SECURITY SOLUTIONS GUIDE
for your connected, secure world
SECURITY SOLUTIONS GUIDE
for your connected, secure world
Summer 2021
CHESAPEAKE & MIDLANTIC MARKETING
www.MidChes.com

Security Solutions Guide

Summer 2021

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EXPERT | SECURITY | ADVICE

Welcome to INTEOX

Unlimited starts here

The INTEOX open camera platform enables full freedom for new development, allowing system integrators and other stakeholders to build customer-specific solutions consisting of applications, software and services.

Building customer-specific solutions starts with freedom of choice:

Moving cameras

MIC inteox 7100i

AUTODOME inteox 7000i

Fixed cameras

FLEXIDOME inteox 7100i*

DINION inteox 7100i*

*Available mid of 2021

Next step:

Select one or multiple applications available in the Security and Safety Things application store

Create your own customer-specific applications

Securely install and execute applications on INTEOX cameras

Use built-in Video Analytics and Camera Trainer technology to tailor the solution to detect user-specific objects or situations

Create your own customer-specific application:

Fast and easy development thanks to an open Operating System

Make use of tools, libraries and documentation

Utilize the powerful INTEOX hardware platform that supports neural network based analytics (Artificial Intelligence)

Get a head-start by making smart use of customer-specific (meta) data generated by INTEOX cameras

Solutions build on INTEOX:

Are built to last

Offer outstanding performance

Deliver highest level of data security and privacy protection

Are easy to install, manage and use

AUTODOME inteox cameras

Locate, track and zoom into an exciting new world of possibilities

AUTODOME inteox 7000i

Model with Traffic Detector available

Add software apps afterwards securely

Specifications:

	H.265	30x	1080p	fps	dB	starlight
AUTODOME inteox 7000i	●	●	●	●	30fps	120dB	●

Housing:

High impacts
IK10

Withstands challenging weather conditions
IP66 NEMA-4X

Intelligent Video Analytics:

- Intelligent tracking*
- Video Analytics while moving
- Reliable alerts, even in extreme weather conditions
- Video Analytics extremely resistant against shaking
- Video content analysis over large distances

* Available as of firmware 8.0

Use Intelligent Video Analytics to build your own software applications:

- Analyze valuable data, use it in a wide variety
- Build applications by using 16 built-in Video Analytics algorithms
- Build applications with Camera Trainer technology

MIC inteox cameras

Taking a new world of exciting possibilities to the extremes

MIC inteox 7100i

Specific models for ITS Models with Traffic Detector available

Add software apps afterwards securely

Specifications:

	optical image stabilization	H.265	Optional illuminator	120dB	30x	12x	starlight	SD industrial	window defroster
MIC inteox 7100i (basic) **1080p**		●	1804 ft	●	●		●		
MIC inteox 7100i (enhanced) **1080p**		●	1804 ft	●	●		●	●	●
MIC inteox 7100i (enhanced) **4K UHD**	●	●	984 ft			●		●	●

Intelligent Video Analytics:

- Intelligent tracking*
- Video Analytics while moving
- Reliable alerts, even in extreme weather conditions
- Video Analytics extremely resistant against shaking
- Video content analysis over large distances

* Available as of firmware 8.0

Use Intelligent Video Analytics to build your own software applications:

- Analyze valuable data, use it in a wide variety
- Build applications by using 16 built-in Video Analytics algorithms
- Build applications with Camera Trainer technology

Extremely robust:

- High impacts — IK10 — IEC 62262
- Shock and vibration resistant — IEC 60068 — MIL-STD-167-1A
- Withstands challenging weather conditions — IP68 — UL Type 6P — CORROSION PROOF ISO 12944-6: C5-M (High) — NEMA-TS2 — MIL-STD-810G

Fixed cameras

Indoor

Essential Video Analytics

FLEXIDOME IP micro 3000i

NDV-350x-Fxx
Up to 5MP

FLEXIDOME IP turret 3000i IR

NTV-350x-FxxL
Up to 5MP

FLEXIDOME IP 4000i

NDI-4502-A
30 fps@1080p

FLEXIDOME IP 4000i IR

NDI-4502-AL
30 fps@1080p, IR

FLEXIDOME IP 5000i

NDI-5503-A
30 fps@5MP

FLEXIDOME IP 5000i IR

NDI-5503-AL
30 fps@5MP, IR

FLEXIDOME IP starlight 5000i

NDI-5502-A
60 fps@1080p

FLEXIDOME IP starlight 5000i

NDI-5502-AL
60 fps@1080p

DINION IP starlight 6000 HD

NBN-63013-B
60 fps@720p, starlight

DINION IP starlight 6000 HD

NBN-63023-B
60 fps@1080p, starlight

Intelligent Video Analytics

DINION IP starlight 7000 HD

NBN-73013-BA
60 fps@720p, starlight

DINION IP starlight 7000 HD

NBN-73023-BA
60 fps@1080p, starlight

DINION IP starlight 8000 MP

NBN-80052-BA
30 fps@5MP, starlight

DINION IP ultra 8000 MP

NBN-80122-CA
30 fps@UHD

FLEXIDOME IP panoramic 7000 IC

NFN-70122-Fx(A)
30 fps@12MP, in-ceiling

FLEXIDOME IP panoramic 7000 MP

NIN-70122-Fx(A)
30 fps@12MP

FLEXIDOME panoramic 5100i

NDS-5703-F360
30 fps@6MP

FLEXIDOME panoramic 5100i

NDS-5704-F360
30 fps@12MP

Outdoor

Essential Video Analytics

FLEXIDOME IP turret 3000i (outdoor)

NTE-350x-Fxx
Up to 5MP

FLEXIDOME IP micro 3000i (outdoor)

NDE-350x-Fxx
Up to 5MP

FLEXIDOME IP 3000i IR

NDE-350x-AL
Up to 5MP

DINION IP 3000i IR

NBE-350x-AL
Up to 5MP

FLEXIDOME IP panoramic 6000 (outdoor)

NDS-6004-FxxxE
30 fps@12MP

FLEXIDOME IP 4000i

NDE-4502-A
30 fps@1080p

FLEXIDOME IP 4000i IR

NDE-4502-AL
30 fps@1080p, IR

FLEXIDOME IP 5000i

NDE-5503-A
30 fps@5MP

FLEXIDOME IP 5000i IR

NDE-5503-AL
30 fps@5MP, IR

FLEXIDOME IP starlight 5000i IR

NDE-5502-A
60 fps@1080p, IR

FLEXIDOME IP starlight 5000i IR

NDE-5502-AL
60 fps@1080p, IR

FLEXIDOME IP starlight 6000 VR

NIN-63013-Axxx
60 fps@720p

FLEXIDOME IP starlight 6000 VR

NIN-63023-Axxx
60 fps@1080p, starlight

Intelligent Video Analytics

FLEXIDOME IP starlight 7000 VR

NIN-73013-Axxx
60 fps@720p, starlight

FLEXIDOME IP starlight 7000 VR

NIN-73023-Axxx
60 fps@1080p, starlight

DINION IP thermal 8000

NHT-8001-F
VGA

DINION IP thermal 8000

NHT-8000-F
QVGA

FLEXIDOME IP starlight 8000i

NDE-8502-R(T)
1080p, starlight, 146dB

FLEXIDOME IP starlight 8000i

NDE-8503-R(T)
6 MP, starlight, 120dB

FLEXIDOME IP starlight 8000i

NDE-8504-R(T)
4K UHD, starlight, 120dB

DINION IP imager 9000 HD

NAI-90022-AAA
30 fps@1080p

FLEXIDOME IP panoramic 7000 (outdoor)

NDS-7004-FxxxE
30 fps@12MP

FLEXIDOME IP starlight 8000i

NDE-8502-RX(T)
1080p HDR X, starlight X

FLEXIDOME IP starlight 8000i

NDE-8502-RX(T)
4 MP HDR X, starlight X

FLEXIDOME panoramic 5100i IR

NDS-5703-F360LE
30 fps@6MP

FLEXIDOME panoramic 5100i IR

NDS-5704-F360LE
30 fps@12MP

FLEXIDOME multi 7000i

NDM-7702-A
30 fps@4x 3MP

FLEXIDOME multi 7000i

NDM-7703-A
30 fps@4x 5MP

NDAA compliant

Moving cameras

Indoor

Essential Video Analytics

AUTODOME IP 4000i

NDP-4502-Z12-P
60 fps@1080p, Essential Video Analytics

AUTODOME IP 4000i

NDP-4502-Z12C-P
in-ceiling, 60 fps@1080p, 12x zoom, Essential Video Analytics

AUTODOME IP starlight 5000i

NDP-5512-Z30C-P
in-ceiling, 60 fps@1080p, starlight, Essential Video Analytics

AUTODOME IP starlight 5100i

NDP-5523-Z20C-P
in-ceiling, 60 fps@4MP, starlight, HDR X, Essential Video Analytics

Intelligent Video Analytics

AUTODOME IP starlight 7000i

NDP-7512-Z30Cx
in-ceiling, 30 fps@1080p, starlight, Intelligent Video Analytics

AUTODOME inteox 7000i

NDP-7602-Z30Cx
In-ceiling, 30 fps@1080p, starlight, Intelligent Video Analytics

Outdoor

Essential Video Analytics

AUTODOME IP starlight 5000i

NDP-5512-Z30-P
60 fps@1080p, starlight, Essential Video Analytics

AUTODOME IP starlight 5100i

NDP-5523-Z20-P
60 fps@4MP, starlight, HDR X, Essential Video Analytics

AUTODOME IP starlight 5000i IR

NDP-5512-Z30L-P
60 fps@1080p, starlight, IR, Essential Video Analytics

AUTODOME IP starlight 5100i IR

NDP-5523-Z30L-P
60 fps@4MP, starlight, IR, HDR X, Essential Video Analytics

Intelligent Video Analytics

AUTODOME IP starlight 7000i

NDP-7512-Z30
30 fps@1080p, starlight, Intelligent Video Analytics

AUTODOME inteox 7000i

NDP-7602-Z30x
30 fps@1080p, starlight, Intelligent Video Analytics

Extreme outdoor

Optical

MIC IP starlight 7100i

MIC-7522-Z30x
60 fps@1080p, starlight, 30x zoom, Intelligent Video Analytics

MIC IP ultra 7100i

MIC-7504-Z12xR
4K UHD, 12x zoom, Intelligent Video Analytics

MIC inteox 7100i

MIC-7604-Z12xR
30 fps@UHD, 12x, Intelligent Video Analytics

MIC IP starlight 7100i

MIC-7522-Z30xR
60fps@1080p, 30x, Enhanced version, Intelligent Video Analytics

MIC inteox 7100i

MIC-7602-Z30x
30 fps@1080p, 30x, Intelligent Video Analytics

MIC inteox 7100i

MIC-7602-Z30xR
30 fps@1080p, 30x, Enhanced version, Intelligent Video Analytics

Optical & Thermal

MIC IP fusion 9000i

MIC-9502-Z30xxx
60 fps@1080p, fusion, Intelligent Video Analytics

NDAA compliant

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP turret 3000i IR		▶FLEXIDOME IP turret 3000i - outdoor		▶FLEXIDOME IP micro 3000i	
		1080p	5MP	Outdoor 1080p	Outdoor 5MP	1080p	5MP
Commercial Type Number		**NTV-3502-FxxL**	**NTV-3503-FxxL**	**NTE-3502-Fxx**	**NTE-3503-Fxx**	**NDV-3502-Fxx**	**NDV-3503-Fxx**
Video analytics at the edge	Essential Video Analytics ▶	■	■	■	■	■	■
	Intelligent Video Analytics	–	–	–	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■	■	■
	Intelligent streaming ▶	■	■	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming ▶	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution ▶	HD 1080p	5MP	HD 1080p	5MP	HD 1080p	5MP
	Image sensor type ▶	1/2.8" CMOS	1/2.9" CMOS	1/2.8" CMOS	1/2.9" CMOS	1/2.8" CMOS	1/2.9" CMOS
	Max. frames per second (fps) ▶	30 fps @ 1080p	20 fps @ 5.3MP 25 fps @ 4.1MP	30 fps@1080p	20 fps@5.3MP 25 fps@4.1MP	30 fps@1080p	20 fps@5.3MP 25 fps@4.1MP
	Indoor / outdoor ▶	■/–	■/–	■/■	■/■	■/–	■/–
	Day / night	■ (electronic)	■ (electronic)	■ (electronic)	■ (electronic)	■ (electronic)	■ (electronic)
	Wide Dynamic Range (WDR) ▶	120dB	120dB	120dB	120dB	120dB	120dB
	ONVIF conformant	■	■	■	■	■	■
	Built-in microphone ▶	■	■	■	■	■	■
Advanced features	Intelligent Auto Exposure / Intelligent Defog ▶	–/■	–/■	–/■	–/■	–/■	–/■
	Privacy masking	■	■	■	■	■	■
	Region Of Interest tracking ▶	■	■	■	■	■	■
	Upright video mode ▶	■	■	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■	■/■	■/■	■/■
	Built-in video analytics ▶	■	■	■	■	■	■
	Audio detection ▶	■	■	■	■	■	■
Sensitivity	Minimum illumination day mode (color) ▶	0.06 lux	0.5 lux	0.06 lux	0.5 lux	0.06 lux	0.5 lux
	Minimum illumination night mode (black / white) ▶	0.015 lux	0.2 lux	0.015 lux	0.2 lux	0.015 lux	0.2 lux
	Night vision ▶	■ (infrared)	■ (infrared)	■ (infrared)	■ (infrared)	–	–
	Max. range at night ▶	15 m (49 ft)	15 m (49 ft)	15 m (49 ft)	15 m (49 ft)	–	–
Lens	Automatic varifocal	–	–	–	–	–	–
	Focal length ▶	2.3 mm (F02) 2.8 mm (F03)	2.3 mm (F02) 2.8 mm (F03)	2.3 mm (F02) 2.8 mm (F03)	2.3 mm (F02) 2.8 mm (F03)	2.3 mm (F02) 2.8 mm (F03)	2.3 mm (F02) 2.8 mm (F03)
	Horizontal Angle of View (HAoV) ▶	132° (F02) 118° (F03)	118° (F02) 94° (F03)	132° (F02) 118° (F03)	118° (F02) 94° (F03)	132° (F02) 118° (F03)	118° (F02) 94° (F03)
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard) ▶	17/7/3/2(F02) 28/11/6/3(F03)	37/15/7/4(F02) 57/23/11/6(F03)	17/7/3/2 (F02) 28/11/6/3 (F03)	37/15/7/4 (F02) 57/23/11/6 (F03)	17/7/3/2 (F02) 28/11/6/3 (F03)	37/15/7/4 (F02) 57/23/11/6 (F03)
Storage	Industrial SD card support with health monitoring	■	■	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting
Connections	Alarm input / output ▶	1/1	1/1	1 / 1	1 / 1	1 / 1	1 / 1
	Audio in / out ▶	■ (built-in mic)/■	■ (built-in mic)/■	■/■	■/■	■ (built–in mic)/■	■ (built–in mic)/■
	Hybrid / public view monitor ▶	–/–	–/–	■/■	■/■	–/–	–/–
Housing	Weather rating ▶	–	–	IP66	IP66	–	–
	Vandal resistant ▶	IK08	IK08	IK10	IK10	IK08	IK08
	Operating temperature ▶	-20° to +50° C (-4° to 104° F)	-20° to +50° C (-4° to 104° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V ▶	■/■/-	■/■/-	■/■/–	■/■/–	■/■/–	■/■/–

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

			▶FLEXIDOME IP micro 3000i - outdoor		▶FLEXIDOME IP micro 5000		▶FLEXIDOME IP 3000i IR	
			1080p Outdoor	5MP Outdoor	1080p	5MP	1080p	5MP
Commercial Type Number			**NDE-3502-Fxx**	**NDE-3503-Fxx**	**NUC-51022-FX**	**NUC-51051-FX**	**NDE-3502-AL**	**NDE-3503-AL**
Video analytics at the edge	Essential Video Analytics	▶	■	■	–	–	■	■
	Intelligent Video Analytics		–	–	–	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction		■	■	■	■	■	■
	Intelligent streaming	▶	■	■	–	–	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	▶	■/■/4 streams	■/■/4 streams	–/■/4 streams	–/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	▶	HD 1080p	5MP	HD 1080p	5MP	HD 1080p	5MP
	Image sensor type	▶	1/2.8" CMOS	1/2.9" CMOS	1/2.7"	1/3"	1/2.8" CMOS	1/2.9" CMOS
	Max. frames per second (fps)	▶	30 fps@1080p	20 fps@5.3MP 25 fps@4.1MP	30 fps@1080p	12 fps@5MP	30 fps@1080p	20 fps@5.3MP 25 fps@4.1MP
	Indoor / outdoor	▶	■/■	■/■	■/■	■/■	–/■	–/■
	Day / night	▶	■ (electronic)	■ (electronic)	■ (electronic)	■ (electronic)	■	■
	Wide Dynamic Range (WDR)	▶	120dB	120dB	76dB	65dB	120dB	120dB
	ONVIF conformant		■	■	■	■	■	■
	Built-in microphone	▶	■	■	–	–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	▶	–/■	–/■	–/–	–/–	–/■	–/■
	Privacy masking		■	■	■	■	■	■
	Region Of Interest tracking	▶	■	■	–	–	■	■
	Upright video mode	▶	■	■	–	–	■	■
Alarm triggering	Tamper detection / Video motion detection		■/■	■/■	■/■	■/■	■/■	■/■
	Built-in video analytics	▶	■	■	–	–	■	■
	Audio detection	▶	■	■	–	–	■	■
Sensitivity	Minimum illumination day mode (color)	▶	0.06 lux	0.5 lux	0.4 lux (F4) 1 lux (F2)	0.8 lux (F4) 2 lux (F2)	0.06 lux	0.5 lux
	Minimum illumination night mode (black / white)	▶	0.015 lux	0.2 lux	–	–	0.015 lux	0.2 lux
	Night vision	▶	–	–	–	–	■ (infrared)	■ (infrared)
	Max. range at night	▶	–	–	–	–	30 m (98 ft)	30 m (98 ft)
Lens	Automatic varifocal	▶	–	–	–	–	■	■
	Focal length	▶	2.3 mm (F02) 2.8 mm (F03)	2.3 mm (F02) 2.8 mm (F03)	3.6 mm (F4) 2.5 mm (F2)	3.6 mm (F4) 2.5 mm (F2)	3.2 - 10 mm	3.2 - 10 mm
	Horizontal Angle of View (HAoV)	▶	132° (F02) 118° (F03)	118° (F02) 94° (F03)	97° (F4) 135° (F2)	69° (F4) 105° (F2)	33° - 104°	30° - 89°
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	▶	17/7/3/2 (F02) 28/11/6/3 (F03)	37/15/7/4 (F02) 57/23/11/6 (F03)	34/13/7/3 (F4) 16/6/3/2 (F2)	69/27/14/7 (F4) 40/16/8/4 (F2)	30-75/12-30/6-15/3-8	63-141/25-56/13-28/6-14
Storage	Industrial SD card support with health monitoring		■	■	■	■	■	■
	Cloud application storage		Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video clips or JPEG Exporting
Connections	Alarm input / output	▶	1 / 1	1 / 1	–/–	–/–	1/1	1/1
	Audio in / out	▶	■/■	■/■	–	–	■/■	■/■
	Hybrid / public view monitor	▶	■/■	■/■	–/■	–/■	■/■	■/■
Housing	Weather rating	▶	IP66	IP66	IP66	IP66	IP66	IP66
	Vandal resistant	▶	IK10	IK10	IK08	IK08	IK10	IK10
	Operating temperature	▶	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	▶	■/■/–	■/■/–	■/–/–	■/–/–	■/■/–	■/■/–

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP 4000i	▶FLEXIDOME IP 4000i	▶FLEXIDOME IP 4000i IR	▶FLEXIDOME IP 4000i IR
		Indoor	Outdoor	Indoor	Outdoor
Commercial Type Number		**NDI-4502-A**	**NDE-4502-A**	**NDI-4502-AL**	**NDE-4502-AL**
Video analytics at the edge	Essential Video Analytics	■	■	■	■
	Intelligent Video Analytics	–	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	HD 1080p	HD 1080p	HD 1080p	HD 1080p
	Image sensor type	1/2.9"	1/2.9"	1/2.9"	1/2.9"
	Max. frames per second (fps)	30 fps@1080p	30 fps@1080p	30 fps@1080p	30 fps@1080p
	Indoor / outdoor ▶	■/ –	■/■	■/ –	■/■
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	90dB	90dB	90dB	90dB
	ONVIF conformant	■	■	■	■
	Built-in microphone ▶	■	–	■	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■	–/■	–/■
	Privacy masking	■	■	■	■
	Region Of Interest tracking	–	–	–	–
	Upright video mode	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■	■	■	■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.1 lux	0.1 lux	0.1 lux	0.1 lux
	Minimum illumination night mode (black / white) ▶	0.02 lux	0.02 lux	0 lux (IR on)	0 lux (IR on)
	Night vision ▶	–	–	■ (infrared)	■ (infrared)
	Max. range at night ▶	–	–	30 m (98 ft)	30 m (98 ft)
Lens	Automatic varifocal	■	■	■	■
	Focal length	3 - 9 mm	3 - 9 mm	3 - 9 mm	3 - 9 mm
	Horizontal Angle of View (HAoV)	37° - 106°	37° - 106°	37° - 106°	37° - 106°
DORI distances	Detect / Observe / Recognize / Identify (Distances in according to EN-IEC 62676-4 standard)	32-126/13-50/6-25/3-13	32-126/13-50/6-25/3-13	32-126/13-50/6-25/3-13	32-126/13-50/6-25/3-13
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1	1/1
	Audio in / out	■/■	■/■	■/■	■/■
	Hybrid / public view monitor	■/■	■/■	■/■	■/■
Housing	Weather rating ▶	–	IP66	–	IP66
	Vandal resistant ▶	IK04	IK10	IK04	IK10
	Operating temperature ▶	-20° to 50° C (-4° to 122° F)	-40° to 50° C (-22° to 122° F)	-20° to 50° C (-4° to 122° F)	-40° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/■	■/■/■	■/■/■	■/■/■

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP 5000i	▶FLEXIDOME IP 5000i	▶FLEXIDOME IP 5000i IR	▶FLEXIDOME IP 5000i IR
		Indoor	Outdoor	Indoor	Outdoor
Commercial Type Number		**NDI-5503-A**	**NDE-5503-A**	**NDI-5503-AL**	**NDE-5503-AL**
Video analytics at the edge	Essential Video Analytics	■	■	■	■
	Intelligent Video Analytics	–	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	5MP	5MP	5MP	5MP
	Image sensor type	1/2.9"	1/2.9"	1/2.9"	1/2.9"
	Max. frames per second (fps)	30 fps@5MP	30 fps@5MP	30 fps@5MP	30 fps@5MP
	Indoor / outdoor ▶	■/–	■/■	■/–	■/■
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	120dB	120dB	120dB	120dB
	ONVIF conformant	■	■	■	■
	Built-in microphone ▶	■	–	■	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/■	■/■	■/■	■/■
	Privacy masking	■	■	■	■
	Region Of Interest tracking	–	–	–	–
	Upright video mode	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■	■	■	■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.24 lux	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white) ▶	0.03 lux	0.03 lux	0 lux (IR on)	0 lux (IR on)
	Night vision ▶	–	–	■ (infrared)	■ (infrared)
	Max. range at night ▶	–	–	30 m (98 ft)	30 m (98 ft)
Lens	Automatic varifocal	■	■	■	■
	Focal length	3 - 10 mm	3 - 10 mm	3 - 10 mm	3 - 10 mm
	Horizontal Angle of View (HAoV)	31° - 99°	31° - 99°	31° - 99°	31° - 99°
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	59-266/24-106/12-53/6-27	59-266/24-106/12-53/6-27	59-266/24-106/12-53/6-27	59-266/24-106/12-53/6-27
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1	1/1
	Audio in / out	■/■	■/■	■/■	■/■
	Hybrid / public view monitor	■/■	■/■	■/■	■/■
Housing	Weather rating ▶	–	IP66	–	IP66
	Vandal resistant ▶	IK04	IK10	IK04	IK10
	Operating temperature ▶	-20° to 50° C (-4° to 122° F)	-40° to 50° C (-22° to 122° F)	-20° to 50° C (-4° to 122° F)	-40° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/■	■/■/■	■/■/■	■/■/■

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP starlight 5000i	▶FLEXIDOME IP starlight 5000i	▶FLEXIDOME IP starlight 5000i IR	▶FLEXIDOME IP starlight 5000i IR
		Indoor	Outdoor	Indoor	Outdoor
Commercial Type Number		**NDI-5502-A**	**NDI-5502-AL**	**NDE-5502-A**	**NDE-5502-AL**
Video analytics at the edge	Essential Video Analytics	■	■	■	■
	Intelligent Video Analytics	–	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	HD 1080p	HD 1080p	HD 1080p	HD 1080p
	Image sensor type	1/2.8"	1/2.8"	1/2.8"	1/2.8"
	Max. frames per second (fps)	60 fps@1080p	60 fps@1080p	60 fps@1080p	60 fps@1080p
	Indoor / outdoor ▶	■/ –	■/■	■/ –	■/■
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	146dB	146dB	146dB	146dB
	ONVIF conformant	■	■	■	■
	Built-in microphone ▶	■	–	■	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/■	■/■	■/■	■/■
	Privacy masking	■	■	■	■
	Region Of Interest tracking	–	–	–	–
	Upright video mode	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■	■	■	■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.0225 lux	0.0225 lux	0.0225 lux	0.0225 lux
	Minimum illumination night mode (black / white)	0.0051 lux	0.0051 lux	0.0051 lux	0.0051 lux
	Night vision	■ (starlight)	■ (starlight)	■ (starlight)	■ (starlight)
	Max. range at night ▶	–	–	IR 45 m (148 ft)	IR 45 m (148 ft)
Lens	Automatic varifocal	■	■	■	■
	Focal length	3 - 9 mm	3 - 9 mm	3 - 9 mm	3 - 9 mm
	Horizontal Angle of View (HAoV)	37° - 106°	37° - 106°	37° - 106°	37° - 106°
DORI distances	Detect / Observe / Recognize / Identify (Distances in according to EN-IEC 62676-4 standard)	32-126/13-50/6-25/3-13	32-126/13-50/6-25/3-13	32-126/13-50/6-25/3-13	32-126/13-50/6-25/3-13
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1	1/1
	Audio in / out	■/■	■/■	■/■	■/■
	Hybrid / public view monitor	■/■	■/■	■/■	■/■
Housing	Weather rating ▶	–	IP66	–	IP66
	Vandal resistant ▶	IK04	IK10	IK04	IK10
	Operating temperature ▶	-20° to 50° C (-4° to 122° F)	-40° to 50° C (-22° to 122° F)	-20° to 50° C (-4° to 122° F)	-40° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/■	■/■/■	■/■/■	■/■/■

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP starlight 6000 VR	▶FLEXIDOME IP starlight 7000 VR	▶FLEXIDOME IP starlight 6000 VR	▶FLEXIDOME IP starlight 7000 VR
		720p	720p	1080p	1080p
Commercial Type Number		**NIN-63013-Axxx**	**NIN-73013-Axxx**	**NIN-63023-Axxx**	**NIN-73023-Axxx**
Video analytics at the edge	Essential Video Analytics ▶	■	–	■	–
	Intelligent Video Analytics ▶	–	■	–	■
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution ▶	720p	720p	1.3MP / 1080p	1.3MP / 1080p
	Image sensor type	1/2.8"	1/2.8"	1/2.8"	1/2.8"
	Max. frames per second (fps) ▶	60 fps@720p	60 fps@720p	60 fps@1.3MP / 1080p	60 fps@1.3MP / 1080p
	Indoor / outdoor	■/■	■/■	■/■	■/■
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	120dB	120dB	120dB	120dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	–	–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/■	■/■	■/■	■/■
	Privacy masking	■	■	■	■
	Region Of Interest tracking	■	■	■	■
	Upright video mode	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■	■/■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
Sensitivity	Minimum illumination day mode (color) ▶	0.0104 lux	0.0104 lux (A3xx) 0.0179 lux (A10xx)	0.0104 lux	0.0104 lux (A3xx) 0.0179 lux (A10xx)
	Minimum illumination night mode (black / white) ▶	0.0039 lux	0.0039 lux (A3xx) 0.0066 (A10x)	0.0039 lux	0.0039 lux (A3xx) 0.0066 (A10x)
	Night vision	■ (starlight)	■ (starlight)	■ (starlight)	■ (starlight)
	Max. range at night	–	–	–	–
Lens	Automatic varifocal	■	■	■	■
	Focal length ▶	3 - 9 mm (A3xx)	3 - 9 mm (A3xx) 10 - 23 mm (A10xx)	3 - 9 mm (A3xx)	3 - 9 mm (A3xx) 10 - 23 mm (A10xx)
	Horizontal Angle of View (HAoV) ▶	37° - 117° (A3xx)	37° - 117° (A3xx) 14.4° - 32° (A10xx)	37° - 117° (A3xx)	37 ° - 117° (A3xx) 14.4° - 32° (A10xx)
DORI distances	Detect / Observe / Recognize / Identify (Distances in according to EN-IEC 62676-4 standard) ▶	16-77/6-30/3-15/2-8 (A3xx)	16-77/6-30/3-15/2-8 (A3xx) 89-203/35-80/18-41/9-20 (A10xx)	24-115/9-46/5-23/2-12 (A3xx)	24-115/9-46/5-23/2-12 (A3xx) 134-304/53-121/27-61/13-30 (A10xx)
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1	2/1
	Audio in / out	■/■	■/■	■/■	■/■
	Hybrid / public view monitor	■/■	■/■	■/■	■/■
Housing	Weather rating	IP66 and NEMA type 4X	IP66 and NEMA type 4X	IP66 and NEMA type 4X	IP66 and NEMA type 4X
	Vandal resistant	IK10	IK10	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/–	■/■/–	■/■/–	■/■/–

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

▶**FLEXIDOME IP starlight 8000i**

1080p

6MP

4K UHD

Commercial Type Number			NDE-8502-R(T)	NDE-8503-R(T)	NDE-8504-R(T)
Remote commissioning	Motorized pan / Tilt / Roll / Zoom (PTRZ) with wireless support		■	■	■
Video analytics at the edge	Essential Video Analytics		–	–	–
	Intelligent Video Analytics + Camera Trainer		■	■	■
Bitrate management	Intelligent Dynamic Noise Reduction		■	■	■
	Intelligent streaming		■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming		■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	▶	HD 1080p	6MP	4K UHD
	Image sensor type	▶	1/2.8"	1/1.8"	1/1.8"
	Max. frames per second (fps)	▶	60	30	30
	Indoor / outdoor		■/■	■/■	■/■
	Day / night		■	■	■
	Wide Dynamic Range (WDR)	▶	146dB HDR	120dB HDR	120dB HDR
	ONVIF conformant		■	■	■
	Built-in microphone		–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog		■/■	■/■	■/■
	Privacy masking		■	■	■
	Region Of Interest tracking		■	■	■
	Upright video mode		■	■	■
Alarm triggering	Tamper detection / Video motion detection		■/■	■/■	■/■
	Built-in video analytics		■	■	■
	Audio detection		■	■	■
Sensitivity	Minimum illumination day mode (color)	▶	0.0104 lux (R) / 0.0179 lux (RT)	0.0509 lux (R) / 0.1222 lux (RT)	0.0540 lux (R) / 0.1251 lux (RT)
	Minimum illumination night mode (black / white)	▶	0.0039 lux (R) / 0.0066 lux (RT)	0.0086 lux (R) / 0.0198 lux (RT)	0.0098 lux (R) / 0.0200 lux (RT)
	Night vision		■ (starlight)	■ (starlight)	■ (starlight)
	Max. range at night (IR range)		–	–	–
Lens	Automatic varifocal		■ (P-iris)	■ (P-iris)	■ (P-iris)
	Focal length	▶	3 - 9 mm (R) / 10 - 23 mm (RT)	3.9 - 10 mm (R) / 12 - 40 mm (RT)	3.9 - 10 mm (R) / 12 - 40 mm (RT)
	Horizontal Angle of View (HAoV)		117° - 37° (R) / 32° - 14.4° (RT)	117° - 44° (R) / 36° - 12.6° (RT)	117° - 44° (R) / 36° - 12.6° (RT)
DORI distances	Detect / Observe / Recognize / Identify (m) (Distances according to EN-IEC 62676-4 standard)	▶	24-115/9-46/5-23/2-12 134-304/53-121/27-61/13-30	40-162/16-64/8-32/4-16 201-591/80-235/40-118/20-59	47-190/195-75/9-38/5-19 236-696/94-276/47-139/24-70
Storage	Industrial SD card support with health monitoring		■ (2 slots)	■ (2 slots)	■ (2 slots)
	Cloud application storage		Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output		2/1 + 12V 50mA out	2/1 + 12V 50mA out	2/1 + 12V 50mA out
	Audio in / out		■/■	■/■	■/■
	Hybrid / public view monitor		–	–	–
Housing	Weather rating		IP66, IP6K9K and NEMA type 4X	IP66, IP6K9K and NEMA type 4X	IP66, IP6K9K and NEMA type 4X
	Vandal resistant		IK10+	IK10+	IK10+
	Operating temperature		-50º to +60º C (-58º to +140º F)	-50º to +60º C (-58º to +140º F)	-50º to +60º C (-58º to +140º F)
Power input voltage	Power over Ethernet / 12V / 24V		■/■/■	■/■/■	■/■/■
Accessories	Modular mount compatible		■	■	■

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

▶FLEXIDOME IP starlight 8000i - X series

Commercial Type Number			NDE-8502-RX(T)	NDE-8503-RX(T)
Remote commissioning	Motorized pan / Tilt / Roll / Zoom (PTRZ) with wireless support		■	■
Video analytics at the edge	Essential Video Analytics		–	–
	Intelligent Video Analytics + Camera Trainer		■	■
Bitrate management	Intelligent Dynamic Noise Reduction		■	■
	Intelligent streaming		■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming		■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	▶	HD 1080p	4.1MP
	Image sensor type		1/1.8"	1/1.8"
	Max. frames per second (fps)		60	60
	Indoor / outdoor		■/■	■/■
	Day / night		■	■
	Wide Dynamic Range (WDR)	▶	144dB HDR X	141dB HDR X
	ONVIF conformant		■	■
	Built-in microphone		–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog		■/■	■/■
	Privacy masking		■	■
	Region Of Interest tracking		■	■
	Upright video mode		■	■
Alarm triggering	Tamper detection / Video motion detection		■/■	■/■
	Built-in video analytics		■	■
	Audio detection		■	■
Sensitivity	Minimum illumination day mode (color)	▶	0.0061 lux (R) / 0.0178 lux (RT)	0.0078 lux (R) / 0.0247 lux (RT)
	Minimum illumination night mode (black / white)	▶	0.0007 lux (R) / 0.0026 lux (RT)	0.0008 lux (R) / 0.0030 lux (RT)
	Night vision		■ (starlight X)	■ (starlight X)
	Max. range at night (IR range)		–	–
Lens	Automatic varifocal		■ (P-iris)	■ (P-iris)
	Focal length		4.4 -10 mm (R) / 12 - 40 mm (RT)	4.4 - 10 mm (R) / 12 - 40 mm (RT)
	Horizontal Angle of View (HAoV)		110° - 48° (R) / 36.8° - 12..8° (RT)	110° - 48° (R) / 36.8° - 12..8° (RT)
DORI distances	Detect / Observe / Recognize / Identify (m) (Distances according to EN-IEC 62676-4 standard)	▶	27-86/11-34/5-17/3-9 115-342/46-136/23-68/12-34	38-121/15-48/8-24/4-12 162-479/64-190/32/96/16-48
Storage	Industrial SD card support with health monitoring		■ (2 slots)	■ (2 slots)
	Cloud application storage		Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output		2/1 + 12V 50mA out	2/1 + 12V 50mA out
	Audio in / out		■/■	■/■
	Hybrid / public view monitor		–	–
Housing	Weather rating		IP66, IP6K9K and NEMA type 4X	IP66, IP6K9K and NEMA type 4X
	Vandal resistant		IK10+	IK10+
	Operating temperature		-50° to +60° C (-58° to +140° F)	-50° to +60° C (-58° to +140° F)
Power input voltage	Power over Ethernet / 12V / 24V		■/■/■	■/■/■
Accessories	Modular mount compatible		■	■

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP panoramic 5000 MP	▶FLEXIDOME IP panoramic 5000 MP
		indoor	outdoor
Commercial Type Number		**NUC-52051-F0**	**NUC-52051-F0E**
Video analytics at the edge	Essential Video Analytics	–	–
	Intelligent Video Analytics	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■
	Intelligent streaming	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution	5MP	5MP
	Image sensor type	1/3"	1/3"
	Max. frames per second (fps)	15 fps	15 fps
	Indoor / outdoor ▶	■/–	■/■
	Day / night	■ (electronic)	■ (electronic)
	Wide Dynamic Range (WDR)	81dB	81dB
	ONVIF conformant	■	■
	Built-in microphone ▶	■	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■
	Edge dewarping	–	-
	Privacy masking	■	■
	Region Of Interest tracking	–	-
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■
	Built-in video analytics	–	–
	Audio detection ▶	■	–
	PTZ Intelligent Tracking	–	–
Sensitivity	Minimum illumination day mode (color)	0.36 lux	0.36 lux
	Minimum illumination night mode (black / white)	0.12 lux	0.12 lux
	Night vision	–	–
	Max. range at night	–	–
Lens	Focal length	1.19 mm	1.19 mm
	Horizontal Angle of View (HAoV)	360°	360°
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	19/7/4/1	19/7/4/1
Storage	Industrial SD card support with health monitoring	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	–	–
	Audio in / out	–	–
	Hybrid / public view monitor	–	–
Housing	Weather rating ▶	–	IP66
	Vandal resistant ▶	IK4	IK10
	Operating temperature ▶	-20° to +50° C (-4° to 104° F)	-30° to +50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/–	■/■/–

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME panoramic 5100i		▶FLEXIDOME panoramic 5100i IR	
Commercial Type Number		**NDS-5703-F360**	**NDS-5704-F360**	**NDS-5703-F360LE**	**NDS-5704-F360LE**
Video analytics at the edge	Essential Video Analytics	–	–	–	–
	Intelligent Video Analytics + Camera Trainer	■	■	■	■
	Audio Analytics Future support	■	■	■	■
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams	■/4 streams
Basic features	Maximum resolution ▶	6MP	12MP	6MP	12MP
	Image sensor type ▶	1/1.8	1/2.3	1/1.8	1/2.3
	Max. frames per second (fps)	30	30	30	30
	Indoor / outdoor ▶	■/–	■/–	■/■	■/■
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	120dB HDR	120dB HDR	120dB HDR	120dB HDR
	ONVIF conformant	■	■	■	■
	Built-in microphone	Microphone array	Microphone array	Microphone array	Microphone array
	HMDI out	■	■	■	■
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■	–/■	–/■
	Edge dewarping	future support	future support	future support	future support
	Privacy masking	■	■	■	■
	Region Of Interest tracking	future support	future support	future support	future support
Alarm triggering	Tamper detection / Video motion detection	■	■	■	■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
	PTZ Intelligent Tracking	future support	future support	future support	future support
Sensitivity	Night vision ▶	–	–	■ (IR)	■ (IR)
	Max. range at night ▶	–	–	20 m (66 ft)	20 m (66 ft)
Lens	Focal length ▶	1.155 mm	1.26 mm	1.155 mm	1.26 mm
	Horizontal Angle of View (HAoV)	360°	360°	360°	360°
DORI distances	Detect / Observe / Recognize / Identify (Distances in according to EN-IEC 62676-4 standard) ▶	28 m/11.5 m/5.5 m/2.1 m	45.5 m/18 m/8.5 m/3.8 m	28 m/11.5 m/5.5 m/2.1 m	45.5 m/18 m/8.5 m/3.8 m
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output ▶	–	–	1/1	1/1
	Audio in / out	–	–	■	■
	HDMI output / public view monitor	■/■	■/■	■/■	■/■
Housing	Weather rating ▶	–	–	IP66 NEMA Type 4X	IP66 NEMA Type 4X
	Vandal resistant ▶	IK08 (except lens)	IK08 (except lens)	IK10	IK10
	Operating temperature ▶	-10° to +45° C	-10° to +45° C	-40° to +55° C	-40° to +55° C
Power input voltage	Power over Ethernet / 12V / 24V ▶	PoE/–/–	PoE/–/–	PoE/■/■	PoE/■/■
Accessories	Modular mount compatible	■	■	■	■

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME IP panoramic 7000 MP	▶FLEXIDOME IP panoramic 7000 IC	▶FLEXIDOME IP panoramic 7000
		indoor	inceiling	outdoor
Commercial Type Number		**NIN-70122-Fx(A)**	**NFN-70122-Fx(A)**	**NDS-6004-FxxxE / NDS-7004-FxxxE**
Video analytics at the edge	Essential Video Analytics ▶	■ (depending on model)	■ 6000 model	■ 6000 model
	Intelligent Video Analytics ▶	■ (depending on model)	■ 7000 model	■ 7000 model
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■
	Intelligent streaming	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution	12MP	12MP	12MP
	Image sensor type	1/2.3"	1/2.3"	1/2.3"
	Max. frames per second (fps)	30 fps	30 fps	30 fps
	Indoor / outdoor ▶	■/–	■/–	■/■
	Day / night	■	■	■
	Wide Dynamic Range (WDR)	92dB (with IAE + 16dB)	92dB (with IAE + 16dB)	92dB (with IAE + 16dB)
	ONVIF conformant	■	■	■
	Built-in microphone ▶	■	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■ (customized region)/■	■ (customized region)/■	■ (customized region)/■
	Edge dewarping	■	■	■
	Privacy masking	■	■	■
	Region Of Interest tracking	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■
	Built-in video analytics	■	■	■
	Audio detection ▶	■	–	–
	PTZ Intelligent Tracking	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.46 lux (F1) 0.55 lux (F0)	0.46 lux (F1) 0.55 lux (F0)	0.46 lux (180° lens) 0.55 lux (360° lens)
	Minimum illumination night mode (black / white)	0.15 lux (F1) 0.18 lux (F0)	0.15 lux (F1) 0.18 lux (F0)	0.15 lux (180° lens) 0.18 lux (360° lens)
	Night vision	–	–	–
	Max. range at night	–	–	–
Lens	Focal length	2.1 mm (F1) 1.6 mm (F0)	2.1 mm (F1) 1.6 mm (F0)	2.1 mm (180° lens) 1.6 mm (360° lens)
	Horizontal Angle of View (HAoV)	180° (F1) 360° (F0)	180° (F1) 360° (F0)	180° (180° lens) 360° (360° lens)
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	19/12/6.5/3.5 (F1) 19/8.5/4.5/2 (F0)	19/12/6.5/3.5 (F1) 19/8.5/4.5/2 (F0)	19/12/6.5/3.5 (180° lens) 19/8.5/4.5/2 (360° lens)
Storage	Industrial SD card support with health monitoring	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting
Connections	Alarm input / output	–	–	–
	Audio in / out	–	–	–
	Hybrid / public view monitor	–	–	–
Housing	Weather rating ▶	–	–	IP66
	Vandal resistant	IK6	IK6	IK10
	Operating temperature ▶	-20° to +40° C (-4° to 104° F)	-20° to +40° C (-4° to 104° F)	-30° to +45° C (-22° to 113° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/–/–	■/–/–	■/–/–

IP Video
Dome Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶FLEXIDOME multi 7000i		▶FLEXIDOME multi 7000i IR	
Commercial Type Number		**NDM-7702-A**	**NDM-7703-A**	**NDM-7702-AL**	**NDM-7703-AL**
Remote commissioning	USB-C port for wireless dongle	■	■	■	■
Video analytics at the edge	Essential Video Analytics	–	–	–	–
	Intelligent Video Analytics + Camera Trainer	■	■	■	■
Bitrate management	Dynamic Noise Reduction	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/4x4 streams	■/4x4 streams	■/4x4 streams	■/4x4 streams
Basic features	Maximum resolution ▶	4x 3MP	4x 5MP	4x 3MP	4x 5MP
	Image sensor type	1/2.7	1/2.7	1/2.7	1/2.7
	Max. frames per second (fps)	30	30	30	30
	Indoor / outdoor	■/■	■/■	■/■	■/■
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	120dB HDR	120dB HDR	120dB HDR	120dB HDR
	ONVIF conformant	■	■	■	■
	Built-in microphone	■	■	■	■
	HMDI out	–	–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	Defog	Defog	Defog	Defog
	Edge dewarping	N/A	N/A	N/A	N/A
	Privacy masking	■	■	■	■
	Region Of Interest tracking	N/A	N/A	N/A	N/A
Alarm triggering	Tamper detection / Video motion detection	■	■	■	■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
	PTZ Intelligent Tracking	N/A	N/A	N/A	N/A
Sensitivity	Minimum illumination day mode (color)	0.091	0.091	0.091	0.091
	Minimum illumination night mode (black / white)	0.012	0.012	0.012	0.012
	Night vision ▶	–	–	■ (IR)	■ (IR)
	Max. range at night ▶	–	–	30 m (98 ft)	30 m (98 ft)
Lens	Focal length	3.7-7.7 mm	3.7-7.7 mm	3.7-7.7 mm	3.7-7.7 mm
	Horizontal Angle of View (HAoV) ▶	85.1 - 38.7	85.1 - 38.7	85.1 - 38.7	85.1 - 38.7
DORI distances	Detect / Observe / Recognize / Identify (Distances in according to EN-IEC 62676-4 standard) ▶	45-117 m/18-46 m/9-23 m/4-12 m	57-148 m/22-59 m/11-30 m/6-15 m	45-117 m/18-46 m/9-23 m/4-12 m	57-148 m/22-59 m/11-30 m/6-15 m
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1	1/1
	Audio in / out	■	■	■	■
	Hybrid / public view monitor	–	–	–	–
Housing	Weather rating	IP66 NEMA Type 4X	IP66 NEMA Type 4X	IP66 NEMA Type 4X	IP66 NEMA Type 4X
	Vandal resistant	IK10	IK10	IK10	IK10
	Operating temperature	-50° to +55° C	-50° to +55° C	-50° to +55° C	-50° to +55° C
Power input voltage	Power over Ethernet / 12V / 24V	PoE+/–/■	PoE+/–/■	PoE+/–/■	PoE+/–/■
Accessories	Modular mount compatible	■	■	■	■

IP Video
Fixed Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶DINION IP 5000 HD	▶DINION IP 5000 MP
		1080p	5MP
Commercial Type Number		**NBN-50022-xxx**	**NBN-50051-xxx**
Video analytics at the edge	Essential Video Analytics	–	–
	Intelligent Video Analytics	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■
	Intelligent streaming	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution ▶	HD 1080p	5MP
	Image sensor type ▶	1/2.7"	1/3"
	Max. frames per second (fps) ▶	30 fps@1080p	12 fps@5MP
	Indoor / outdoor	■/■ (with housing)	■/■ (with housing)
	Day / night	■	■
	Wide Dynamic Range (WDR) ▶	76dB	81dB
	ONVIF conformant	■	■
	Built-in microphone	■	■
Advanced features	Intelligent Auto Exposure / Intelligent Defog ▶	–/■	–/–
	Privacy masking	■	■
	Region Of Interest tracking	–	–
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■
	Built-in video analytics	–	–
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color) ▶	0.25 lux	0.35 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.05 lux
	Night vision	–	–
	Max. range at night	–	–
Lens	Automatic Back Focus (ABF)	–	–
	Automatic varifocal	–	–
	Focal length	3.3 - 12 mm (V3)/CS mount	3.3 - 12 mm (V3)/CS mount
	Horizontal Angle of View (HAoV) ▶	34° - 110° (V3)	25° - 82° (V3)
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard) ▶	27-125/11-50/5-25/3-13 (V3)	60-234/24-93/12-47/6-23 (V3)
Storage	Industrial SD card support with health monitoring	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1
	Audio in / out	■/■	■/■
	Hybrid / public view monitor	■/■	■/■
Housing	Weather rating	–	–
	Vandal resistant	–	–
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/–	■/■/–

IP Video
Fixed Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

▶DINION IP 3000i IR

1080p

5MP

Commercial Type Number			NBE-3502-AL	NBE-3503-AL
Video analytics at the edge	Essential Video Analytics		■	■
	Intelligent Video Analytics		–	–
Bitrate management	Intelligent Dynamic Noise Reduction		■	■
	Intelligent streaming		■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming		■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	▶	HD 1080p	5MP
	Image sensor type	▶	1/2.8" CMOS	1/2.9" CMOS
	Max. frames per second (fps)	▶	30 fps@1080p	20 fps@5.3MP 25 fps@4.1MP
	Indoor / outdoor		■/■	■/■
	Day / night		■	■
	Wide Dynamic Range (WDR)	▶	120dB	120dB
	ONVIF conformant		■	■
	Built-in microphone		–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	▶	–/■	–/■
	Privacy masking		■	■
	Region Of Interest tracking		■	■
	Upright video mode		■	■
Alarm triggering	Tamper detection / Video motion detection		■/■	■/■
	Built-in video analytics		■	■
	Audio detection		■	■
Sensitivity	Minimum illumination day mode (color)	▶	0.06 lux	0.5 lux
	Minimum illumination night mode (black / white)	▶	0.015 lux	0.2 lux
	Night vision		■ (infrared)	■ (infrared)
	Max. range at night	▶	30 m (98 ft)	30 m (98 ft)
Lens	Automatic Back Focus (ABF)		–	–
	Automatic varifocal		■	■
	Focal length	▶	3.2 - 10 mm	3.2 - 10 mm
	Horizontal Angle of View (HAoV)	▶	33° - 104°	30° - 89°
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	▶	30-75/12-30/6-15/3-8	63-141/25-56/13-28/6-14
Storage	Industrial SD card support with health monitoring		■	■
	Cloud application storage		Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output		1/1	1/1
	Audio in / out		■/■	■/■
	Hybrid / public view monitor		–/–	–/–
Housing	Weather rating	▶	IP66	IP66
	Vandal resistant		IK10	IK10
	Operating temperature	▶	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	▶	■/■/–	■/■/–

IP Video
Fixed Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶DINION IP starlight 6000 HD	▶DINION IP starlight 7000 HD	▶DINION IP starlight 6000 HD	▶DINION IP starlight 7000 HD
		720p	720p	1080p	1080p
Commercial Type Number		**NBN-63013-B ****	**NBN-73013-BA ****	**NBN-63023-B ****	**NBN-73023-BA ****
Video analytics at the edge	Essential Video Analytics ▶	■	–	■	–
	Intelligent Video Analytics ▶	–	■	–	■
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution ▶	720p	720p	1080p	1080p
	Image sensor type	1/2.8"	1/2.8"	1/2.8"	1/2.8"
	Max. frames per second (fps) ▶	60 fps@720p	60 fps@720p	60 fps@1.3MP / 1080p	60 fps@1.3MP / 1080p
	Indoor / outdoor	■/■(with housing)	■/■(with housing)	■/■(with housing)	■/■(with housing)
	Day / night	■	■	■	■
	Wide Dynamic Range (WDR)	120dB	120dB	120dB	120dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	–	–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/■	■/■	■/■	■/■
	Privacy masking	■	■	■	■
	Region Of Interest tracking	■	■	■	■
	Upright video mode	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■	■/■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.0069 lux	0.0069 lux	0.0069 lux	0.0069 lux
	Minimum illumination night mode (black / white)	0.0008 lux	0.0008 lux	0.0008 lux	0.0008 lux
	Night vision	■ (starlight)	■ (starlight)	■ (starlight)	■ (starlight)
	Max. range at night	–	–	–	–
Lens	Automatic Back Focus (ABF)	■	■	■	■
	Automatic varifocal	–	–	–	–
	Focal length	Lenses available separately C/CS mount 1.8 - 3 mm, 3.8 - 13 mm, 9 - 40 mm	Lenses available separately C/CS mount 1.8 - 3 mm, 3.8 - 13 mm, 9 - 40 mm	Lenses available separately C/CS mount 1.8 - 3 mm, 3.8 - 13 mm, 9 - 40 mm	Lenses available separately C/CS mount 1.8 - 3 mm, 3.8 - 13 mm, 9 - 40 mm
	Horizontal Angle of View (HAoV)	depending on optional lens	depending on optional lens	depending on optional lens	depending on optional lens
DORI distances	Detect / Observe / Recognize / Identify (Distances in according to EN-IEC 62676-4 standard)	depending on optional lens	depending on optional lens	depending on optional lens	depending on optional lens
Storage	Industrial SD card support with health monitoring	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1	2/1
	Audio in / out	■/■	■/■	■/■	■/■
	Hybrid / public view monitor	■/■	■/■	■/■	■/■
Housing	Weather rating	depending on optional housing	depending on optional housing	depending on optional housing	depending on optional housing
	Vandal resistant	depending on optional housing	depending on optional housing	depending on optional housing	depending on optional housing
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/–	■/■/–	■/■/–	■/■/–

** Lens not included

IP Video
Fixed Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶DINION IP starlight 8000 MP	▶DINION IP ultra 8000 MP
		starlight	4K UHD
Commercial Type Number		**NBN-80052-BA****	**NBN-80122-CA****
Video analytics at the edge	Essential Video Analytics	–	–
	Intelligent Video Analytics	■	■
Bitrate management	Intelligent Dynamic Noise Reduction	■	■
	Intelligent streaming	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution ▶	5 MP (16:9)/5.5 MP (4:3)	12 MP (4:3)/UHD (16:9)
	Image sensor type ▶	1/1.8"	1/2.3"
	Max. frames per second (fps) ▶	30 fps@5 MP	20 fps@12MP, 30 fps@UHD
	Indoor / outdoor	■/■ (with housing)	■/■ (with housing)
	Day / night	■	■
	Wide Dynamic Range (WDR) ▶	97dB (5MP)/105dB (1080p) (with IAE + 16dB)	92dB (with IAE + 16dB)
	ONVIF conformant	■	■
	Built-in microphone	–	–
	Power over Ethernet (PoE)	■	■
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/■	■/■
	Privacy masking	■	■
	Region Of Interest tracking	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■
	Built-in video analytics	■	■
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color) ▶	0.0121 lux (5 MP) 0.0083 lux (1080p)	0.11 lux
	Minimum illumination night mode (black / white) ▶	0.004 lux (5 MP) 0.0028 lux (1080p)	0.037 lux
	Night vision ▶	■ (starlight)	–
	Max. range at night	–	–
Lens	Automatic Back Focus (ABF)	■	■
	Automatic varifocal	–	–
	Focal length ▶	C/CS mount 4.1-9 mm/12.5-50 mm	C/CS mount - 35 mm/50 mm/75 mm fixed iris P-iris lens 4-13 mm
	Horizontal Angle of View (HAoV)	Depending on optional lens	Depending on optional lens
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	Depending on optional lens	Depending on optional lens
Storage	Industrial SD card support with health monitoring	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1
	Audio in / out	■/■	■/■
	Hybrid / public view monitor	■/■	■/■
Housing	Weather rating	–	–
	Vandal resistant	–	–
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■/■/–	■/■/–

** Lens not included

IP Video
Specialty Cameras

■ Available – Not available

		▸DINION IP imager 9000 HD	▸FLEXIDOME IP corner 9000 MP
Commercial Type Number		**NAI-90022-AAA**	**NCN-90022-F1**
Video analytics at the edge	Essential Video Analytics	–	–
	Intelligent Video Analytics	■	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■
	Intelligent streaming	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution	HD 1080p	1080p
	Image sensor type	1/2.7"	1/2.7"
	Max. frames per second (fps)	30 fps@1080p	30 fps@1080p
	Indoor / outdoor	–/■	■/–
	Day / night	■	■
	Wide Dynamic Range (WDR)	76dB (with IAE +16dB)	76dB
	ONVIF conformant	■	■
	Built-in microphone	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/–	–/–
	Privacy masking	■	■
	Region Of Interest tracking	■	–
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■
	Built-in video analytics	■	–
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.4 lux	0.3 lux
	Minimum illumination night mode (black / white)	0 lux (IR on)	0 lux (IR on)
	Night vision	■ (infrared)	■ (infrared)
	Max. range at night	120 m (394 ft)	9 m (30 ft)
Lens	Automatic Back Focus (ABF)	■	–
	Automatic varifocal	■	–
	Focal length	10 - 23 mm	2 mm
	Horizontal Angle of View (HAoV)	14.8° - 34°	121°
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	126-296/50-117/25-59/13-30	20/8/4/2
Storage	Industrial SD card support with health monitoring	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1
	Audio in / out	■/■	■/■
	Hybrid / public view monitor	■/■	–/–
Housing	Weather rating	IP66	IP65
	Vandal resistant	IK10	IK10
	Operating temperature	-40° to 50° C (-40° to 122° F)	-10° to 50° C (14° to 122° F)
Power input voltage	Power over Ethernet / 12V / 24V	■ (HiPoE)/■/■	■/■/■

IP Video
Specialty Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶DINION IP thermal 8000	▶DINION IP thermal 8000
		QVGA	VGA
Commercial Type Number		**NHT-8000-F**	**NHT-8001-F**
Video analytics at the edge	Essential Video Analytics	–	–
	Intelligent Video Analytics	■	■
Bitrate management	Intelligent Dynamic Noise Reduction	–	–
	Intelligent streaming	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	–/■/4 streams	–/■/4 streams
Basic features	Maximum resolution ▶	QVGA	VGA
	Image sensor type	Un-cooled vanadium oxide microbolometer	Un-cooled vanadium oxide microbolometer
	Max. frames per second (fps) ▶	9 fps (-FxxQS) or 60 fps (-FxxQF)	9 fps (-FxxVS) or 30 fps (-FxxVF)
	Indoor / outdoor	■/■	■/■
	Day / night	–	–
	Wide Dynamic Range (WDR)	–	–
	ONVIF conformant	■	■
	Built-in microphone	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/–	–/–
	Privacy masking	Eight independent areas, fully programmable	Eight independent areas, fully programmable
	Region Of Interest tracking	–	–
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■
	Built-in video analytics	■	■
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	–	–
	Minimum illumination night mode (black / white)	0 lux	0 lux
	Night vision	■ (thermal)	■ (thermal)
	Max. range at night	–	–
Lens	Automatic Back Focus (ABF)	–	–
	Automatic varifocal	–	–
	Focal length ▶	7.5 mm (-F07Qx), 19 mm (-F19Qx)	9 mm (-F09Vx), 16.7 mm (-F17Vx), 35 mm (-F35Vx), 65 mm (-F65Vx)
	Horizontal Angle of View (HAoV) ▶	7.5 mm: 41.8°, 19 mm: 16°	9 mm: 70°, 16.7 mm: 37.5°, 35 mm: 17.6°, 65 mm: 9.6°
DRI distances	Detection / Recognition / Identification ▶	7.5 mm: 140 m (459 ft) / 35 m (115 ft) / 18 m (59 ft) 19 mm: 380 m (1247 ft) / 95 m (312 ft) / 48 m (157 ft)	9 mm: 155 m (509ft) / 40 m (131 ft) / 20 m (66 ft) 16.7 mm: 315 m (1033 ft) / 80 m (262 ft) / 40 m (131 ft) 35 mm: 690 m (2264 ft) / 170 m (558 ft) / 85 m (279 ft) 65 mm: 1270 m (4167 ft) / 320 m (1050 ft) / 160 m (525 ft)
Storage	Industrial SD card support with health monitoring	■	■
	Cloud application storage	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting (FTP only)
Connections	Alarm input / output	2/1	2/1
	Audio in / out	■/■	■/■
	Hybrid / public view monitor	■	■
Housing	Weather rating	IP66	IP66
	Vandal resistant	–	–
	Operating temperature	-50° to 55° C (-58° to 131° F)	-50° to 55° C (-58° to 131° F)
Power input voltage	Power over Ethernet / 12V / 24V	–/–/■	–/–/■

IP Video
Moving Cameras

■ Available – Not available
▸ = indication of main differentiator(s)

		▸AUTODOME IP 4000i		▸AUTODOME IP starlight 5000i		▸AUTODOME IP starlight 5000i IR
		In-ceiling	12x zoom	Inceiling	30x zoom	IR
Commercial Type Number		**NDP-4502-Z12C-P**	**NDP-4502-Z12-P**	**NDP-5512-Z30C-P**	**NDP-5512-Z30-P**	**NDP-5512-Z30L-P**
Video analytics at the edge	Essential Video Analytics	■	■	■	■	■
	Intelligent Video Analytics	–	–	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■	■
	Intelligent streaming	■	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) /multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	HD 1080p	HD 1080p	HD 1080p	HD 1080p	HD 1080p
	Image sensor type	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
	Max. frames per second (fps)	60 fps@1080p	60 fps@1080p	60 fps@1080p	60 fps@1080p	60 fps@1080p
	▸ Indoor / outdoor	■/–	■/–	■/–	■/■	■/■
	Day / night	■	■	■	■	■
	Wide Dynamic Range (WDR)	94dB	94dB	120dB	120dB	120dB
	ONVIF conformant	■	■	■	■	■
	Built-in microphone	–	–	–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■	■/■	■/■	■/■
	Privacy masking	■	■	■	■	■
	Nbr of presets/guard tours	256/2	256/2	256/2	256/2	256/2
	Wiper	–	–	–	–	–
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■	■/■	■/■
	Built-in video analytics	■	■	■	■	■
	Audio detection	■	■	■	■	■
	PTZ Intelligent Tracking	–	–	–	–	–
Sensitivity	Minimum illumination day mode (color)	0.05 lux	0.05 lux	0.0186 lux	0.0186 lux	0.0186 lux
	▸ Minimum illumination night mode (black / white)	0.01 lux	0.01 lux	0.004 lux	0.004 lux	0 lux (IR on)
	▸ Night vision	–	–	–	–	■ (infrared)
	▸ Max. range at night	–	–	–	–	180m (590 ft)
Lens	▸ Focal length	5.3 - 64 mm	5.3 - 64 mm	4.5 - 135 mm	4.5 - 135 mm	4.5 - 135 mm
	▸ Horizontal Angle of View (HAoV)	4.9° to 58.5°	4.9° to 58.5°	2.4° to 60.9°	2.4° to 60.9°	2.4° to 60.9°
	▸ PTZ Zoom optical/digital	12x/16x	12x/16x	30x/16x	30x/16x	30x/16x
	▸ Tilt angle	-90° to 0°	-90° to 0°	-90° to 0°	-90° to 0°	-90° to 3°
DORI distances	▸ Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	69-897/27-356/14-179/7-90	69-897/27-356/14-179/7-90	65-1833/26-727/13-367/7183	65-1833/26-727/13-367/7183	65-1833/26-727/13-367/7183
Storage	Industrial SD card support with health monitoring	■	■	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1	2/1	2/1
	Audio in / out	■/■	■/■	■/■	■/■	■/■
	Hybrid / public view monitor	–/–	–/–	–/–	–/–	–/–
Housing	▸ Weather rating	IP51	IP65	IP51	IP66	IP66
	▸ Vandal resistant	IK6	IK10	IK06	IK10	–
	▸ Operating temperature	-10° to 55° C (14° to 131° F)	-10° to 55° C (14° to 131° F)	-10° to 60° C (14° to 140° F)	-40° to 60° C (-40° to 140° F)	-40° to 60° C (-40° to 140° F)
Power input voltage	Power over Ethernet / 12V / 24Vac	■ (PoE+)/–/■	■ (PoE+)/–/■	■ (PoE+)/–/■	■ (PoE+)/–/■	■ (PoE+)/–/■

IP Video
Moving Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

	▶AUTODOME IP starlight 5100i	▶AUTODOME IP starlight 5100i	▶AUTODOME IP starlight 5100i IR
	Inceiling, 20x zoom, 4MP, HDR X	20x zoom, 4MP, HDR X	IR+Whitelight, 4MP, HDR X
Commercial Type Number	**NDP-5523-Z20C-P**	**NDP-5523-Z20-P**	**NDP-5523-Z30C-P**
Video analytics at the edge	Essential Video Analytics	■	■	■
	Intelligent Video Analytics	–	–	–
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■
	Intelligent streaming	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	4MP	4MP	4MP
	▶ Image sensor type	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS
	Max. frames per second (fps)	60 fps@4MP	60 fps@4MP	60 fps@4MP
	▶ Indoor / outdoor	■/–	■/■	–/■
	Day / night	■	■	■
	Wide Dynamic Range (WDR)	133dB HDR X	133dB HDR X	133dB HDR X
	ONVIF conformant	■	■	■
	Built-in microphone	–	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	■/■	■/■	■/■
	Privacy masking	■	■	■
	Nbr of presets/guard tours	256/2	256/2	256/2
	▶ Wiper	–	–	■ Auto
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■
	Built-in video analytics	■	■	■
	Audio detection	■	■	■
	PTZ Intelligent Tracking	–	–	–
Sensitivity	▶ Minimum illumination day mode (color)	0.0107 lux	0.0107 lux	0.0101 lux
	▶ Minimum illumination night mode (black / white)	0.0016 lux	0.0016 lux	0 lux (IR on)
	▶ White light	–	–	■
	▶ Night vision	–	–	■ (infrared)
	▶ Max. range at night	–	–	320 m (1050 ft)
Lens	▶ Focal length	6.5 - 130 mm	6.5 - 130 mm	6.6 - 198 mm
	▶ Horizontal Angle of View (HAoV)	3.5° to 61.1°	3.5° to 61.1°	2.1° to 58.5°
	▶ PTZ Zoom optical/digital	20x/16x	20x/16x	30x/16x
	Tilt angle	-90° to 0°	-90° to 0°	-90° to 5°
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	87-1676/34-665/17-335/9-168	87-1676/34-665/17-335/9-168	91-2794/36-1109/18-559/9-279
Storage	Industrial SD card support with health monitoring	■	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in / out	■/■	■/■	■/■
Housing	▶ Weather rating	IP51	IP66	IP66
	▶ Vandal resistant	IK6	IK10	IK10
	Operating temperature	-10° to 55° C (14° to 131° F)	-40° to 60° C (-40° to 140° F)	-40° to 60° C (-40° to 140° F)
Power input voltage	Power over Ethernet / 12V / 24Vac	■ (PoE+)/–/■	■ (PoE+)/–/■	■ IEEE802.3bt/-/■

IP Video
Moving Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶AUTODOME IP starlight 7000i	▶AUTODOME inteox 7000i
		H.265	INTEOX H.265
Commercial Type Number		**NDP-7512**	**NDP-7602-Z30x**
Video analytics at the edge	Essential Video Analytics	–	–
	Intelligent Video Analytics	■	■
Bitrate management	Intelligent Dynamic Noise Reduction	■	■
	Intelligent streaming	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming ▶	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution	HD 1080p	HD 1080p
	Image sensor type	1/2.8"	1/2.8"
	Max. frames per second (fps)	60 fps@720p 30 fps@1080p	60 fps@720p 30 fps@1080p
	Indoor / outdoor	■/■	■/■
	Day / night	■	■
	Wide Dynamic Range (WDR)	120dB	120dB
	ONVIF conformant	■	■
	Built-in microphone	–	–
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■
	Privacy masking	■	■
	Nbr of presets/guard tours	256/2	256/2
	Wiper	–	–
	Intelligent Tracking	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■
	Built-in video analytics	■	■
	Audio detection	■	■
	PTZ Intelligent Tracking	■	■
Sensitivity	Minimum illumination day mode (color)	0.0077 lux	0.0077 lux
	Minimum illumination night mode (black / white)	0.0008 lux	0.0008 lux
	Night vision	■ (starlight)	■ (starlight)
	Max. range at night	–	–
Lens	Focal length	4.3 - 129 mm	4.3 - 129 mm
	Horizontal Angle of View (HAoV)	2.3° to 64.7°	2.3° to 64.7°
	PTZ Zoom optical/digital	30x/12x	30x/12x
	Tilt angle	-90° to 14° (pendant)	-90° to 14° (pendant)
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard)	61-1913/24-765/12-383/6-191	61-1913/24-765/12-383/6-191
Storage	Industrial SD card support with health monitoring	■	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	7/4	7/4
	Audio in / out	■/■	■/■
	Hybrid / public view monitor	–/–	–/–
Housing	Weather rating	IP66 (pendant)/IP54 (in-ceiling)	IP66 (pendant)/IP54 (in-ceiling)
	Vandal resistant	IK10 (with rugged bubble)	IK10 (with rugged bubble)
	Operating temperature	-40° to 55° C (-40° to 131° F)	-40° to 55° C (-40° to 131° F)
Power input voltage	Power over Ethernet / 12V / 24Vac	■ (HiPoE)/–/■ (pendent) ■ (PoE+)/–/■ (In ceiling)	■ (HiPoE)/–/■ (pendent) ■ (PoE+)/–/■ (In ceiling)

IP Video
Moving Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶MIC IP starlight 7100i		▶MIC IP ultra 7100i	▶MIC IP fusion 9000i
			enhanced version	4K UHD	
Commercial Type Number		**MIC-7522-Z30x**	**MIC-7522-Z30xR**	**MIC-7504-Z12xR**	**MIC-9502-Z30xxx**
Video analytics at the edge	Essential Video Analytics	–	–	–	–
	Intelligent Video Analytics	■	■	■	■ (Thermal and Optical)
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■	■
	Intelligent streaming ▶	■	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams	■/4 streams (optical + thermal)
Basic features	Maximum resolution ▶	HD 1080p	HD 1080p	4K UHD	HD 1080p (optical) / 320/640 pixel (thermal)
	Image sensor type ▶	1/2"	1/2"	1"	1/2 8" CMPS (optical) / Un-cooled microbolometer (thermal)
	Max. frames per second (fps) ▶	60 fps@ 1080p	60 fps@ 1080p	30 fps@ UHD	60 fps@1080p (optical) <9/30 fps w/640 pixel (thermal) <9/60 fps w/320 pixel (thermal)
	Indoor / outdoor	–/■	–/■	–/■	–/■
	Day / night	■	■	■	■ (optical)
	Wide Dynamic Range (WDR) ▶	120dB	120dB	62dB	120dB
	ONVIF conformant	■	■	■	■
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■	–/■	–/■
	Privacy masking	■	■	■	■
	Nbr of presets/guard tours	256/2	256/2	265/2	256/2
	Wiper / Built in window defroster ▶	■/–	■/■	■/■	■
	Intelligent Tracking	■	■	■	■
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■	■/■
	Built-in video analytics	■	■	■	■
	Audio detection	■	■	■	■
	PTZ Intelligent Tracking	■	■	■	■
Sensitivity	Minimum illumination day mode (color) ▶	0.0047 lux	0.0047 lux	0.292 lux	0.0077 lux (optical) N.A. (thermal)
	Minimum illumination night mode (black / white) ▶	0.0013 lux	0.0013 lux	0.0110 lux	0.0008 lux (optical) 0 lux (thermal)
	Night vision ▶	■ (optional illuminator)	■ (optional illuminator)	■ (optional illuminator)	■ (thermal)
	Max. range at night ▶	550 m (1804 ft)	550 m (1804 ft)	300 m (984 ft)	300 m (971 ft) (optical) 1540 m (5050 ft) w/320 pixel (thermal) 3550 m (11,600 ft) w/640 pixel (thermal)
Lens	Focal length ▶	6.6 - 198 mm	6.6 - 198 mm	9.3 - 111.6 mm	4.3 - 129 mm (optical), 19 mm w/320 pixel (thermal) 50 mm w/640 pixel (thermal)
	Horizontal Angle of View (HAoV) ▶	2.1° to 58.3°	2.1° to 58.3°	6.1° to 64.6°	2.3° to 63.7° (optical) 16° w/320 pixel, 12.4° w/640 pixel (thermal)
	PTZ Zoom optical/digital ▶	30x/12x	30x/12x	12x/12x	30x/12x
	Tilt angle ▶	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard) ▶	wide 69-226/27-89/14-46/7-23 tele 2895-6873/834-2726/419-1375/210-689	wide 69-226/27-89/14-46/7-23 tele 2895-6873/834-2726/419-1375/210-689	wide 108-355/43-142/22-71/11-36 tele 154-504/61-202/31-101/15-50	62-1913/25-765/12-383/6-191
Storage	Memory card slot ▶	-	■ (up to 2TB)	■ (up to 2TB)	■ (16 GB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	5/3 (with MIC-ALM-WAS-24)	5/3 (with MIC-ALM-WAS-24)	5/3 (with MIC-ALM-WAS-24)	5/3 (with MIC-ALM-WAS-24)
	Audio in / out ▶	■	■	■	■/■
	Hybrid / public view monitor	■ (with external decoder)/–	■ (with external decoder)/–	■ (with external decoder)/–	–
Housing	Weather rating	IP68	IP68	IP68	IP68
	Vandal resistant	IK10	IK10	IK10	IK10
	Operating temperature	-40° to +65° C (-40° to +149° F)	-40° to +65° C (-40° to +149° F)	-40° to +65° C (-40° to +149° F)	-40° to 65° C (-40° to 149° F)
Power input voltage	Power over Ethernet / 12V / 24Vac	■ (PoE++)/–/■	■ (PoE++)/–/■	■ (PoE++)/–/■	■ (HiPoE)/–/■

IP Video
Moving Cameras

■ Available – Not available
▶ = indication of main differentiator(s)

		▶MIC inteox 7100i	▶MIC inteox 7100i	▶MIC inteox 7100i
		2MP	2MP enhanced version	8MP
Commercial Type Number		**MIC-7602-Z30x**	**MIC-7602-Z30xR**	**MIC-7604-Z12xR**
Video analytics at the edge	Essential Video Analytics	–	–	–
	Intelligent Video Analytics	■	■	■
Bitrate management	Intelligent Dynamic Noise Reduction	■	■	■
	Intelligent streaming	■	■	■
	Compression (H.265 / H.264 & MJPEG) / multi-streaming	■/■/4 streams	■/■/4 streams	■/■/4 streams
Basic features	Maximum resolution ▶	HD 1080p	HD 1080p	4K UHD
	Image sensor type ▶	1/2"	1/2"	1"
	Max. frames per second (fps) ▶	30 fps@ 1080p	30 fps@ 1080p	30 fps@ UHD
	Indoor / outdoor	–/■	–/■	–/■
	Day / night	■	■	■
	Wide Dynamic Range (WDR) ▶	120dB	120dB	62dB
	ONVIF conformant	■	■	■
Advanced features	Intelligent Auto Exposure / Intelligent Defog	–/■	–/■	–/■
	Privacy masking	■	■	■
	Nbr of presets/guard tours	256/2	256/2	256/2
	Wiper / Built in window defroster ▶	■/–	■/■	■/■
	Intelligent Tracking	–	–	–
	3rd party apps possible	■	■	■
	AI based Object classification detectors ▶	–	–	–
Alarm triggering	Tamper detection / Video motion detection	■/■	■/■	■/■
	Audio detection ▶	■	■	■
	PTZ Intelligent Tracking	–	–	–
Sensitivity	Minimum illumination day mode (color) ▶	0.0047 lux	0.0047 lux	0.292 lux
	Minimum illumination night mode (black / white) ▶	0.0013 lux	0.0013 lux	0.0110 lux
	Night vision	■ (optional illuminator)	■ (optional illuminator)	■ (optional illuminator)
	Max. range at night ▶	550 m (1804 ft)	550 m (1804 ft)	300 m (984 ft)
Lens	Focal length ▶	6.6 - 198 mm	6.6 - 198 mm	9.3 - 111.6 mm
	Horizontal Angle of View (HAoV) ▶	2.1° to 58.3°	2.1° to 58.3°	6.1° to 64.6°
	PTZ Zoom optical/digital ▶	30x/12x	30x/12x	12x/12x
	Tilt angle ▶	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)	-55° to +90° (upright), -95° to +55° (inverted), -80° to +65° (canted)
DORI distances	Detect / Observe / Recognize / Identify (Distances according to EN-IEC 62676-4 standard) ▶	wide 69-226/27-89/14-46/7-23 tele 2895-6873/834-2726/419-1375/210-689	wide 69-226/27-89/14-46/7-23 tele 2895-6873/834-2726/419-1375/210-689	wide 108-355/43-142/22-71/11-36 tele 154-504/61-202/31-101/15-50
Storage	Memory card slot ▶	-	■ (up to 2TB)	■ (up to 2TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	–	–	–
	Audio in / out ▶	■	■	■
	Hybrid / public view monitor	■ (with external decoder)/–	■ (with external decoder)/–	■ (with external decoder)/–
Housing	Weather rating	IP68	IP68	IP68
	Vandal resistant	IK10	IK10	IK10
	Operating temperature	-40° to +65° C (-40° to +149° F)	-40° to +65° C (-40° to +149° F)	-40° to +65° C (-40° to +149° F)
Power input voltage	Power over Ethernet / 12V / 24Vac	■ (PoE++)/–/■	■ (PoE++)/–/■	■ (PoE++)/–/■

IP Video
Digital Recording

■ Available – Not available
▶ = indication of main differentiator(s)

			All-in-one solution		
			▶DIVAR IP all-in-one 5000	▶DIVAR IP all-in-one 7000 2U	▶DIVAR IP all-in-one 7000 3U
Commercial Type Number			**DIP-524xxx-xxx**	**DIP-738x-xxx**	**DIP-73Gx-xxx**
Basic functions	Max. system size (channels)	▶	42	256	256
	Integrated video management		■	■	■
	RAID Level	▶	–	RAID-5, RAID-6	RAID-5, RAID-6
	Operating system drive	▶	On separate SSD	On separate redundant SSD	On separate redundant SSD
	Supported resolutions		CIF/2CIF/4CIF/720p/1080p/5MP/UHD	CIF/2CIF/4CIF/720p/1080p/5MP/UHD	CIF/2CIF/4CIF/720p/1080p/5MP/UHD
	Video compression		H.264, H.265, MPEG-4, ONVIF, RTSP, JPEG	H.264, H.265, MPEG-4, ONVIF, RTSP, JPEG	H.264, H.265, MPEG-4, ONVIF, RTSP, JPEG
	Transcoding		■	■	■
	ONVIF		■	■	■
Mechanical	Form factor	▶	4-bay Mini-Tower	2U 19-inch Rack Mount	3U 19-inch Rack Mount
	Network connections (LAN)	▶	2x Gigabit Ethernet	2x Gigabit Ethernet, 1x 100Mbit (Mgmt)	2x Gigabit Ethernet, 1x 100Mbit (Mgmt)
	USB ports	▶	4x USB	2x USB2.0, 3x USB3.1, 1x USB-C	2x USB2.0, 3x USB3.1, 1x USB-C
	Number of power supplies	▶	1	2	2
	Power supplies hot swappable	▶	–	■	■
Video output	Connector type	▶	1 HDMI2.0, 1 DP, 1 DVI-D (GPU models: 4x mini-DP)	2x DP, 1x DVI	2x DP, 1x DVI
	Monitor output	▶	3 (GPU-models: 4)	3	3
Audio	In / out channels		42	128	128
	Compression type		G.726	G.726	G.726
	Synchronous audio		■	■	■
	Associate multiple cameras to 1 Audio		■	■	■
Recording	Video Recording Manager (VRM)		■	■	■
	Schedule recording modes		■	■	■
Storage options	Max. drives supported	▶	4	8	16
	Available capacities per drive		4, 8 or 12TB	4, 8 or 12TB	4, 8 or 12TB
	Base system capacity TB	▶	0, 16, 32 or 48TB	0, 32, 64 or 96TB	0, 64, 128 or 192TB
	Max. Base system capacity TB	▶	48TB	96TB	192TB
	Full system capacity TB	▶	144TB	864TB	960TB
	Extenable / external support		iSCSI	iSCSI	iSCSI
Storage extensions	Max. number of units	▶	2x DIVAR IP all-in-one 5000 configured as storage extension	4x DIVAR IP all-in-one 7000 configured as storage extension	4x DIVAR IP all-in-one 7000 configured as storage extension
	Maximum drives supported	▶	4	8	16
	Available capacities per drive	▶	0, 16, 32 or 48TB	4, 8 or 12TB	4, 8 or 12TB
	Hot swappable	▶	–	■	■
Export/back-up of data	Data format		native, MOV, ASF, MP4	native, MOV, ASF, MP4	native, MOV, ASF, MP4
	Built-in DVD writer		–	■	■
	Supported devices	▶	External CD/DVD Writer, USB 2.0, USB 3.0, iSCSI	USB 2.0, USB 3.0, iSCSI, internal CD/DVD Writer	USB 2.0, USB 3.0, iSCSI, internal CD/DVD Writer
	Back-up mode		Manual or Automatic	Manual or Automatic	Manual or Automatic

IP Video
Digital Recording

▪ Available – Not available
▸ = indication of main differentiator(s)

All-in-one solution				
		▸DIVAR IP all-in-one 5000	▸DIVAR IP all-in-one 7000 2U	▸DIVAR IP all-in-one 7000 3U
Commercial Type Number		**DIP-524xxx-xxx**	**DIP-738x-xxx**	**DIP-73Gx-xxx**
Redundancy	Power suply redundancy ▸	–	▪	▪
	Hot swappable HDD ▸	–	▪	▪
	Teamed Ethernet Network ports ▸	▪	▪	▪
	Redundant operating system drive ▸	–	▪	▪
Software options	PTZ control	▪	▪	▪
	CCTV keyboard support	▪	▪	▪
	Admin control	▪	▪	▪
	Export options	▪	▪	▪
Remote access	Mobile device (smart phone / tablet)	▪ Video security app	▪ Video security app	▪ Video security app
	Network	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet
	Web browser access	▪	▪	▪
	Simultaneous accessible users	4	4	4
Advanced features support	Forensic search support (metadata)	▪	▪	▪
	Webclient	▪	▪	▪
Supported software	Bosch Video Client	-	-	-
	Bosch Video Management System	▪ (v9.0 or newer)	▪ (v10.1 or newer)	▪ (v10.1 or newer)
	3rd Party software	–	–	–
3rd party integration tools	Optional ATM/POS integration	▪	▪	▪
	SDK (IPP*)	▪	▪	▪

* Integration Partner Program (IPP) for more information visit https://www.boschsecurity.com/xc/en/partners

IP Video
Digital Storage

Network Video Recorder

▶DSA E-Series

■ Available – Not available

Commercial Type Number		DSA-N6xxxx-xxxx
Basic functions	Max. system size (channels)	800
	Integrated video management	–
	RAID Level	RAID-5/RAID-6/DDP
	Supported resolutions	CIF/2CIF/4CIF/720p/1080p/5MP
	Video compression	H.264, H.265, MPEG-4, ONVIF, RTSP, JPEG
	Transcoding	–
	ONVIF	■
Mechanical	Form factor	2U/4U 19-inch Rack Mount
	Network connections (LAN)	2x Gigabit Ethernet/ 2x 10 Gigabit Ethernet
	USB ports	–
	Number of power supplies	2
	Power supplies hot swappable	■
Video output	Connector type	–
	Monitor output	–
Audio	In / out channels	800 (audio playback via remote station only)
	Compression type	G.726
	Synchronous audio	■
	Associate multiple cameras to 1 Audio	■
Recording	Video Recording Manager (VRM)	–
	Schedule recording modes	■
Storage options	Max. drives supported	12/60
	Available capacities per drive	4, 8 or 12TB and 16TB only for 12 bay
	Base system capacity TB	–
	Max. Base system capacity TB	12 bay: 48/96/144/192TB 60 bay: 240/480/720TB
	Full system capacity TB	12 bay: 384/ 768/ 1152/ 1536TB 60 bay: 720/1440/2160TB
	Extenable / external support	6Gb/s SAS (Copper)
Storage extentions	Max. number of units	12 bay: 7 / 60 bay: 3
	Maximum drives supported	12/60
	Available capacities per drive	4, 8 or 12TB and 16TB only for 12 bay
	Hot swappable	■
Export/back-up of data	Data format	WMF, Bosch ASF
	Built-in DVD writer	–
	Supported devices	External CD/DVD Writer, USB 2.0, iSCSI
	Back-up mode	manual or automatic
Redundancy	Power supply redundancy	■
	Hot swappable HDD	■

Table continued on the next page

IP Video
Digital Storage

Network Video Recorder

▶DSA E-Series

▮ Available – Not available

Commercial Type Number		DSA-N6xxxx-xxxx
Software options	PTZ control	–
	CCTV keyboard support	–
	Admin control	–
	Export options	–
Remote access	Mobile device (smart phone / tablet)	–
	Network	2x 10 Gigabit Ethernet
	Web browser access	–
	Simultaneous accessible users	–
Advanced features support	Forensic search support (metadata)	–
	Webclient	▮
Supported software	Bosch Video Client	–
	Bosch Video Management System	–
	3rd Party software	–
3rd party integration tools	Optional ATM/POS integration	–
	SDK (IPP*)	–

* Integration Partner Program (IPP) for more information visit https://www.boschsecurity.com/xc/en/partners

IP Video
Video Software

▪ Available – Not available
▸ = indication of main differentiator(s)

▸Video Management System

Name			BVMS Viewer	BVMS Lite	BVMS Plus	BVMS Professional	BVMS Enterprise
System features	Included cameras (max cameras)	▸	16 (500)	8 (42)	8 (256)	8 (2000)	200.000
	Maximum number of clients	▸	1	5	10	100	100
	Maximum number of Bosch Video Management System (VMS) servers	▸	1	1	1	1	10/30
	Maximum number of Bosch Video Recording Manager (VRM) servers	▸	32**	2	2	125	1.250
	Maximum storage capacity	▸	n.a.	2 x 2PB	2x 2 PB	125 x 2PB	1.250 x 2PB
	Forensic search		▪	▪	▪	▪	▪
	DVR support		▪	▪	▪	▪	▪
	Events and alarms	▸	–	▪	▪	▪	▪
	Streamlining	▸	–	▪	▪	▪	▪
	Remote access	▸	–	▪	▪	▪	▪
	Dynamic transcoding		▪	▪*	▪*	▪*	▪*
	Web client	▸	–	▪	▪	▪	n.a.
	Bosch Mobile Video Client App support	▸	–	▪	▪	▪	n.a.
	Keyboard support	▸	–	▪	▪	▪	▪
	Maps	▸	–	▪	▪	▪	▪
	Audio support	▸	–	▪	▪	▪	▪
	Bosch Config Wizard	▸	–	▪	▪	▪	n.a.
	Live & Playback sites	▸	▪**	-	-	9.999	9.999
Supported camera devices	Bosch panoramic cameras		▪	▪	▪	▪	▪
	Bosch UHD cameras		▪	▪	▪	▪	▪
	Bosch HD cameras		▪	▪	▪	▪	▪
	Bosch SD / VGA cameras		▪	▪	▪	▪	▪
	Third party ONVIF Profile S cameras		▪	▪	▪	▪	▪
Redundancy	Automatic Network Replenishment (ANR)	▸	–	▪	▪	▪	▪
	VMware® vSphere / Microsoft Hyper-V Virtualization support	▸	–	▪	▪	▪	▪
	VMware® vSphere High Availability support	▸	–	▪	▪	▪	▪
	Microsoft Hyper-V Failover Cluster and Hyper-V Replica support	▸	–	▪	▪	▪	▪
	Failover Video Recording Manager (VRM)	▸	–	▪	▪	▪	▪
	Dual Recording	▸	–	▪	▪	▪	▪
Alarm management	Logbook	▸	–	▪	▪	▪	▪
	Events and alarms	▸	–	▪	▪	▪	▪
	Email notification	▸	–	▪	▪	▪	▪
	SMS notification	▸	–	▪	▪	▪	▪
	Alarm-based recording	▸	n.a.	▪	▪	▪	▪
	Motion recording	▸	n.a.	▪	▪	▪	▪
	Video Analytics events	▸	–	▪	▪	▪	▪
	SNMP support	▸	–	▪	▪	▪	▪
	Workflow with instructions on alarm	▸	–	▪	▪	▪	▪
Integration	Maximum number of Bosch B/G Series intrusion panels	▸	–	5	10	20	200
	I/O module support	▸	–	▪	▪	▪	▪
	Active directory connectivity		▪	▪	▪	▪	▪
	ATM-POS support	▸	–	▪	▪	▪	▪
	Additional data	▸	–	▪	▪	▪	▪
	Software Development Kit (SDK)	▸	–	▪	▪	▪	▪

* Additional hardware required

** Limited

IP Video
Viewing Software

■ Available – Not available
▶ = indication of main differentiator(s)

		▶Video Security App	▶Video Security Client
Name		**Video Security App**	**Video Security Client**
	▶ No. of channels	120 per site	128 per site
	▶ Usage situation	Mobile	PC and Mobile
	▶ Workstation OS support	iOS, Android	Windows 10.1607 “Anniversary Update”(64- bit) or higher
	Software based Video IP Platform	■	■
	Multi-site Support (independent systems tied together)	–	–
	Multi-site Support (dispersed system recording, cameras, remote independent client)	–	–
Key technologies supported	Dynamic Transcoding	■	■
	Video analytics	■	■
	Client side dewarping (panoramic)	■	■
	4K UHD		■
	starlight		
Encoding	H.264/HEVC/H.265	■/■/■	■/■/■
	MPEG-4	■	■
	3rd party camera support	■ (with VSG)	■ (with VSG)
Viewing	Multi-monitor support	–	–
	16:9 monitor support	n/a	■
	Viewing frequency	–	–
	Dynamic cameo scaling	■	■
Alarm Management	User management	–	–
	Digital I/O alarms	–	–
	System event alarms	–	–
	Motion alarms	–	–
	Event response and command scripts	–	–
	Video analytics alarms	–	–
	Video analytics forensic search	■ (Simple search)	■ (Simple search)
	Audio	–	–
	Compound events	–	–
	Scheduled dependent alarming	–	–
	Event allocation to user groups	–	–
Control	AUTODOME Intelligent Tracking	■	■
	PTZ	■	■
	IntuiKey	–	–
	Virtual matrix	–	–
Storage	@edge camera support	■	■
	iSCSI	■	■
	NVR support	–	–
	VRM	■	■
	Video analytics metadata	■	■
	Support redundant storage	–	–
	DLA Support (VRM Mode)	■	■
Integration	BRS	–	–
	DxR 400 / 600 / 700	–	–
	Virtual inputs	–	–

IP Video
Encoders

▶VIDEOJET multi 4000

■ Available – Not available

Commercial Type Number		VJM-4016
	Description	16 Channel H.264 Video Encoder
Video/Audio	Camera Inputs	16
	Video Codec	H.264 High Profile
	Max. frames per second (fps)	25/30@4CIF
	Audio in / out	2/1
	Transcoding at the edge	–
Intelligence	Direct-to-iSCSI	■
	Video Analytics	Motion+
Interfaces	Alarm In	4
	Relay Out	1
	ONVIF conformant	■

IP Video
Decoders

▶VIDEOJET decoder 7000

■ Available – Not available
▶ = indication of main differentiator(s)

Commercial Type Number			VJD-7513
	Description	▶	High performance H.265 UHD decoder
Video/Audio	Monitor Outputs	▶	2 (HDMI, DP via USB-C)
	Video Codec	▶	H.265, H.264, MPEG-4, MPEG-2
	Max. frames per second (fps)	▶	4x 30@UHD* 10x 60@1080p* 18x 60@720p* 28x 60@432p*
	Audio in / out	▶	via HDMI
	Transcoding at the edge		–
Interfaces	Alarm In	▶	–
	Relay Out	▶	–
	ONVIF conformant		–
Other	Keyboard	▶	supported for IP Matrix
	IP Matrix		■

* at 25° C / 77° F with a single HD monitor connected

IP Video
Flat Panel Monitors

▪ Available – Not available
▸ = indication of main differentiator(s)

▸**High Definition**

Commercial Type Number			UML-245-90	UML-275-90	UML-274-90	UML-324-90	UML-434-90	UML-554-90
Display	Type	▸	23.8" LED	27" LED	27" LED	32" LED	43" LED	55" LED
	Max Pixel Resolution	▸	1920x1080	3840x2160	1920x1080	1920x1080	1920x1080	3840x2160
	Aspect Ratio		16:9	16:9	16:9	16:9	16:9	16:9
	Brightness (cd/m2)	▸	250	300	350	500	400	450
	Contrast Ratio	▸	1000:1	1000:1	3000:1	3000:1	3000:1	4000:1
	Backlight	▸	30,000 hrs	30,000 hrs	30,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs
	Viewing Angle (HxV)	▸	178x178	178x178	178 x 178	178 x 178	178 x 178	178 x 178
Connectors	Composite Video (BNC)		–	–	–	–	–	–
	VGA	▸	–	–	▪	▪	▪	▪
	DVI-D	▸	–	–	▪	▪	▪	▪
	HDMI		▪	▪	▪	▪	▪	▪
	Display Port		▪	▪	▪	▪	▪	▪
Audio	Input	▸	–	–	▪	▪	▪	▪
	Speaker		▪	▪	▪	▪	▪	▪
Mechanical	Width	▸	21.2-inch	24.2-inch	24.9-inch	29-inch	38.5-inch	49.3-inch
	Height	▸	15.2-inch	16.8-inch	14.6-inch	16.9-inch	22.3-inch	28.4-inch
	Depth	▸	8.6-inch	8.6-inch	2.5-inch	2.8-inch	2.9-inch	2.9-inch
	Weight	▸	7.7 lb	8.8 lb	14.9 lb	25.5 lb	41 lb	67.2 lb
Power	Power Supply	▸	Separate	Separate	Integrated	Integrated	Integrated	Integrated
	Power Consumption	▸	<35W	<45W	<50W	<60W	<75W	<155W
Misc.	Picture-in-picture	▸	–	–	–	–	–	–
	Front Panel Lockout	▸	–	–	–	–	–	–
	IR Remote	▸	–	–	▪	▪	▪	▪
Cables Included	VGA-to-VGA	▸	–	–	▪	▪	▪	▪
	HDMI-to-HDMI		▪	▪	▪	▪	▪	▪
	DVI-to-DVI		–	–	–	–	–	–
	DP-to-DP		▪	▪	▪	▪	▪	▪
	DP-to-MiniDP converter		▪	▪	▪	▪	▪	▪
Mounting	VESA Compliant		▪	▪	▪	▪	▪	▪
	Rack-mountable		–	–	–	–	–	–
	Fixed desktop stand		within box	within box	within box	within box	within box	within box
	Adjustable desktop stand	▸	UMM-LED27-SD	UMM-LED27-SD	UMM-LED27-SD	–	–	–
	Fixed Wall Mount	▸	–	–	–	–	ST650	ST650
	Swivel/Tilt Wall Mount	▸	UMM-LW-30B	UMM-LW-30B	UMM-LW-30B	UMM-WMT-32	–	–

Industrial Monitor Solutions

DuraVision®

Highly configurable. Always reliable.

DuraVision monitor solutions offer robust performance and a high degree of mounting flexibility for security & surveillance, industrial environments, maritime, and more.

EIZO®

Security and Surveillance

DX0211-IP

- H.265, H.264, MJPEG decoding
- Dual HDMI outputs
- Connects to up to 64 IP cameras via LAN
- Supports up to 3840 x 2160 resolution

NEW

FDF2711W-IP

- 27"
- 1920 x 1080 resolution
- H.265, H.264, MJPEG decoding
- 32 simultaneous display channels

FDF4627W-IP

- 1920 × 1080 resolution
- Connects to up to 16 IP cameras via LAN
- Visibility-enhancing technology

FDF2304W-IP

- 23"
- 1920 × 1080 resolution
- Connects to up to 16 IP cameras via LAN
- Visibility-enhancing technology

FDS1903

- 19"
- 1280 × 1024 resolution
- PC and video Inputs
- LED backlight

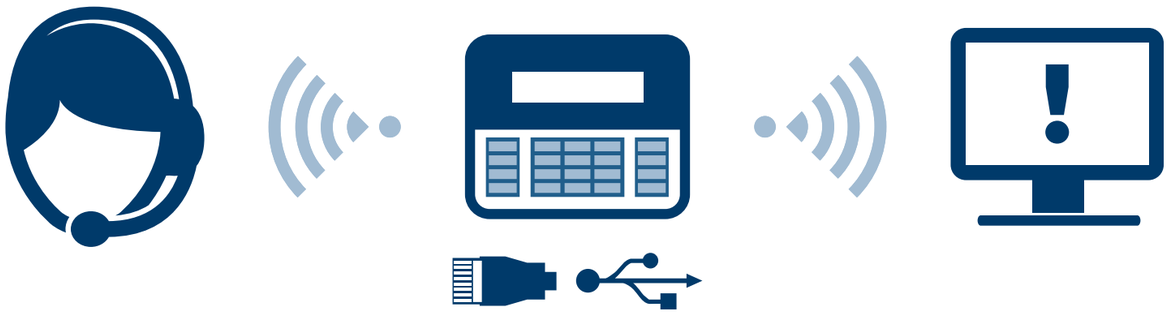
FDS1703

- 17"
- 1280 × 1024 resolution
- PC and video Inputs
- LED backlight

B and G Series
Integrated Security Solution

BOSCH
Invented for life

Greater technology



Use your Ethernet or cellular data network with your control panel to send alarm transmissions to the central monitoring station — eliminating the need for a phone line, reducing costs and increasing security.

With B and G Series, you are prepared for the future. The panels support both current and future Internet Protocols—IPv4 and IPv6—to protect your investment as technology changes. Multiple interfaces allow Ethernet and USB connections, and simple, dual plug-in communication modules enable easy adoption of new technologies.

Remote firmware updates ensure easy maintenance or feature enhancements. Remote programming with advanced diagnostic capabilities makes maintenance more convenient and allows technicians to service your system or modify certain functions without disrupting operations at your facility.

Greater customization

With custom functions, a single action or presentation of access credentials can initiate multiple functions. This means easy arming for overtime work, holidays, meetings after hours, and more.

Scheduled events also ensure the system is armed or disarmed at pre-determined times, or that other functions are performed based on the system's internal clock and calendar.

Bonjour! Hola! Olá! Hello!
For enhanced ease-of-use, system text and notifications can be displayed in English, Spanish, French or Portuguese. The language can automatically switch based on the user for reduced errors and false alarms.

With our Remote Security Control app, you can also operate your system from an iOS or Android device. Arm or disarm the system, check status and control monitored points or doors using a smart phone or tablet. You can even view video or still images from Bosch IP cameras integrated with the panel.

Control individual rooms or up to 32 distinct areas of your facility. These flexible systems provide optimum performance and protection for a wide range of building configurations.

Unique features only from Bosch bring you an added layer of security:

Area Re-Arm ensures critical areas are only disarmed for short periods and automatically re-arms them after a pre-determined time, ideal for ATM service room or pharmacy storage areas where no EN certifications are required.

Monitor Delay checks doors and other points in the system even when disarmed. The control panel provides notification and reports of specified conditions, such as an emergency exit propped open or loading dock door left ajar. This helps mitigate risk and help control HVAC costs.

www.MidChes.com | Support@MidChes.com | (410) 612-9640

Greater flexibility

Out most advanced control panels, the B9512G and B8512G provide easy integration to a wide range of security components that create unique solutions for any application.

The B and G Series are compatible with a flexible line of keypads, IP cameras, access readers, smoke detectors, intrusion detectors, automation technology and wireless transmitters.

Keypads

Choose from an award-winning color graphic touch screen display, a two-line LCD keypad or a two-line capacitive touch keypad. With programmable text, the system can be customized to provide the most complete information for response to critical events.

GOOD DESIGN

Intrusion Detectors

Select from a full line of intrusion detectors with excellent catch performance and false alarm immunity, including the Professional Series, Commercial Series and Blue Line Gen2.

IP Cameras

A broad portfolio of IP cameras from Bosch integrate directly with the control panels. Choose from compact cameras ideal for well-lit indoor areas to high-performance cameras that deliver superior image quality in even the most challenging lighting or environmental conditions. The Bosch Video Management System (BVMS) adds another layer or convenience with a graphical representation of alarm events and arm / disarm control from the software.

Wireless Transmitters

RADION component options feature superior range, reliability, flexibility, and battery life to provide maximum security with minimal inconvenience and cost.

Smoke Detectors

Select from a variety of compatible detectors that include addressable photoelectric smoke and photoelectric smoke with heat sensor.

Automation Technology Coming Soon!

Add a SmartHome Controller to connect the control panel with a wide variety of Z-Wave wireless devices — including lighting controls, door locks, temperature sensors, HVAC controls and more — to provide automation and remote monitoring capabilities from a convenient app or web-based interface.

Z-WAVE

Greater peace of mind

Bosch employs the highest standards to ensure quality and performance. Each control panel has also passed rigorous testing by Underwriters Laboratory (UL), an independent product safety testing and certification organization.

Choose B and G Series from Bosch for greater quality, greater control and greater security!

Availability of features and services may vary by country or region. Not all features are available in all languages.

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G Series Kits
Intrusion

B9512G

Panel | Enclosure | Communications Module | Lock & Key Set | Transformer

Part number	B9512G	B9512G-E*	B8103	B430 (PSTN)	B444 (4G LTE)	D101F	D1640
B9512G-CC	■		■		■	■	■
B9512G-C	■		■			■	■
B9512G-CP	■		■	■		■	■
B9512G-ECC		■	■		■	■	■
B9512G-ECP		■	■	■		■	■

* Economy models do not include on-board Ethernet

B8512G

Panel | Enclosure | Communications Module | Lock & Key Set | Transformer

Part number	B8512G	B8512G-E*	B8103	B430 (PSTN)	B444 (4G LTE)	D101F	D1640
B8512G-CC	■		■		■	■	■
B8512G-C	■		■			■	■
B8512G-CP	■		■	■		■	■
B8512G-ECC		■	■		■	■	■
B8512G-ECP		■	■	■		■	■

* Economy models do not include on-board Ethernet

G Series
Intrusion

Miscellaneous

Remote Security Control Mobile App

D1218 12V Battery

D113 Battery Supervision Module

D122/ D122L Battery harness

D1640 Transformer

RADION Wireless Devices

B810 SDI2 Wireless Receiver
RFRP–A Wireless Repeater

RFPR–C12–A Curtain PIR, Pet Immune 40 x 5 ft.

RFDL–11–A PIR Microwave TriTech 35 x 25 ft.

RFPR–12–A PIR, Pet Immune 40 ft.

RFGB–A Glass Break Detector

RFDW–RM–A Recessed Door/Window Contact

RFDW–SM–A Surface Mount Door/Window Contact

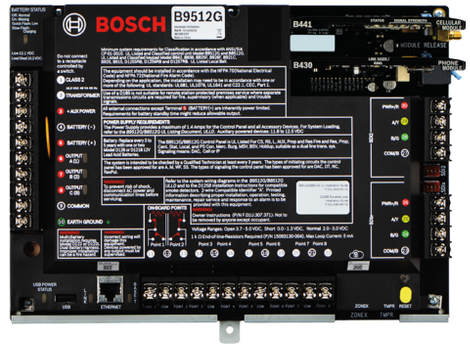
RFUN–A Universal Transmitter w/ Door/Window Contact

RFIN–A Inertia Detector

RFSM–A Wireless Smoke Detector

RFBT–A Billtrap Transmitter

B9512G/B8512G

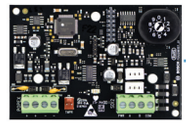


Point Expansion

D8125MUX Multiplex Interface

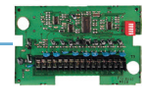
B600 Retrofit (ZONEX)Module

B299 SDI2 Popex Expansion



DS7457i Single Zone Mini-Mod

DS7432 Eight-Input



D9127U/T Popit Module

DS7461i Single Zone Input

D8128D Octo-Popit

ZX938Z 360 Motion w/POPIT

DS7465i Input-Output

D8129 Octo-Relay

ZX935Z Motion w/POPIT

SDI2 Devices

B942/B942W Touchscreen

B920 Text w/ Function Keys

B915 Text

B56 Surface Mount Backbox

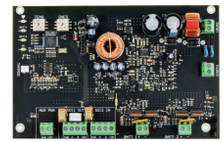
B921C Capacitive Touch

B930 Text w/ Soft Keys

B208 Octo-Input Module

B308 Octo-Output Module

B520 Power Supply



B430/440/441/443 Cellular Module

B450 Plug-in Module Interface for B44x cards SDI or SDI2

RFPB-SB/TB-A 1 & 2 Button Panic Devices

RFKF-TBS/FBS-A 2 & 4 Button Keyfobs

DS7460i Dual-Zone Input

D5060 Programmer

ZX794Z Motion w/POPIT

B96 Trim Plate for B Series Keypads

B426 Ethernet Communication Module SDI or SDI2

Professional Series

ISC-PPR1-W16/ WA16G PIR
60 ft.

ISC-PDL1-W18G/ WA18G TriTech
60 ft.

ISC-PDL1-WC30G
TriTech
100 ft.

Commercial Series

ISC-CDL1-W15x
TriTech
50 ft.

ISC-CDL1-WA15x
TriTech+ w/Anti-Mask
50 ft.

Blue Line Gen2 Series

ISC-BDL2-WP12G/ WP6G/W12G TriTech
40 X 40 ft./20 x 20 ft./ 40 x 40 ft.

ISC-BPR2-W12/ WP12 PIR 40 x 40 ft.

ISC-BPQ2-W12
Quad PIR
40 x 40 ft.

Classic Series

DS9370/ DS9371
360 TriTech
70 ft.

DS938Z/ DS9360
360 PIR 50 ft.

DS936
Low-profile
360 PIR

Glass Breaks

DS1101i/1102i/1103i/1108i

Sirens

D116/118

D117/119

Enclosures & Accessories

D8103

D8108A

D137

D138

ICP-EZTS Universal Tamper

Access Modules & Card Readers

B901
SDI2 Access Mod

BioMetric Readers

ARD-FP
BEPIC-OC/ EPHP-OC
BioEntry Plus FP

PIN Reader

D8229

HID Prox

D8223/8224/8225

RFID Readers

ARD-AYH12
EM Prox
Wall Mount

ARD-AYJ12
EM Prox
Mullion

ARD-AYK12
EM Prox
Mini Mullion

ARD-AYQ12
EM Prox
Vandal Resistant

Request-to-Exit Sensors

DS150i

DS160

LECTUS Secure Readers (iClass SE)

ARD-SER40-WI

ARD-SER10-WI

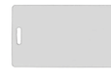
Credentials

iClass

ACD-IC2K26-50
ACT/ACA-IC2K26-10

HID PROX

D8236-10



D8236KF-10

RFID Tags for Readers & B942 Kepads

ACA-ATR13

ACD-ATR11ISO

ACD-ATR14CS

Z-Wave

G100 Z-Wave
Home Control Gateway

Remote Security Control Plus Mobile App

SDI Devices

NOTE: SDI Keypads have limited functionality. SDI2 keypads are recommended.

D1260-B
ATM Keypad

D1255-B
Keypad

Inovonics Wireless Devices

Please see the complete list in B Series or Gv4 sections.

IP Camera Integration

Any Bosch IP camera

RPS

D5500CU
RPS Upgrade

D5370-USB

B99
USB Cable

D5500CU-LITE **D5371-USB**
RPS Lite

G Series Kits

Fire

B9512G

Panel	Enclosure	Lock & Key Set	Dual Battery Harness	Fire Keypad / Annunciator	Telephone Cord	Communications Module		Transformer

Part number	B8512G	D8109	D101F	D122	B926F	D161	B430 (PSTN)	B444 (4G LTE)	D1640
B9512G-B	■	■	■	■		■ (Qty 2)	■ (Qty 2)		■
B9512G-B1	■	■	■	■	■				■
B9512G-B2	■	■	■	■	■			■	■

B8512G

Panel	Enclosure	Lock & Key Set	Dual Battery Harness	Fire Keypad / Annunciator	Telephone Cord	Communications Module		Transformer

Part number	B8512G	D8109	D101F	D122	B926F	D161	B430 (PSTN)	B444 (4G LTE)	D1640
B8512G-B	■	■	■	■		■ (Qty 2)	■ (Qty 2)		■
B8512G-B1	■	■	■	■	■				■
B8512G-B2	■	■	■	■	■			■	■
B8512G-B3	■	■	■	■	■	■	■	■	■

G Series
Intrusion + Commercial Fire UL 864

Power

D1224 12V Battery

D126 12V Standby Battery

D122/D122L Battery harness

D1640 Transformer

D1218 12V Battery

D113 Battery Supervision Module

Interface Cards

D192G Bell Card

D132A

D129 Dual Class A

FPP-RNAC-8A-4C
4-Outputs (24 VDC Only)

D130 Aux Relay

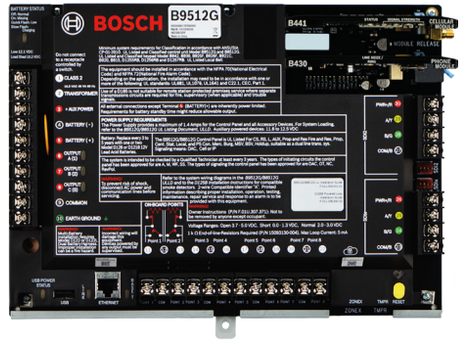
D185
Reverse Polarity

MB-G6/10-12-R
Motor Bell

D8130
Releasing Module

D125B
Powered Loop

B9512G/B8512G



SDI2 Devices

B925F Combination Intrusion + Fire

B926F Standard Fire

SDI Devices

D1257RB
Fire Annunciator, UL 864, 9th Edition

D1256RB
4-Button Annunciator, UL 864, 9th Edition

D1255RB Full Function Keypad, UL 864, 9th Edition

ICP-SDI-9114
Splitter, Only for Combination Systems

SDI2 Devices

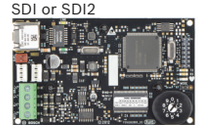
B208 Octo-Input Module

B308 Octo-Output Module

B430/440/441/443
Cellular Module

B520
Power Supply

B426 Ethernet Communication Module
SDI or SDI2



B450 Plug-in Module Interface for B44x cards
SDI or SDI2

Point Expansion

D8125MUX
Multiplex Interface

DS7432
Eight-Input

B600
Retrofit(ZONEX) Module

MX938i
Multiplex

DS7465i
Input-Output

B299 SDI2 Popex Expansion

MX794i
Multiplex PIR

DS7461i Single Zone Input

D8128D
Octo-Popit

Gentex

GEH12WR/W
Horn

AVSM–R/W
Synchronization Module

GEC3–12WR/ GES3–12WR
Horn Strobe

Wheelock

W–HNR/W
Horn

DSM–12/24–R
Dual Synchronization Module

W–HSRC/WC
Horn Strobe

W–STW/R
Strobe

ASWP–2475W–FR
Outdoor Horn Strobe

POTS Communication

D928 Dual Phone Switcher

D166/RJ31X
Primary/Secondary

System Sensor

SS–P Two–wire Speaker Strobes

SS–S Two–Wire Indoor Strobes

SS–SRK Two–wire Outdoor Strobe

SS–P2RK Two–wire Outdoor Horn Strobe

Enclosures

D8109L

D8109

BATB–40/80
Battery Cabinet

D56R
Conduit Box

D8004
Transformer Enclosure

MX775i/934i
Multiplex PIR

DS7460i
Dual-Zone Input

D9127U/T
Popit Module

D7050/TH
Addressble Dec-tector Head

D8129
Octo-Relay

ZX938Z 360 Motion w/POPIT

D7050–B6 Two–wire Dectector Base

DS7457i/IF Single Zone Mini-Mod

ZX794Z
Motion w/POPIT

D603/604/605
Heat Detector Head

D278S
Addressable Base 12 volt

ZX935Z/7762/835/970
Motion w/POPIT

F220P/PTH/ PTHC

F220–B6x
Addressable Base 12/24 volt

FMM–462
Addressable Pull

D5060
Programmer

FCC–38
CO Detector

RFPB-SB/TB-A 1 & 2 Button Panic Devices

RFKF-TBS/FBS-A 2 & 4 Button Keyfobs

DS7460i Dual-Zone Input

D5060 Programmer

ZX794Z Motion w/POPIT

B96 Trim Plate for B Series Keypads

B426 Ethernet Communication Module
SDI or SDI2

Classic

DS9370/ DS9371 (black)
360 TriTech
50 ft./70 ft.

DS938Z/ DS9360
360 PIR
50 ft.

DS936
Low-profile
360 PIR

Professional Series

ISC-PPR1-W16/ WA16G PIR
60 ft.

ISC-PDL1-W18G/ WA18G TriTech
60 ft.

ISC-PDL1WC30G
TriTech
100 ft.

Commercial Series

ISC-CDL1-WA15x
TriTech+ w/Anti-Mask
50 ft.

ISC-CDL1-W15x
TriTech
50 ft.

Blue Line Gen2 Series

ISC-BDL2-WP12G/ WP6G/W12G TriTech
40 X 40 ft./20 x 20 ft./
40 x 40 ft.

ISC-BPR2-W12/ WP12 PIR
40 x 40 ft.

Glass Breaks

DS1101i/1102i/ 1103i/1108i

Sirens

D116/118

D117/119

Enclosures & Accessories

D8103

D8108A

ICP-EZTS
Universal Tamper

D137

D138

Access Modules & Card Readers

D9210C/-D203
SDI Access Mod

BioMetric Readers

ARD-FP BEPIC-OC/ EPHP-OC
BioEntry Plus FP

iClass

ARD-R10/R40

HID Prox

D8223/8224/8225

D8229
Pin Reader

RFID Readers

ARD-AYH12 EM
Prox Wall Mount

ARD-AYJ12 EM
Prox Mullion

ARD-AYK12 EM
Prox Mini Mullion

ARD-AYQ12 EM
Prox Vandal Resistant

Request-to-Exit Sensors

DS150i

DS160

LECTUS Secure Readers (iClass SE)

ARD-SER40-WI

ARD-SER10-WI

Credentials

iClass

ACD-IC2K26-50
ACT/ACA-IC2K26-10

HID PROX

D8236-10

D8236KF-10

RFID Tags for Readers & B942 Kepads

ACA-ATR13

ACD-ATR11ISO

ACD-ATR14CS

SDI Devices

NOTE: SDI Keypads have limited functionality. SDI2 keypads are recommended.

D1260-B
ATM Keypad

D1255-B
Keypad

ICP-SDI-9114
Splitter

D1255-RB
Fire Keypad

D1256RB
Fire Annunciator

Inovonics Wireless Devices

Please see the complete list in 'B Series' or 'GV4 Series' sections.

RPS

D5500CU
RPS Upgrade

D5370-USB

DX4010V2

D5500CU-LITE
RPS Lite

D5371-USB

Inovonics Wireless Devices

EN1247 Wireless Glass Break

EN1265 Wireless 360 PIR

EN1249 Wireless Billtrap Transmitter

EN1261HT Wireless PIR

EN1260 Wireless PIR

EN1262 Wireless PIR

EN1210/W Wireless Transmitter

EN1242 Wireless Smoke Detector

EN1224-ON Multiple Condition Pendant

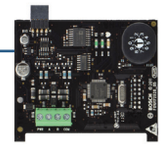
EN1223D/S Water Resistant Wireless Pendant

EN1235S/D Belt Clip Wireless Pendant

EN1233S/D Necklace Wireless Pendant

EN4200 Serial Receiver

B820 SDI2 Wireless Interface



Enclosures & Accessories

D8103

D8108A

D137

D138

ICP-EZTS Universal Tamper

*Not compatible with access modules and card readers.

SDI Devices & Accessories

NOTE: SDI Keypads have limited functionality. SDI2 keypads are recommended.

D1260-B ATM Keypad

D1255-B Keypad

D720-B LED Keypad

D54/D54B-1260 Flush Mount Kit

D54/D54B Flush Mount Kit

D55 Keypad Desk Stand

D56 Keypad Enclosure

Access Modules & Card Readers

D9210C SDI Access Mod

BioMetric Readers

ARD-FP
BEPIC-OC/
EPHP-OC
BioEntry Plus FP

iClass

ARD-R10/R40

HID Prox

D8223/8224/8225

RFID Readers

ARD-AYH12 EM Prox Wall Mount

ARD-AYJ12 EM Prox Mullion

ARD-AYK12 EM Prox Mini Mullion

ARD-AYQ12 EM Prox Vandal Resistant

D132A Reversing Relay

D8229 Pin Reader

LECTUS Secure Readers (iClass SE)

ARD-SER40-WI

ARD-SER10-WI

Request-to-Exit Sensors

DS150i

DS160

Credentials

iClass

ACD-IC2K26-50
ACT/ACA-IC2K26-10

HID PROX

D8236-10

D8236KF-10

RFID Tags

ACA-ATR13

ACD-ATR11ISO

ACD-ATR14CS

RPS

D5500CU RPS Upgrade

D5370-USB

DX4010V2

D5500CU-LITE RPS Lite

D5371-USB

B Series Control Panels

Commercial type number (CTN)		B3512	B4512	B5512	B6512
Integration		IP Video, Home Automation, Residential Fire	IP Video, Home Automation, Residential Fire	IP Video, Home Automation, Residential Fire	IP Video, Access Control, Home Automation, Residential Fire
Advanced features	**Area arming**	Interior + perimeter	Interior + perimeter	Interior + perimeter	Interior + perimeter
	Link mulitple areas	–	■	■	■
	Area re-arm	■	■	■	■
	Monitor delay	■	■	■	■
	Dual authentication	■	■	■	■
	Early ambush	■	■	■	■
	Two-man rule	■	■	■	■
Communication	**Options**	IP, Cellular, PSTN	IP, Cellular, PSTN	IP, Cellular, PSTN	IP, Cellular, PSTN
	Formats	Contact ID, Modem4	Contact ID, Modem4	Contact ID, Modem4	Contact ID, Modem4
IP	**On-board Ports**	Ethernet, USB	Ethernet, USB	Ethernet, USB	Ethernet, USB
	Conettix	■	■	■	■
	DNS support	■	■	■	■
	IPv4/IPv6	■/ ■	■/ ■	■/ ■	■/ ■
	Encryption	AES 256-bit	AES 256-bit	AES 256-bit	AES 256-bit
	AutoIP configuration	■	■	■	■
	Universal Plug and Play	■	■	■	■
Programming methods		RPS via IP or USB, Keypad	RPS via IP or USB, Keypad	RPS via IP or USB, Keypad	RPS via IP or USB, Keypad
Ease of use	**Mobile app**	■	■	■	■
	Bilingual operation (languages)	English, French, Spanish, Portuguese, German, Dutch, Chinese, Polish, Italian, Greek, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Chinese, Polish, Italian, Greek, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Chinese, Polish, Italian, Greek, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Chinese, Polish, Italian, Greek, Hungarian, Swedish
	Custom keypad text	■	■	■	■
	Situation-sensitive on-screen help	■	■	■	■
	Simplified menus	■	■	■	■

■ Available – Not available

NOTE: Availability of features and services may vary by country or region. Not all features are available in all languages.

B Series Control Panels *(continued)*

Commercial type number (CTN)		B3512	B4512	B5512	B6512
Notifications		Email, SMS text	Email, SMS text	Email, SMS text	Email, SMS text
Passcode security	**Authority levels**	14	14	14	14
	User names	32 characters	32 characters	32 characters	32 characters
Wireless compatibility		RADION, Inovonics	RADION, Inovonics	RADION, Inovonics	RADION, Inovonics
Capacity	**Areas**	1	2	4	6
	Custom functions	1	2	4	6
	Doors	–	–	–	4
	IP cameras	–	2	4	6
	Log events	512	512	1024	1024
	Outputs	3	27	43	91
	Point profiles	20	20	20	20
	Points (total/wired/wireless)	16 / 8 / 8	28 / 24 / 20	48 / 40 / 40	96 / 84* / 88
	Schedules (SKEDS)	1	5	5	10
	Supervised keypads	4	8	8	12
	Users	10 + service	32 + service	50 + service	100 + service
Certifications		UL, CSFM, ULC, CE, CCC	UL, CSFM, ULC, CE, CCC	UL, CSFM, ULC, CE, CCC	UL, CSFM, ULC, CE, CCC

■ Available – Not available

NOTE: Availability of features and services may vary by country or region. Not all features are available in all languages.

* When using four access doors

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Intrusion Application Keypads

Material description		Text	Text w/ function keys	Capacitive touch	Text w/ soft keys	Touch screen
Commercial type number (CTN)		B915/B915i	B920	B921C	B930	B942/B942W
Function keys	**Intrusion**	–	■	■	■	–
	Fire	–	–	–	–	–
Display	**Type**	2-line, 32 characters	2-line, 32 characters	2-line, 32 characters	5-line, 32 characters	Text + icons
	Bilingual support	■	■	■	■	■
	Languages	English, French, Spanish, Portuguese, German, Dutch, Chinese, Polish, Italian, Greek, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Italian, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Italian, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Italian, Hungarian, Swedish	English, French, Spanish, Portuguese, German, Dutch, Chinese, Polish, Italian, Greek, Hungarian, Swedish
On-screen help		–	■	■	■	■
Indicators	**All on**	■	■	■	■	■
	Part on	■	–	–	–	–
	Ready	■	■	■	■	■
	Trouble	■	■	■	■	■
	Power	■	■	■	■	■
	Gas alarm	■	■	■	■	■
Features	**Audible tones**	■	■	■	■	■
	Proximity reader	–	–	–	–	■
	Inputs/outputs	–/–	–/–	4/–	–/–	4/1
Specifications	**Dimensions**	5.5 x 4.7 x 1 in (139 x 118 x 23 mm)	6.2 x 4.7 x 1 in (150 x 120 x 26 mm)	6.2 x 4.7 x 1 in (150 x 120 x 26 mm)	6.2 x 5.5 x 1 in (150 x 140 x 26 mm)	6.2 x 4.7 x 0.65 in (150 x 120 x 16.5 mm)
	Connection type	SDI2 bus	SDI2 bus	SDI2 bus	SDI2 bus	SDI2 bus

■ Available – Not available

NOTE: Availability of features and services may vary by country or region. Not all features are available in all languages.

* When using four access doors

Communication modules

Material description		PSTN (Single phone line)	Two-way cellular**	Two-way cellular**	Remote cellular interface
Commercial type number (CTN)		B430	B444	B443/B443-ATT/B443-ROG/ B443-TMO	B450
IP	**Supported protocols**	–	Conettix	Conettix	Conettix
	Encryption	–	AES 256-bit	AES 256-bit	AES 256-bit
Cellular	**Communication**	–	4G LTE	3G GPRS, EDGE, UMTS, HSPA+	–
	Network	–	Verizon	AT&T, Rogers, T-Mobile	–
Connection type	**Panel**	Plug-in	Plug-in	Plug-in	SDI or SDI2
	Communication path	RJ-45	Omni-directional antenna	Omni-directional antenna	Via plug-in module
Notifications	**Email**	–	■	■	■**
	Text message (SMS)	–	■	■	■**
	Remote Security Control app	–	■	■	■**
Programming	**Keypad (basic)**	■	■	■	■
	Remote via RPS	■	■	■	■**
Diagnostics	**LEDs**	–	■	■	■
	Advanced keypad diagnostics	■	■	■	■
Panel compatibility	**B Series**	■	■	■	■
	G Series	■	■	■	■
	GV4	–	■ (with B450)	■ (with B450)	■
Certifications		UL, ULC, CSFM, FDNY-CoA, ANATEL	FCC, UL, CSFM, FDNY-CoA, Verizon	UL, ULC, PTCRB, CE, FDNY-CoA, Rogers	NIST, FCC, UL, ULC, PTCRB, CE, ANATEL, SIA, CSFM, FDNY-CoA

■ Available – Not available

* B444 is shipped pre-activated for Bosch Cellular Service on the Verizon cellular network. A valid service contract is required prior to ordering.
** Requires Bosch Cellular Service or other cellular network access. B443 available without a SIM card.

NOTE: Availability of features and services may vary by country or region. Not all features are available in all languages.

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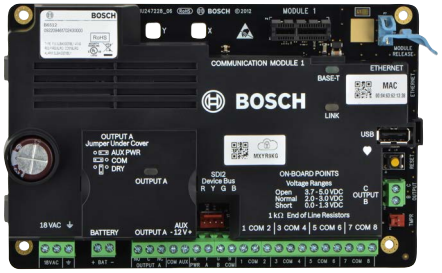
B Series Control Panels – Intrusion Application

B6512/B5512/B4512/B3512



Keypads

B942
Touch screen

B921C
Capacitive touch

B915/ B915i
Text

B942W
Touch screen

B920
Text w/ function keys

B930
Text w/ soft keys

Communicators

B443/B443-ATT/ B443-ROG/B443-TMO
Cellular (AT&T, Rogers, T-Mobile)

B430
Telephone (PSTN)

B444
Cellular (Verizon 4G LTE)

B450
Remote Cellular Interface

Conettix alarm traffic must be sent to a Bosch Communications Receiver/Gateway: D6100i, D6100IPv6, D6600

Enclosures

B8103
Large enclosure

B10
Medium enclosure

D8108A
Attack Resistance Enclosure

B11
Small enclosure

Accessories

D137
Mounting bracket

D138
Mounting bracket

B12
Mounting plate for D8103 & D8108A

ICP-EZTS
Universal tamper

B56
Keypad backbox

B96
Keypad Trim Bezel

I/O Expansion

B208
Octo-input Module

B308
Octo-output Module

Relays

D130
Aux Relay

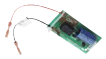
D133/134
Relay

Power

B520
AUX Power supply

D126
12V, 7Ah Battery

TR1850*
18VAC Transformer



D135A
Low-Battery Disconnect Module

D1218
12V, 18Ah Battery

CX4010* 18VAC
Transformer

ICP-TR1822-CAN
Plug-in Transformer – Canada (110 VAC/ 18 VAC 22 VA)

*Country specific variants may apply

Residential Fire

D132A
Reversing Relay

B201
2-wire powered loop

F220/ F220-B6R
Smoke Detector plus Base

D125B
Dual Class B Initiating Module

D113
Battery Lead Supervision Module

D192G
Bell Super Vision Module

D185
Reverse Polarity Signaling Module

Programming

D5500CU
RPS

D5500CU-LITE
RPS Lite

B99
USB Cable

Wired Sensors

Professional Series

ISC-PPR1-W16
PIR
50 x 70 ft.

ISC-PPR1-WA16G
PIR, w/Anti-Mask
50 x 70 ft.

ISC-PDL1-W18G
TriTech
60 x 80 ft.

ISC-PDL1-WA18G
PIR, w/Anti-Mask
60 x 80 ft.

ISC-PDL1-WC30G
TriTech
100 x 8.5 ft.

Commercial Series

ISC-CDL1-W15G
TriTech
50 x 50 ft.

ISC-CDL1-WA15G
TriTech+
w/ Anti-Mask
50 x 50 ft.

Ceiling Mount

DS936
PIR
360º x 24 ft.

DS9370/
DS9371
TriTech
360º x 70 ft.

DS939
PIR
360º x 70 ft.

Blue Line Gen2

ISC-BPR2-W12
PIR
40 x 40 ft.

ISC-BPR2-WP12
PIR, Pet friendly
40 x 40 ft.

ISC-BPQ2-W12
Quad PIR
40 x 40 ft.

ISC-BDL2-W12G
TriTech
40 x 40 ft.

ISC-BDL2-WP12G
TriTech, Pet friendly
40 x 40 ft.

ISC-BDL2-WP6G
TriTech, Pet friendly
20 x 20 ft.

Request-to-Exit

DS160
DS161

DS150i
DS151i

Glass Break

DS1101i

DS1103i

DS1102i

DS1108i

Wireless

RADION

B810
Wireless
Receiver

RFRP-A
Wireless
Repeater

RFGB-A
Glass Break
Detector

RFPR-C12-A
Curtain PIR,
Pet Immune
40 x 5 ft.

RFPR-12-A
Standard PIR,
Pet Immune
40 x 40 ft.

RFDL-11-A
TriTech
35 x 35 ft.

RFDW-SM-A
Surface
Contact

RFDW-RM-A
Recessed
Contact

RFUN-A
Universal
Transmitter

RFSM-A
Smoke
Detector

RFBT-A
Bill Trap

RFPB-SB-A
RFPB-TB-A
Panic Buttons

RFKF-TBS-A
RFKF-FBS-A
Arm/Disarm
Keyfobs

Inovonics

B820
SDI2
Inovonics
Interface
Module

EN4200
Serial
Receiver

Access Control (B6512 only)

Module

B901
Access
Module

Credentials

ACD-IC2K26-50
ACT-IC2K26-10
ACA-IC2K26-10
iClass Credential

ACA-ATR13
ACD-ATR11ISO
ACD-ATR14CS
RFID Credential

D8236-10
HID Prox Card

D8236KF-10
HID Prox Token

Readers

ARD-SER40-WI
ARD-SER10-WI
ARD-SERK40-WI
ARD-SER90-WI
Lectus Secure,
iCLASS, Wiegand

ARD-AYK12
EM Mini Mullion RFID

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Residential and small commercial – Blue Line Gen2 Series

Material description		Standard PIR	Pet Friendly® PIR	Quad PIR	Standard TriTech®	Pet Friendly® TriTech®	Pet Friendly® TriTech®
Commercial type number (CTN)		ISC-BPR2-W12	ISC-BPR2-WP12	ISC-BPQ2-W12	ISC-BDL2-W12x	ISC-BDL2-W12x	ISC-BDL2-W6x
Overview	**Application risk level**	Low to moderate risk	Low to moderate risk	Moderate risk	Low to moderate risk	Low to moderate risk	Low to moderate risk
	Environment*	Standard	Standard	Difficult	Difficult	Difficult	Difficult
Specifications	**Coverage/range**	40 x 40 ft (12 x 12 m)	40 x 40 ft (12 x 12 m)	40 x 40 ft (12 x 12 m)	40 x 40 ft (12 x 12 m)	40 x 40 ft (12 x 12 m)	20 x 20 ft (6 x 6 m)
	Mounting height	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)
	Operating temperature**	-20º to 130º F (-30º to 55º C)	-20º to 130º F (-30º to 55º C)	-20º to 130º F (-30º to 55º C)	-20º to 130º F (-30º to 55º C)	-20º to 130º F (-30º to 55º C)	-20º to 130º F (-30º to 55º C)
	Operating voltage	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC
	Current draw (typical)	10 mA	10 mA	10 mA	10 mA	10 mA	10 mA
Features	**First step processing**	■	■	■	■	■	■
	Microwave noise adaptive processing	–	–	–	■	■	■
	Dynamic temperature compensation	■	■	■	■	■	■
	Wall-to-wall coverage	■	■	■	■	■	■
	Look-down zone	■	■	■	■	■	■
	Pet/small animal immunity	10 lb (4.5 kg)	45 lb (20 kg)	10 lb (4.5 kg)	10 lb (4.5 kg)	100 lb (45 kg)	100 lb (45 kg)
	Alarm output	NC	NC	NC	NC	NC	NC
	Alarm memory	–	–	–	–	–	–
	Anti-mask	–	–	–	–	–	–
	Tamper	Cover	Cover	Cover	Cover	Cover	Cover
	Sealed optical chamber	■	■	■	■	■	■
Ease of Installation***	**No-adjust installation**	■	■	■	■	■	■
	Enable/disable LED	■	■	■	■	■	■
	Enable/disable pet immunity	–	■	–	–	■	■
	Enable/disable look-down	■	■	■	–	–	–
	Microwave Doppler range adjustment	–	–	–	■	■	■
	Remote walk test	–	–	–	–	–	–
	Remote self test	–	–	–	–	–	–
Certifications		AFNOR, CCC, CE, EN50131-2-2 Grade 2, INCERT, UL	AFNOR, CCC, CE, EN50131-2-2 Grade 2, INCERT, UL	AFNOR, CCC, CE, EN50131-2-2 Grade 2, INCERT, UL	CCC, FCC, IC, UL	CCC, FCC, IC, UL	CCC, FCC, IC, UL

■ Available – Not available

Small to medium commercial – Commercial Series

Material description		Standard TriTech®	Anti-mask TriTech®	Anti-mask TriTech®
Commercial type number (CTN)		ISC-CDL1-W15x	ISC-CDL1-WA15x	ISC-CDL1-WA12x
Overview	**Application risk level**	Moderate risk	High risk	High risk
	Environment*	Difficult	Difficult	Difficult
Specifications	**Coverage/range**	50 x 50 ft (15 x 15 m)	50 x 50 ft (15 x 15 m)	40 x 40 ft (12 x 12 m)
	Mounting height	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)	7.5 to 9 ft (2.3 to 2.75 m)
	Operating temperature**	-22º to 130º F (-30º to 55º C)	-22º to 130º F (-30º to 55º C)	-22º to 130º F (-30º to 55º C)
	Operating voltage	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC
	Current draw (typical)	10 mA	15 mA	15 mA
Features	**First step processing**	∎	∎	∎
	Microwave noise adaptive processing	∎	∎	∎
	Range adaptive radar	–	–	–
	Active white light suppression	∎	∎	∎
	Dynamic temperature compensation	∎	∎	∎
	Look-down zone	∎	∎	∎
	Pet/small animal immunity	10 lb (4.5 kg)	10 lb (4.5 kg)	10 lb (4.5 kg)
	Alarm output	NC	NC	NC
	Alarm memory	∎	∎	∎
	Anti-mask	–	∎	∎
	Tamper	Cover	Cover + wall	Cover + wall
	Sealed optical chamber	∎	∎	∎
Ease of Installation***	**No-adjust installation**	∎	∎	∎
	Enable/disable look-down	∎	∎	∎
	Enable/disable LED	∎	∎	∎
	Microwave Doppler range adjustment	∎	∎	∎
	Remote walk test	–	–	–
	Remote self test	–	–	–
Certifications		CCC, FCC, IC, UL	CCC, FCC, IC, UL	CCC, FCC, IC, UL

∎ Available – Not available

Large commercial and high security – Professional Series

Material description		Standard PIR	Anti-mask PIR	Standard PIR	Anti-mask TriTech®	Curtain TriTech®	Anti-mask Curtain TriTech®
Commercial type number (CTN)		ISC-PPR1-W16	ISC-PPR1-WA16x	ISC-PDL1-W18x	ISC-PDL1-WA18x	ISC-PDL1-WC30x	ISC-PDL1-WAC30x
Overview	**Application risk level**	Moderate risk	High risk	Moderate risk	High risk	Moderate risk	High risk
	Environment*	Standard	Standard	Difficult	Difficult	Difficult	Difficult
Specifications	**Coverage/range**	50 x 70 ft (16 x 21 m) 25 x 33 ft (8 x 10 m)	50 x 70 ft (16 x 21 m) 25 x 33 ft (8 x 10 m)	60 x 80 ft (18 x 25 m) 25 x 33 ft (8 x 10 m)	60 x 80 ft (18 x 25 m) 25 x 33 ft (8 x 10 m)	100 x 8.5 ft (30 x 2.6 m) 25 x 3.3 ft (8 x 1 m)	100 x 8.5 ft (30 x 2.6 m) 25 x 3.3 ft (8 x 1 m)
	Mounting height	7 to 10 ft (2.1 to 3 m)	7 to 10 ft (2.1 to 3 m)	7 to 10 ft (2.1 to 3 m)	7 to 10 ft (2.1 to 3 m)	7 to 10 ft (2.1 to 3 m)	7 to 10 ft (2.1 to 3 m)
	Operating temperature**	-20º to 130º F (-29º to 55º C)	-22º to 130º F (-30º to 55º C)	-20º to 130º F (-29º to 55º C)	-22º to 130º F (-30º to 55º C)	-22º to 130º F (-30º to 55º C)	-22º to 130º F (-30º to 55º C)
	Operating voltage	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC	9 to 15 VDC
	Current draw (typical)	10 mA	18 mA	13 mA	18 mA	18 mA	18 mA
Features	**Sensor Data Fusion**	■	■	■	■	■	■
	Microwave noise adaptive processing	–	–	■	■	■	■
	Range adaptive radar	–	–	■	■	■	■
	Active white light supression	■	■	■	■	■	■
	Dynamic temperature compensation	■	■	■	■	■	■
	Look-down zone	■	■	■	■	■	■
	Pet/small animal immunity	10 lb (4.5 kg)	10 lb (4.5 kg)	10 lb (4.5 kg)	10 lb (4.5 kg)	10 lb (4.5 kg)	10 lb (4.5 kg)
	Alarm output	NC	NC	NC	NC	NC	NC
	Alarm memory	■	■	■	■	■	■
	Anti-mask	–	■	–	■	–	■
	Tamper	Cover + wall	Cover + wall	Cover + wall	Cover + wall	Cover + wall	Cover + wall
	Sealed optical chamber	■	■	■	■	■	■
Ease of Installation***	**No-adjust installation**	■	■	■	■	■	■
	Enable/disable look-down	■	■	■	■	■	■
	Long/short select range	■	■	■	■	–	–
	Microwave Doppler range adjustment	–	–	■	■	■	■
	Remote walk test	■	■	■	■	■	■
	Remote self test	■	■	■	■	■	■
Certifications		AFNOR, CCC, CE, EN50131-2-2 Grade 2, FCC, IC, INCERT, UL	AFNOR, CCC, CE, EN50131-2-2 Grade 3, FCC, IC, INCERT, UL	AFNOR, CCC, CE, EN50131-2-4 Grade 2, FCC, IC, INCERT, UL	CCC, FCC, IC, UL	CCC, FCC, IC, UL	–

■ Available – Not available

Ceiling Mount

Material description		Low-profile PIR	High-performance PIR	High-performance TriTech®
Commercial type number (CTN)		DS936	DS939	DS9370
Overview	**Application risk level**	Low to moderate risk	Moderate risk	Moderate risk
	Environment*	Standard	Standard	Difficult
Specifications	**Optics**	Fresnel	Triple 35-zone Frensel	Triple 35-zone Frensel
	Coverage/range	24 ft (7 m) diameter	70 ft (21 m) diameter	70 ft (21 m) diameter
	Mounting height	7 to 12 ft (2.1 to 3.6 m)	8 to 25 ft (2.4 to 7.6 m)	8 to 25 ft (2.4 to 7.6 m)
	Operating temperature**	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)
	Operating voltage	10 to 15 VDC	9 to 15 VDC	9 to 15 VDC
	Current draw (typical)	20 mA	12 mA	19 mA
Features	**First Step Processing**	–	∎	∎
	Motion Analyzer II signal processing	–	–	–
	PIR supervision	–	–	–
	Microwave supervision	–	–	∎
	Microwave noise adaptive processing	–	–	∎
	Dynamic temperature compensation	–	∎	∎
	Pet/small immunity	–	–	–
	Pattern masking	∎	∎	∎
	Alarm output	NC	NC/NO	NC/NO
	Alarm memory	–	∎	∎
	Tamper	Cover	Cover + wall	Cover + wall
	Sealed optical chamber (insect/dust)	∎	∎	∎
Ease of Installation***	**Interchangeable optics**	–	–	–
	Switchable coverage patterns	–	∎	∎
	Enable/disable LED	∎	∎	∎
	PIR sensitivity adjustment	∎	∎	∎
	Microwave Doppler range adjustment	–	–	∎
	Flexible mounting height	∎	∎	∎
	Remote walk test	–	∎	∎
	Remote self test	–	–	–
Certifications		CCC, CE, UL	AFNOR, CCC, CE, EN50131-2-2 Grade 2, INCERT, UL	CCC, FCC, IC, UL

∎ Available – Not available

Specialty – Photoelectric Beam

Material description		Photobeam 3000			Photobeam 5000		
Commercial type number (CTN)		ISC-FPB1-W30DS	ISC-FPB1-W60DS	ISC-FPB1-W90DS	ISC-FPB1-W60QS ISC-FPB1-W60QF	ISC-FPB1-W120QS ISC-FPB1-W120QF	ISC-FPB1-W200QS ISC-FPB1-W200QF
Overview	**Type**	Dual Beam	Dual Beam	Dual Beam	Quad Beam	Quad Beam	Quad Beam
	Application type	Residential to large commercial	Residential to large commercial	Residential to large commercial	Residential to large commercial	Residential to large commercial	Residential to large commercial
Specifications	**Coverage/range indoor**	200 ft (60 m)	400 ft (120 m)	600 ft (180 m)	393 ft (120 m)	787 ft (240 m)	1,312 ft (400 m)
	Coverage/range outdoor	100 ft (30 m)	200 ft (60 m)	300 ft (90 m)	196 ft (60 m)	393 ft (120 m)	656 ft (200 m)
	Response time	50 ms to 700 ms	50 ms to 700 ms	50 ms to 700 ms	40 ms to 500 ms	40 ms to 500 ms	40 ms to 500 ms
	Operating temperature	-13° to 131°F (-25° to 55°C)	-13° to 131°F (-25° to 55°C)	-13° to 131°F (-25° to 55°C)	-13° to 140°F (-25° to 60°C)	-13° to 140°F (-25° to 60°C)	-13° to 140°F (-25° to 60°C)
	Operating voltage	10.5 VDC to 28 VDC	10.5 VDC to 28 VDC	10.5 VDC to 28 VDC	10.5 VDC to 28 VDC	10.5 VDC to 28 VDC	10.5 VDC to 28 VDC
	Current draw (typical)	6 mA (transmitter) 24 mA (receiver)	10 mA (transmitter) 24 mA (receiver)	15 mA (transmitter) 24 mA (receiver)	90/120 mA (transmitter) 24 mA (receiver)	95/124 mA (transmitter) 24 mA (receiver)	100/128 mA (transmitter) 24 mA (receiver)
	Environmental rating	IP55	IP55	IP55	IP66	IP66	IP66
Features	**Pulsed Active IR**	–	–	–	∎	∎	∎
	Multi-channel operation	–	–	–	∎ (QF models)	∎ (QF models)	∎ (QF models)
	Beam Power Control (BPC)	–	–	–	∎	∎	∎
	Dual modulated beam	–	–	–	∎	∎	∎
	Environmental discrimination	–	–	–	∎	∎	∎
	Alarm output	NC/NO	NC/NO	NC/NO	NC/NO	NC/NO	NC/NO
	Tamper output	NC	NC	NC	NC	NC	NC
	EDC output	–	–	–	NC	NC	NC
	LED indicator	–	–	–	∎	∎	∎
	Draft/insect immunity	∎	∎	∎	∎	∎	∎
Ease of Installation	**Pointable optics**	Horizontal +/- 90° Vertical +/- 5°	Horizontal +/- 90° Vertical +/- 5°	Horizontal +/- 90° Vertical +/- 5°	Horizontal +/- 90° Vertical +/- 10°	Horizontal +/- 90° Vertical +/- 10°	Horizontal +/- 90° Vertical +/- 10°
	Selectable response time	∎	∎	∎	∎	∎	∎
	Test features	Voltage output (for alignment)	Voltage output (for alignment)	Voltage output (for alignment)	Voltage output and LEDs (for alignment)	Voltage output and LEDs (for alignment)	Voltage output and LEDs (for alignment)
	Mounting location	Surface, pole	Surface, pole	Surface, pole	Surface, pole	Surface, pole	Surface, pole

∎ Available – Not available

QS – single channel
QF – four channel

Specialty – Seismic/Shock

Material description		Standard Seismic	High-performance Seismic	Shock
Commercial type number (CTN)		ISN-SM-50	ISN-SM-80	ISC-SK10
Overview	**Type**	Thermal, Mechanical, Explosive, Water Attack Detection	Thermal, Mechanical, Explosive, Water Attack Detection	Mechanical Attack Detection
	Application type	Small to large commercial	Small to large commercial	Residental to large commercial
	Application risk level	High risk	High risk	High risk
	Environment	Vault walls and doors, safes, ATMs, strong rooms, vending machines	Vault walls and doors, safes, ATMs, strong rooms, vending machines	Vault walls and doors, safes, ATMs, strong rooms, vending machines
Specifications	**Coverage/range**	50 m²	80 m²	1.5 to 3.5 m radius
	Operating temperature**	-40º to 158º F (-40º to 70º C)	-40º to 158º F (-40º to 70º C)	-14º to 131º F (-10º to 55º C)
	Operating voltage	8 to 16 VDC	8 to 16 VDC	9 to 15 VDC
	Current draw (typical)	3 mA	3 mA	8.5 mA
	Environmental rating	IP43	IP43	IP43
Features	**Anti-drilling shield**	■	■	–
	Temperature supervision	■	■	–
	Voltage monitoring	■	■	–
	Automatic self test	■	■	–
	Local event memory	–	■	–
	Alarm output	NC solid state relays	NC solid state relays	NC solid state relays
	LED	–	–	Green, red
	Tamper	Cover + wall	Cover + wall	Cover
Ease of installation	**Intelligent installation mode**	–	–	■
	Mounting and function test	■	■	■
	Sensitivity adjustment	■	■	■
	Mounting location	Steel, concrete	Steel, concrete	Any
	Installation accessories	Anti-drill foil (ISN-GMX-D7), Floor socket (ISN-GMX-B0), Mounting plate (ISN-GMX-P0), Swivel plate (ISN-GMX-P3S), Test transmitter (ISN-GMX-S1), Wall mounting kit (ISN-GMX-W0)	Anti-drill foil (ISN-GMX-D7), Floor socket (ISN-GMX-B0), Mounting plate (ISN-GMX-P0), Test transmitter (ISN-GMX-S1), Wall mounting kit (ISN-GMX-W0)	–
	Software options	ISN-SMS-W7 SensTool PC Software	ISN-SMS-W7 SensTool PC Software	–
Certifications	**Approvals/listings**	CCC, CE, NCP, VdS, UL	CCC, CE, NCP, VdS, UL	CCC, CE

■ Available – Not available

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Specialty – Glass Break

Material description		Standard	Standard	Standard	Standard	Combo Magnetic Contact
Commercial type number (CTN)		DS1101i	DS1108i	DS1102i	DS1103i	DS1109i
Overview	**Application type**	Residential to large commercial	Residential to large commercial	Residential to large commercial	Residential to large commercial	Residential to large commercial
	Application risk level	Low to moderate risk	Low to moderate risk	Low to moderate risk	Low to moderate risk	Low to moderate risk
	Environment	Standard	Standard	Standard	Standard	Standard
Specifications	**Coverage/range**	25 ft (7.6 m) diameter	25 ft (7.6 m) diameter	25 ft (7.6 m) diameter	25 ft (7.6 m) diameter	10 ft (3 m) diameter
	Operating temperature**	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)
	Operating voltage	6 to 15 VDC	9 to 15 VDC	6 to 15 VDC	9 to 15 VDC	6 to 15 VDC
	Current draw (typical)	23 mA	21 mA	23 mA	21 mA	21 mA
Features	**Sound Analysis Technology (SAT) processing**	NC/NO	NC	NC/NO	NC	NC
	Alarm output	∎	∎	∎	∎	∎
	LED indicator	–	–	–	–	–
	Tamper	∎	∎	∎	–	∎
Ease of installation	**Mounting location**	Wall, ceiling	Wall, ceiling	Wall, ceiling	Wall, ceiling (flush)	Door, window frame
	Installation accessories	Glass Break Tester (DS1110i)	Glass Break Tester (DS1110i)	Glass Break Tester (DS1110i)	Glass Break Tester (DS1110i)	Glass Break Tester (DS1110i)
Certifications		CCC, CE, UL	CCC, CE, UL	CCC, CE, UL	CCC, CE, UL	CCC, CE, UL

∎ Available – Not available

Specialty – Request-to-Exit

Material description		Standard PIR		High-performance PIR	
Commercial type number (CTN)		DS150i	DS151i	DS160	DS161
Specifications	**Coverage/range**	8 x 10 ft (2.4 x 3 m)	8 x 10 ft (2.4 x 3 m)	8 x 10 ft (2.4 x 3 m)	8 x 10 ft (2.4 x 3 m)
	Mounting height	7 to 10 ft (2.1 to 3 m)	7 to 10 ft (2.1 to 3 m)	7.5 to 15 ft (2.3 to 4.6 m)	7.5 to 15 ft (2.3 to 4.6 m)
	Operating temperature**	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)	-20º to 120º F (-29º to 49º C)
	Operating voltage	12 VAC or VDC; 24 VAC or VDC	12 VAC or VDC; 24 VAC or VDC	12 VAC or VDC; 30 VAC or VDC	12 VAC or VDC; 30 VAC or VDC
	Current draw (typical)	26 mA nominal	26 mA nominal	8 mA nominal	8 mA nominal
Features	**Door monitor with sounder**	–	–	■	■
	Keycard reader input	–	–	■	■
	Sequential logic input	–	–	■	■
	Relay fail-safe/fail-secure	■	■	■	■
	Relay settable select	■	■	■	■
	Relay latch time adjustment	0.25 to 60 seconds	0.25 to 60 seconds	0.5 to 64 seconds	0.5 to 64 seconds
	Pattern masking	■	■	■	■
	Alarm output/memory	–/■	–/■	–/■	–/■
	Tamper	–	–	■	■
	Pointable optics	Vertical adjustment	Vertical adjustment	Vertical adjustment	Vertical adjustment
	Switchable relay mode	■	■	■	■
	Switchable timer reset mode	■	■	■	■
	Adjustable sounder volume	–	–	■	■
	PIR sensitivity adjustment	■	■	■	■
	Enable/disable LED	–	–	■	■
	Flexible mounting height	■	■	■	■
Certifications		UL, CE	UL, CE	UL, CE	UL, CE

■ Available – Not available

Wireless – RADION†

Material description		Standard PIR	Curtain PIR	Standard TriTech®
Commercial type number (CTN)		RFPR-12	RFPR-C12	RFDL-11
Overview	**Application risk level**	Low to moderate risk	Low to moderate risk	Low to moderate risk
	Environment*	Standard	Standard	Difficult
Specifications	**Frequency**	433.42 MHz	433.42 MHz	433.42 MHz
	Coverage/range	40 x 40 ft (12 x 12 m)	40 x 5 ft (12 x 1.5 m)	35 x 35 ft (11 x 11 m)
	Mounting height	7 to 9 ft (2.1 to 2.75 m)	7 to 8.5 ft (2.1 to 2.6 m)	6.5 to 8 ft (2.0 to 2.4 m)
	Operating temperature**	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)
	Operating voltage	3 VDC	3 VDC	6 VDC
	Power source	One CR123A Lithium battery	One CR123A Lithium battery	Four AA Alkaline batteries
	Battery life	Up to 5 years	Up to 5 years	Up to 5 years
Features	**Motion Analyzer II signal processing**	∎	∎	∎
	Microwave noise adaptive processing	–	–	∎
	Dynamic temperature compensation	∎	∎	∎
	Wall-to-wall coverage	∎	∎	∎
	Look-down zone	∎	∎	∎
	Pet/small animal immunity	30 lb (13 kg)	30 lb (13 kg)	100 lb (45 kg)
	Anti-mask	–	–	–
	Tamper	Cover + wall	Cover + wall	Cover + wall
	Sealed optical chamber	∎	∎	∎
Ease of installation***	**No adjust installation**	∎	∎	–
	Enable/disable LED	–	–	–
	Enable/disable pet immunity	–	–	∎
	Enable/disable look-down	∎	∎	∎
	Switchable detection patterns	–	–	–
	Microwave Doppler range adjustment	–	–	∎
Certifications		ANATEL, AFNOR, CCC, CE, EN50131-2-2 Grade 2, FCC, IC, INCERT, RCM, UL	ANATEL, AFNOR, CCC, CE, EN50131-2-2 Grade 2, FCC, IC, INCERT, RCM, UL	ANATEL, CCC, FCC, IC, RCM, UL

∎ Available – Not available

Wireless – RADION†

Material description		Surface Mount Contact	Recessed Mount Contact	Universal Transmitter	Smoke Detector
Commercial type number (CTN)		RFDW-SM	RFDW-RM	RFUN	RFSM
Specifications	**Frequency**	433.42 MHz	433.42 MHz	433.42 MHz	433.42 MHz
	Coverage/range	–	–	–	135º +/- 5º F (57.2º +/- 2.8º C)
	Reed switch gap width	< 0.75 in (19 mm)	< 0.75 in (19 mm)	< 0.75 in (19 mm)	–
	Operating temperature*	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)
	Operating voltage	1.5 VDC	1.5 VDC	1.5 VDC	3 VDC
	Power source	One AAA Lithium battery	One AAA Lithium battery	One CR123A Lithium battery	Two CR123A Lithium battery
	Battery life	Up to 5 years	Up to 5 years	Up to 5 years	Up to 5 years
Features	**Tamper**	∎	∎	∎	∎
	LED indicator	–	–	–	∎
Certifications		ANATEL, CCC, CE, EN50131, FCC, IC, INCERT, RCM, UL	ANATEL, CCC, CE, EN50131, FCC, IC, INCERT, RCM, UL	ANATEL, CCC, CE, EN50131, FCC, IC, INCERT, RCM, UL	ANATEL, CE, CSFM, FCC, IC, RCM, UL

∎ Available – Not available

Wireless – RADION†

Material description		Glass Break	Bill Trap	Keyfob	Panic Button
Commercial type number (CTN)		RFGB	RFBT	RFKF-FBS, RFKF-TBS	RFSM
Specifications	**Frequency**	433.42 MHz	433.42 MHz	433.42 MHz	433.42 MHz
	Coverage/range	20 ft (6 m) diameter	–	–	–
	Mounting gap	–	–	–	–
	Operating temperature**	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)	14º to 120º F (-10º to 49º C)
	Operating voltage	3 VDC	1.5 VDC	3 VDC	3 VDC
	Power source	One CR123A Lithium battery	One AAA Lithium battery	One CR2032 Lithium battery	One CR2032 Lithium battery
	Battery life	Up to 5 years	Up to 5 years	Up to 5 years	Up to 5 years
Features	**Tamper**	∎	∎	–	–
	LED indicator	∎	∎	∎	∎
	Synchronized encryption	–	–	∎ (FBS, TBS models)	–
Certifications		ANATEL, CCC, CE, EN50131, FCC, IC, INCERT, RCM, UL	ANATEL, CCC, CE, EN50131, FCC, IC, INCERT, RCM, UL	ANATEL, CCC, CE, EN50131, FCC, IC, INCERT, RCM, UL	ANATEL, CE, CSFM, FCC, IC, RCM, UL

∎ Available – Not available

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Wireless – ZigBee

Material description		Standard PIR	Standard TriTech®
Commercial type number (CTN)		RFPR-ZB	RFDL-ZB
Overview	**Application risk level**	Low to moderate risk	Low to moderate risk
	Environment*	Standard	Difficult
Specifications	**Frequency**	2.4 GHz	2.4 GHz
Features	**Coverage/range**	40 x 40 ft (12 x 12 m)	40 x 40 ft (12 x 12 m)
	Mounting height	7.5 to 9 ft (2.3 to 2.7 m)	7.5 to 9 ft (2.3 to 2.7 m)
	Operating temperature**	14º to 131º F (-10º to 55º C)	14º to 131º F (-10º to 55º C)
	Operating voltage	3 VDC	3 VDC
	Power source	CR123A Lithium battery	CR123A Lithium battery
	Battery life	Up to 6 years (one battery) Up to 10 years (two batteries)	Up to 3 years (one battery) Up to 6 years (two batteries)
	First Step Processing	∎	∎
	Microwave noise adaptive processing	–	∎
	Dynamic temperature compensation	∎	∎
	Wall-to-wall coverage	∎	∎
	Look-down zone	∎	∎
	Pet/small animal immunity	45 lb (20 kg)	100 lb (45 kg)
	Anti-mask	–	–
	Tamper	Cover + wall	Cover + wall
	Sealed optical chamber	∎	∎
Ease of installation***	**No-adjust installation**	∎	∎
	Enable/disable LED	∎	∎
	Enable/disable pet immunity	∎	∎
	Enable/disable look-down	∎	∎
	Microwave Doppler range adjustment	–	∎
Certifications		FCC, IC, cETLus, ZigBee, iControl	FCC, IC, cETLus, ZigBee, iControl

∎ Available – Not available

		Multi-sensor
		RFPR-ZB
Specifications	**Frequency**	2.4 GHz
	Sensor gap width	≥ 1.3 in (33 mm)
	Operating temperature**	14º to 131º F (-10º to 55º C)
	Operating voltage	3 VDC
	Power source	One CR2 Lithium battery
	Battery life	Up to 5 years
Features	**Hall effect contact sensor**	∎
	Water detection	∎
	Tilt detection	∎
	Low temperature alarm	∎
	Tamper	∎
	LED indicator	∎
	Synchronized encryption	∎
Certifications		FCC, IC, cETLus, ZigBee

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Security Escort

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Reliable wireless location solutions

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Security Escort – Overview

What is Security Escort?

Security Escort is a **wireless help-call system** that allows you to locate people or property throughout the system's area. Whether you need to provide personal security or manage assets such as computers, equipment or artwork, Security Escort by Bosch Security Systems is the reliable total solution you've been looking for.

How is Security Escort used?

The Security Escort System is easily controlled through **user-friendly software** and maintained through the Central Console, which consists of one or two computers with up to eight workstations. The ease of operation greatly reduces the opportunity for user error, adding to the reliability of the Security Escort system for any application.

Who is Security Escort for?

Patient / resident monitoring in hospitals, assisted living facilities and adult communities

Personal protection on campuses

Asset tracking in museums

Man-down and guard tour features for correctional facilities

Main Benefits and Functionalities

Instant identification and location of users and assets

Security Escort shows the precise location of users and assets thanks to its **triangulation method**. This technique defines the location according to the transmitter's location in relation to the three closest nearby receivers.

Superior reliability

Security Escort is a proven solution in the Australian and North American market where it has been installed in many sites for **more than 15 years**. Compared to competition, the system's lower frequency even allows for penetration through concrete walls and steel construction. Furthermore, **false alarms are reduced** thanks to a built-in test mode.

Limitless coverage and expansion

Security Escort works over multiple buildings and multiple floors and is effective both indoors and outdoors, for **60,000+ users and assets**.

Customization and integration in any installation

Security Escort offers the ability to create a **customized graphical map** of your application, allowing to apply appropriate labels for buildings, parking areas and more. Also, it easily **integrates into pre-existing video and paging systems** for visual confirmation of the incident and additional alarm notification.

Dynamic graphic monitoring

Security Escort shows **100 maps per system** with simple display monitoring and controlling of the user and / or asset, also allowing for movement tracking of the person or item. Several databases are available to **record subscribers, system events, component addresses** and more.

Countless features

- User self test
- Man down
- Asset tracking
- Fixed point identification
- Transmitter schedules
- Check-in and watchdog schedule
- Acknowledgement transmitter

Security Escort – How does it work

The Security Escort system responds to signals that are initiated either automatically or manually by a transmitter. The signal is relayed through the system to the main computer and up to eight additional workstations. Signals are then actively tracked to provide up-to-the-minute information for alarm response management.

Transmitters

The user transmits with the transmitter a signal by simply pressing the button

Receivers

The signal is received by multiple receivers and sent to the transponder / coordinator

Transponder / Coordinator

The transponder / coordinator compiles the information to notify the central console

SE2 Personnel Transmitter (304MHz) / SE-TRM Personnel Transmitter (433MHz)

- Transmits alarms, tests and tracking signals
- Notifies Central Console of user's name and location immediately on alarm
- User replaceable battery with four-year life
- Low battery indication

SE3 Subscriber Transmitter (304MHz)

- Central Console displays user's name and location immediately on alarm
- Users can test transmitter anywhere within the protected area
- Optional silent alarm
- Key-chain attachment

SEC-3402 Point Tracking Transmitter (304MHz / 433MHz)

- Notifies Central Console of transmitter's ID and location immediately on alarm
- Flexible mounting options
- Available post-alarm tracking and alarm map recall

SE88 Watch / Pendant Panic Transmitter (304MHz)

- Once activated, sends an immediate notification of wearer's identity and location
- Can be worn like a watch, pendant or mounted to a permanent location
- Water resistant

Compatible Parts

The following table indicates the parts available for inclusion in a Security Escort System. Contact Bosch Security Systems Customer Service for up-to-date model numbers.

Part Name	Description
Electronics, Components	
EA500	Electronics for eight-bus Transponder
EA102	Electronics for indoor or outdoor Receiver
EA120	Electronics for indoor and outdoor Alert Unit
SE485	Interface between Transponder and Central Console
SE3 Transmitters	Personal Duress Transmitter
SE2 Transmitters	Man-down, lanyard, supervisory, and duress Transmitter
SE3401	Point tracking Transmitter
SE88	Personal Watch/Pendant Transmitter
SEFD1	Fall Down Transmitter
Enclosures and Housings	
AE3	Large (51.5 cm x 37.5 cm [20.25 in. x 14.75 in.]) Enclosure
AE1	Small (36.8 cm x 31.8 cm [14.5 in. x 12.5 in.]) Enclosure
AE100	Indoor Receiver Enclosure
AE101	Outdoor Receiver Enclosure
Cables	
C311	3 or 7 Ah battery harness parallel expansion kit
C312	Cables for Transponder to ProxLink Radio Module
Software	
SE2005	System software for up to 500 users
SE2010	System software for up to 1,000 users
SE2050	System software for up to 5,000 users
SE2100	System software for up to 10,000 users
Misc. Parts and Accessories	
HOLST-LGB-SE2	Leather holster for SE2 Transmitters, large belt loop (5.7 cm [2.25 in.])
HOLSTER-SE2	Leather holster for SE2 Transmitters, standard belt loop (4.5 cm [1.75 in.])
E28666B	Security hex driver for Receivers
TR1850	Transformer
P335-10	SE2 Replacement Batteries, 10 pack of CR2, 3 VDC Lithium
E28629B	3 Ah 12 V battery for outdoor Alert Unit
P334	7 Ah 12 V battery for indoor Alert Unit
D1218	17 Ah 12 V Battery
SE112	Portable Test Receiver with display
CTS1-70	Enclosure Cover/Wall Tamper for AE1 and AE3

Features and Benefits

- Security Escort can be integrated into most pre-existing CCTV systems
- Advanced security software allows database versatility for a variety of campus needs
- Automatic alphanumeric paging capabilities alert multiple pagers and provide the alarm's location
- Multiple alarm generating options including "man-down", lanyard pull and guard tour features
- Wide-ranging indoor and outdoor protection including elevators, underground tunnels or basements
- Variety of alarm signals available including sirens, flashing strobe lights and silent alarms
- Transmitters have a built-in test mode reducing incidents of false alarms and assuring reliability in time of need
- Auto-tracking resends the alarm signal every few seconds until help is executed
- Protect and locate valuables (e.g. computers and artwork) with the Point Tracker System

System Accessories

Transmitter
- Transmits alarms, tests and tracking signals
- Subscriber, Personnel and Asset transmitters available
- 60,000+ transmitters per system

Indoor Receiver
- Receives alarm information and relays it to the transponder
- Provides local sounders and visual test confirmation
- Up to 64 per transponder

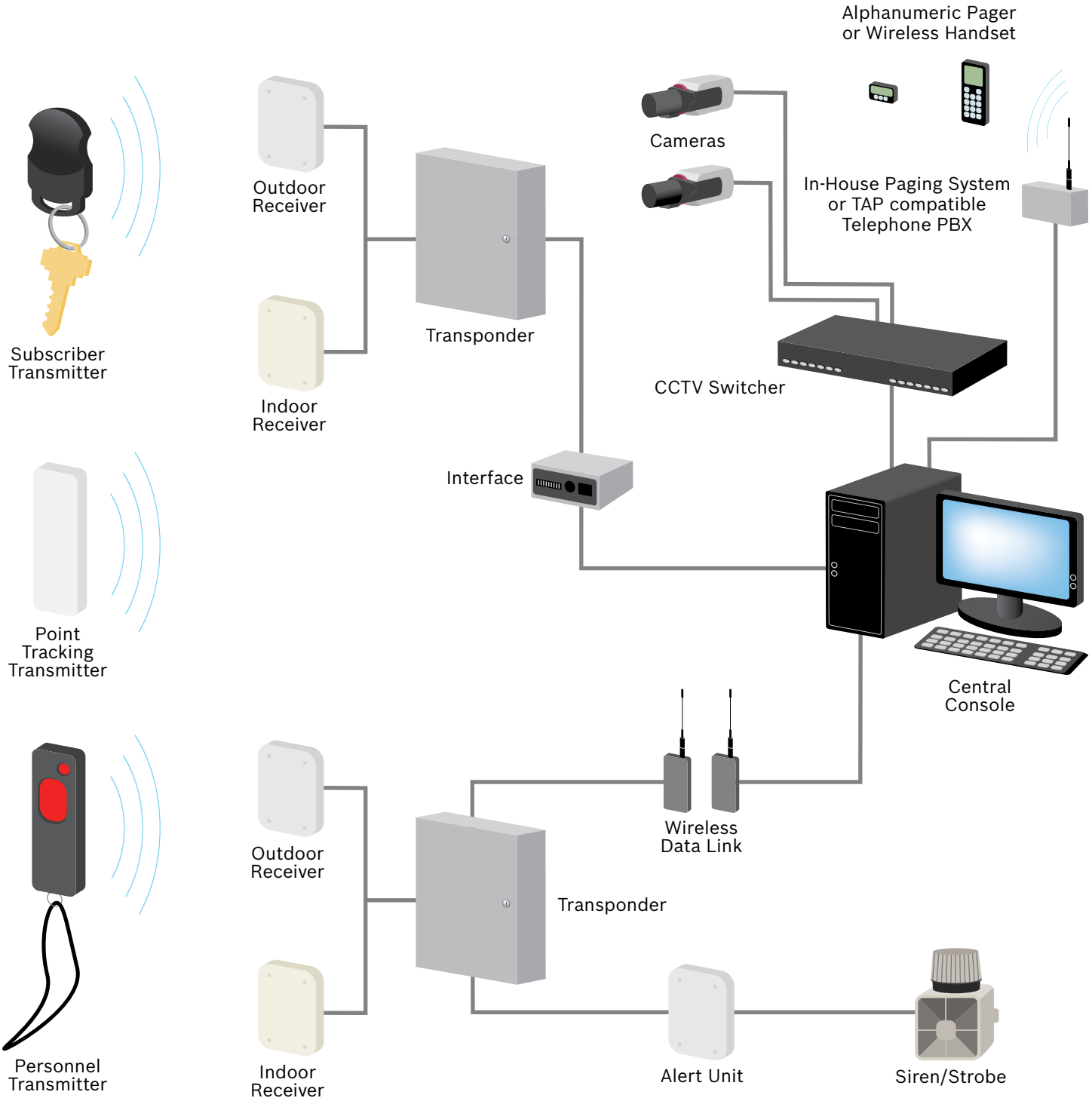
Outdoor Receiver
- Receives alarm information and relays it to transponder
- Fully weather-resistant enclosure
- Up to 64 per transponder

Central Console Software
- Controls system operation
- Includes system databases
- Displays user location and information during an alarm event
- Supports up to 10 computers

Alert Unit
- Provides alarm annunciation
- Test confirmation via attached siren/strobe
- Up to 64 per transponder

Transponder
- Controls receivers and alert units
- Provides communication link between receivers, alert units and central console
- Up to 255 per system

Security Escort System Configuration



The system layout shown here is for demonstration only.
All software images in this brochure are simulations. Please contact your Security Escort salesperson for more information.

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Access Management System

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Product Overview

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Software

Access Management System (AMS)
for medium to large sized projects

- Easy-to-use, scalable and resilient software with intuitive, modern graphical user interface (GUI)
- Integration of third-party functionalities such as time and attendance and other HR systems via API
- Integration with BVMS and other video management systems
- Integration with B and G Series Intrusion Control Panels
- Support of Open Supervised Device Protocol (OSDPv2 secure channel) for bi-directional encrypted communication between reader and controller
- Encrypted database and communication at all stages
- Suitable for office and governmental buildings, educational institutions, hospitals, etc.
- Administrates up to:
  - 400 divisions
  - 10,000 doors
  - 200,000 cardholders
  - 40 concurrent workplace clients

Simplicity
Efficient and user-friendly tools to configure the system and an intuitive, modern GUI for easy and convenient operation.

Maximum resilience
An additional third layer of security – Master Access Controller – between the server and the controllers ensures controller communication, even if the server fails.

Future-proof investment
AMS grows with your needs thanks to the three different license editions: you can start with Lite and switch to Plus or Professional when your security requirements grow. If your needs grow even further, you even switch to BIS-ACE.

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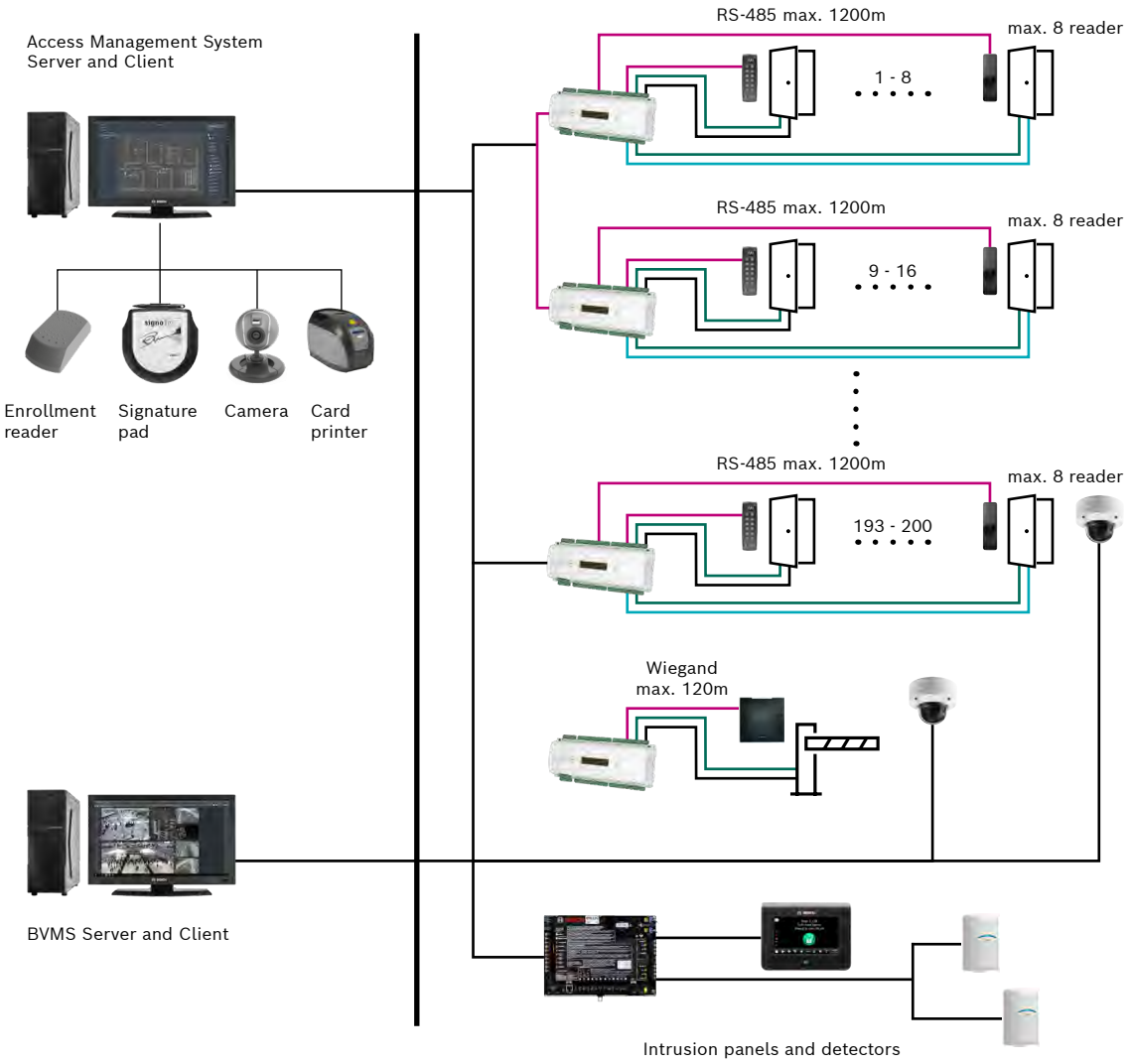
System design example
Access Management System



System description / application

System size
▶ 150 doors ▶ 1,200 cardholders ▶ Three operators

AMS features	AMC features	Reader features
▶ Max. 10,000 doors ▶ Max. 200,000 cardholders ▶ 5 cards per person ▶ 1,024 authorizations per MAC ▶ Graphical location map ▶ Video integration for video verification via BVMS ▶ Intrusion integration via G Series	▶ 2 RS-485 buses ▶ 8 inputs ▶ 8 relays ▶ TCP/IP, RS-485 connection	▶ Support of OSDPv2 secure channel ▶ Outdoor resistant (up to IP67) ▶ Multitechnology support (125kHz and 13.56MHz) ▶ Wiegand and RS-485 support ▶ Keypad or fingerprint for verification

Further elements	Item Type
Readers	ARD-AYBS6380, ARD-FPBEW2-H2, ARD-SER90-WI
Lock	4710760066
Magnet contact	ISN-CSM35-W
REX button	4710760047
AMS Software	1 x AMS-BASE-PLUSxx*, 1 x AMS-XDRS-128Vxx, 2 x AMS-XCLI-1Vxx
Controller	APC-AMC2-4R4CF, APC-AMC2-4WCF
Power supply	APS-PSU-60
Battery	D126
BVMS Software	MBV-BPLU-100
Cameras	NDE-8504-R
Intrusion control panel	B8512G
Intrusion touch screen keypad	B942
Intrusion detectors	ISC-CDL1-W15G

* Version dependent

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Software licenses

AMS licenses

	AMS-BASE-LITExx*	AMS-BASE-PLUSxx	AMS-BASE-PROxx
Base licenses	Lite license	Plus license	Pro license

	AMS-XDIV-1Vxx	AMS-XCLI-1Vxx	AMS-XCLI-5Vxx	AMS-XCRD-100Vxx	AMS-XCRD-1KVxx	AMS-XCRD-10KVxx	AMS-XCRD-50KVxx	AMS-XDRS-32Vxx	AMS-XDRS-128Vxx	AMS-XDRS-512Vxx	AMS-XOND-25Vxx	AMS-XMAC-1Vxx	AMS-XMAC-5Vxx
Expansion licenses	License for 1 division	License for 1 operator client	License for 5 operator client	License for 100 ID cards	License for 1,000 ID cards	License for 10,000 ID cards	License for 50,000 ID cards	License for 32 doors	License for 128 doors	License for 512 doors	License for 25 remote online doors	License for 1 MAC server	License for 5 MAC server

* Version dependent

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Hardware

Access Modular Controller

- Intelligent access management controller
- Carries out independent authorization checks on access points, takes access decisions, controls closing/opening elements and registers movement events – even when offline
- Specifically designed to work with APE, AMS and BIS-ACE systems
- Support of RS-485/OSDPv2 secure channel and Wiegand technology
- Offline capability
- Administrates up to:
  - 8 readers
  - 200,000 cardholders

Speed of installation

The modular concept makes system planning and stocking easy. The service display allows for quick troubleshooting and system maintenance. Thanks to the fast and reliable Ethernet host interface, cardholder updates are completed within seconds.

Reliability

Thanks to its offline capability and supervised battery extensions, the AMC works continuously. To avoid losing data, the event buffer memory stores up to 2 million events offline.

Future-proof investment

Modular system design ensures that the system can grow and adapt according to your needs and changes in technology.

Readers and Credentials

Bosch offers a wide range of readers and cards, from fully featured advanced solutions to cost-effective starter systems. Most models are available with or without keypad or as biometric versions. Wiegand and RS-485 (OSDPv2 SC) support ensures that our solutions work seamlessly with your technology. Our support team will be happy to assist you in choosing the right system.

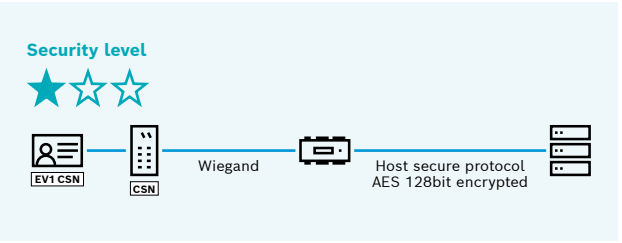
Proximity Readers

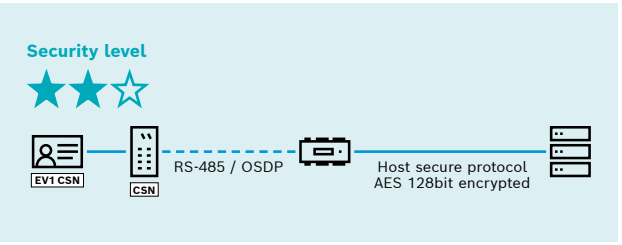
Proximity readers act as an interface between the proximity card and the access controller. The data is transferred from the card to the reader on 125 kHz frequency band.

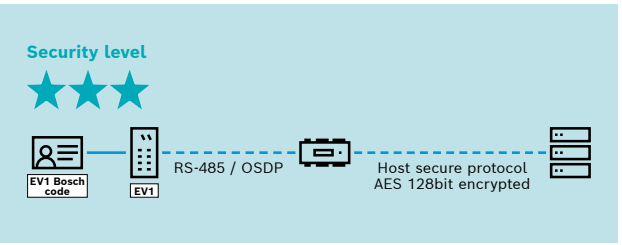
Smart Readers

Smart readers act as an interface between the smart card and the access controller. The data is transferred from the card to the reader on 13.56 MHz frequency band. Bosch offers all customers highest security standards with their unique Bosch data elements. All RS-485 smart card readers come equipped with specialized FW to access a secure sector and read the Bosch code on the smart cards.

Readers Security Level







- Support of OSDP (up to OSDPv2 secure channel)
- Support of Bosch coded MIFARE credentials
- Secure communication via AES 128bit encryption
- Latest SQL data base support

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Proximity Readers

Material description	**Card Reader, HIDprox, mullion**	**Standalone device**	**Standalone device**	**Card Reader, EM, mini mullion**
Commercial type number (CTN)	ARD-MINIPROX	ARD-PROX-PPL	ARD-ENTRYPROX	ARD-AYK12
Bosch controller compatibility	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	Standalone device	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series
Software compatibility	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS
Interfaces	Wiegand	Wiegand	Wiegand	Wiegand
Supported protocol	Wiegand	Wiegand	Wiegand	Wiegand
Panel connection	Pigtail	Pigtail	Terminal strip	Pigtail
Supported credential technology	HID Prox	HID Prox	HID Prox	EM4102
Bosch code	–	–	–	–
Power supply	5 – 16 VDC	5 – 16 VDC	10 – 16 VDC	5 – 16 VDC
Environment class	IP55	IP55	IP55	IP65
Maximum reading distance	13 cm	6 cm	6 cm	8 cm
Keypad	no	no	yes	no
Dimensions (H x W x D)	152 x 43 x 25,4 mm (indoor and outdoor)	79,6 x 44 x 17 mm (indoor and outdoor)	133 x 70 x 35 mm (indoor and outdoor)	80 x 40 x 13 mm (indoor and outdoor)

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Smart Card Readers
(Wiegand) iCLASS

Name	LECTUS secure 1000 WI	LECTUS secure 4000 WI	LECTUS secure 5000 WI	LECTUS secure 9000 WI
Material description	**Card reader, iCLASS, Wiegand**	**Handsfree card reader, iCLASS, Wiegand**	**Card reader with keypad, iCLASS, Wiegand**	**Handsfree card reader, iCLASS, Wiegand**
Commercial type number (CTN)	ARD-SER10-WI	ARD-SER40-WI	ARD-SERK40-W1	ARD-SER90-WI
Bosch controller compatibility	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series
Software compatibility	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS
Interfaces	Wiegand	Wiegand	Wiegand	Wiegand
Supported protocol	Wiegand	Wiegand	Wiegand	Wiegand
Panel connection	Pigtail	Terminal strip	Terminal strip	Terminal strip
Supported standard	ISO 1443A, ISO 15693, ISO 14443B	ISO 1443A, ISO 15693, ISO 14443B	ISO 1443A, ISO 15693, ISO 14443B	ISO 1443A, ISO 15693, ISO 14443B
Supported credential technology	MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos	MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos	MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos	MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos
Bosch code	–	–	–	–
Power supply	5 – 16 VDC	5 – 16 VDC	5 – 16 VDC	5 – 16 VDC
Environment class	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)	IP65
Maximum reading distance	7.6 cm	11.4 cm	14 cm	33.6 cm
Keypad	no	no	yes	no
Dimensions (H x W x D)	103 x 48 x 23 mm (indoor)	122 x 84 x 24 mm (indoor)	122 x 85 x 28 mm (indoor)	333 x 333 x 39 mm (indoor and outdoor)

- 13.56 MHz proximity readers for connecting to access controllers with Wiegand interfaces
- Available with four different form factors, LECTUS secure readers meet nearly all installation requirements

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Smart Card Readers
(Wiegand and RS-485 (OSDP V1)) – MIFARE

Name	LECTUS duo 3000C	LECTUS duo 3000 CK	LECTUS duo 3000 E	LECTUS duo 3000 EK
Material description	**Card reader, MIFARE Classic**	**Card reader with keypad, MIFARE Classic**	**Card Reader, MIFARE EV1**	**Card reader with keypad, MIFARE EV1**
Commercial type number (CTN)	ARD-AYBS6260	ARD-AYBS6360	ARD-AYBS6280	ARD-AYBS6380
Bosch controller compatibility	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC
Software compatibility	BIS-ACE, APE, AMS, AEC	BIS-ACE, APE, AMS, AEC	BIS-ACE, APE, AMS, AEC	BIS-ACE, APE, AMS, AEC
Interfaces	Wiegand, RS-485	Wiegand, RS-485	Wiegand, RS-485	Wiegand, RS-485
Supported protocol	Wiegand, OSDPv1	Wiegand, OSDPv1	Wiegand, OSDPv1	Wiegand, OSDPv1
Panel connection	Terminal strip	Terminal strip	Terminal strip	Terminal strip
Supported standard	ISO 1443A	ISO 1443A	ISO 1443A	ISO 1443A
Supported credential technology	ISO14443A CSN , MIFARE Classic	ISO14443A CSN , MIFARE Classic	ISO14443A CSN, MIFARE DESFire, MIFARE Classic	ISO14443A CSN, MIFARE DESFire, MIFARE Classic
Bosch code	yes	yes	yes	yes
Power supply	8.5 – 16 VDC	8.5 – 16 VDC	8.5 – 16 VDC	8.5 – 16 VDC
Environment class	IP65	IP65	IP65	IP65
Maximum reading distance	3 cm	3 cm	3 cm	3 cm
Keypad	no	yes	no	yes
Dimensions (H x W x D)	137 x 44 x 27,5 mm (indoor and outdoor)	137 x 44 x 27,5 mm (indoor and outdoor)	137 x 44 x 27,5 mm (indoor and outdoor)	137 x 44 x 27,5 mm (indoor and outdoor)

- The LECTUS duo 3000 Classic line consists of a keypad and a non keypad version for MIFARE Classic and MIFARE DESFire. They come equipped with the Bosch coded MIFARE data sector and support reading the CSN of ISO14443A cards as well.
- Both reader types provide a Wiegand and RS-485/OSDP interface, selectable easily by DIP switch.
- Three LED indicators and a beeper give clear feedback to the user during operation. The reader's logo is illuminated in the dark.

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Smart Card Readers

Multitech smart card readers (RS-485 OSDP V2 encrypted) – iCLASS and MIFARE

Name	LECTUS Secure 1000 RO	LECTUS Secure 2000 RO	LECTUS Secure 4000 RO	LECTUS Secure 5000 RO
Material description	**Card reader, OSDP**	**Card reader, OSDP**	**Card reader, OSDP**	**Card reader with keypad, OSDP**
Commercial type number (CTN)	ARD-SER10-RO	ARD-SER15-RO	ARD-SER40-RO	ARD-SERK40-RO
Bosch controller compatibility	AMC2-4WCF	AMC2-4WCF	AMC2-4WCF	AMC2-4WCF
Software compatibility	APE, BIS-ACE, AMS	APE, BIS-ACE, AMS	APE, BIS-ACE, AMS	APE, BIS-ACE, AMS
Interfaces	RS-485	RS-485	RS-485	RS-485
Supported protocol	OSDPv2 SC	OSDPv2 SC	OSDPv2 SC	OSDPv2 SC
Panel connection	Terminal strip	Terminal strip	Terminal strip	Pigtail
Supported standard	ISO 1443A, ISO 15693, ISO 14443B	ISO 1443A, ISO 15693, ISO 14443B	ISO 1443A, ISO 15693, ISO 14443B	ISO 1443A, ISO 15693, ISO 14443B
Supported credential technology	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos
Bosch code	yes	yes	yes	yes
Power supply	5 – 16 VDC	5 – 16 VDC	5 – 16 VDC	5 – 16 VDC
Environment class	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)
Maximum reading distance	7.6 cm	7.6 cm	13 cm	13 cm
Keypad	no	no	no	yes
Dimensions (H x W x D)	103 x 48 x 23 mm (indoor and outdoor)	153 x 48 x 23 mm (indoor and outdoor)	122 x 85 x 24 mm (indoor and outdoor)	122 x 85 x 28 mm (indoor and outdoor)

- Highest level of security due to OSDPv2 AES 128bit encryption.
- 13.56 MHz proximity readers for connecting to access controllers with OSDP interfaces
- They come equipped with the Bosch coded MIFARE data sector and support reading the CSN of ISO14443A cards as well.
- Interoperable with a growing range of technology environments and form factors

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Biometric Reader and Enrollment Reader
BioEntry W2

Name	BioEntry W2
Material description	**Fingerprint reader, OSDP, multiCLASS**
Commercial type number (CTN)	ARD-FPBEW2-H2

Bosch controller compatibility	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC
Software compatibility	BIS-ACE, AMS, AEC
Interfaces	Wiegand, RS-485
Supported protocol	Wiegand, OSDPv2 SC
Panel connection	Terminal strip, RJ45 (PoE)
Supported standard	ISO 1443A
Supported credential technology	EM, HID Prox, MIFARE Classic, MIFARE DESFire EV1, HID-Corporate-1000, iCLASS, iCLASS SE, Seos
Bosch code	yes
Power supply	12 VDC or PoE
Environment class	Indoor / outdoor product (IP67/ IK09)
Maximum reading distance	13 – 127 mm
Keypad	no
Dimensions (H x W x D)	172 x 50 x 43 mm

* One card format at a time is supported

Biometry at its highest standard

- Convenient cardholder registration including the enrollment of fingerprint templates in just one management system (AMS or BIS-ACE)
- Fingerprint templates can be stored either in secure database or locally on the reader
- BioEntry W2 provides class-leading performance and security by featuring the latest fingerprint algorithm coupled by a powerful quad-core CPU
- The device offers flexibility and sustainability by featuring multitechnology support of credentials, including EM, iCLASS and MIFARE DESFire*
- Packed in a rugged IP67/IK09 housing with sleek metallic finish, BioEntry W2 is a perfect access control solution for tough environment and outdoor installation

Features

Best-In-Class Performance
- 1.2GHz quad-core CPU

Accuracy & Security
- High-precision optical sensor to detect a wide variety of fake fingers

High storage capacity
- Supports up to 400k users
- Data can be stored either on device or on secure database of AMS / BIS-ACE

Rugged Structure
- IK09 impact protection
- IP67 ingress protection
- Ideal for outdoor installation

Multi RFID Card Reading
- LF(125KHz), HF(13.56MHz) dual-band
- Reads all card types that HID multiCLASS supports (EM/HID Prox/MIFARE Classic/ iCLASS/MIFARE DESFire/NFC)
- Highest security standard by supporting Bosch coded MIFARE credentials

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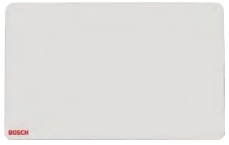
Credentials
MIFARE DESFire, MIFARE Classic and iCLASS

Material description	**Card, MIFARE EV1, Bosch coded**	**Keyfob MIFARE EV1**	**MIFARE Classic Card Imprinted Card Number/ Bosch coded**	**Contactless MIFARE ID Keyfob 1**
Commercial type number (CTN)	ACD-EV1-ISO	ACT-EV1TRF-SA1	ACD-MFC-ISO	ACT-MFCTRF-SA1
Description	MIFARE DESFire EV1 ID card with 8 kByte data storage, 2 application areas, one of which can be customized.	MIFARE DESFire EV1 ID keyfob with 8 kByte data storage, 2 application areas, one of which can be customized.	MIFARE Classic ID card with 1 kByte data storage, 2 application areas, one of which can be customized ▶ PVC plastic card ▶ Credit card size ▶ Imprinted card number ▶ MIFARE Classic chip	MIFARE Classic ID keyfob with 1 kByte data storage, 2 application areas, one of which can be customized

Material description	**iCLASS 26 bit Card with printed Bosch Logo**	**iCLASS 37 bit card with printed Bosch Logo**	**iCLASS 26bit Keyfob**	**iCLASS 37bit Keyfob**
Commercial type number (CTN)	ACD-IC2K26-50	ACD-IC2K37-50*	ACT-ICL256-2AR*	ACT-IC16K37-10*
				
Description	A 13.56 MHz contactless smart card programmed to Wiegand 26-bit format. It has two 1 Kb application areas (256 Byte capacity).	A 13.56 MHz contactless smart card programmed to Wiegand 37-bit format. It has two 1 Kb application areas (256 Byte capacity).	▶ Plastic Tag, PVC ▶ Dimensions: 34 x 31 x 4.4 mm ▶ Fastening Slot ▶ iCLASS chip	A contactless adhesive tag with smart card technology programmed to Wiegand 37-bit format. It operates at 13.56 MHz. It is 16k bits (2K bytes) with 16 application areas.

* Check regional availability with your local sales contact

MIFARE DESFire and MIFARE Classic are all Bosch coded and compatible with the complete Bosch reader portfolio.
Further credentials can be found in your local online product catalogue (link: https://www.boschsecurity.com/xc/en/product-catalog/).

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Readers and credentials
Compatibility matrix

Bus type	Recommended Bosch Readers	Card format					
		MIFARE DESFire EV1 (Bosch code)	MIFARE Classic (Bosch code)	iCLASS, iCLASS SE, Seos	ISO 14443-A CSN	EM card	HID Prox
		13.56 MHz				125kHz	
RS-485	LECTUS secure 1000 RO LECTUS secure 2000 RO LECTUS secure 4000 RO LECTUS secure 5000 RO	●	●	●	●		
RS-485	LECTUS duo 3000 C LECTUS duo 3000 CK		●		●		
RS-485	LECTUS duo 3000 E LECTUS duo 3000 EK	●	●		●		
RS-485 / Wiegand	ARD-FPBEW2-H2	●	●	●	●	●	●
Wiegand	LECTUS secure 1000 WI LECTUS secure 4000 WI LECTUS secure 5000 W1 LECTUS secure 9000 WI			●	●		
Wiegand	ARD-AYK12					●	
Wiegand	ARD Miniprox ARD Entrypox ARD-PROX-PPL						●

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Access Modular Controller
AMC Controllers

Material description	**Door controller Wiegand, 2 readers**	**Door controller Wiegand with CF card**	**Door controller RS-485 with CF card**
Commercial type number (CTN)	APC-AMC2-2WCF	APC-AMC2-4WCF	APC-AMC2-4R4CF
Input voltage	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Output voltage	12 VDC	12 VDC	10 - 30 VDC
Number of connectable readers	2	4	8
Number of Inputs	4	8	8
Number of Outputs	4	8	8
Display	yes	yes	yes
Internal storage (compact flash)	2GB	2GB	2GB
Reader Interface	Wiegand	Wiegand	RS-485
Max reader cable length	110m per reader port	110m per reader port	1200m per Bus
Reader operating voltage	12V DC	12V DC	10-30V DC
Reader monitoring	no	no	yes
Number of wires per reader	7 + 1	7 + 1	4 + 1
Number of connectable reader extensions	1	1	–
Number of connectable I/O extensions	3	3	3
Reader protocol support	Wiegand	Wiegand	OSDP, LBUS, MICOS, BG900
Standards	CE	CE, UL	CE, UL, VDS

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Access Modular Controller
AMC I/O Extension Boards

Material description	Door controller Wiegand extension	Extension board with 8-input 8-output	Extension board with 16-input 16-output	Extension board with 16-input
Commercial type number (CTN)	API-AMC2-4WE	API-AMC2-8IOE	API-AMC2-16IOE	API-AMC2-16IE
Input voltage	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Output voltage to reader	12 VDC	n/a	n/a	n/a
Number of connetcable readers	4	–	–	–
Number of Inputs	8	8	16	16
Number of Outputs	8	8	16	
Display	no	no	no	no
Internal storage (compact flash)	no	no	no	no

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AMC Accessories

Enclosures

Material description	Enclosure with 1 DIN rail	Enclosure VDS certified	Enclosure with 2 DIN rails	Enclosure with power supply & DIN rail
Commercial type number (CTN)	AEC-AMC2-UL1	AEC-AMC2-VDS (EMEA)*	AEC-AMC2-UL2	AEC-AMC2-ENC3/ENC3Z (China)
Information	▶ Steel enclosure ▶ 1 DIN rail system for easy mounting of AMC2 or AMC2 extension board, power supply and battery	▶ Steel enclosure with preassembled cabling ▶ 1 DIN-rail click system for easy mounting and replacement ▶ Compliant with VdS 2119	▶ Steel enclosure ▶ 2 DIN rail system for easy mounting of AMC2 or MAC2 extension board, power supply and battery	▶ Steel enclosure with preassembled cabling ▶ This enclosure can be used for securely mounting and housing AEC and AMC2 and a power supply.

Mounting Plate, Power supply

Material description	Mounting plate for two/four DIN rails	Power Supply Unit
Commercial type number (CTN)	AEC-PANEL19-UPS/AEC-PANEL19-4DR	APS-PSU-60
Information	▶ 4 rack units/ 88 horizontal pitches ▶ Up to four rails for AMC devices ▶ Battery bracket ▶ Screw socket for PBC-60 ▶ Cable kits to connect the power supply	▶ Power supply unit with integrated battery charging device ▶ Support of 12 V/7 Ah, 12 V/14 Ah and 24 V/7 Ah batteries

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Access Hardware Extensions
Request-to-Exit

Material description	**DS160 Series High Performance**	**Door Release Button**	**Door Release Button**
Commercial type number (CTN)	DS160(white)/DS161(black)	4710760047*	4710760048*
Type	Request-to-exit Detectors	RTE button with key symbol surface-mount	RTE button with key symbol flush-mount
Information	▶ Door monitor with sounder alert ▶ Up to 64 second adjustable latch time ▶ Selectable relay trigger mode ▶ Selectable fail safe/fail secure modes	▶ Zero-potential sensor contact for signaling whether the door is open or closed ▶ Suppressor diode to counteract voltage spikes during the switching process	▶ Zero-potential feedback contact for signaling whether the door is open or closed ▶ Recovery diode for suppressing interfering pulses during the switching process

* Check regional availability with your local sales contact

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Look at what's New !

Orion's expanded product line make it easier than ever to protect your critical devices. Orion has you covered for power quality, power distribution, cooling, and support.

Edge Pro Rackmount

The Edge Pro R Series is a value priced flexible UPS that is ideal for telecom, network, server, and storage applications that require the best possible power protection.
See page 9 for details.

Network Pro RTX2

The NEW Network Pro RTX2 provides Network grade power protection with line-interactive design. RTX2 also accepts up to (4) external battery packs for long runtime.
See page 10 for details.

SCR3 6 & 10 kVA UPS

The NEW SCR3 series 6 & 10kVA ups systems provide true Unity power factor output in a compact modular design. Just arrived - new plug and receptacle versions for easy install.
See pages 13-16 for more details.

PSR Series Cooling

Orion portable air conditioners have many commercial and industrial applications including; server rooms, data closets, hospitals, laboratories, process cooling, and multi workstation cooling.
See page 18 for more details.

Office Pro LCD 550 and 750VA

Visit web page -

The Orion Power Systems Office Pro LCD 550 and 750VA models are feature rich but cost effective solutions for protecting small home office computers, telephone, security, and peripheral equipment.

Features
- Touchscreen LCD display
- Ultimate 632 joule surge protection
- Transformer spaced outlets
- Smart microprocessor Control
- USB Communication Port
- Power Monitoring and Shutdown Software
- Easy Wall mount capability
- Smart Battery Management
- 37 Month Silver Warranty on Electronics and battery

TAA COMPLIANT

Office Pro 550VA - 750VA

Model	Rating	Input	Output	Wt.	Dim	List
OP550U-LCD	550VA/330W	5-15P	(5) 5-15R UPS (5) 5-15R Surge Only	6 lbs.	4" H x 6"W x 12"L	$ 103.00
OP750U-LCD	750VA/450W	5-15P	(5) 5-15R UPS (5) 5-15R Surge Only	6.5 lbs.	4" H x 6"W x 12"L	$ 136.00

* Case qty 4 units.
Note: TAA compliant product available, must specify at time of order.

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Office Pro G2 Series

Line Interactive from 1000VA to 2000VA

The Office Pro G2 is the most advanced and cost effective solution for protecting critical PCs, servers, telephone systems, and DVRs. Features include LCD display, automatic voltage regulation, enhanced 735 joule surge protection and USB communication for power management software.

Features:
- Informative LCD display
- Enhanced 735 joule surge protection circuitry
- All mode surge protection with MOV and Gas Tube Design
- Automatic Voltage Regulation
- Smart Microprocessor Control
- Modem/LAN Internet protection
- USB communication port with Free monitoring and shutdown software
- 37 Month Silver Warranty on Electronics and battery

Office Pro Line Interactive Series 120V 50/60HZ

Model	Description			Dims (H x W x D) / Wt.	List
OP1000U-G2	1000VA / 600W	5-15P	(4) 5-15R Surge only (4) 5-15R Battery+Surge	7”x 5.9”x11.8” / 22 lbs.	$ 218
OP1500U-G2	1500VA / 900W	5-15P	(4) 5-15R Surge only (4) 5-15R Battery+Surge	7”x 5.9”x11.8” / 22 lbs.	$ 254
OP2000U-G2	2000VA / 1200W	5-20P	(4) 5-15R Surge only (4) 5-15R Battery+Surge	7”x 5.9”x11.8” / 24 lbs.	$ 335

Options and Warranties

Model	Description	Dims / Wt.	List
60-SOP1000	60 month Silver warranty for Office Pro G2 1000VA ups. Covers UPS and internal batteries. Customer pays shipping to Orion, Orion pays return shipping.	N/A	$120
60-SOP1500	60 month Silver warranty for Office Pro G2 1500VA ups. Covers UPS and internal batteries. Customer pays shipping to Orion, Orion pays return shipping.	N/A	$150
60-SOP2000	60 month Silver warranty for Office Pro G2 2000VA ups. Covers UPS and internal batteries. Customer pays shipping to Orion, Orion pays return shipping.	N/A	$175

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Edge Pro Rack Mount Series

Line Interactive from 1000VA to 2000VA

The Orion Power Systems Edge Pro R Series offers industry leading efficiency and features in a line interactive design for the highest quality power protection. Edge Pro R features an LCD screen to provide real time data and alarm information. The Edge Pro R Series is a flexible UPS that is ideal for telecom, network, server, and storage applications that require the best possible power protection.

Features:
- 2U Rack Mount Design
- Pure sine wave output
- Line Interactive Design with AVR
- Advanced LCD Display
- SNMP and relay card ready
- USB and RS232 Communication Ports
- Power Monitoring and Shutdown Software
- Easy Swap Batteries
- 37 Month Silver Warranty on Electronics and battery

Edge Pro Rack Mount Series 120V 50/60HZ

Model	Rating	Input	Output	Wt.	Dims (HxWxD)	List
EP1000R	1000VA / 600W	5-15P	(8)5-15R	42 lbs.	3.5" x 17.2" x 16.9"	$478
EP1500R	1500VA / 900W	5-15P	(8)5-15R	48 lbs.	3.5" x 17.2" x 16.9"	$538
EP2000R	2000VA / 1200W	5-20P	(8)5-15R	48 lbs.	3.5" x 17.2" x 16.9"	$776

Options and Warranties

Model	Description	Wt.	Dims (HxWxD)	List
OPS-SNMP4-WEBCARD	Orion SNMP communications card.	2 lbs.	3.5” x 10” x 10”	$ 340
OPS-EMP4	Orion Environmental Monitoring Probe for temp, humidity, 2 alarm contacts. Must be used with SNMP card.	2 lbs.	3.5” x 10” x 10”	$ 290
OPS-Railkit	Rail kit to support ups in 19” 4 post rack.	5 lbs.	3.5” x 3.5” x 20”	$ 78
60-SEP1000	60 month Silver warranty for Edge Pro 1000VA	N/A	N/A	$ 150
60-SEP1500	60 month Silver warranty for Edge Pro 1500VA	N/A	N/A	$ 175
60-SEP2000	60 month Silver warranty for Edge Pro 2000VA	N/A	N/A	$ 195

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Network Pro RTX2 Series

Line Interactive from 1500VA to 3000VA

The Orion Power Systems Network Pro RTX2 offers industry leading efficiency and features in a line interactive design for the highest quality network grade power protection. The Network Pro RTX2 is a flexible UPS that is ideal for telecom, network, server, and storage applications that require the best possible power protection.

Features:

- 2U Rack/Tower Convertible Design
- Pure sine wave output
- Line Interactive Design with AVR
- Advanced rotating LCD
- Hot Swappable User Replaceable Batteries
- SNMP and relay card ready
- .9 power factor provides more real power
- USB and RS232 Communication Ports
- 37 Month Plus Gold Warranty on Electroncis and Battery
- Allows external battery packs for longer outages

Network Pro RTX2 Line Interactive Series 120V 50/60HZ

Model	Rating	Input	Output	Wt.	Dims (HxWxD)	List
NP1500RTX2	1500VA / 1350W	5-15P	(8)5-15R	42 lbs.	3.5" x 18" x 21"	$798
NP2000RTX2	2000VA / 1800W	5-20P	(8)5-15/20R	48 lbs.	3.5" x 18" x 21"	$1,324
NP3000RTX2	3000VA / 2700W	L5-30P	(8)5-15/20R	48 lbs.	3.5" x 18" x 25"	$1,894
NP2000RTX2EBM	48V	N/A	N/A	49 lbs.	3.5” x 18” x 17.3”	$730
NP3000RTX2EBM	72V	N/A	N/A	61 lbs.	3.5” x 18” x 17.3”	$978

Options and Warranties

Model	Description	Wt.	Dims (HxWxD)	List
OPS-SNMP4-WEBCARD	Orion SNMP communications card.	2 lbs.	3.5” x 10” x 10”	$ 340
OPS-EMP4	Orion Environmental Monitoring Probe for temp, humidity, 2 alarm contacts. Must be used with SNMP4 card.	2 lbs.	3.5” x 10” x 10”	$ 290
OPS-Railkit	Rail kit to support ups in 19” 4 post rack.	5 lbs.	3.5” x 3.5” x 20”	$ 78
60-PGNP1500	60 month Plus Gold warranty for Network RTX2 1500VA and below.	N/A	N/A	$ 368
60-PGNP3000	60 month Plus Gold warranty for Network Pro RTX2 2000VA thru 3000VA	N/A	N/A	$ 752
60-PGNP2000EBM	60 month Plus Gold warranty for Network RTX2 1500VA and 2000VA EBM	N/A	N/A	$ 556
60-PGNP3000EBM	60 month Plus Gold warranty for Network Pro RTX2 3000VA EBM	N/A	N/A	$ 778

* NP2000RTX2EBM works with both NP1500RTX2 and NP2000RTX2. Note: TAA compliant product available, must specify at time of

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Online RT ONE Series

True Online from 1000VA to 3000VA

An advanced Digital On-Line Double conversion UPS. The Online RT1 features near Unity power fac
informative LCD display, and rack / tower design.

Features:
- 2U Rack/Tower Convertible Design
- Advanced rotating LCD display
- Double Conversion On-Line design
- Near Unity power factor provides more real power
- Adjustable charger from 1 to 8 amps
- RS232 / USB interface
- Free monitoring and shutdown software
- Remote controllable outlets
- SNMP and Relay Card Ready.
- 37 Month Gold Plus Warranty on Electronics and Battery

Online RT ONE True Online Series 100 - 127V 50/60HZ

Model	Rating at 125V	Input	Output	Wt.	Dims (HxWxD)	List
DC1000RT1	1000VA / 1000W	5-15P	(8) 5-15R	35 lbs.	3.5” x 18” x 16.3”	$879
DC1500RT1	1500VA / 1430W	5-15P	(8)5-15R	38 lbs.	3.5” x 18” x 16.3”	$1,156
DC2000RT1	2000VA / 1930W	5-20P	(8)5-20R	43 lbs.	3.5” x 18” x 21”	$1,490
DC3000RT1	3000VA / 2850W	L5-30P	(8)5-20R (1)L5-30R	61 lbs.	3.5” x 18” x 25"	$1,994

Options and Warranties

Model	Description	Wt.	Dims (HxWxD)	List
OPS-SNMP4-WEBCARD	Orion SNMP communications card.	2 lbs.	3.5” x 10” x 10”	$ 340
OPS-EMP4	Orion Environmental Monitoring Probe for temp, humidity, 2 alarm contacts. Must be used with SNMP card.	2 lbs.	3.5” x 10” x 10”	$ 290
OPS-Railkit	Rail kit to support ups in 19” 4 post rack.	5 lbs.	3.5” x 3.5” x 20”	$ 78
60-PGDC1500	60 month Plus Gold warranty for Online RT1/RTX1 1500VA models and below. Covers UPS and internal batteries. Orion pays shipping both ways.	N/A	N/A	$ 368
60-PGDC3000	60 month Plus Gold warranty for Online RT1/RTX1 2000 and 3000VA models. Covers UPS and internal batteries. Orion pays shipping both ways.	N/A	N/A	$ 752

Note: TAA compliant product available, must specify at time of order.

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Online RTX ONE Extended Run Series

True Online from 1000VA to 3000VA

An advanced Digital On-Line Double conversion UPS. The Online RT features near Unity power factor, informative LCD display, extended run capability, and rack / tower design.

Features:

- 2U Rack/Tower Convertible Design
- Advanced rotating LCD display
- Double Conversion On-Line design
- Near Unity power factor for more real power
- RS232 / USB interface
- Free monitoring and shutdown software
- SNMP and Relay Card Ready.
- 37 Month Gold Plus Warranty on Electronics and Battery
- Allows external battery packs for longer outages

TAA COMP

Online RT ONE True Online Series 100 - 127V 50/60HZ

Model	Rating at 125V	Input	Output	Wt.	Dims (HxWxD)	List
DC1000RTX1	1000VA / 1000W	5-15P	(8) 5-15R	35 lbs.	3.5” x 18” x 16.3”	$989
DC1500RTX1	1500VA / 1430W	5-15P	(8)5-15R	38 lbs.	3.5” x 18” x 16.3”	$1,276
DC2000RTX1	2000VA / 1930W	5-20P	(8)5-20R	43 lbs.	3.5” x 18” x 21”	$1,728
DC3000RTX1	3000VA / 2850W	L5-30P	(8)5-20R (1)L5-30R	61 lbs.	3.5” x 18” x 25"	$2,218
DC1500RTX1EBM *	36VDC	N/A	N/A	46 lbs.	3.5” x 18” x 15"	$618
DC2000RTX1EBM	48VDC	N/A	N/A	66 lbs.	3.5” x 18” x 19"	$772
DC3000RTX1EBM	72VDC	N/A	N/A	86 lbs.	3.5” x 18” x 28"	$980

Options and Warranties

Model	Description	Wt.	Dims (HxWxD)	List
OPS-SNMP4-WEBCARD	Orion SNMP communications card.	2 lbs.	3.5” x 10” x 10”	$ 340
OPS-EMP4	Orion Environmental Monitoring Probe for temp, humidity, 2 alarm contacts. Must be used with SNMP card.	2 lbs.	3.5” x 10” x 10”	$ 290
OPS-Railkit	Rail kit to support ups in 19” 4 post rack.	5 lbs.	3.5” x 3.5” x 20”	$ 78
60-PGDC1500	60 month Plus Gold warranty for Online RT1/RTX1 1500VA models and below. Covers UPS and internal batteries.	N/A	N/A	$ 368
60-PGDC3000	60 month Plus Gold warranty for Online RT1/RTX1 2000 and 3000VA models. Covers UPS and internal batteries.	N/A	N/A	$ 752
60-PGDC1500EBM	60 mo. Plus Gold warranty for DC1500RTX1EBM	N/A	N/A	$ 496
60-PGDC2000EBM	60 mo. Plus Gold warranty for DC2000RTX1EBM	N/A	N/A	$ 556
60-PGDC3000EBM	60 mo. Plus Gold warranty for DC3000RTX1EBM	N/A	N/A	$ 778

* DC1500RTX1EBM works with both DC1000RTX1 and DC1500RTX1. Note: TAA compliant product available, must specify at time of

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Online SCR3 6kVA

Rack / Tower True Online UPS rated at 6 kVA

The Orion Power Systems Online SCR3 6 & 10kVA UPS Systems offer industry leading efficiency and features in a true online, double conversion design for the highest quality power protection. Online SCR3 frees up rack or floor space with it's compact design (as small as 4U for up to 10kVA). Online SCR3 uses the latest technology to provide true unity power factor, LCD display, modular design in the most compact footprint possible. The Online SCR3 is a flexible UPS that is ideal for industrial, network, server, and storage applications that require the best possible power protectio

Features
- Flexible form factor allows rack mounted or tower deployment
- True Online Double Conversion Design
- Pure sine wave output at all times
- Keep running longer - add up to 4 external battery packs
- Compact design provides 6kVA and 10kVA in 4U
- Standard wall/rack mounted bypass
- Optional SNMP and Relay Card management
- FREE Power Monitoring and Shutdown Software
- Includes tower stands and rack ears
- 37 Month Gold Plus Warranty on Electronics and Battery
- $150,000 Load Protection Guarantee

Online SCR3 6 kVA UPS

Model	Rating	Wt.(lbs.)	Dims (HxWxD)	List
SCR3-6000RT	SCR3-6000RT power module (2U / 208/240) Hardwired in/out *** Battery module sold seperately ***	45	3.5"x 17.3" x 25"	$ 1,860
SCR3-MBSM	SCR3-MBSM hardwired bypass module	12	3.5"x 17.3" x 7"	$ 680
SCR3-6000RTSW	SCR3-6000RT power module (2U / 208/240V) 6kVA/6kW - L6-30P input plugs and L6-30R receptacle *** Battery module sold seperately *** *** Must be ordered with SCR3-MBSM-6KSW ***	67	3.5"x 17.3" x 25"	$ 2,275
SCR3-MBSM-6KSW	SCR3-MBSM 6kVA bypass module w/ L6-30P input plug and (2) L6-30R receptacles	12	3.5"x 16.9" x 21"	$ 995
SCR3-192EBM6K	Compact 2U battery pack for SCR3-6000RT rated at 192VDC	125	3.5"x 17.3" x 25"	$ 1,525
SCR3-240EBM6K	3U battery pack for SCR3-6000RT rated at 240VDC	145	5"x 17.3" x 25"	$ 1,695

Note: TAA compliant product available, must specify at time of order.

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Online SCR3 6kVA (Continued)

Rack / Tower True Online UPS rated at 6 kVA

Online SCR3 6 kVA UPS				
Model	**Rating**	**Wt.(lbs.)**	**Dims (HxWxD)**	**List**
SCR3-6000RTXFR	SCR3 6kVA isolation transformer to provide 120V/208V/240V. Hardwired input/output.	165	5"x 17.3" x 25"	$ 2,250
SCR3-6000RTXFRSW	SCR3 6kVA isolation transformer to provide 120V/208V/240V. L6-30P input L14-30R output.	165	5"x 17.3" x 25"	$ 2,350
SCR3-PDU6K1	SCR3 6kVA power distribution unit. L14-30P with 8 foot input line cord. (6) 5-20R (1) L5-20R (2) L6-30R (2) L6-20R output receptacles. Wall mount or rack mount.	10	17.3"x 5.25" x 5"	$ 1,095
SCR3-PDU6K2	SCR3 6kVA power distribution unit. L6-30P with 8 foot input line cord. (3) L6-30R (2) L6-20R output receptacles. Wall mount or rack mount.	10	17.3"x 5.25" x 5"	$ 1,029
OPS-SNMP4-WEBCARD	Orion SNMP communications card for SCR3 Series	2	3.5” x 10” x 10”	$ 340
60-PGSCR3-6K	60 month Plus Gold warranty for SCR3-6000RT. Covers UPS and (1) battery module.	N/A	N/A	$ 1,850
60-PGSCR3-6K-EBM	60 month Plus Gold warranty for SCR3-6000RT EBM extended battery packs.	N/A	N/A	$ 925
OPS-OSS6kVA	On-Site startup service to inspect installation, verify correct operation, and train site personnel. Mon-Fri 8am 5pm	N/A	N/A	$ 1,475
OPS-SCR3-Railkit	Heavy-duty rail kit to support SCR3 ups in 19” 4 post rackmount applications.	12	3” x 6” x 22”	$99

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Online SCR3 10kVA

Rack / Tower True Online UPS rated at 10 kVA

The Orion Power Systems Online SCR3 6 & 10kVA UPS Systems offer industry leading efficiency and features in a true online, double conversion design for the highest quality power protection. Online SCR3 frees up rack or floor space with it's compact design (as small as 4U for up to 10kVA). Online SCR3 uses the latest technology to provide true unity power factor, LCD display, modular design in the most compact footprint possible. The Online SCR3 is a flexible UPS that is ideal for industrial, network, server, and storage applications that require the best possible power protection.

Features

- Flexible form factor allows rack mounted or tower deployment
- True Online Double Conversion Design
- Pure sine wave output at all times
- Keep running longer - add up to 4 external battery packs
- Compact design provides 6kVA and 10kVA in 4U
- Standard wall/rack mounted bypass
- Optional SNMP and Relay Card management
- FREE Power Monitoring and Shutdown Software
- Includes tower stands and rack ears
- 37 Month Gold Plus Warranty on Electronics and Battery
- $150,000 Load Protection Guarantee

TAA COMPLIANT

Online SCR3 10kVA UPS

Model	Rating	Wt.(lbs.)	Dims (HxWxD)	List
SCR3-10000RT	SCR3-10000RT power module (2U / 208/240) Hardwired in/out	40	3.5"x 17.3" x 25"	$3,550
SCR3-MBSM	SCR3-MBSM hardwired bypass module	12	7"x 17.3" x 7"	$680
SCR3-10000RTXFR	SCR3 10kVA isolation transformer to provide 120V/208V/240V. Hardwired input / output.	165	5"x 17.3" x 25"	$ 2,550
SCR3-PDU10K1	SCR3 10kVA power distribution unit. 8 foot input line cord hardwired. (6) 5-20R (1) L5-20R (2) L6-30R (2) L6-20R output receptacles. Wall mount or rack mount.	10	17.3"x 5.25" x 5"	$ 1,195
SCR3-192EBM10K	Compact 2U battery pack for SCR3-10000RT rated at 192VDC	155	3.5"x 17.3" x 25"	$ 1,559
SCR3-240EBM10K	3U battery pack for SCR3-10000RT rated at 240VDC	165	5"x 17.3" x 25"	$ 1,749

Note: TAA compliant product available, must specify at time of order.

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Online SCR3 10kVA (Cont.)

Rack / Tower True Online UPS rated at 10 kVA

Online SCR3 10kVA UPS				
Model	**Rating**	**Wt.(lbs.)**	**Dims (HxWxD)**	**List**
OPS-SNMP4-WEBCARD	Orion SNMP communications card for SCR3 Series	2	3.5” x 10” x 10”	$ 340
60-PGSCR3-10K	60 month Plus Gold warranty for SCR3-10000RT. Covers UPS and (1) battery module.	N/A	N/A	$ 1,850
60-PGSCR3-10K-EBM	60 month Plus Gold warranty for SCR3-10000RT EBM extended battery packs.	N/A	N/A	$ 925
OPS-OSS10kVA	On-Site startup service to inspect installation, verify correct operation, and train site personnel. Mon-Fri 8am 5pm	N/A	N/A	$ 1,475
OPS-SCR3-Railkit	Heavy-duty rail kit to support SCR3 ups in 19” 4 post rackmount applications.	12	3” x 6” x 22”	$99

ORION Power Systems

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MSR Series 20-60kVA

Modular,Scalable,Redundant 3 phase UPS

The Orion Power Systems MSR Series UPS System offers industry leading efficiency and features in a true online, double conversion design for the highest quality power protection. MSR Series compact design offers 20-60kVA with internal batteries and a 3 breaker bypass. Modular design offers redundancy, expansion on demand, and fast easy service

Features
- Modular,scalable,redundant
- True Online Double Conversion Design
- Pure sine wave output at all times
- 5.5 inch advanced LCD display
- Internal automatic bypass
- Built in 3 breaker rear manual maintenance bypass switch
- SNMP management slot, EPO, dry contacts, and RS232 communications
- Easy change battery modules and power modules
- Upgradeable in 20 kVA increments to 60kVA
- Compact footprint with ups, batteries and maintenance bypass in one box
- Add on battery cabinets for extended runtime

MSR 20-60kVA UPS

Model	Rating	Wt.(lbs.)	Dims (HxWxD)	List
MSR20K	20kVa / 18kW - 120Y208V 3 phase Hardwired in/out	745	56"x 21" x 42"	$ 25,750.00
MSR40K	40kVa / 36kW - 120Y208V 3 phase Hardwired in/out	1030	56"x 21" x 42"	$ 33,650.00
MSR60K	60kVa / 48kW - 120Y208V 3 phase Hardwired in/out	1345	56"x 21" x 42"	$ 40,850.00
MSR-EBC1	MSR Series EBC with (12) battery modules, expandable to (20) battery modules	851	57"x 21" x 42"	$ 13,650.00
MSR-EBC2	MSR Series EBC with (20) battery modules	1695	57"x 21" x 42"	$ 18,879.00
OPS-OSS-MSR	On-Site startup service to inspect installation, verify correct operation, and train site personnel. Mon-Fri 8am 5pm	N/A	N/A	$ 1,750.00

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PSR Series Cooling

Portable, Scalable, Redundant cooling for small data centers

Orion Power Systems PSR series air conditioners are a great solution for most heat related applications. Our portable units can handle everything from mission critical to harsh industrial environments. Orion portable air conditioners have many commercial and industrial applications including; server rooms, data closets, hospitals, laboratories, process cooling, and multi workstation cooling.

Features
- Portable,scalable,redundant
- Made in USA
- Washable filters for easy maintenance
- Industry leading 12 month warranty with 48 month compressor warranty
- LCD display with simple controls
- Auto restart function
- Uses standard 120V outlet
- Can be stacked, rack or ceiling mounted

PSR Series Cooling

Model	Rating	Wt.(lbs.)	Dims (HxWxD)	List
PSR-12	PSR Series 12,000 btu Spot AC for ceiling, portable, or rack mount installation.	145	56"x 21" x 42"	$ 6,300.00
Options:				
PSR-RMKIT	PSR Series rack mount installation kit	10	N/A	$ 455.00
PSR-Port	PSR Series portable installation kit	10	N/A	$ 395.00
PSR-Stack	PSR Series vertical stacking installation kit	10	N/A	$ 265.00
PSR-HKIT	PSR Series hanging installation kit	10	N/A	$ 495.00

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Communications & Options

Orion Software, Communications Cards, and Accessories

Monitoring and shutdown software:
- Works with Windows Vista, Vers. 7,8,10, Linux
- Included FREE with all models
- Logging of power events and shutdown capability
- Email and SMS capability
- Shuts down multiple servers over network

SNMP Management Card
- Works with Edge Pro, Network Pro RTX, Network Pro RTX2, Online RT1, Online RTX1, SCR3 and MSR models
- Logging of power events and shutdown capability
- Monitor ups from web browser
- Email and SMS capability

Relay Card for AS/400 and Industrial Applications:
- 9 pin relay dry contacts

Options and Warranties

Model	Description	Wt.	Dims (HxWxD)	List
OPS-SNMP4-WEBCARD	Orion SNMP communications card for Edge Pro, Network Pro RTX2, Online RT1 and RTX1, SCR3, and MSR models.	2 lbs.	2 ” x 7” x 7”	$340
OPS-EMP4	Orion Environmental Monitoring Probe for temp, humidity, 2 alarm contacts. Must be used with OPS-SNMP4-WEBCARD.	2 lbs.	3.5” x 10” x 10”	$290
OPS-Relay4	Orion Power Systems relay card for AS/400 and building management applications. Works with Edge Pro, Network Pro RTX2, Online RT1 and RTX1, SCR3, and MSR models.	2 lbs.	2 ” x 7” x 7”	$290
OPS-Railkit	Rail kit to support ups in 19” 4 post rackmount	7 lbs.	3” x 6” x 22”	$78
OPS-SCR3-Railkit	Heavy-duty rail kit to support SCR3 ups in 19” 4 post rackmount applications.	12 lbs.	3” x 6” x 22”	$99

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Value Series Power Distribution

Orion Power Systems, Inc. Value Series power distribution units (PDUs) provide robust power distribution for 19 inch cabinets and racks. Orion PDUs are a stand-alone device that is reliable in delivering power required for high availability applications.

Features:
- 19 inch rack mount
- 1U Horizontal or vertical mount
- UL Listed
- 5 Year Warranty
- Circuit breaker
- Front convenience outlet
- Covered switch prevents accidental power off
- Works with sine wave or non-sine wave ups
- High quality metal housing

Value Series PDUs: 120V 50/60HZ

Model	Amp	Mount	Input	Output	Wt.	Dims (HxWxD)	List
OPS-HVPDU-15A10	15A	H/V	5-15P	(2) 5-15R front (8) 5-15R rear	5 lbs.	1.75" x 3.75" x 19" 1U	$74
OPS-HVPDU-20A12	20A	H/V	L5-20P/5-20P *	(2) 5-15/20R front (10) 5-15/20R rear	6 lbs.	1.75" x 3.75" x 19" 1U	$145

* Includes twist lock L5-20P and adapter to convert to 5-20P non-locking

Replacement battery kits

Orion Power Systems, Inc. replacement battery kits are direct factory replacements for for Orion UPS Systems. Orion battery kits assure correct fit and fast easy battery replacement.

Features:
- Original factory performance
- Free return label to dispose of old batteries
- 1 Year warranty
- Easy installtion with guaranteed factory fit

Orion factory battery kits

Model	Description	Wt.	Dims (HxWxD)	List
OP1000U-LCD-RBC	Replacement battery cartridge for OP1000U-LCD internal batteries.	16 lbs.	3" x 4.9" x 5.5"	$110.00
OP2000U-LCD-RBC	Replacement battery cartridge for OP1400U-LCD and OP2000U-LCD internal batteries.	18 lbs.	3" x 4.9" x 5.5"	$160.00
NP1500RTX-RBC	Replacement battery cartridge for NP1500RTX internal batteries.	25 lbs.	3" x 9" x 12"	$320.00
NP2200RTX-RBC	Replacement battery cartridge for NP2200RTX internal batteries.	35 lbs.	3" x 9" x 12"	$395.00
DC1000RTX-RBC	Replacement battery cartridge for DC1000RT/RTX internal batteries. 24 Volt version.	18 lbs.	3" x 9" x 7"	$210.00
DC1500RTX-RBC	Replacement battery cartridge for DC1500RT/RTX internal batteries.	25 lbs.	3" x 9" x 12"	$320.00
DC2000RTX-RBC	Replacement battery cartridge for DC2000RT/RTX internal batteries.	33 lbs.	3" x 9" x 12"	$395.00
DC3000RTX-RBC	Replacement battery cartridge for DC3000RT/RTX internal batteries.	46 lbs.	3" x 9" x 19"	$560.00

Office Pro Series **Load (Watts) / Time in minutes**

Model	100	200	400	600	800	1000	1200
OP550U-LCD	13	4.4	N/A	N/A	N/A	N/A	N/A
OP750U-LCD	15	6	2	N/A	N/A	N/A	N/A
OP1000U-G2	54	22	4	2	N/A	N/A	N/A
OP1500U-G2	62	24	4	3	2	N/A	N/A
OP2000U-G2	68	28	7	5	4	3	2

Edge Pro Series **Load (watts) / Time in minutes**

Model	100	250	500	750	1000	1200
EP700R	34	9.5	N/A	N/A	N/A	N/A
EP1000R	63	19	10	N/A	N/A	N/A
EP1500R	84	25	9	5	N/A	N/A
EP2000R	84	25	9	5	3	2

Network RTX2 Runtime Chart **Load (watts) / Time in minutes**

Model	100	250	500	750	1000	1200	1350	1800	2700
NP1100RTX2	83	25	10	5	N/A	N/A	N/A	N/A	N/A
+ 1 EBM	326	105	43	25	N/A	N/A	N/A	N/A	N/A
+ 2 EBM	602	198	84	50	N/A	N/A	N/A	N/A	N/A
+ 3 EBM	897	300	127	77	N/A	N/A	N/A	N/A	N/A
+ 4 EBM	1206	406	175	105	N/A	N/A	N/A	N/A	N/A
NP1500RTX2	154	49	20	12	7	6	5	N/A	N/A
+ 1 EBM	704	235	100	60	41	33	28	N/A	N/A
+ 2 EBM	1320	447	194	117	82	65	56	N/A	N/A
+ 3 EBM	1975	675	295	179	126	100	86	N/A	N/A
+ 4 EBM	2656	913	402	245	173	138	120	N/A	N/A
NP2000RTX2	198	62	25	15	9	7	6	4	N/A
+ 1 EBM	748	248	105	63	43	34	29	20	N/A
+ 2 EBM	1364	460	199	120	84	66	57	39	N/A
+ 3 EBM	2019	688	300	182	128	101	87	60	N/A
+ 4 EBM	2700	926	407	248	175	139	121	84	N/A
NP3000RTX2	326	105	43	25	16	12	8	6	3.7
+ 1 EBM	1206	405	175	105	73	57	39	29	19
+ 2 EBM	2187	746	326	198	139	110	76	57	39
+ 3 EBM	3224	1110	489	299	211	168	117	88	61
+ 4 EBM	4302	1490	660	406	287	229	161	122	84

Online RT1/RTX1 Runtime Chart (EBM only applies to RTX model)

	Load (Watts) / Time in minutes							
Model	100	250	500	750	1000	1200	1600	2400
DC1000RT1 / RTX1	102	30	12	6	4	N/A	N/A	N/A
+ 1 EBM	393	128	53	31	20	N/A	N/A	N/A
+ 2 EBM	723	240	101	61	42	N/A	N/A	N/A
+ 3 EBM	1076	361	155	93	64	N/A	N/A	N/A
+ 4 EBM	1444	483	211	128	88	N/A	N/A	N/A
Model	100	250	500	750	1000	1200	1600	2400
DC1500RT1 / RTX1	139	43	17	9	6	5	N/A	N/A
+ 1 EBM	531	174	73	43	29	22	N/A	N/A
+ 2 EBM	973	325	140	83	57	45	N/A	N/A
+ 3 EBM	1444	488	211	128	89	70	N/A	N/A
+ 4 EBM	1935	659	288	175	122	97	N/A	N/A
Model	100	250	500	750	1000	1200	1600	2400
DC2000RT1 / RTX1	198	62	25	15	9	7	5	N/A
+ 1 EBM	748	248	105	63	43	34	22	N/A
+ 2 EBM	1364	460	199	120	84	66	45	N/A
+ 3 EBM	2019	688	300	182	128	101	70	N/A
+ 4 EBM	2700	926	407	248	175	139	97	N/A
Model	100	250	500	750	1000	1200	1600	2400
DC3000RT1 / RTX1	326	105	43	25	16	12	8	4
+ 1 EBM	1206	405	175	105	73	57	39	22
+ 2 EBM	2187	746	326	198	139	110	76	45
+ 3 EBM	3224	1110	489	299	211	168	117	70
+ 4 EBM	4302	1490	660	406	287	229	161	97

Online SCR3 6kVA and 10kVA

	Load (watts) / Time in minutes					
Model	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**
SCR3-6000RT						
+ 1 SCR3-192EBM6K	45.2	17.6	9.8	6.3	4.4	n/a
+ 2 SCR3-192EBM6K	110.2	45.2	26.2	17.6	12.8	n/a
+ 3 SCR3-192EBM6K	182.7	77	45.2	30.8	22.7	n/a
+ 4 SCR3-192EBM6K	260	110	65.7	45.2	33.5	n/a
+ 1 SCR3-240EBM6K	61	24	34	13	6	4.7
+ 2 SCR3-240EBM6K	146	61	58	36	18	13.6
+ 3 SCR3-240EBM6K	240	102	60	61	31	24
+ 4 SCR3-240EBM6K	341	145	82	87	45.2	36

	Load (watts) / Time in minutes					
Model	**1000**	**2000**	**4000**	**6000**	**8000**	**10000**
SCR3-10000RT						
+ 1 SCR3-192EBM10K	62.7	25	9.3	5	3.1	2
+ 2 SCR3-192EBM10K	150.9	62.7	25	14.2	9.3	6.6
+ 3 SCR3-192EBM10K	248.7	105.2	43	25	16.7	12
+ 4 SCR3-192EBM10K	352.8	150.9	62.7	36.8	22.8	18
+ 1 SCR3-240EBM10K	83.5	33.8	12.9	7	4.5	3.1
+ 2 SCR3-240EBM10K	199	83.5	33.8	19.4	12.9	9.3
+ 3 SCR3-240EBM10K	327	139	58	33.8	23	16
+ 4 SCR3-240EBM10K	461.6	199	83.5	49.4	33.8	25

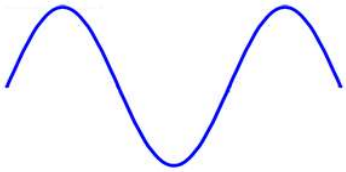
MSR 20-60kVA

	Load (watts) / Time in minutes						
Model	**4500**	**9000**	**18000**	**27000**	**36000**	**45000**	**54000**
MSR20K	20	8	2	N/A	N/A	N/A	N/A
MSR40K	52	20	8	4	2	N/A	N/A
MSR60K	87	36	14	8	5	3	2
External Battery Cabinets							
MSR-EBC1	208	88	36	21	14	10	8
MSR-EBC2	295	125	52	30	21	15	12

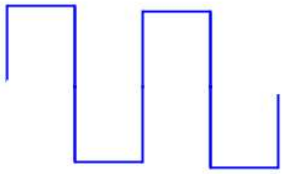
Notes: EBC runtime includes UPS cabinet with 12 battery modules installed.

UPS Basics - Electrical Fundamentals

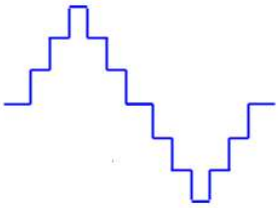
Alternating Current waveforms



Sine Wave- This is the wave form of good clean utility power. More expensive to produce with a ups system.



Square wave- This is the wave form produced by low quality inverters. Examples would be camping inverters, etc. Produces excessive heat with long term use.



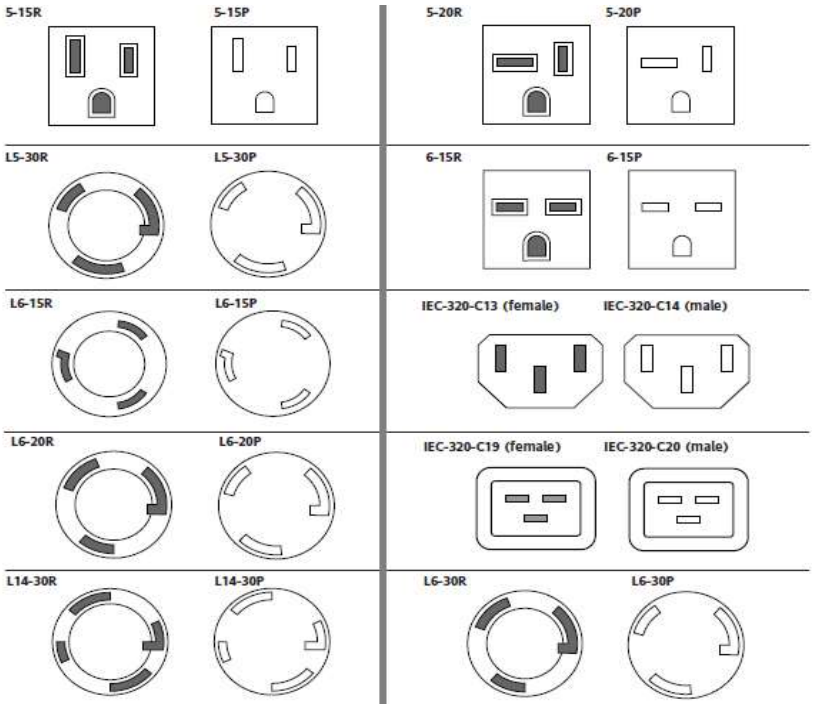
Stepped Square Wave - Much cleaner than square wave and produces less heat. Not recommended for long run time applications or servers with power factor corrected power supplies.

Watts, Volts, and Amps

One of the most basic electrical formulas is : Watts= Volts x Amps
Volts and Amps have an inverse relationship. When you raise the volts, you must lower the amps for a given watt rating.
Why does this matter ? When you raise the volts, you reduce the amps. The lower the amps (or current) the less copper you need. The less copper the lower your cost.
Example: 1000W = 500 V x 2 Amps or 1000W = 2V x 500 Amps

UPS Basics - Installation methods

Plugs and Receptacles



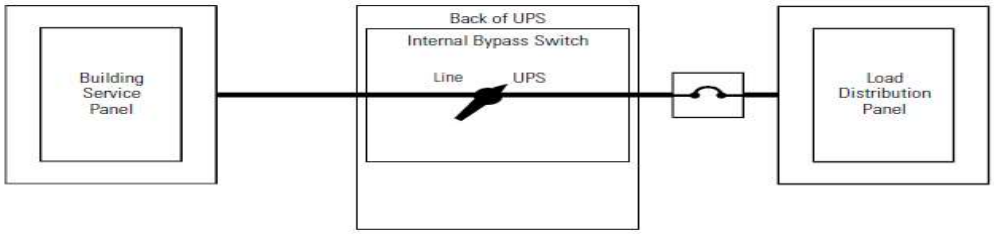
NEMA Receptacle Examples

NEMA 5-15R

5 = 120V
15 = 15 Amps
R = Receptacle

NEMA L6-30P
L = Locking
6 = 208/240V
30 = 30 Amps
P = Plug

Hardwired

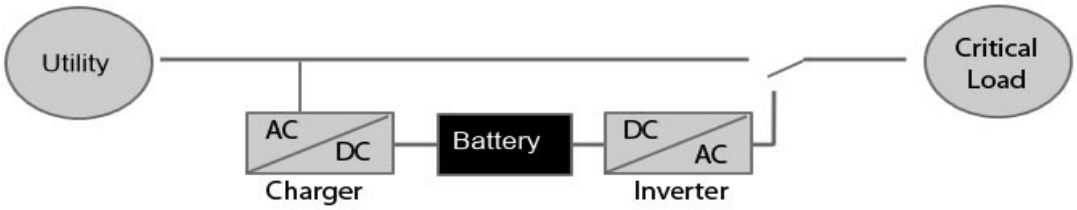


Hardwired installation is typically reserved for larger ups systems 6kVA and above. The input and output of the UPS System is permanently attached to the electrical panels in the building. Hardwired installations must be performed by licensed electricians.

UPS Basics - How UPS Systems Work

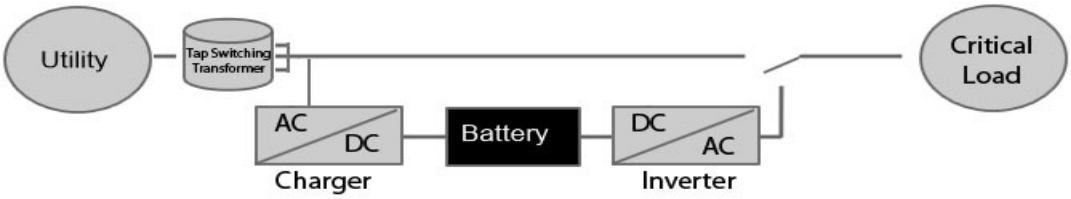
Stand-By UPS

Stand-by UPS Systems are the least expensive and most basic type of UPS. They protect against all 5 power problems, but cannot handle brownouts or overvoltages for extended periods.



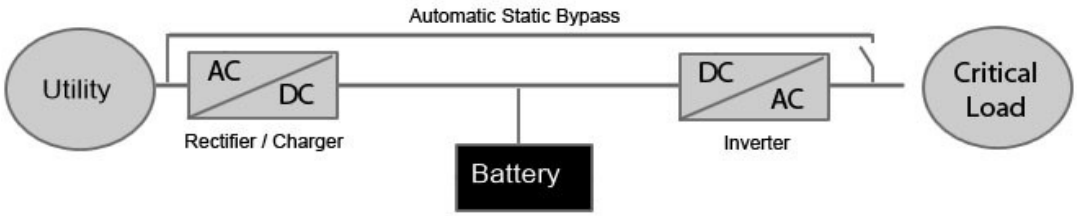
Line-Interactive UPS - Orion Model Network Pro RTX and Office Pro LCD

Line Interactive ups systems provide excellent overall power protection and are ideal for computer applications. They protect against all 5 power problems, but are not a good fit for power quality sensitive applications such as lab equipment.



Double Conversion UPS - Orion Models Online RT1, RTX1, SCR3, MSR

True online double conversion UPS Systems are the industry standard for mission critical applications or where power quality must be precise. Double conversion systems typically regulate voltage +/- 3% or better and output a true sine-wave.



ORION Power Systems

APC - Tripp-Lite
Cross-Reference Chart

Stand-By Products

APC	Tripp-Lite	Orion	Orion Description
BE350	INTERNET350U	OP550U-LCD	Flat style 600VA - (4) UPS (4) Surge Outlets
BK500	INTERNET550U	OP550U-LCD	Flat style 600VA - (4) UPS (4) Surge Outlets
BE550G	INTERNET550U	OP550U-LCD	Flat style 600VA - (4) UPS (4) Surge Outlets

Line Interactive (Step -Wave)

APC	Tripp-Lite	Orion	Orion Description
BR1000G	SMART1000LCD	OP1000U-G2	LCD Tower (8) 5-15R , 5-15P plug
BR1500	OMNIVS1500	OP1500U-G2	LCD Tower (8) 5-15R , 5-15P plug
SC420	SMART550USB	OP1000U-G2	LCD Tower (8) 5-15R , 5-15P plug
SC620	SMART750USB	OP1000U-G2	LCD Tower (8) 5-15R , 5-15P plug
N/A	N/A	OP2000U-G2	LCD Tower (8) 5-15R , 5-20P plug

Line Interactive (Sine-Wave)

APC	Tripp-Lite	Orion	Orion Description
SMT1000	SMART1050	NP1500RTX2	Rack / Tower (8) 5-15R , 5-15P Plug
SMT1000RM2U	SMART1000RM2U	NP1500RTX2	Rack / Tower (8) 5-15R , 5-15P Plug
SMT2200	SMART2200NET	NP2200RTX2	Rack / Tower, (8)5-15/20R, 5-20P Plug
SMT2200RM2U	SMART2200RM2U	NP2200RTX2	Rack / Tower, (8)5-15/20R, 5-20P Plug
SMT3000	SMART3000NET	NP3000RTX2	Rack / Tower, (8) 5-20R (1) L5-30R ,L5-30P Plug
SMT3000RM2U	SMART3000RM2U	NP3000RTX2	Rack / Tower, (8) 5-20R (1) L5-30R ,L5-30P Plug

Line Interactive (Sine-Wave with extended runtime)

APC	Tripp-Lite	Orion	Orion Description
SMX1000	SU1000XLa	NP1500RTX2	Rack / Tower (8) 5-15R , 5-15P Plug
SUA1000XL	SU1000XLa	NP1500RTX2	Rack / Tower (8) 5-15R , 5-15P Plug
SMX1500RM2U	SMART1500RMXL2Ua	NP1500RTX2	Rack / Tower (8) 5-15R , 5-15P Plug
SMX2000RMLV2U	SMART2200RMXL2U	NP2000RTX2	Rack / Tower, (8)5-15/20R, 5-20P Plug
SMX3000LV	SMART3000RMXL2U	NP3000RTX2	Rack / Tower, (8) 5-20R (1) L5-30R ,L5-30P Plug
SMX3000RMLV2U	SMART3000RMXL2U	NP3000RTX2	Rack / Tower, (8) 5-20R (1) L5-30R ,L5-30P Plug

True Online - Double Conversion

APC	Tripp-Lite	Orion	Orion Description
N/A	SU1000RTXL2UA	DC1000RTX1	Rack / Tower (6) 5-15R , 5-15P Plug
SURTA1500RMXL2U	SU1500RTXL2UA	DC1500RTX1	Rack / Tower (6) 5-15R , 5-15P Plug
SURTA1500XL	SU1500XLCD	DC1500RTX1	Rack / Tower (6) 5-15R , 5-15P Plug
SURTA2200RMXL2U	SU2200RTXL2UA	DC2000RTX1	Rack / Tower, (8) 5-20R, 5-20P Plug
SURTA2200XL	SU2200XLCD	DC2000RTX1	Rack / Tower, (8) 5-20R, 5-20P Plug
SURTA3000RMXL3U	SU3000RTXL2UA	DC3000RTX1	Rack / Tower, (8) 5-20R (1) L5-30R ,L5-30P Plug
SURTA3000XL	SU3000XLCD	DC3000RTX1	Rack / Tower, (8) 5-20R (1) L5-30R ,L5-30P Plug

Notes: Cross references are approximate. Please verify exact technical specifications.

razberi™ technologies

Razberi Product Line Overview

Enterprises Benefit from Razberi Best of Breed Video Surveillance Platform

Razberi provides an open platform, not just a box, that enables enterprises to deploy a simple, secure best of breed video surveillance solution.

Our Philosophy

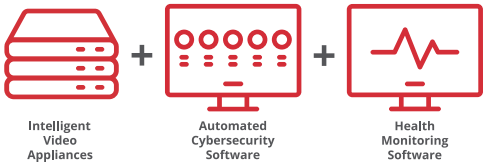
We believe it should be easy for anyone to deploy, manage, and cybersecure their enterprise video surveillance system.

Razberi makes it simple:

1. Our products require less technical knowledge and training to install and use.
2. We provide value-add cybersecurity software to automate the process of setting up cybersecurity on IP cameras and the system.
3. We provide system health monitoring software to manage the entire system remotely.
4. Our open product platforms work with compatible 3rd party IP video cameras, video management software (VMS), and video analytics software.

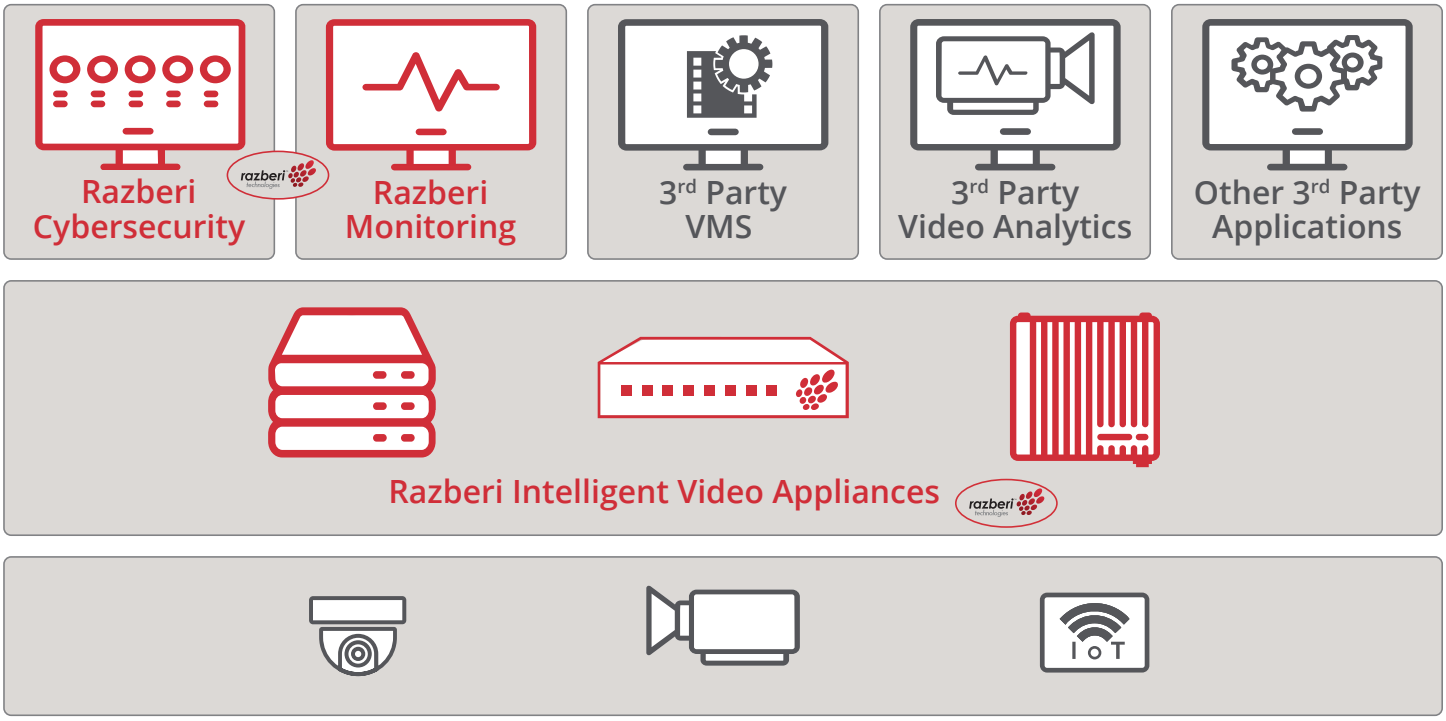
BENEFITS OF RAZBERI INTELLIGENT VIDEO SURVEILLANCE SOLUTIONS

Reduced Bandwidth, Installation and Maintenance Costs	Increased Cybersecurity Protection and Threat Response Times	Faster Resolution of System Issues with Fewer Site Visits Required



Razberi Open Video Surveillance Solutions and Platform

We offer a variety of appliances for the data center, the edge of the network, and outdoors to store, analyze, and process video. Inside each appliance is a combination of servers, switches, and/or storage to address specific applications.



KEY FEATURES

Support for **Centralized** and **Distributed** Architectures

Holistic System Health **Monitoring**

Appliances for **Any Network Location,** Including Outdoors

Automated Cybersecurity Setup

Razberi Intelligent Surveillance Appliances

No matter the size of the enterprise or organization, Razberi can rightsize the solution, deliver network-optimized architecture without compromising video quality, and automate cybersecurity protections.

Data Center Appliances

Razberi Core™

Cybersecure, server-class appliances for video surveillance. Purpose-built to support video management, video recording, and video analytics for demanding centralized video deployments. High performance, redundant, high capacity storage and analytics.

Razberi Edge Appliances

Razberi ServerSwitchIQ™

Razberi's flagship edge appliance that incorporates a server, storage, and managed switch into one small, efficient chassis. Powerful, cybersecure appliances built to record and manage video at the network edge. Automatically secures network connections with cameras and other IoT devices. Reduces network resources to preserve high quality video.

Razberi EndpointDefender™

Managed switch for the network edge, providing endpoint cybersecurity protection for IP cameras and other IoT devices. Effective and responsible scalability. Assures consistent implementation of best practices for device cybersecurity.

Razberi Rugged™

ServerSwitchIQ™ server, storage, and managed switch functionality for extreme temperature environments, including outdoors. Reduces network resources to preserve high quality video and eliminates costs of heaters and air conditioned enclosures.

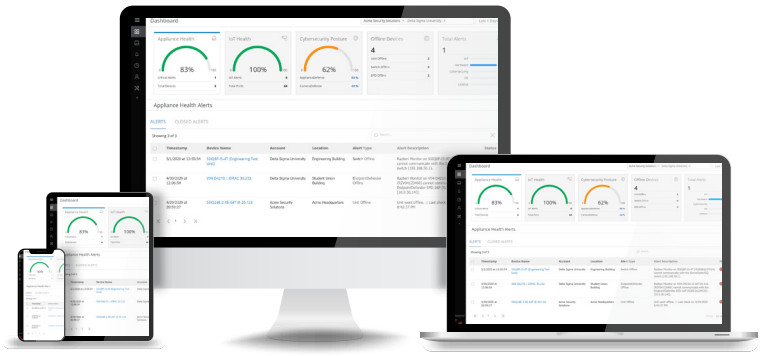
RAZBERI QUALITY AND SUPPORT

Industry Certified
We are ISO 9000 certified. All products are designed, manufactured, and supported from Dallas, TX - USA.

Advanced Replacement Services
Optional 5-year warranties and advance replacement services provide peace of mind and minimize downtime.

Razberi OnSite™ Support
To support mission-critical security, our on-site support offering can expedite equipment and technical support to reduce downtime.

Razberi Value-Add Software



VIDEO SYSTEM HEALTH MONITORING SOFTWARE

Razberi Monitor™

Razberi Monitor™ is a cloud-based platform that manages the health and cybersecurity of multiple enterprises and/or sites. Monitor™ shortens the time it takes to resolve issues and reduces the number of site visits required.

Monitor™ can be offered to enterprises as a managed service with a monthly subscription.

AUTOMATED CYBERSECURITY SOFTWARE

Razberi CameraDefense™

CameraDefense™ automates the process of setting up cybersecurity protection on IP cameras and other IoT devices. Proactively manage and deploy best practices on hundreds or thousands of cameras and IoT devices in minutes with an easy-to-use dashboard. Simple setup wizards guide the user through the process, reducing the need for installers to have in-depth knowledge of cybersecurity.

NETWORK APPLIANCE DEFENSE SOFTWARE

Razberi ApplianceDefense™

Razberi ApplianceDefense™ is a secure appliance architecture and software that provides comprehensive protection over the video server. Designed from the ground-up, the ApplianceDefense™ architecture hardens appliances from cyber-attacks and keeps systems protected 24x7 while providing real-time threat alerts.

Contact Razberi Technologies for a demonstration or more information at razberi.net

salesinfo@razberi.net

alg20200506

comnet
Communication Networks

Video | Audio | Data | Ethernet

netwave®

Wireless Ethernet Transmission

Industrially Hardened Wireless Ethernet Transmission

Power, Point and Play.

Power up and point the units and start transmitting Ethernet.

The ComNet NetWave® line consists of an easy, pre-packaged Point-to-Point kit that contains everything you need to establish remote connectivity to Ethernet edge devices. Also available are Point-to-Multipoint models that allow multiple client/camera/networked edge device locations to connect to a single access point.

NetWave® supports total throughput of 100, 240, or 500 Mbps in a single radio version and up to 240 Mbps in the dual radio models. A wide range of Ethernet devices are supported. NetWave® is secure and uses encryption to prevent unauthorized access to the network. These industrially hardened units with Ethernet Interfaces offer the option to be powered by a PoE switch or a Midspan Power Injector.

Product Category	Page
Point-to-Point Kits	3
Point-to-Multipoint	4
Ultra High Throughput	5
High Throughput	6
Solar Power	7
Accessories	7

Features

- Industrially hardened 5GHz solutions for outdoor applications
- Up to +30 dBm RF output power
- Distances up to 2 mi (FCC) or 2 km (ETSI)
- Distances up to 4 mi (FCC) with MAC lock enabled on Point-to-Point Kits
- Internal directional antenna:
  - 20 dBi 17° beamwidth for full size units
  - 16 dBi 30° beamwidth for mini units
- External antennas available for added configuration flexibility
- Secure transmission: WPA2 – AES or TKIP encryption
- Exclusive ComNet antenna alignment feature eases installation and setup
- Distance adjustments for long-range transmission
- IEEE 802.3at (PSE) compliant support (NW1/2, NW1DR, NW9[E] series)
- Ruggedized heavy duty enclosures meet class IP67 dust and water ingress protection standards
- Lifetime Warranty

NetWave® Kits: A Complete Hardened Point-to-Point Wireless Ethernet Solution

These preconfigured industrial kits include a factory-paired Access Point and Client, plus the power supplies and mounting equipment to install and connect them.

The NetWave® NWK series offers a complete package solution containing everything you need to transmit a single Ethernet data stream between a Client remote location and the Access Point or head end. A simple antenna alignment feature provides easy to read visual indicators that show when the antennas are correctly aligned and the link is established.

Kit Includes

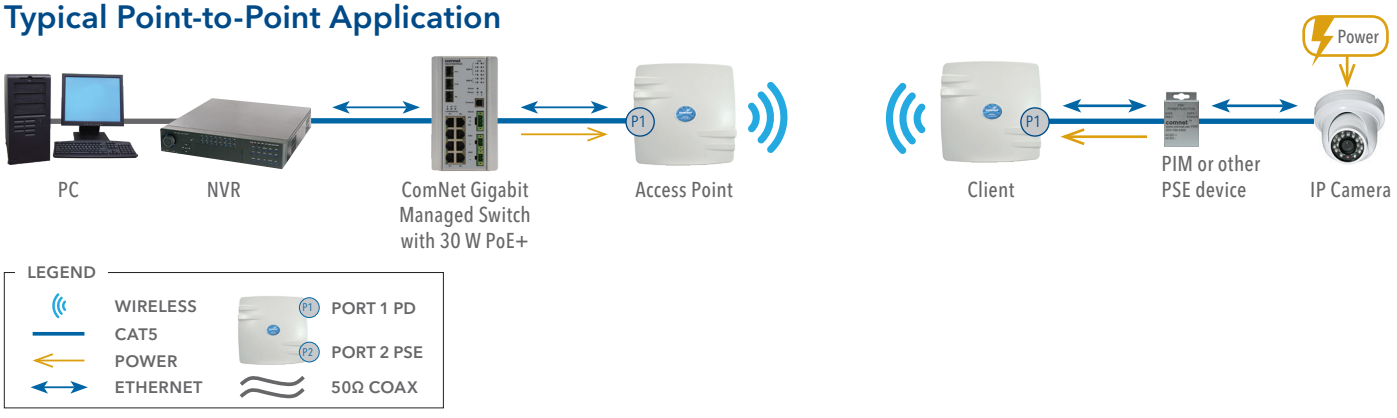
- Client (Remote) and Access Point (Head End)
- NWK9 features ruggedized IP67 rated heavy duty enclosures
- Internal Dual Polarized Directional Antenna
- Distances up to 2 mi (FCC) or 2 km (ETSI)
- Distances up to 4 mi (FCC) with MAC lock enabled on Point-to-Point Kits
- Two mounting hardware assemblies
- Units can optionally be powered by an IEEE 802.3at/IEEE 802.3af PoE switch
- Lifetime Warranty

NetWave® Wireless Ethernet Point-to-Point Kits

Product Group	NWK1	NWK1/M	NWK2	NWK9	NWK11/M
Operating Temp Range	-40° to +75° C	-40° to +75° C	-40° to +75° C	-40° to +70° C	-40° to +75° C
Power	24-48 VDC IEEE 802.3af/at				Passive PoE
Internal Dual Polarized Directional Antenna / Beamwidth	20 dBi / 17°	16 dBi / 30°	20 dBi / 17°	20 dBi / 17°	16 dBi / 30°
Throughput Total (Under Ideal Conditions)	240 Mbps	240 Mbps	240 Mbps	500 Mbps	100 Mbps

This chart references FCC NetWave models. For ETSI models, please refer to the appropriate data sheets or contact ComNet's International Design Center.

Typical Point-to-Point Application



NW1/NW2 Point-to-Multipoint

The NetWave® NW1 and NW2 user-configurable units can be set up through the embedded User Interface as a Client or as an Access Point. Available as region-specific models for North America and Europe in both standard and small-size enclosures, these hardened point-to-multipoint models allow multiple Ethernet endpoints to be connected to a central Access Point. An easy to read LED array displays unit operational status along with received signal strength ensuring optimal installation and operation. These units may be powered from an IEEE 802.3af PoE source.

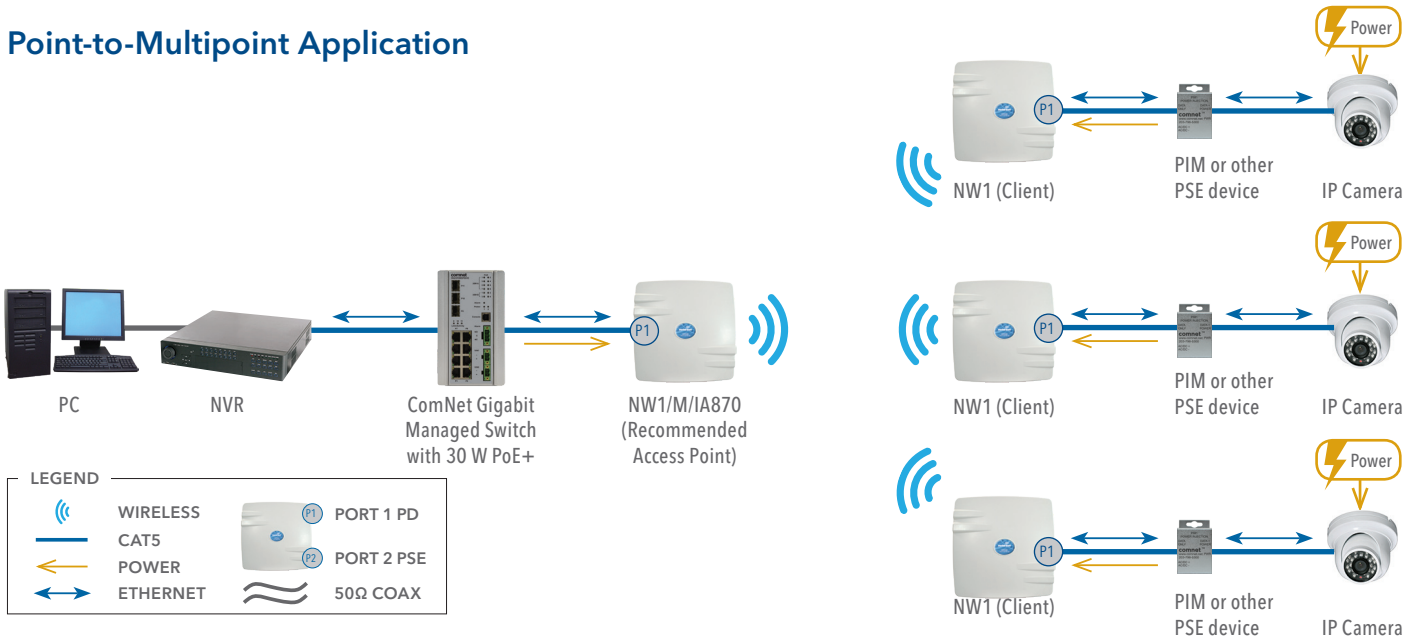
Features

- IEEE802.3at PoE Compliant PD on port 1
- IEEE802.3af PSE available on port 2
- Narrow Channel Spectrum Bandwidths for large and noisy deployments
- Internal Dual Polarized Directional Antenna
- Up to 240 Mbps Throughput
- Transmit power: up to +30 dBm

Ordering Information

Part No.	Description
NW1	Industrial Narrow Bandwidth Wireless Radio, distances up to 2 mi/3.2 km (FCC NA Region)
NW2	Industrial Narrow Bandwidth Wireless Radio, distances up to 2 km/1.25 mi (ETSI EU Region)
NW1IC	Industrial Narrow Bandwidth Wireless Radio, distances up to 2 mi/3.2 km (IC Canada Region)
NW1/M	Mini Industrial Point-to-Multipoint Unit, 16 dBi 30° beamwidth directional antenna (FCC NA Region)
NW2/M	Mini Industrial Point-to-Multipoint Unit, 16 dBi 30° beamwidth directional antenna (ETSI EU Region)
NW1IC/M	Mini Industrial Point-to-Multipoint Unit, 16 dBi 30° beamwidth directional antenna (IC Canada Region)

Point-to-Multipoint Application



NW9[E] Ultra-High Throughput, Impact-Resistant Wireless Ethernet

The NetWave® NW9[E] ultra-high throughput, impact-resistant hardened wireless Ethernet transmission devices that can be configured as a Client or as an Access Point. Simple to deploy and cost-effective alternative to physical connections to Ethernet edge equipment, this single radio model was designed for high throughput point-to-point or multi-point applications and comes standard with an integrated 19 dBi, 17° beam-width antenna. The NW9[E] supports up to 500 Mbps throughput using 802.11ac MIMO technology. The units can be powered by an 802.3af/at PoE compliant device or through a sold-separately PoE injector with the second Ethernet port serving as an IEEE802.3at power source.

Features

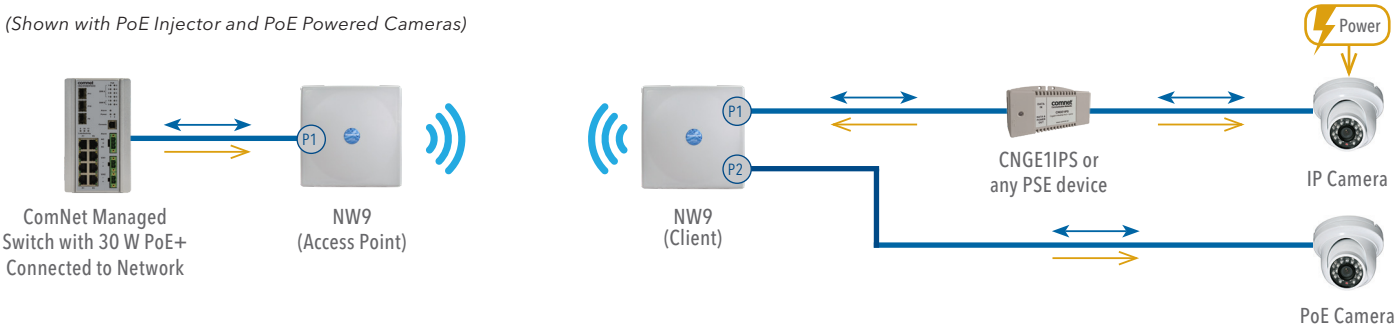
- Sturdy cast aluminum enclosure
- 5 GHz wireless radio
- Up to 500 Mbps throughput
- IEEE802.3at PoE Compliant PD and PSE
- Distances up to 4 mi (FCC) with MAC Lock enabled
- Ruggedized heavy duty IP67 rated enclosures

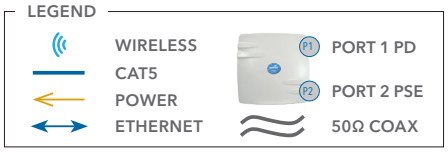
Ordering Information

Part No.	Description
NW9	Individual Hardened Single Radio, 10/100/1000TX PD + 10/100TX PSE Ethernet Ports (FCC NA Region)
NW9E	Individual Hardened Single Radio, 10/100/1000TX PD + 10/100TX PSE Ethernet Ports (ETSI EU Region)
NW9IC	Individual Hardened Single Radio, 10/100/1000TX PD + 10/100TX PSE Ethernet Ports (ETSI EU Region)

Point-to-Point Topology

(Shown with PoE Injector and PoE Powered Cameras)





NW1DR[IC] High Throughput and Scalable Dual Radio Wireless Bridge

The NetWave® industrially hardened narrow bandwidth dual wireless radio is used for redundant ring and drop & repeat topologies when used with an external antenna. Radio 1 is an internal antenna while radio 2 has dual connectors for an external antenna. The wide range of channel spectrum widths available on the NW1DR[IC] series of radios gives user options for either high throughput or more non-overlapping channel options commonly required for noisy or dense radio deployments. Using the NW1DR[IC] will increase the number of available non-overlapping channels while improving stability in crowded RF environments. The NW1DR is FCC certified for use in North America and the NW1DRIC is IC certified for Canada.

Features

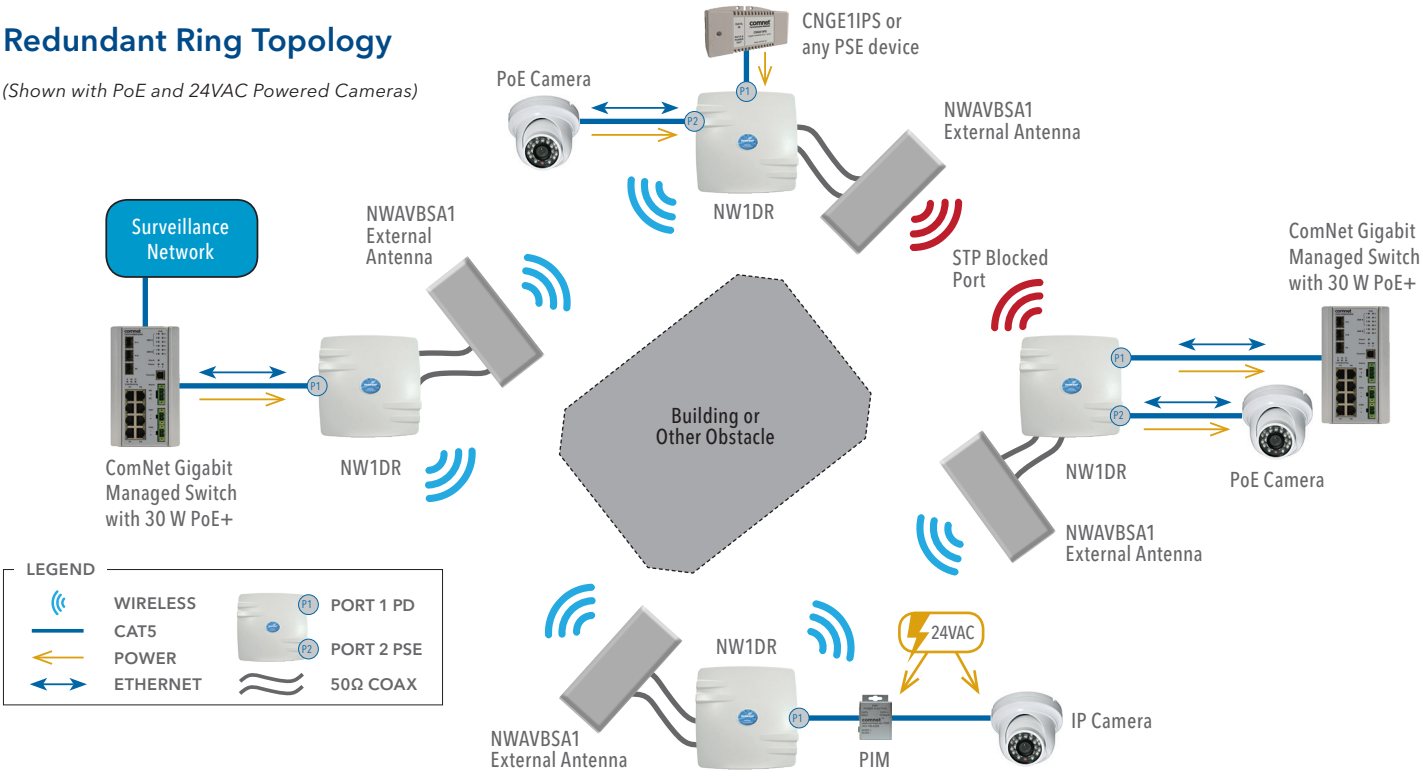
- Scalable - Narrow Channel 5 and 10 MHz Bandwidths
- Expand your WLAN without losing reliability
- Up to 240 Mbps Throughput
- IEEE802.3at PoE Compliant PD on port 1
- IEEE802.3af power source (PSE) available on port 2

Ordering Information

Part No.	Description
NW1DR	Industrially Hardened Dual Radio Narrow Bandwidth Wireless Bridge, (FCC NA Region)
NW1DRIC	Industrially Hardened Dual Radio Narrow Bandwidth Wireless Bridge, (Industry Canada NA Region)

Redundant Ring Topology

(Shown with PoE and 24VAC Powered Cameras)



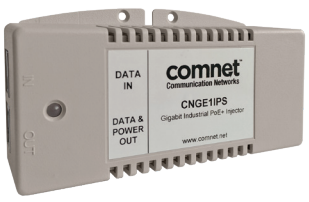
NWKSP(X) Solar Power for Wireless Ethernet

NetWave® Solar kits provide continuous 30 W remote power to networked edge equipment, and include a high quality photovoltaic solar panel, outdoor enclosure with gasketed hinged door and tamper proof locks, power controller and power injection module, all the mounting hardware and is available with or without sealed lead acid batteries. The equipment can be mounted to a four-to-six inch (ten-to-fifteen centimeter) pole or to a wall with the included mounting hardware. The included controller protects against overcharge and over discharge while optional 220 Ah high performance 24 V batteries give the best available deep discharge and temperature performance. Systems provide 48 V PoE output with a 40 hour reserve time (including 25% battery derating for moderately low temperatures).

Ordering Information

Part No.	Description	Solar Panels	Peak Sunlight	System Weight with Batteries*
NWKSP3	30 W Continuous Power Solution	2 × 120 W	6 hrs	299 lb / 135 kg
NWKSP4	30 W Continuous Power Solution	4 × 120 W	3 hrs	418 lb / 189 kg
Included	Enclosure, Controller, Solar Panel, Cables, Mounting hardware for the Solar Panel and Enclosure			
Options	Kits are optionally available without batteries included.			

Optional Accessories



CNGE1IPS

NWAVBSA1

NWADA1

NWBKT

Ordering Information and Compatibility

Part No.	Description	Compatibility (Includes any applicable ETSI models)				
		NW1	NW1/M	NW9	NWK11/M	NW1DR
/IA870	Internal 8 dBi, 70° beam width 5 GHz antenna	–	•	–	–	–
NWAVBSA1	External Dual Polarization 4.9-5.8 GHz 16 dBi Variable Beam Sector Antenna	†	–	–	–	•
NWADA1	External Dual Polarization 4.9-5.8 GHz 19 dBi 17° Beamwidth Directional Antenna	–	–	–	–	•
NWPM24PPI	48 VDC Hardened 100 Mbps TX Passive Power Injector	•	•	•	•	•
CNGE1IPS	35 W 56 VDC Gbps PoE Injector	–	–	•	–	•
NWBKT	Articulating Wall Mount Bracket	•	–	–	–	•

[†] Compatible, requires /EXA model option.

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Communication Networks

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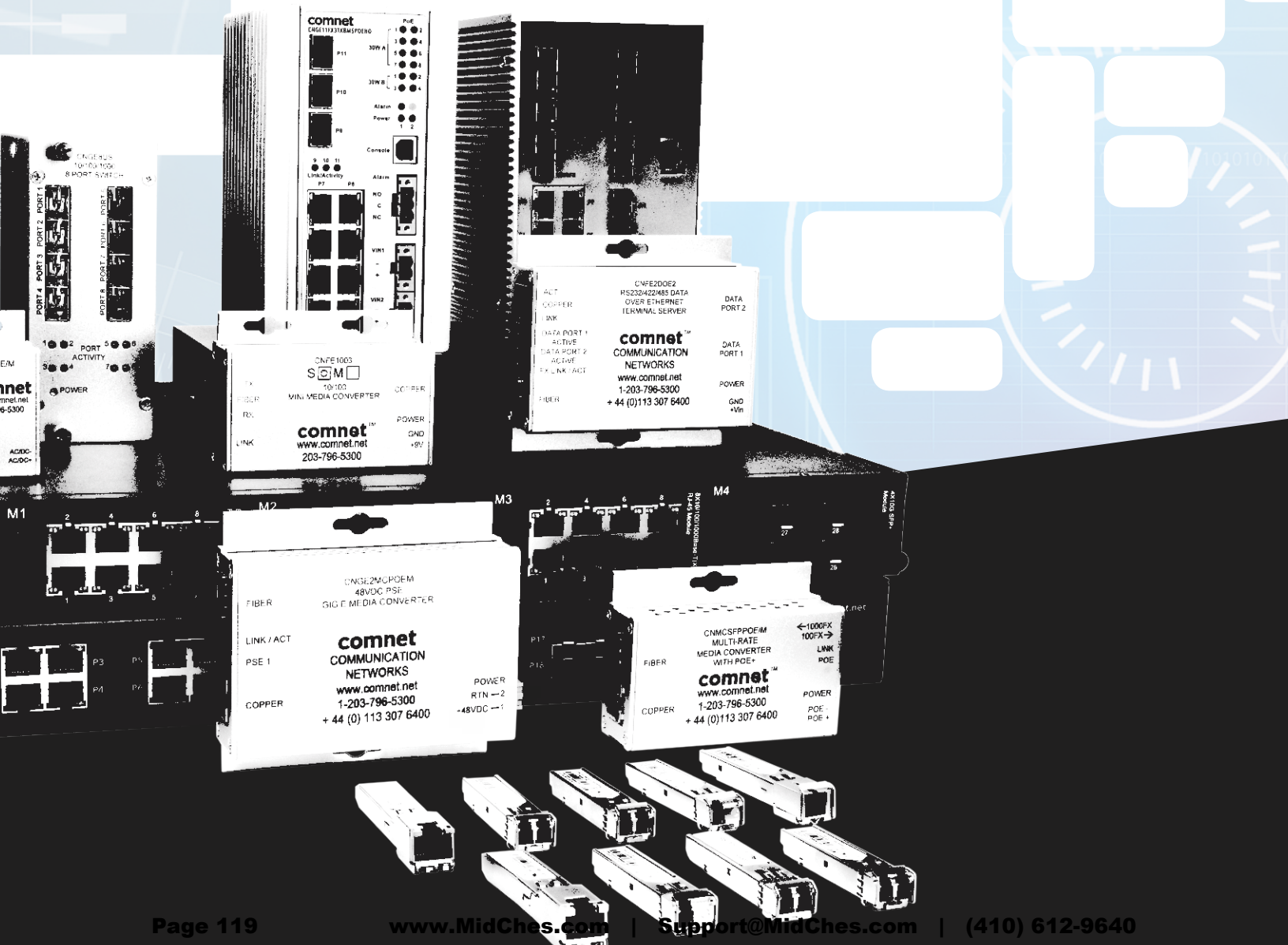
ETHERNET

Network Transmission Solutions



Product training availability and scheduling is available on comnet.net. Scan the QR code above with your mobile device to go directly to the Training Page.

In This Brochure:

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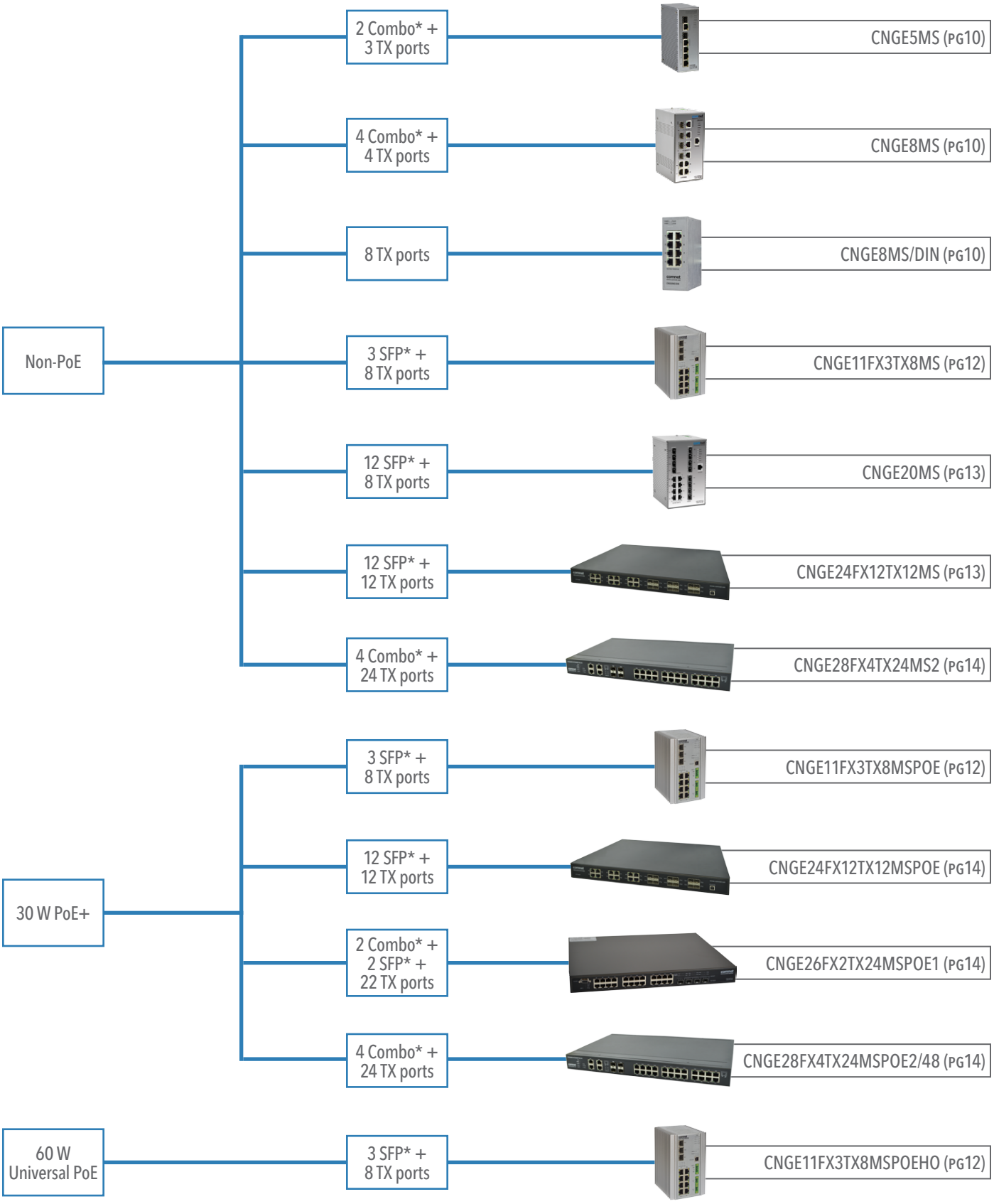
Critical applications demand reliable products. ComNet Ethernet products deliver the highest level of reliability and performance.

ComNet sets the new standard by offering tough transmission equipment backed by an unsurpassed level of support that comes standard with every product we sell. Our innovative equipment is easy to install and operate. With the ComNet Technical Support Team available when you need them, any challenge you may be facing is easily overcome.

ComNet understands Ethernet and wants to share that knowledge with you.

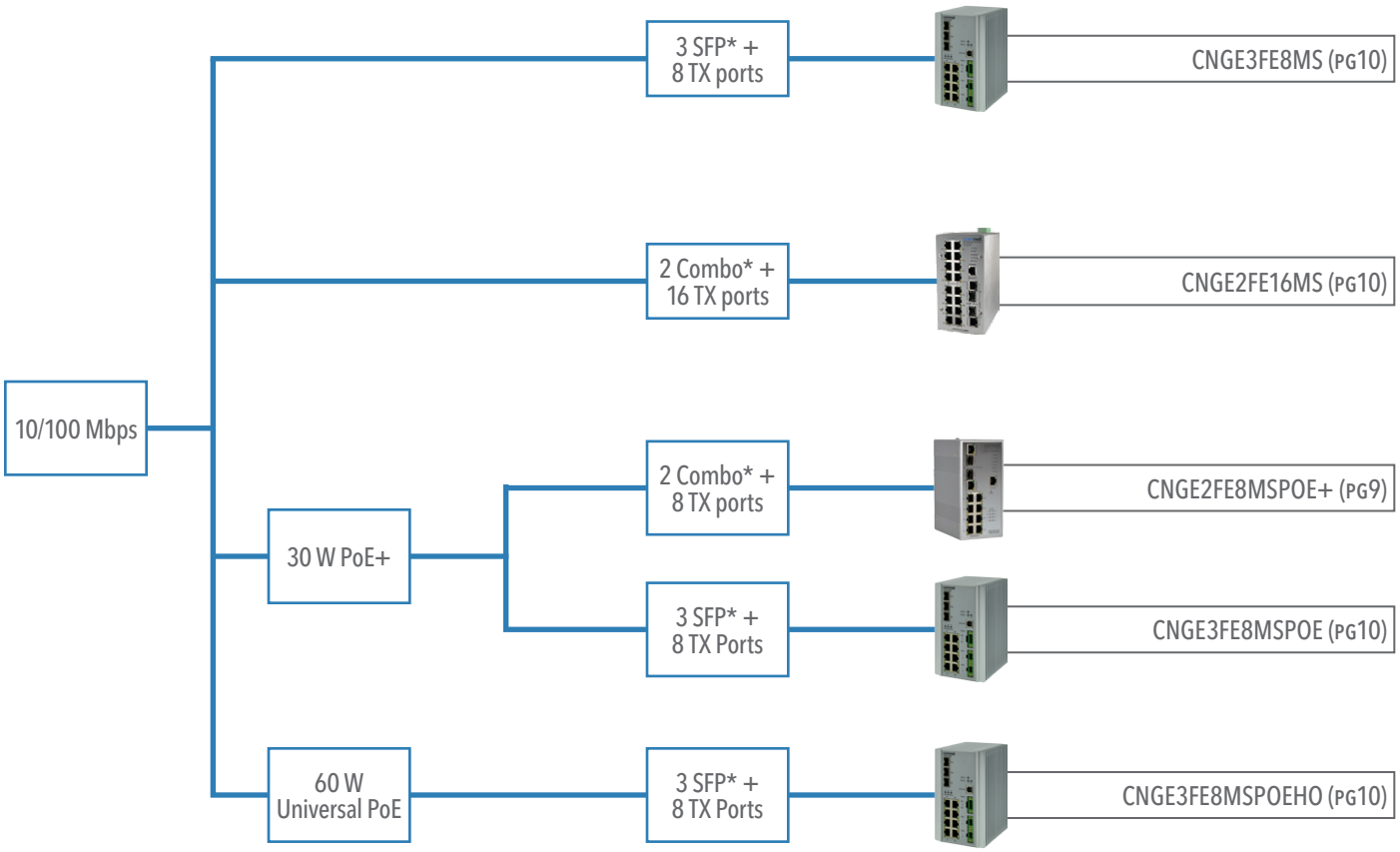
ComNet offers scheduled Ethernet product training classes, webinars and online subject matter to make your understanding of Ethernet greater than ever.

Industrially Hardened All-Gigabit Managed Ethernet Switch Selection Guide



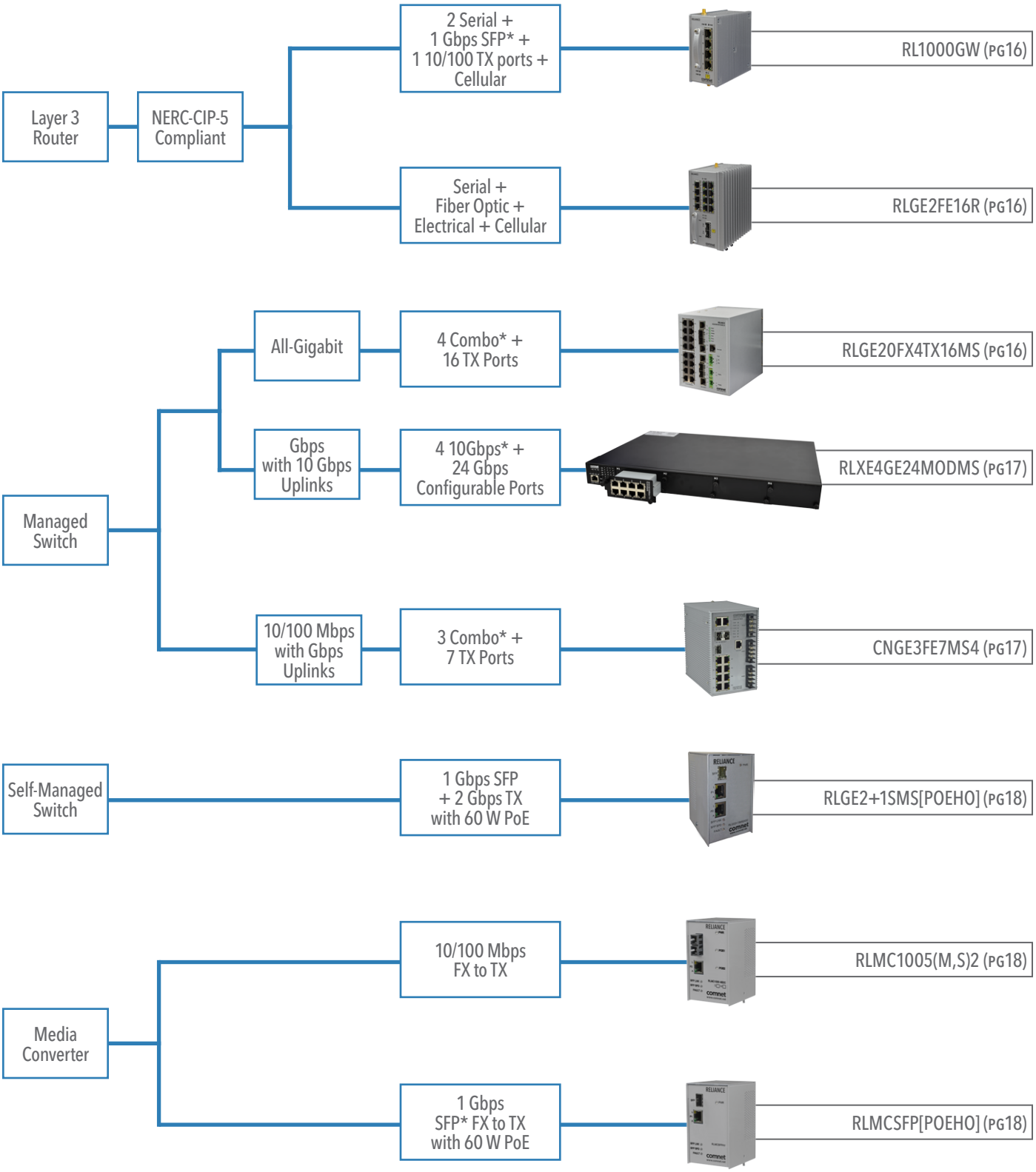
** Requires purchase of SFP modules (sold separately). See Page 37.*

Industrially Hardened 10/100 Mbps Managed Ethernet Switch Selection Guide

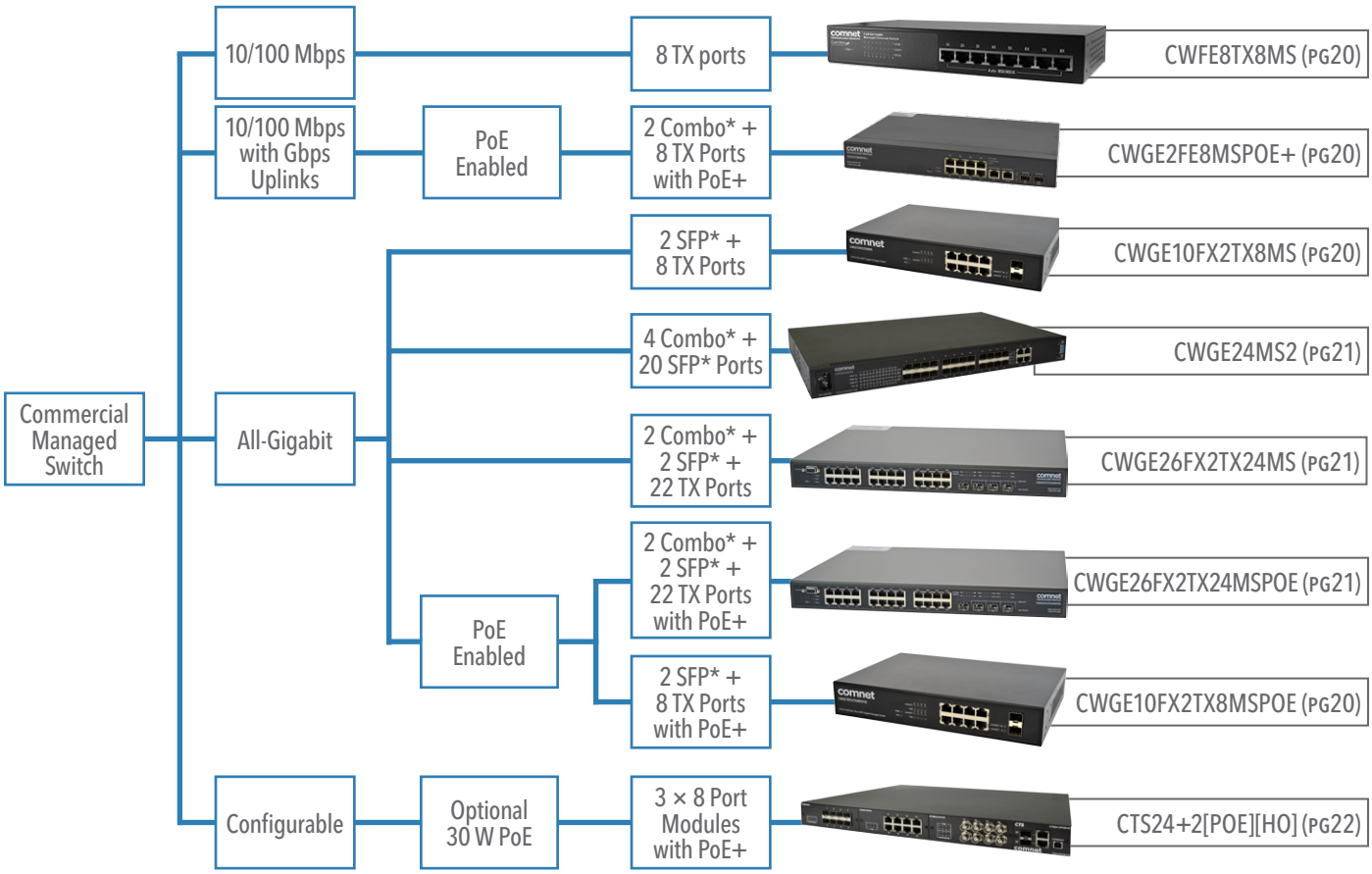


** Requires purchase of SFP modules (sold separately). See Page 37.*

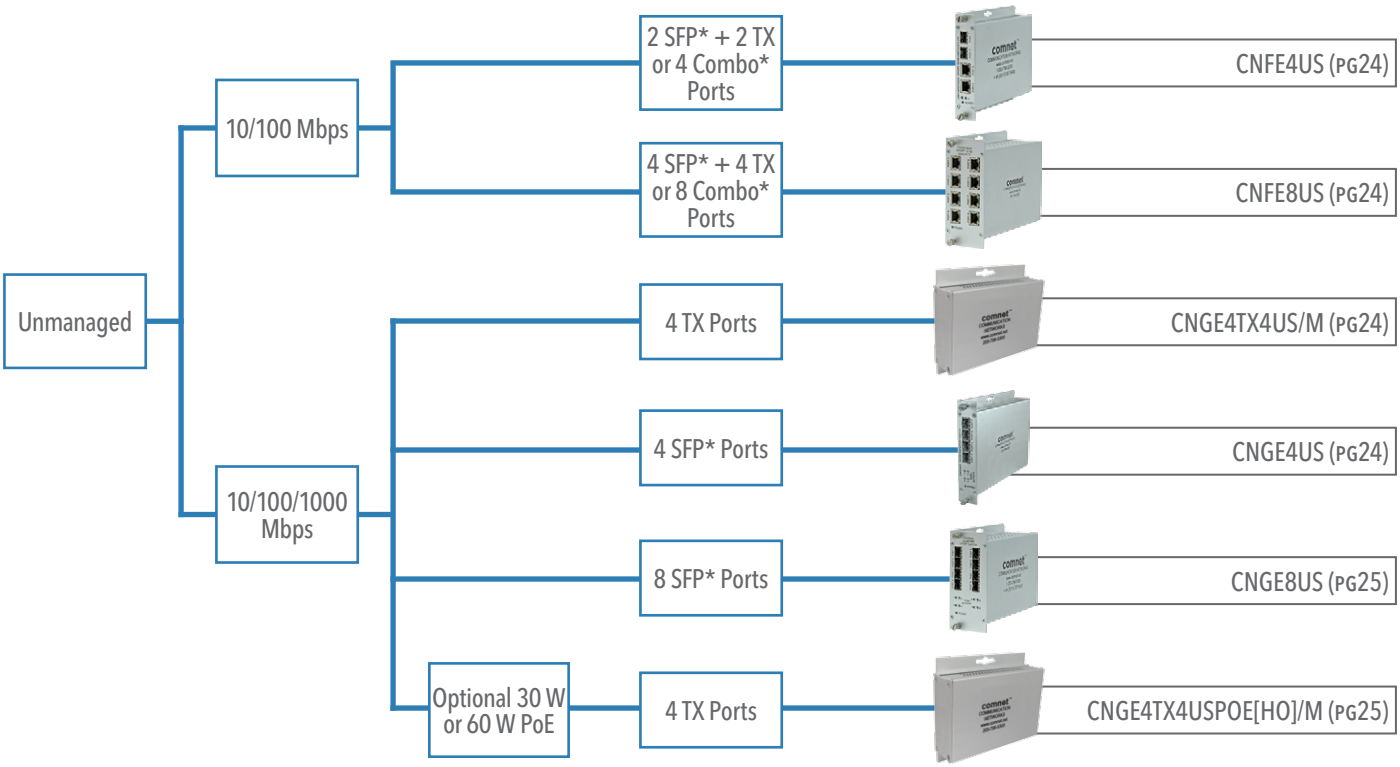
Substation Rated Ethernet Transmission Product Selection Guide



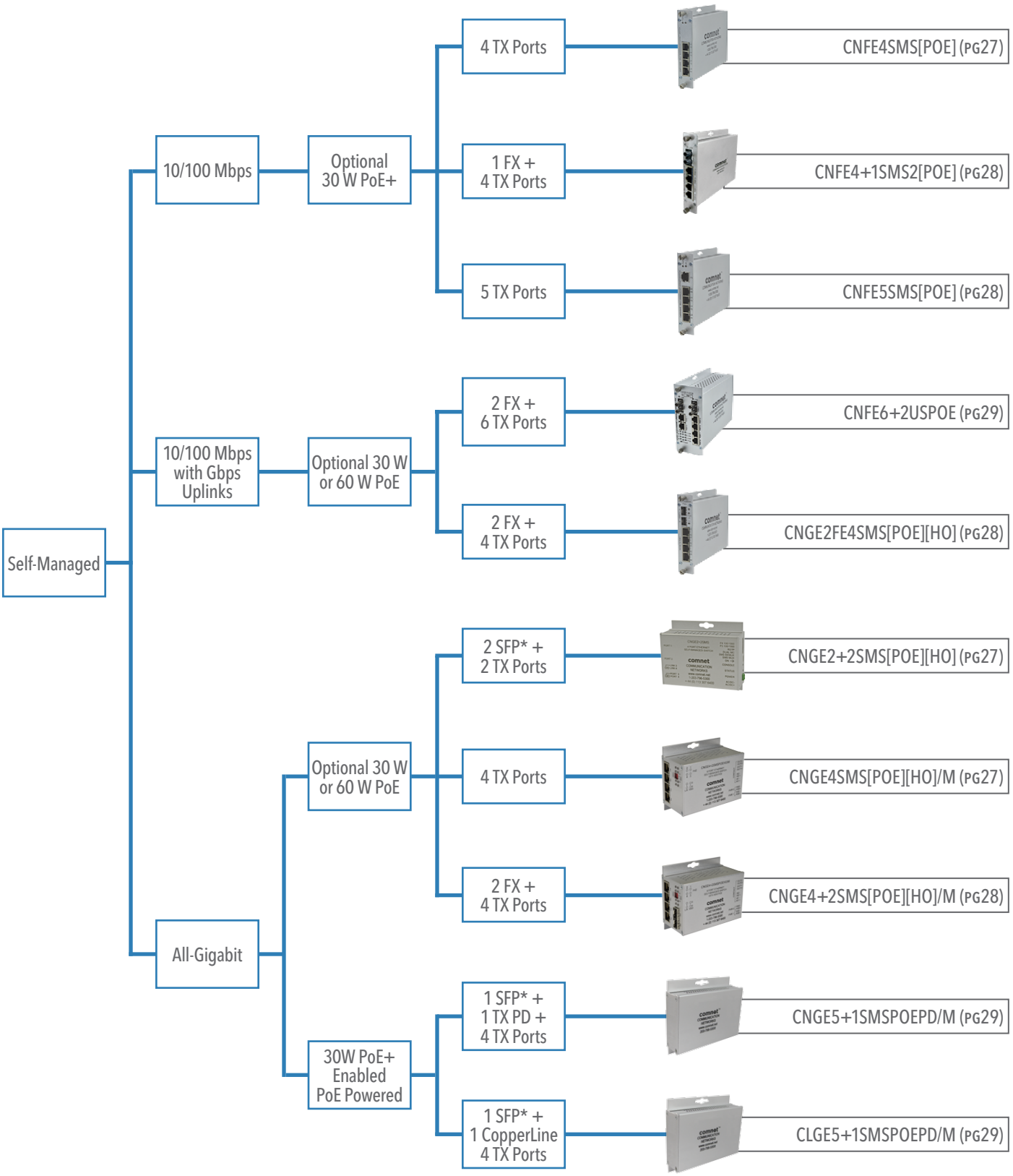
Commercial Managed Ethernet Switch Selection Guide



Industrially Hardened Unmanaged Ethernet Switch Selection Guide

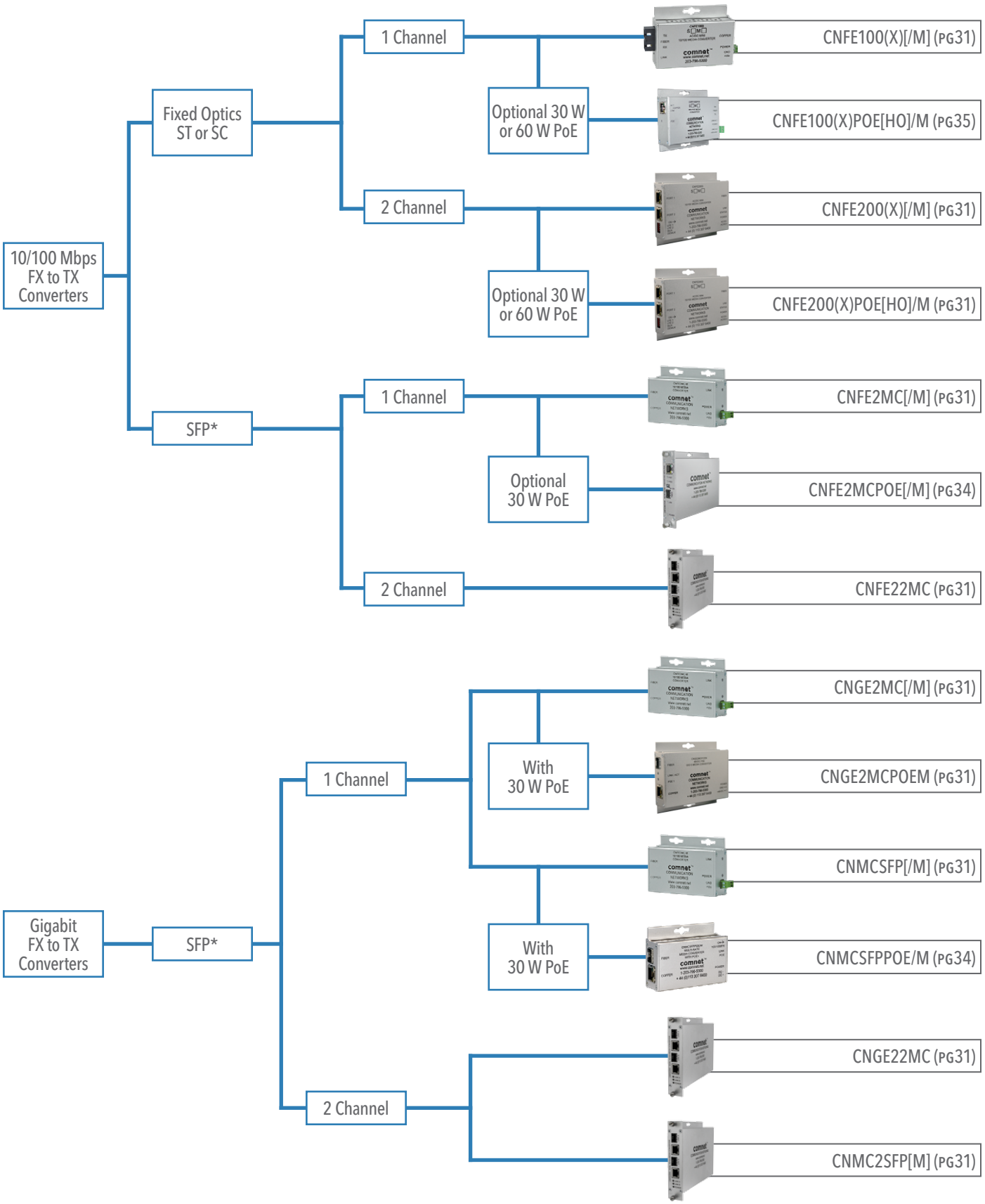


Industrially Hardened Self-Managed Switch Selection Guide



** Requires purchase of SFP modules (sold separately). See Page 37.*

Industrially Hardened Ethernet Media Converter and Extender Selection Guide



** Requires purchase of SFP modules (sold separately). See Page 37.*

Environmentally Hardened Managed Ethernet Switches for Use in the Most Demanding Environments

Switches engineered to meet virtually any high bandwidth demand.

In addition, the extra features such as IEEE-compliant PoE and integrated SFP* ports ensure interoperability to other devices and easy to comprehend browser-based interface ensures easy set up and monitoring of your network.

Each ComNet Managed Ethernet Switch features:

- Optional redundant power supply reduces the possibility of single-point-of-failure
- Fastest Redundant Ethernet Ring: ComNet C-Ring. Recovery time <30ms
- Independently tested and certified for full compliance with the environmental requirements of NEMA TS-1/TS-2 and the CALTRANS Specification for Traffic Signal Control Equipment
- Fully managed, layer 2 switches are optically and electrically compatible with any IEEE 802.3 compliant Ethernet devices
- Auto-negotiating and auto-MDI/MDIX features are provided for simplicity and ease of installation
- Flexible optical and copper-based configuration via SFP plug-in modules
- IGMP Snooping V1/V2 for multicast filtering and IGMP Query V1/V2
- Rapid Spanning Tree protocol (IEEE 802.1W)
- Port-based VLAN (IEEE 802.1Q)
- Environmentally hardened for deployment in difficult, unconditioned out-of-plant and roadside installations, they have an extended ambient operating temperature range of -40° to +75° C
- Fully configurable through web-based or SNMP network management
- Port Based Security
- HD Video Compatible
- LED indicators for monitoring the operating status of the managed switch and network.
- Lifetime Warranty

** Requires purchase of SFP modules (sold separately). See Page 37.*

CNGE5MS

5-Port All-Gigabit Managed Switch

2 Gigabit Combo Ports (SFP/RJ-45)

3 Gigabit Copper Ports (TX)

The all-gigabit ComNet CNGE5MS managed redundant-ring Ethernet switch provides three 10/100/1000 BASE-T(X) and two gigabit SFP* or RJ-45 combo ports. The two combo ports are 10/100/1000 Mbps configurable for either CAT-5e copper, or multimode or single-mode optical fiber by the use of optional ComNet SFPs. The exclusive ComNet C-Ring redundancy feature protects applications from network interruptions or temporary malfunctions with its fast recovery technology.

Additional Features

› IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
› Port Trunking for ease of bandwidth management
› STP/RSTP/MSTP supported
› Fastest Redundant Ethernet Ring: ComNet C-Ring. Recovery time < 20ms
› ComRing open architecture-based support for non-ComNet switches within the network

CNGE8MS

8-Port All-Gigabit Managed Switch

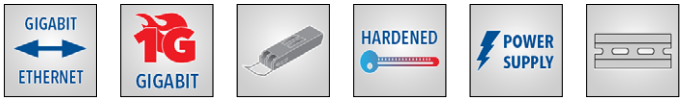
4 Gigabit Combo Ports (SFP/RJ-45)

4 Gigabit Copper Ports (TX)

The all-gigabit ComNet CNGE8MS managed redundant-ring Ethernet switch provides four 10/100/1000BASE-T(X) and four gigabit SFP* or RJ-45 combo ports. The four combo ports are either 10/100/1000 Mbps configurable for CAT-5e copper, or 100/1000FX multimode or single-mode optical fiber by the use of optional ComNet SFPs. The exclusive ComNet C-Ring redundancy feature protects applications from network interruptions or temporary malfunctions with its fast recovery technology.

Additional Features

› 16 Gbps Switching bandwidth: 4 Combo Gigabit Ports & 4 10/100/1000BASE-T(X) Ports
› Port Trunking for ease of bandwidth management
› STP/RSTP/MSTP supported
› ComRing open architecture-based support for non-ComNet switches within the network
› Compatible with eConsole Windows utility for centralized management



CNGE8MS/DIN

8-Port Managed Switches

8 Gigabit Copper Ports (TX)

The CNGE8MS/DIN managed Ethernet switch uses conventional copper transmission media for connectivity. Eight electrical ports are available for easily implementing point-to-point, linear add-drop/drop-and repeat, star or true self-healing ring, and mesh network system architectures. The CNGE8MS/DIN is DIN rail mounted.

Additional Features

› IEC 62439-2 MRP, STP/RSTP/MSTP, LLDP, SNMP v1/v2c/v3, IPV6, SSH/SSL supported
› Fastest Redundant Ethernet Ring: ComNet X-Ring+ Recovery time <30ms
› Port lock to prevent access from unauthorized MAC address
› Provides SSH/SSL protocol for enhanced network security

** Requires purchase of SFP modules (sold separately). See Page 37.*

CNGE2FE8MSPOE+

10-Port Managed Switch with 30 W PoE+

2 Gigabit Combo Ports (SFP/RJ-45)

8 10/100 Mbps Copper Ports (TX) with PoE

The ComNet CNGE2FE8MSPOE+ provides IEEE 802.3at (30 W) PoE+ to eight 10/100BASE-T(X) and has two-gigabit combination SFP* or RJ-45 ports. The CNGE2FE8MSPOE+ is a redundant switch offering multiple Ethernet redundancy protocols, C-Ring (recovery time <10ms over 250 units of connection), ComRing, and MSTP/RSTP/STP (IEEE 802.1 s/w/D). This redundancy feature protects your applications from network interruptions or temporary malfunctions by redirecting transmission within the network.

Additional Features

› Eight electrical ports support IEEE.802.3at (30 W) PoE+ with a total PoE budget of 240 W
› 10/100BASE-TX and 100/1000BASE-FX compatible
› Redundant power supply reduces possibility of single-point-of-failure
› Compatible with eConsole Windows utility for centralized management
› Fully configurable through CLI, web-based or SNMP network management

CNGE3FE8MS

11-Port Managed Switch

3 Gigabit SFP Ports (FX)

8 10/100 Mbps Copper Ports (TX)

MADE IN THE USA

The ComNet CNGE3FE8MS has three 100/1000Base-FX SFP* ports and eight 10/100Base-TX ports. Two of the SFP ports support 2.5 Gbps SFPs for high speed communication in bandwidth intensive applications. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols to protect your applications from network interruptions. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage.

Additional Features

› Two SFP ports support 2.5 Gbps SFP modules for high speed communication
› Fast Redundancy/Recovery – MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032

CNGE3FE8MSPOE[HO]

11-Port Managed Switch
with 30 W PoE+ / 60 W Universal PoE

3 Gigabit SFP Ports (FX)

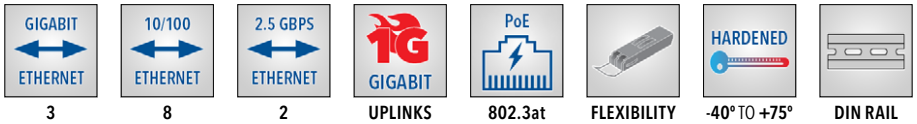
8 10/100 Mbps Copper Ports (TX) with PoE

MADE IN THE USA

The ComNet CNGE3FE8MS[POE][HO] has three 100/1000Base-FX SFP* ports and eight 10/100Base-TX ports. Two of the SFP ports support 2.5 Gbps SFPs for high speed communication in bandwidth intensive applications. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols to protect your applications from network interruptions. Two PoE models are available; the CNGE3FE8MSPOE features 8 Ports that provide up to 30 Watts of PoE. The CNGE3FE8MSPOEHO features four ports that can provide up to 60 watts and four that provide 30 watts of PoE power.

Additional Features

› Two SFP ports support 2.5 Gbps SFP modules for high speed communication
› Fast Redundancy/Recovery – MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032



** Requires purchase of SFP modules (sold separately). See Page 37.*

CNGE11FX3TX8MS

11-Port All-Gigabit Managed Switch

3 Gigabit SFP Ports (FX)

8 Gigabit Copper Ports (TX)

MADE IN THE USA

The ComNet CNGE11FX3TX8MS has three 100/1000Base-FX SFP* ports and eight 10/100/1000Base-TX ports. Two of the SFP ports support 2.5 Gbps SFPs for high speed communication in bandwidth intensive applications. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that protect your network from failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage.

Additional Features

› Fast Redundancy/Recovery – MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032

CNGE11FX3TX8MSPOE[HO]

11-Port All-Gigabit Managed Switch with 30 W PoE+ / 60 W Universal PoE

3 Gigabit SFP Ports (FX)

8 Gigabit Copper Ports (TX) with PoE

MADE IN THE USA

The ComNet CNGE11FX3TX8MS[POE][HO] has three 100/1000Base-FX SFP* ports and eight 10/100/1000Base-TX ports. Two of the SFP ports support 2.5 Gbps SFPs for high speed communication in bandwidth intensive applications. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that protect your network from failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. Two PoE models are available.

Additional Features

› Fast Redundancy/Recovery – MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032

› CNGE11FX3TX8MSPOE provides eight 30 W PoE+ ports

› CNGE11FX3TX8MSPOEHO provides four 30 W PoE+ ports and four 60 W Universal PoE ports

CNGE2FE16MS

18-Port Managed Switch

2 Gigabit Combo Ports (SFP/RJ-45)

16 10/100 Mbps Copper Ports (TX)

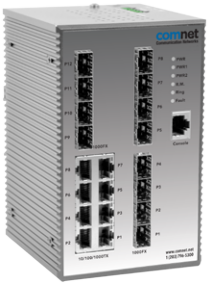
The ComNet CNGE2FE16MS managed Ethernet switch provides sixteen 10/100BASE-TX and two 10/100/1000T(X) or 100/1000FX (gigabit) combo ports. These environmentally hardened units are available for use with either conventional CAT-5e copper or optical transmission media by user selectable SFP*s. The CNGE2FE16MS is approved for use in most industrial control applications.

Additional Features

› Compliant with EN60950-1 and UL Class 1, Division 2, Groups A, B, C and D for Hazardous Locations

› STP/RSTP supported

** Requires purchase of SFP modules (sold separately). See Page 37.*



CNGE20MS

20-Port All-Gigabit Managed Switch

8 Gigabit Copper Ports (TX)

12 Gigabit SFP Optical Ports (FX)

The ComNet CNGE20MS Managed Ethernet Switch features eight 10/100/1000BASE-TX and twelve 100/1000BASE-FX SFP* ports. The SFP ports are 100/1000 Mbps configurable for either multimode or single-mode optical fiber by the use of optional ComNet SFPs. Redundant DC inputs are included for uninterrupted operation in the event of a power supply failure.

Additional Features

› Supports Jumbo Frame up to 9K Bytes for streaming video applications
› STP/RSTP/MSTP supported
› Compatible with eConsole Windows utility for centralized management

CNGE24FX12TX12MS

24-Port All-Gigabit Managed Switch

12 Gigabit SFP Ports (FX)

12 Gigabit Copper Ports (TX)

MADE IN THE USA

The ComNet CNGE24FX12TX12MS has twelve 100/1000Base-FX SFP* ports and twelve 10/100/1000Base-TX ports. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that help protect your network from a failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. The Device-Binding function can prevent unauthorized network access, increasing security. The CNGE24FX12TX12MS also provides advanced DOS/DDOS auto prevention, if data flow becomes too large, too quickly, the switch will lock the source IP address for a set period preventing unauthorized access.

Additional Features

› 2 SFP ports support 2.5 Gbps for high speed communication in bandwidth intensive applications
› Fast Redundancy/Recovery – MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032

CNGE24FX12TX12MSPOE

24-Port All-Gigabit Managed Switch with 30 W PoE+

12 Gigabit SFP Ports (FX)

12 Gigabit Copper Ports (TX) with PoE

MADE IN THE USA

The ComNet CNGE24FX12TX12MSPOE has twelve 100/1000Base-FX SFP* ports and twelve 10/100/1000Base-TX ports. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that help protect your network from failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. The Device-Binding function can prevent unauthorized network access, increasing security. The CNGE24FX12TX12MSPOE also provides advanced DOS/DDOS auto prevention, if data flow becomes too large, too quickly, the switch will lock the source IP address for a set period preventing unauthorized access.

Requires purchase of SFP modules (sold separately). See Page 37.

CNGE26FX2TX24MSPOE1

26-Port Managed Switch with 30 W PoE+

2 Gigabit SFP Ports (FX)

2 Gigabit Combo Ports (SFP/RJ45) with PoE

22 Gigabit Copper Ports (TX) with PoE

The ComNet CNGE26FX2TX24MSPOE1 is an industrially hardened Managed Ethernet Switch. It provides IEEE 802.3at PoE to twenty-four 10/100/1000BASE-T(X) two of which are also gigabit combo ports supporting 100/1000Fx SFP Modules. A further two-100/1000FX SFP* ports are also included. Up to 720 watts of PoE power is available for distribution across all 24 TX ports. The CNGE26FX2TX24MSPOE1 is a redundant switch offering multiple Ethernet redundancy protocols to protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network.

2 + 2 + 22 | ALL GIGABIT | 802.3at | FLEXIBILITY | -20° TO +60° | INTERNAL

CNGE28FX4TX24MS2

28-Port Managed Switch

4 Gigabit Combo Ports (SFP/RJ-45)

24 Gigabit Copper Ports (TX)

The ComNet CNGE28FX4TX24MS2 Layer 2 Managed 28 Port Ethernet Switch supports twenty-four 10/100/1000 BASE-TX ports and four 10/100/1000 BASE-TX or 100/1000 BASE-FX SFP* Combo ports of Ethernet data. The four combination ports are 10/100/1000TX or 100/1000FX SFP configurable for fiber type (multimode or single-mode), connector type and distance. Utilizing RSTP/STP (802.1w/1D) MSTP, and X-Ring redundant ring topologies, a network recovery time of <20 ms is provided for protection from network faults or temporary interruptions. Dual 12-48 VDC input power design ensures vital network capabilities with minimum downtime.

24 + 4 | ALL GIGABIT | FLEXIBILITY | -40° TO +75°

CNGE28FX4TX24MSPOE2/48

28-Port Managed Switch with 30 W PoE+

4 Gigabit Combo Ports (SFP/RJ-45)

24 Gigabit Copper Ports (TX) with PoE

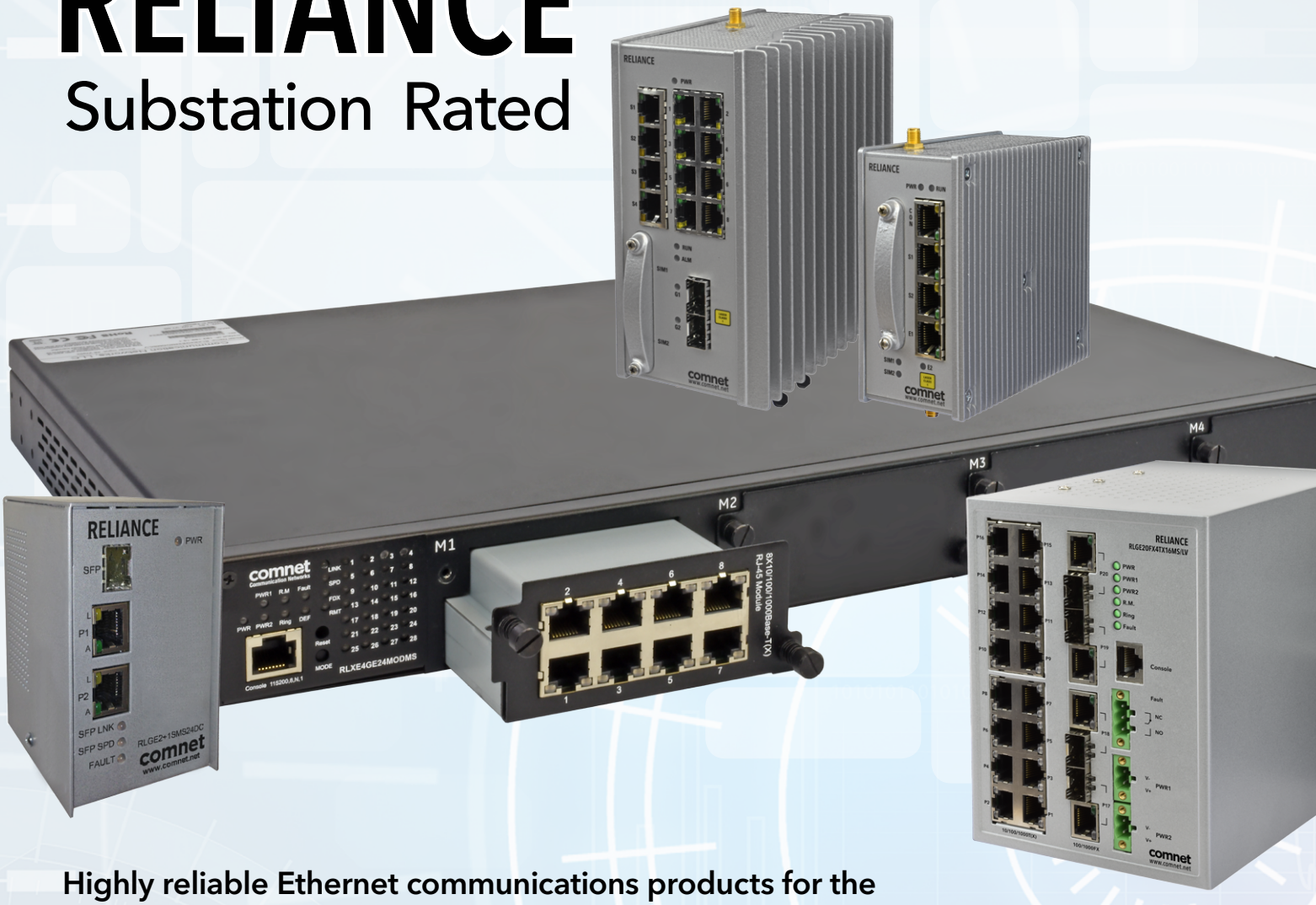
The ComNet CNGE28FX4TX24MSPOE2/48 Layer 2 Managed 28 Port Ethernet Switch supports twenty-four 10/100/1000 BASE-TX ports and four 10/100/1000 BASE-TX or 100/1000 BASE-FX SFP Combo ports of Ethernet data. The four combination ports are 10/100/1000TX or 100/1000FX SFP* configurable for fiber type (multimode or single-mode), connector type and distance. Dual 48 VDC input power design ensures vital network capabilities with minimum downtime. Utilizing RSTP/STP (802.1w/1D) MSTP, and X-Ring redundant ring topologies, a network recovery time of <20 ms is provided for protection from network faults or temporary interruptions.

24 + 4 | ALL GIGABIT | 802.3at | FLEXIBILITY | -40° TO +75°

** Requires purchase of SFP modules (sold separately). See Page 37.*

RELIANCE

Substation Rated



Highly reliable Ethernet communications products for the Electric Power, Transmission & Distribution Industry.

Ruggedized Fiber optic, wireless, and copper media-based Ethernet, serial data, contact closure, T-1/E-1 telephony, audio, and video transmission equipment designed to solve the challenges encountered in harsh or difficult industrial and out-of-plant environments

RL1000GW

Secure Layer 3 Router/Gateway

1 or 2 RS-232 RJ-45 serial port(s), with control lines

1 RS-485 RJ-45 Serial Port

1 Gigabit SFP Port (FX)

1 10/100 Copper Port (TX)

The ComNet RL1000GW is a series of substation-rated and industrially hardened layer 3 router/ gateways, with a unique packet processing SCADA-aware security firewall for demanding cyber-security applications. The RL1000GW is intended for deployment in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges are encountered. Layer 3 routing functionality allows for the participation and foundation of a core network infrastructure.

Additional Features

› IEC 61850-3 and IEEE 1613 Class 2, and NEMA TS-1/TS-2 Compliant
› For NERC-CIP-5 and NERC-CIP-014 compliance, or any network application demanding effective cyber-security protection
› Optional internal 2G/3G/4G LTE GPRS/UMTS cellular radio modem with 2 SIM card slots

RLGE2FE16R

18-Port Substation-Rated, Enhanced Security SCADA-Aware Layer 2 Managed Switch/Layer 3 Router

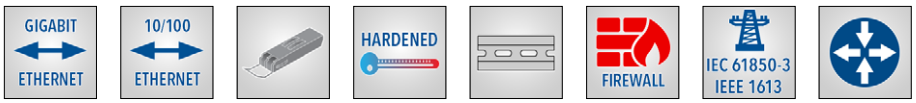
2 Gigabit SFP Ports (FX)

16 10/100 Mbps Copper Ports (TX)

The ComNet RLGE2FE16R is a series of substation-rated and industrially hardened layer 2 managed switches/layer 3 routers, with a unique packet processing SCADA-aware security firewall for the most demanding cyber-security applications. The RLGE2FE16R is intended for deployment in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges occur. Layer 3 routing functionality allows for the participation and foundation of a core network infrastructure. The RLGE2FE16R is an ideal platform for deploying a secure communications and networking gateway for all critical infrastructure applications.

Additional Features

› IEC 61850-3 and IEEE 1613 Class 2, and NEMA TS-1/TS-2 Compliant
› For NERC-CIP-5 and NERC-CIP-014 compliance, or any network application demanding effective cyber-security protection
› Optional internal 2G/3G/4G LTE GPRS/UMTS cellular radio modem with 2 SIM card slots
› PoE+ Model Available: 30 watts per port, 8 ports max.



RLGE20FX4TX16MS

20-Port All-Gigabit Managed Layer 2 Switch

4 Gigabit Combo Ports (SFP/RJ-45)

16 Gigabit Copper Ports (TX)

The ComNet RLGE20FX4TX16MS series is a substation-rated and industrially hardened all-gigabit managed layer 2 switch. The RLGE20FX4TX16MS features 16 10/100/1000BASE-TX ports, with 4 selectable 10/100/1000BASE-TX or 100/1000BASE-FX SFP* ports. The RLGE20FX4TX16MS can be used in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges occur. The internal/self-contained 12 to 60 VDC or 85 to 264 VAC/88 to 373 VDC power supply features redundant power inputs, for the highest reliability.

Additional Features

› Fast Redundancy/Recovery – MSTP/RSTP/STP/C-Ring/Com-Ring
› VLAN Unaware: Supports priority-tagged frames to be received by specific Intelligent Electronic Devices

** Requires purchase of SFP modules (sold separately). See Page 37.*

CNGE3FE7MS4

10-Port Managed Switch

3 Gigabit Combo Ports (SFP/RJ-45)

7 10/100 Mbps Copper Ports (TX)

The ComNet CNGE3FE7MS4 is a substation-rated and industrially hardened fully managed layer 2, gigabit Ethernet switch. It is designed for deployment in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges are routinely encountered, such as electrical utility substations and switchyards, heavy manufacturing facilities, trackside and roadside electronic equipment, and other difficult out-of-plant applications.

Additional Features

› Fully compliant with the requirements of IEC 61850-3 and IEEE 1613 Class 2 for electrical utility substations, EN50155 for railway applications, and NEMA TS-1/TS-2 for traffic signal control equipment
› Compliant with EN60950-1 and UL Class 1, Division 2, Groups A, B, C and D for Hazardous Locations
› Internal/self-contained 85-264 VAC/88-373 VDC power supply
› Environmentally hardened for deployment in difficult unconditioned out- of-plant and roadside installations
› Conformal coated for humidity with condensation or airborne particulate matter conditions

RLXE4GE24MODMS

All-Gigabit Modular Layer 2 Switch/ Layer 3 Router, with 10 Gbps SFP Ports

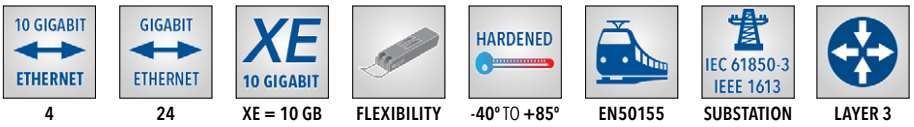
4 10 Gbps Uplink SFP Ports (FX)

24 Gigabit Ports (Option dependent)

The ComNet RLXE4GE24MODMS is a substation-rated and industrially hardened, all-gigabit managed layer 2 switch/layer 3 router. The RLXE4GE24MODMS is a fully modular switch that allows the user to choose between 10Gbps and Gigabit modules to custom configure the switch. Four slots are provided in the chassis for accommodating individual modules featuring different combinations of SFP* and electrical 10/100/1000BASE-TX ports. Individual modules that feature different numbers of TX, FX SFP and fixed SC or ST optical connections with counts of 2, 4 and 8 port modules available. It is designed for use in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges are encountered. The layer 3 static routing functionality allows for the participation and foundation of a core network infrastructure.

Additional Features

› Dual user-replaceable redundant power supply modules provide reliable operation
› Layer 3 static routing, RIP, and VRRP functions
› Fast Redundancy/Recovery – MSTP/RSTP/STP/C-Ring/Com-Ring
› Compliant with the requirements of IEC 61850-3 and IEEE 1613 Class 2, for use in electrical utility substations; NEMA TS-1/ TS-2 for Traffic Signal Control Equipment; and EN50155 for railway applications



** Requires purchase of SFP modules (sold separately). See Page 37.*

RLGE2+1SMS[POEHO]

3-Port All-Gigabit Self-Managed Switch with 60 W Universal PoE

1 Gigabit SFP Port (FX)

2 Gigabit Copper Ports (TX) with PoE

MADE IN THE USA

The ComNet RLGE2+1SMSPOEHO is a substation-rated and industrially hardened 3-port self-managed Ethernet switch with uplink management capability, It is intended for use in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges are routinely encountered, such as electrical utility substations and switchyards, heavy manufacturing facilities, trackside and roadside electronic equipment, and other difficult out-of-plant applications. The RLGE2+1SMSPOEHO comes pre-programmed, preventing network video flooding with DIP-switch selection of the SFP port as uplink or as an unmanaged switch. Two models are available, a standard model and a PoE (power over Ethernet) model that supports PoE powered devices requiring up to 60 watts of operating power.

RLMC1005(M,S)2

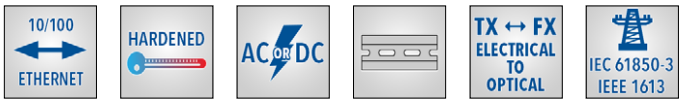
2-Port Media Converter

1 100 Mbps Optical Port (FX)

1 10/100 Mbps Copper Port (TX)

MADE IN THE USA

The ComNet RLMC1005 is a substation-rated and hardened Ethernet media converter Designed to the requirements of IEC 61850-3, IEEE 1613 Class 2, EN50155, and NEMA TS-1/TS-2, it is intended for deployment in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges are occur, such as electrical utility substations and switchyards, heavy manufacturing facilities, trackside and roadside electronic equipment, and other difficult out-of-plant applications. The 100BASE-FX port supports optical transmission over two multimode or single-mode fibers and comes with ST optical connectors.



RLMCSFP[POEHO]

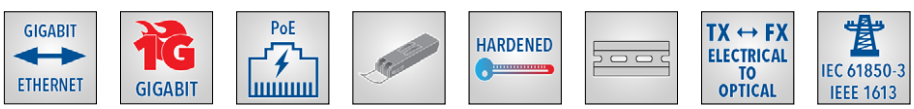
2-Port 10/100/1000 Mbps Media Converter with 60 W Universal PoE

1 Gigabit SFP Port (FX)

1 Gigabit Copper Port (TX) with Optional PoE

MADE IN THE USA

The ComNet RLMCSFPPOEHO is a substation-rated and hardened Ethernet media converter Designed to the requirements of IEC 61850-3, IEEE 1613 Class 2, EN50155, and NEMA TS-1/TS-2, it is intended for deployment in environments where high levels of electromagnetic noise and interference (EMI) and severe voltage transients and surges are occur, such as electrical utility substations and switchyards, heavy manufacturing facilities, trackside and roadside electronic equipment, and other difficult out-of-plant applications. The DIP-switch-selectable 100BASE-FX or 1000BASE-FX port supports optical transmission media with selection of the appropriate ComNet SFP* module. Two models are available, a standard model and a PoE (power over Ethernet) model that supports PoE powered devices requiring up to 60 watts of operating power.



** Requires purchase of SFP modules (sold separately). See Page 37.*

ValueLine: Feature-Rich, Cost-Effective Managed Ethernet Switches For Commercial Applications

ComNet offers the ValueLine Ethernet transmission products designed for use in commercial operating environments.

These ValueLine switches and media converters offer many of the same operational features as environmentally hardened and are some of the most competitively priced Ethernet equipment currently available.

ValueLine Managed Ethernet Switches feature:

- Fully managed, layer 2 switches are optically and electrically compatible with any IEEE 802.3 compliant Ethernet devices
- Auto-negotiating and auto-MDI/MDIX features are provided for simplicity and ease of installation
- Flexible optical and copper-based configuration via SFP* plug-in modules
- IGMP Snooping V1/V2 for multicast filtering and IGMP Query V1/V2
- Rapid Spanning Tree protocol (IEEE 802.1W)
- Port-based VLAN (IEEE 802.1Q)
- Fully configurable through web-based or SNMP network management
- Rack mounting brackets available which allow CW Series switches to be mounted in 19-inch electronics racks
- Port Based Security
- HD Video Compatible
- Five-Year Warranty

** Requires purchase of SFP modules (sold separately).* *See Page 37.*

CWFE8TX8MS

8-Port Managed Switch

8 10/100 Mbps Copper Ports (TX)

Operating temperature range of 0° to +50° C

The ComNet CWFE8TX8MS Managed Ethernet Switch provides transmission of 10/100 BASE-TX Ethernet data. Up to 8 electrical ports are available for easily implementing point-to-point, linear add-drop, drop-and-repeat, star or true self-healing ring and mesh network system architectures. Auto-negotiating and auto-MDI/MDIX features are provided for simplicity and ease of installation.

Additional Features

› Stand alone mounting

› Internal Power Supply 100-240 VAC Input

CWGE2FE8MSPOE+

10-Port Managed Switch with 30 W PoE+

2 Gigabit Combo Ports (SFP/RJ-45)

8 10/100 Mbps Copper Ports (TX) with PoE+

Operating temperature range of 0° to +50° C

The ComNet CWGE2FE8MSPOE+ commercial grade managed Ethernet switch provides eight ports of 10/100 BASE-TX PoE+ and two ports of 10/100/1000TX or 1000FX transmission. Auto-negotiating and auto-MDI/MDIX features are provided for simplicity and ease of installation. All eight ports support IEEE.802.3at based PoE+. Two ports are 10/100/1000 configurable for copper or fiber media for use with multimode or single mode optical fiber, selected by optional SFP* modules.

Additional Features

› Eight electrical ports support IEEE.802.3at (30 W) PoE+ with a total PoE budget of 240 W

CWGE10FX2TX8MS

10-Port All-Gigabit Managed Switch

2 Gigabit SFP Ports (FX)

8 Gigabit Copper Ports (TX)

Operating temperature range of 0° to +50° C

The ComNet CWGE10FX2TX8MS switch that has two 100/1000FX SFP* ports and eight 10/100/1000Base-TX ports. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that protect your network from failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage.

Additional Features

› Fast Redundancy/Recovery – RSTP/STP (IEEE802.1w/D)

CWGE10FX2TX8MSPOE

10-Port All-Gigabit Managed Switch with 30 W PoE+

2 Gigabit SFP Ports (FX)

8 Gigabit Copper Ports (TX) with PoE+

Operating temperature range of 0° to +50° C

The ComNet CWGE10FX2TX8MSPOE is a 10-port commercial managed Ethernet switch that has two 100/1000FX SFP* ports and eight 10/100/1000Base-TX ports. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that protect your network from failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. CWGE10FX2TX8MSPOE features 8 Ports that provide up to 30 Watts of PoE+.

Additional Features

› Eight electrical ports support IEEE.802.3at (30 W) PoE+ with a total PoE budget of 120 W

› Fast Redundancy/Recovery – RSTP/STP (IEEE802.1w/D)

** Requires purchase of SFP modules (sold separately). See Page 37.*

CWGE24MS2

24-Port All-Gigabit Managed Layer 2+ Switch

4 Gigabit Combo Ports (SFP/RJ-45)

20 Gigabit SFP Ports (FX)

Operating temperature range of 0° to +50° C

The ComNet CWGE24MS2 is a 24-port commercial managed Ethernet switch that has four 10/100/1000Base-TX RJ45 or 100/1000Base-FX SFP* combo ports and twenty 100/1000Base-FX SFP ports. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols that protect your network from failure. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage.

Additional Features

› Internal 100-240 VAC Power Supply & 12 VDC battery Backup Input

› Fast Redundancy/Recovery – MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032

CWGE26FX2TX24MS

26-Port Extended Temperature, All-Gigabit Managed Switch

2 Gigabit SFP Ports (FX)

2 Gigabit Combo Ports (SFP/RJ-45)

22 Gigabit Copper Ports (TX)

Operating temperature range of -10° to +60° C

The ComNet CWGE26FX2TX24MS is a commercial Managed Ethernet Switch. It provides twenty-two 10/100/1000BASE-T(X) ports, plus two gigabit combo ports which are user-selectable between 10/100/1000BASE-T(X) ports or two 100/1000FX SFP* ports. A further two-100/1000FX SFP* ports are also included. All SFP ports utilize ComNet SFPs for fiber and connector type and distance. The CWGE26FX2TX24MS is a redundant switch offering multiple Ethernet redundancy protocols to protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network.

CWGE26FX2TX24MSPOE

26-Port Extended Temperature, All-Gigabit Managed Switch with 30 W PoE+

2 Gigabit SFP Ports (FX)

2 Gigabit Combo Ports (SFP/RJ45) with PoE

22 Gigabit Copper Ports (TX) with PoE

Operating temperature range of -10° to +60° C

The ComNet CWGE26FX2TX24MSPOE is an extended temperature, all-gigabit, commercial grade managed Ethernet switch. It provides IEEE 802.3at PoE to twenty-four 10/100/1000BASE-T(X) ports, two of which are also gigabit combo ports supporting 100/1000FX SFP Modules. A further two 100/1000FX SFP* ports are also included. Up to 320 watts of PoE power is available for distribution across all twenty-four TX ports. The switch offers multiple Ethernet redundancy protocols to protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network.

Additional Features

› CWGE26FX2TX24MSPOE provides IEEE.802.3at (30 W) PoE+ budget of 320 W to 24 TX ports

Requires purchase of SFP modules (sold separately). See Page 37.

CTS

CTS24+2[POE][HO] Series

Commercial Managed Transport System with 30 W PoE+

8 100 Mbps SFP Ports (FX)

8 10/100 Mbps Copper Ports (TX)

8 CopperLine® Extended Distance Coaxial Ports

8 CopperLine® Extended Distance UTP Ports

MADE IN THE USA

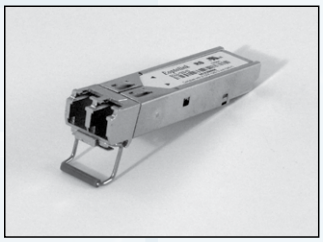
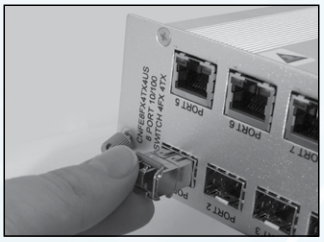
The ComNet CTS24+2 commercial grade managed Ethernet transport system provides up to 24 ports of 10/100 Ethernet and two ports of 10/100/1000TX or 100/1000FX transmission. The system includes a chassis with optional PoE supplies of 400 or 1000 Watts. Additionally, up to three 8 channel modules can be ordered to populate the system. These modules are offered in conventional CAT5/6 10/100 Mbps Ethernet, optical SFP supporting 100FX, or ComNet exclusive CopperLine® interfaces of either Coax or UTP.

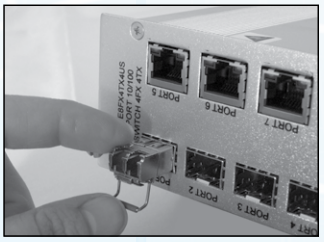
Additional Features

- Three module slots: Combine standard copper, optical, and extended distance Ethernet in one rack mounted chassis configuration
- Optional 30 W with Internal Power Supply
- Light Management Functionality Including IGMP and RSTP
- Chassis and modules are ordered individually, and assembled at the factory to insure your configuration is tested as a complete unit.

** Requires purchase of SFP modules (sold separately). See Page 37.*

ComNet Flexibility
Small Form-Factor Pluggable Modules (SFPs)

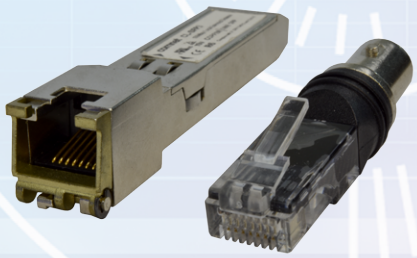


ComNet's Small Form-Factor Pluggable modules provide an optical or copper interface when using any ComNet managed or unmanaged switch or SFP-configurable media converters. These SFP modules are available for use with copper media, or Multimode or Single-mode optical fiber. The optical fiber SFP modules provide 10/100 or 10/100/1000FX transmission in one or two fiber versions. They are available with LC or SC optical connectors. These ComNet SFPs offer distances from 300 meters to 120 kilometers. Industrially rated to perform in the most difficult operating environments, ComNet SFPs are MultiSource Agreement (MSA) compliant.

COPPERLINE®

Distance Extending Ethernet over Copper SFP

The ComNet CopperLine® CL-SFP is a small form-factor pluggable Ethernet extender module that improves bandwidth and distance of existing copper networks. It helps avoid installation costs of new fiber lines on site by allowing full 100 Mbps Ethernet bandwidth to be extended over 2-wire twisted pair or coaxial cable. It is designed for plug-and-play installation into any Ethernet unit with an MSA-compliant, 100 Mbps SFP port.



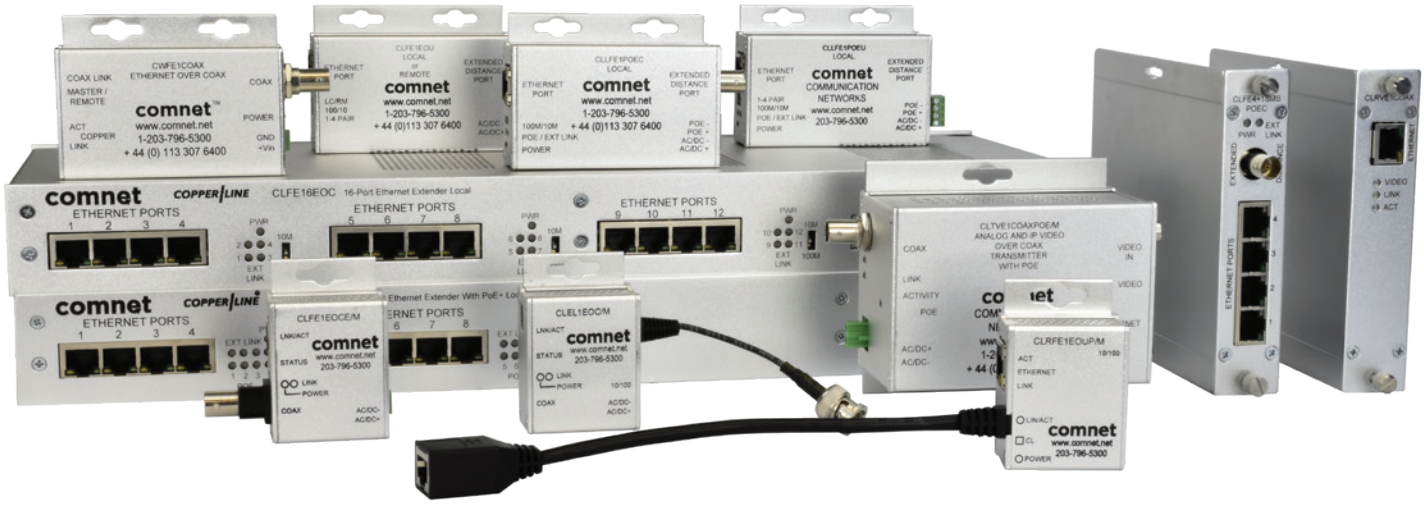
Additional Features

› Point-to-point Ethernet connectivity up to 2,000 ft (609 m) at 100 Mbps
› Extends Ethernet distance over single pair UTP or coax with adapter
› Can be plugged into any Ethernet switch with MSA-compliant SFP ports that support 100BASE-FX

CL-SFP and CLRJ2COAX
Distance Extending SFP Series

For more information see the ComNet CopperLine® Brochure, available as a PDF or in print or online at http://www.comnet.net/resources/product-literature/

comnet
Communication Networks



COPPERLINE®

Ethernet over Copper Transmission Extenders

Ethernet Transmission over Coaxial or UTP Cable

Fiber Optic and Ethernet Network Solutions

COPPERLINE® FROM COMNET

Ethernet over Copper

CopperLine® is an advanced and unique technology that extends Ethernet networks beyond the 100-meter limitation encountered when using UTP for IP Video and Ethernet-based applications. CopperLine® is a cost-saving alternative that enables you to use existing coaxial and UTP cables for significantly greater Ethernet transmission distances.

Choose CopperLine®:

- Longest Available Transmission Distances
- All CLFE(X)EOC Coax and CLFE(X)EOU UTP Models Support Pass-Through PoE
- All CL(L,R)FE(X)POEC and CL(L,R)FE(X)POEU Models Support PoE+ Power Injection and Pass-Through Power
- Fixed Data Rate at Maximum Specified Distance
- Consumes Less than 1 Watt per Port
- Price and Performance – CopperLine®

CopperLine® Features

- Extends Ethernet networks beyond 100 m limitations for CCTV and IT projects
- Cost-effective
- Extends standard Ethernet:
  - » 10BaseT up to 3,000 ft (914 m) and 100BaseT up to 2,000 ft (610 m) over UTP
  - » 10BaseT up to 5,000 ft (1,524 m) and 100BaseT up to 2,000 ft (610 m) over Coax
- Switch-selectable LAN rate optimizes the best possible rate/distance design for each application
- High data rate – ideal for high bandwidth requirements of Mega-pixel cameras or multiple IP cameras
- Compatible with any LAN device – fully transparent to Ethernet networks and higher layer protocols
- Easy to install – no IP address programming or other networking setup required
- Indicating LEDs for link status and data rate
- Very low power – remote units can share power supply with camera
- Now form- and fit-compatible with all ComNet Products
- Lifetime Warranty
- Designed and made in the USA using a unique state-of-the-art data transmission technology

AGENCY COMPLIANCE

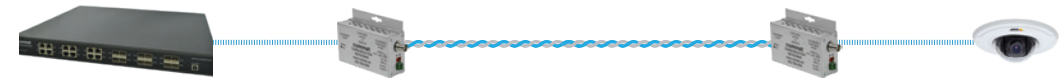
RoHS

Low Power Consumption

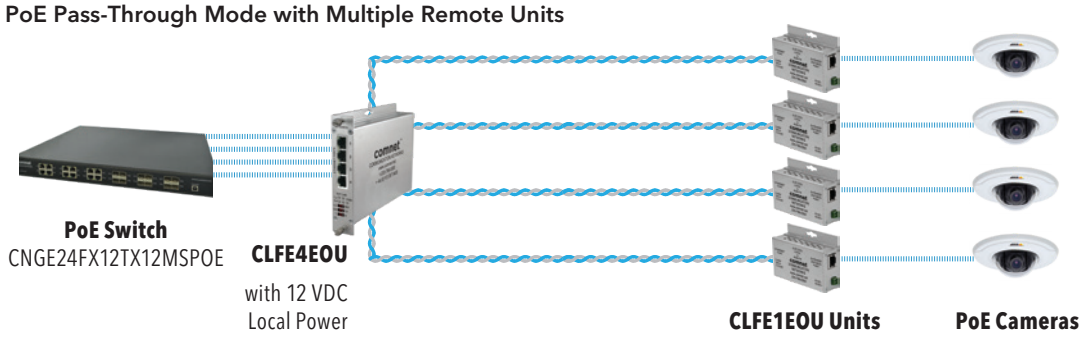
Ethernet-over-Copper Extenders with Pass-Through PoE

The ComNet CopperLine® Ethernet over copper line supports up to sixteen channels of 10/100Mbps Ethernet with Pass-through PoE over twisted pair cable (CAT-5, UTP), or over coaxial cable. The single channel units may be powered by a PoE switch or the included power supply. Four, eight, and sixteen channel units operate from local power. These units provide the ultimate flexibility for extending a powered device (PD) over long distance UTP or coax. DIP switches are provided for user-selection of local or remote, 10 or 100Mbps, and 1 pair or 4 pair (UTP) settings.

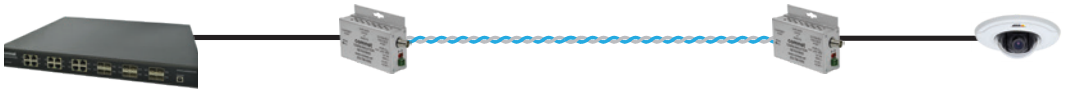
PoE Pass-Through Mode



PoE Pass-Through Mode with Multiple Remote Units



Non-PoE Mode



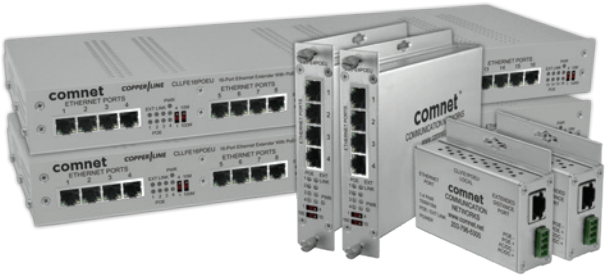
CopperLine® Ethernet over Unshielded Twisted Pair (UTP)

Model	Ports	Function
CLFE1EOU	1	1 channel Ethernet over UTP with Pass-through PoE
CLFE4EOU	4	4 channel Ethernet over UTP with Pass-through PoE
CLFE8EOU	8	8 channel Ethernet over UTP with Pass-through PoE
CLFE16EOU	16	16 channel Ethernet over UTP with Pass-through PoE

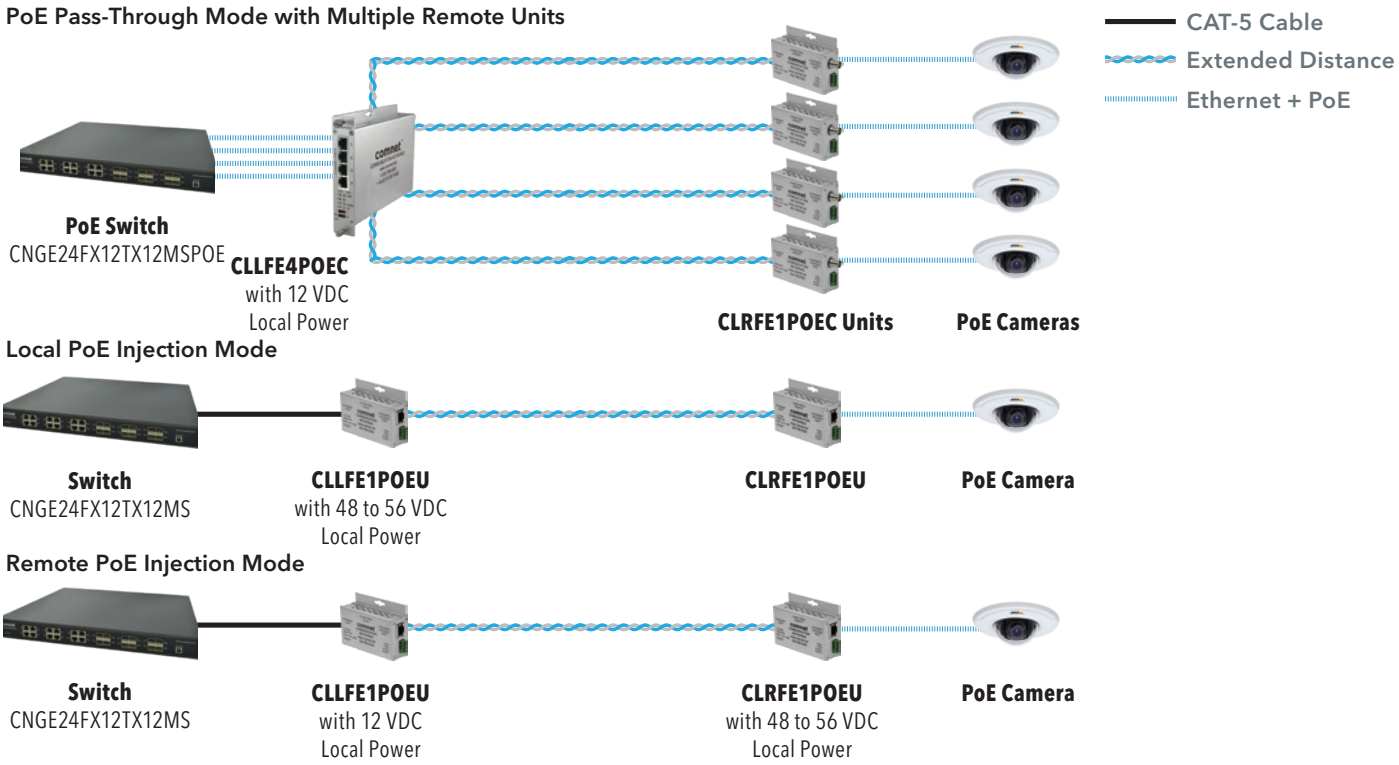
CopperLine® Ethernet over Coaxial Cable

Model	Ports	Function
CLFE1EOC	1	1 channel Ethernet over Coaxial Cable with Pass-through PoE
CLFE4EOC	4	4 channel Ethernet over Coaxial Cable with Pass-through PoE
CLFE8EOC	8	8 channel Ethernet over Coaxial Cable with Pass-through PoE
CLFE16EOC	16	16 channel Ethernet over Coaxial Cable with Pass-through PoE

Ethernet-over-Copper Extenders With 30 Watt PSE PoE+



The ComNet CopperLine® Ethernet over copper line has a completely new look and is now form and fit compatible with all ComNet products. With a greater focus on providing PoE power to devices on the network, the CL(L,R)FE(X)POE(C,U) line can act as power sourcing equipment (PSE) or pass through power from a different source. Available in one, four, eight and sixteen port models, the CL(L,R)FE(X)POE(C,U) line can transmit 10/100Mbps Ethernet with PoE+ Power Injection or Pass-through PoE+ over twisted pair cable (CAT-5, UTP) or over coax. You can connect this series directly to a PoE+ switch, or it can source PoE+ power with a 48 to 56 Volt input to either the Local or Remote ends. The CL(L,R)FE(X)POE(C,U) line can provide great flexibility for extending the distance of a powered device over longer copper media distances.



CopperLine® Ethernet over Unshielded Twisted Pair (UTP) with PSE PoE and Pass-through PoE

Local Model	Remote Model	Function
CLLFE1POEU	CLRFE1POEU	1 channel Ethernet over UTP with Pass-through PoE and PSE PoE
CLLFE4POEU	CLRFE4POEU	4 channel Ethernet over UTP with Pass-through PoE and PSE PoE
CLLFE8POEU	n/a	8 channel Ethernet over UTP with Pass-through PoE and PSE PoE
CLLFE16POEU	n/a	16 channel Ethernet over UTP with Pass-through PoE and PSE PoE

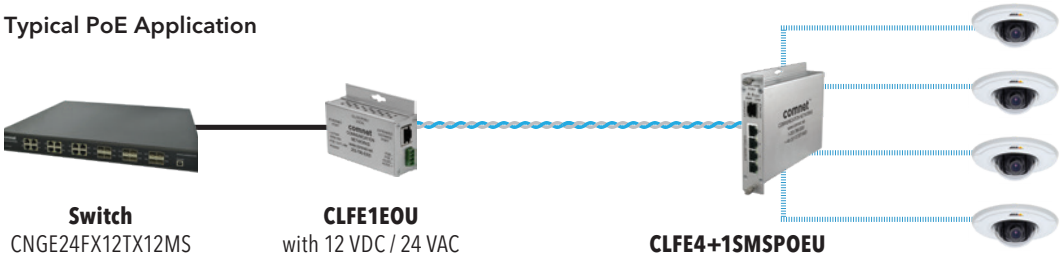
CopperLine® Ethernet over Coaxial Cable with PSE PoE and Pass-through PoE

Local Model	Remote Model	Function
CLLFE1POEC	CLRFE1POEC	1 channel Ethernet over Coaxial Cable with Pass-through PoE and PSE PoE
CLLFE4POEC	CLRFE4POEC	4 channel Ethernet over Coaxial Cable with Pass-through PoE and PSE PoE
CLLFE8POEC	n/a	8 channel Ethernet over Coaxial Cable with Pass-through PoE and PSE PoE
CLLFE16POEC	n/a	16 channel Ethernet over Coaxial Cable with Pass-through PoE and PSE PoE

10/100 Mbps 4+1 Ethernet Self-Managed Switches with 30 Watt Power over Ethernet (PoE+)

The ComNet CLFE4+1SMS[POE](C,U) is a five-port Ethernet over coaxial cable/UTP self-managed switch with uplink management functionality and features four copper ports operating at 10/100 Mbps and is designed to combine four electrical ports into a single electrical CAT-5, UTP or coax CopperLine® port that forwards this data to the next network device. No programming required to use this product. The CLFE4+1SMS comes pre-programmed; preventing network video flooding with DIP switch selection of the fifth electrical port as uplink or as an unmanaged switch. When paired with a 48 to 56 VDC power supply, Ports 1–4 of the CLFE4+1SMSPOE can supply up to thirty watts of PoE to each port and incorporate PoE+ features based on the IEEE 802.3af/at standard.

Typical PoE Application



** For non-PoE applications, use the CLFE4+1SMS(C,U) with a 12 VDC Power Supply*

CopperLine® Self-Managed Switch – Ethernet over Unshielded Twisted Pair (UTP)

Model	Function
CLFE4+1SMSU	4 Port 10/100 Mbps Ethernet Self-Managed Switch, UTP CopperLine® Uplink Port
CLFE4+1SMSPOEU	4 Port 10/100 Mbps Ethernet Self-Managed Switch, PoE+, UTP CopperLine® Uplink Port

CopperLine® Self-Managed Switch – Ethernet over Coaxial Cable

Model	Function
CLFE4+1SMSC	4 Port 10/100 Mbps Ethernet Self-Managed Switch, Coaxial CopperLine® Uplink Port
CLFE4+1SMSPOEC	4 Port 10/100 Mbps Ethernet Self-Managed Switch, PoE+, Coaxial CopperLine® Uplink Port

Commercial Managed Transport System with 30 W PoE+

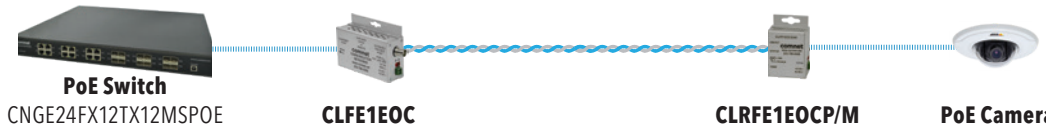
The ComNet CTS24+2 commercial grade managed Ethernet transport system provides up to 24 ports of 10/100 Ethernet and two ports of 10/100/1000TX or 100/1000FX transmission. The system includes a chassis with optional PoE supplies of 400 or 1000 Watts. Up to three 8 channel modules can be ordered to populate the system. These modules are offered in conventional CAT5/6 10/100 Mbps Ethernet, optical SFP supporting 100FX, or CopperLine® interfaces of either Coax or UTP.

Model	Function
CTS24+2	CTS Commercial Grade Modular Ethernet Managed Switch Chassis with Power Supply
CTS24+2POE	CTS Commercial Grade Modular Ethernet Managed Switch Chassis with 400 W Power Supply
CTS24+2POE1	CTS Commercial Grade Modular Ethernet Managed Switch Chassis with 720 W Power Supply
CTS8FETX	8 Channel 10/100 TX Module with RJ-45 Interface
CTS8FESFP	8 Channel 100 FX Module with SFP Interface (SFPs sold separately)
CTS8EOC	8 Channel CopperLine® Module with BNC Coaxial Cable Interface
CTS8EOU	8 Channel CopperLine® Module with RJ-45 UTP Cable Interface
CTS24+2SFP	CTS Chassis with 24 100 FX SFP Ports and Power Supply
CTS24+2EOCPOE	CTS Chassis with 24 CopperLine® Ports with BNC Coaxial Cable Interface and 400 W PoE Power Supply
CTS24+2TXPOE	CTS Chassis with 24 10/100 TX RJ-45 Standard Ports and 400 W PoE Power Supply
CTS24+2EOUPOE	CTS Chassis with 24 CopperLine® Ports with RJ-45 UTP Cable Interface and 400 W PoE Power Supply

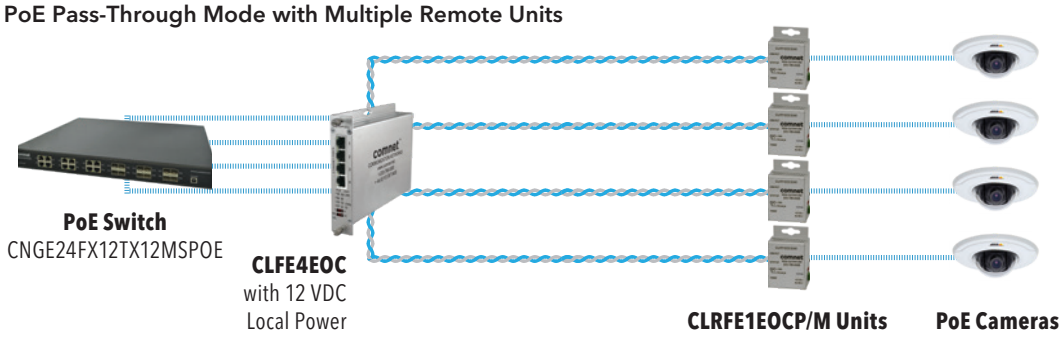
Mini Ethernet-over-Coax Extender Remote Units Powered by External or PoE Source

These Ethernet-over-coax minis are an ultra-small form factor addition to the ComNet CopperLine® product family. These miniature remote units provide 10/100 Mbps Ethernet data with or without Pass-through PoE power over extended distance coaxial cable. Available in both standard and PoE applications, the mini CopperLine® CLRFE1EOC/M units will allow extended distance over copper to be used in applications where space is extremely limited. Automatically configured as remote units, and with user configurable selection of 10 Mbps or 100 Mbps speed these units are simple to install and fully compatible with most CopperLine® products.

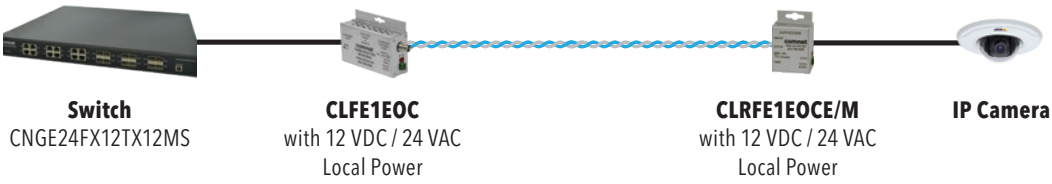
PoE Pass-Through Mode



PoE Pass-Through Mode with Multiple Remote Units



Non-PoE Mode



CopperLine® Mini Ethernet-over-Coax Extender Remote Units

Model	Function
CLRFE1EOCE/M	Miniature CopperLine® Single Channel Ethernet over Coax External Power, Remote
CLRFE1EOCP/M	Miniature CopperLine® Single Channel Ethernet over Coax PoE Powered, Remote
CLRFE1EOUP/M	Miniature CopperLine Single Channel Ethernet over UTP

10/100 Mbps Ethernet Repeater with 60 W Pass-Through PoE++

The ComNet CNFE1RPT can be used to double the distance to 656 feet (200 meters) or multiple units can be combined in series with each unit providing an additional 328 feet (100 meters) of full unrestricted 10/100 Mbps bandwidth. They are powered by pass-through PoE and require no local power. Low power consumption ensures for maximum power to the remote PD device.

Model	Function
CNFE1RPT	Tube 1 Channel 10/100 Mbps Ethernet Repeater with 60 W PoE Pass-Through
CNFE1RPT/PD	Tube, 1 Channel 10/100 Mbps Ethernet Repeater with 60 W PoE Pass-Through
CNFE1RPT/M	Mini, 1 Channel 10/100 Mbps Ethernet Repeater with 60 W PoE Pass-Through
CNFE1RPT/PD/M	Mini, 1 Channel 10/100Mb Ethernet Repeater with 60 W PoE Pass-Through

Simultaneous Analog and IP Video up to 500 m over COAX

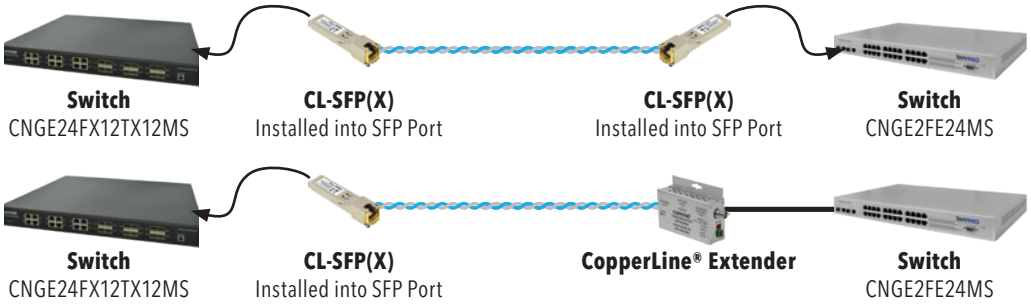
The ComNet CL(T,R)VE1COAX[POE][/M] allows you to combine composite analog baseband video and 10/100T(X) Ethernet on a single RG59 coaxial cable and transmit it up to 500 meters. This model is for applications where the addition of IP Video to an existing analog video system is required. The CLTVE1COAXPOE[/M] models can provide power to the camera via PoE.

Model	Function
CLTVE1COAX/M	Medium Size Surface Mount Analog and IP Video over COAX Transmitter
CLTVE1COAXPOE/M	Medium Size Surface Mount Analog and IP Video over COAX Transmitter with POE
CLRVE1COAX/M	Medium Size Surface Mount Analog and IP Video over COAX Receiver
CLRVE1COAX	ComFit 1 Channel Analog and IP Video over COAX Receiver
CLRVE2COAX	ComFit 2 Channel Analog and IP Video over COAX Receiver

Small Form-Factor Pluggable Copper Range Extender Modules

The ComNet CopperLine® CL-SFP is a small form-factor pluggable Ethernet extender module that improves bandwidth and distance of existing copper networks. It helps avoid installation costs of new fiber lines on site by allowing full 10 Mbps or 100 Mbps Ethernet bandwidth to be extended over 2-wire twisted pair or coaxial cable.
Housed in a small form-factor pluggable (SFP) module enclosure, it is designed for plug-and-play installation into any 100BASE-FX Ethernet unit with an MSA-compliant port. These must be used in pairs, with a CL-SFP module installed at both ends of the connection, or a CopperLine® unit installed at one end.

Model	Function
CL-SFP1	10 Mbps Copper Range Extending SFP
CL-SFP3	100 Mbps Copper Range Extending SFP



CopperLine® Accessories

Model	Function
CLSETUP	IP Camera Setup and PoE Tester
CLESP	Single Port Ethernet Voltage Transient & Surge Protector
CLRJ2COAX	RJ-45 Plug-to-Coax (BNC) – for use with CL-SFP(X) only
CLRJ2COAXCAB	RJ-45 Plug-to-Coax (BNC) Cable Assembly – for use with CL-SFP(X) only

Complete Product Documentation

The complete CopperLine® product line is listed on ComNet's website, along with data sheets and intruction manuals.

Scan this QR Code or visit: http://www.comnet.net/comnet-products/copperline/

ORION
ENTRANCE CONTROL, INC.

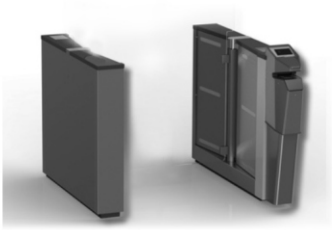
www.OrionECI.com

OPTICAL BARRIERS

ODAB OPTICAL DROP ARM BARRIER »

OSAB-DA OPTICAL SWING ARM BARRIER-DOUBLE ARM »

OSAB-SA OPTICAL SWING ARM BARRIER-SINGLE ARM »



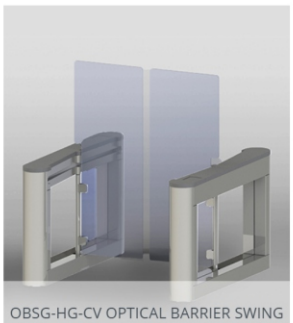
OBSG-WAVE OPTICAL BARRIER SWING GLASS-WAVE »

OPTICAL SPEED LANES

OBFG OPTICAL BI-PARTING FULL GLASS »

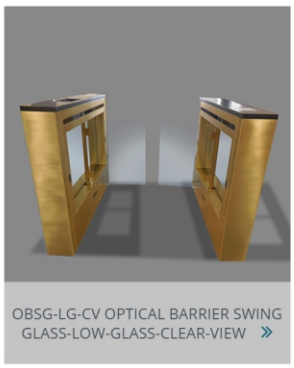
OBFG-E OPTICAL BI-PARTING FULL GLASS-EXTENDED »

OBSG-HG OPTICAL BARRIER SWING GLASS-HIGH GLASS »



OBSG-HG-CV OPTICAL BARRIER SWING GLASS-HIGH GLASS-CLEAR VIEW »

OBSG-LG OPTICAL BARRIER SWING GLASS-LOW GLASS »



OBSG-LG-CV OPTICAL BARRIER SWING GLASS-LOW-GLASS-CLEAR-VIEW »

ORWB OPTICAL RETRACTABLE WING BARRIER »

PURE OPTICAL

PONB-36 PURE OPTICAL NO BARRIER-36 »

PONB-45 PURE OPTICAL NO BARRIER-45 »

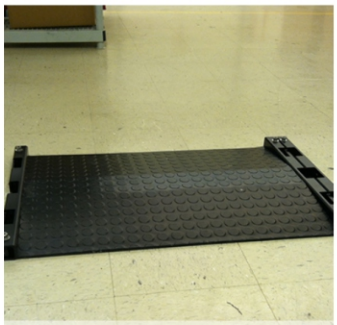
PONB-36-CV PURE OPTICAL NO BARRIER-36-CLEAR VIEW »

PONB-45-CV PURE OPTICAL NO BARRIER-45-CLEAR VIEW »

SLPO-12 SLIM LINE PURE OPTICAL-12 »

SLPO-24 SLIM LANE PURE OPTICAL-24 »

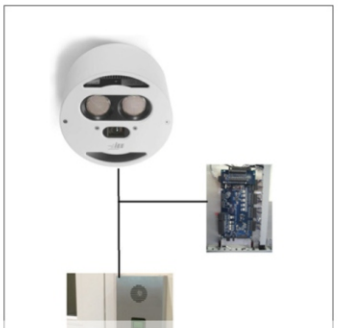
ACCESSORIES



OLMP ORION LANE MOUNTING PLATFORM »

OPSG ORION PEDESTRIAN SWING GATE »

RLC-PB REMOTE LANE CONTROLLER-PUSH BUTTON »

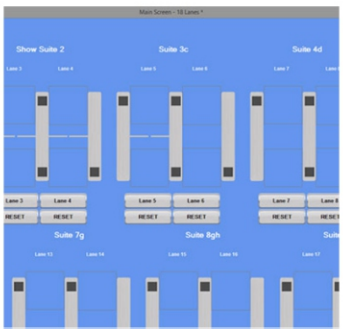


OSDG ORION SINGLE DOOR GUARD TAILGATE DETECTION »

LIFESAFETY-POWER-POWER-SUPPLY »

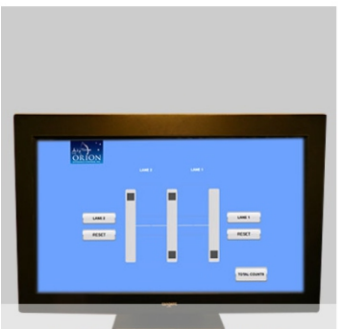
SOFTWARE

IRLC-SP INFINITY REMOTE LANE CONTROLLER-SURFACE PRO »



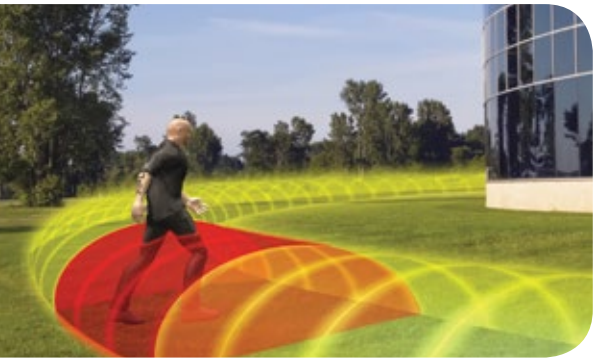
IRLC-SW INFINITY REMOTE LANE CONTROLLER-SOFTWARE ONLY »

IRLC-TS-15 INFINITY REMOTE LANE CONTROLLER-15 INCH »



IRLC-TOUCHSCREEN INFINITY REMOTE LANE CONTROLLER-24 INCH »

FENCE, BURIED CABLE AND MICROWAVE DETECTION SOLUTIONS



INTREPID™

INTELLIGENT SENSORS. INTELLIGENT CHOICE.

SOUTHWEST MICROWAVE

INTEGRATED, INTELLIGENT SOLUTIONS
FOR DIVERSE PERIMETER SECURITY NEEDS.

INTREPID™ Series II smart sensors feature a common, open-architecture communications protocol that enables convenient, single-platform networking of these detection technologies:

INTREPID™ MicroPoint™ II
Fence Detection System

- Advanced detection of cut / climb attacks
- Pinpoints intrusion attempts to 3 m (10 ft)
- Sensitivity Leveling™ for uniform detection
- Point Impact Discrimination™ prevents nuisance alarms
- Flexible, software controlled zoning

INTREPID™ MicroTrack™ II
Buried Cable Detection System

- Covert, terrain-following RF detection
- Pinpoints intrusion attempts to 3 m (10 ft)
- Sensitivity Leveling™ for uniform detection
- Prevents environmental nuisance alarms
- Flexible, software controlled zoning

INTREPID™ MicroWave 330
Digital Microwave Link

- Range of 457 m (1500 ft) / 244 m (800 ft) CE
- Fence lines, open areas, gates, entryways, rooftops, walls
- K-Band multipath detection
- Powerful DSP algorithms for high Pd, low NAR
- Microwave path monitoring for signal changes

INTREPID™
HIGH-SECURITY STANDALONE SENSORS

INTREPID™ UniZone™
Fence Detection Sensor

- Designed to protect smaller critical infrastructure sites
- Sensitivity Leveling™ for uniform detection
- Point Impact Discrimination™ prevents nuisance alarms
- Installs on most types of fence fabric
- EMI / RFI shielding and surge protection
- Monitoring via on-board, Form-C relay outputs

INTREPID™ Model 316
Digital Microwave Link

Range of 122 m (400 ft) / CE Rated

INTREPID™ Model 336
Digital Microwave Link

Range of 457 m (1500 ft)

- K-Band frequency
- Fence lines, open areas, gates, entryways, rooftops, walls
- Advanced, embedded DSP for high Pd / low NAR
- EMI / RFI shielding and surge protection
- Rugged construction resists abuse and climatic extremes
- Monitoring via on-board, Form-C relay outputs

PROVEN PERIMETER PROTECTION. PLUG-AND-DEPLOY CONVENIENCE.

INTREPID™ standalone technologies offer unprecedented ease of set-up and deployment with user-friendly installation software, letting installers tailor solutions to users' individualized requirements in minutes. These high-performance sensors incorporate advanced, proprietary digital signal processing (DSP) capabilities to optimize discrimination between intrusion attempts and environmental disturbances - mitigating risk of site compromise while preventing nuisance alarms.

2019-2020
WINSTED CATALOG

Winsted®

Control Room Consoles

THE GLOBAL LEADER

CONSOLES • FURNITURE • RAISED FLOORS & MORE

800.447.2257 winsted.com info@winsted.com

PRESTIGE - SIGHT-LINE

PRODUCT FEATURES AND HIGHLIGHTS

Three Base Console Widths
Base consoles are available in three widths: 24", 48", and 72". Features the Insta-Lock fastening system for simple construction. Black powder-coat finish.

Corner Fillers
Corner fillers help fit consoles into rooms, and deliver a convenient, ergonomic wrap-around operator console. Choose from 15°, 45°, and 90° concave corner options or 15° and 45° convex corner options.

Easy-Access Cable Management
Enhance reliability while protecting and managing your cables. All Prestige consoles feature convenient cable management solutions that are easily accessible. A large drop-down interior tray is also available as an option.

Multi-Purpose Locking Doors
Double-panel doors are extra-sturdy to support a CPU shelf or file/storage bin for convenient swing-out access.

Anti-Tip Extension
Extensions stabilize the console on all in-line console configurations. Anti-tip extensions come standard with all end frames. Black powder-coat finish.

Data/Power Access
Openings for a universal data mounting plate (RJ-45, HDMI, CAT-5, CAT-5E, CAT-6, BNC, and S-Video) and/or duplex power are conveniently located at the back of the work surface on Sight-Line and Insight consoles.

Versa-Trak Monitor Mounting System
Integrated horizontal aluminum track system will support a wide variety of monitor arrays. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.

Decorative TruForm End Panels
Complete the look of your console with our popular TruForm end panels. TruForm panels are available in a wide variety of colors. End panels can also be custom ordered in laminate or solid-surface materials.

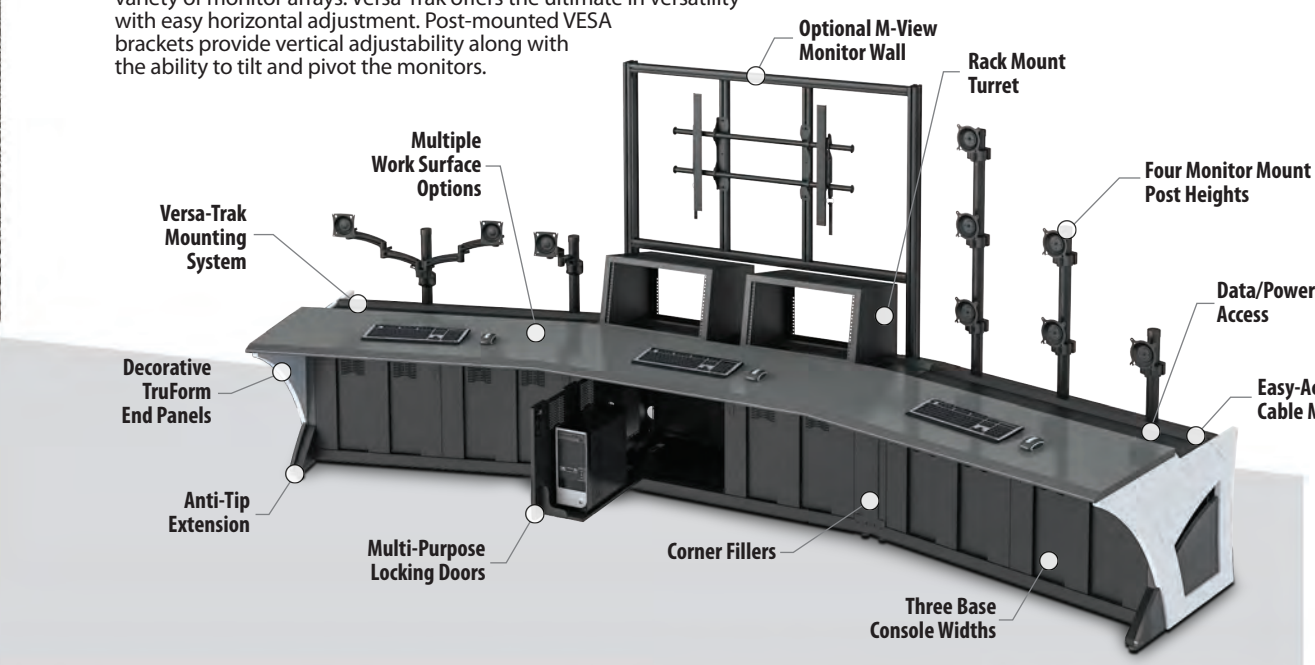
Rack Mount Turret
Optional Sight-Line rack mount turrets can be positioned to meet your needs. Available in either 7" (4U) , 10-1/2" (6U), or 19-1/4" (11U) by 19"W EIA rack space. Features a vented top. Decorative wood trim is available. 10-1/2" (6U) turret is available for Insight.

Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts easily attach monitors to a support post, and provides smooth pivot and pitch adjustment for optimal viewing of flat panel monitors.

Four Monitor Mount Post Heights
Available in four different heights: 15", 28-1/2", 42" and 60" so you can create a monitor array suitable for any application.

Optional M-View Monitor Wall
Sight-Line and Insight consoles work in tandem with our M-View monitor wall system to support large monitors over rack mount turrets.

Multiple Work Surface Options
Choose from four durable work surface options. Our innovative Endurance Plus, our proprietary Comfort Edge, our popular laminate with Safeguard, and flexible Corian® work surfaces are all available for our Prestige consoles.



GREENGUARD GOLD

Winsted
Control Room Consoles

SLAT-WALL™ PRESTIGE SERIES CONSOLES

Winsted Prestige Slat-Wall Consoles use an innovative, integrated slat-wall design to enhance functionality and declutter workspaces. A wide range of available accessories includes multiple monitor mounts, LED task lights and organizational shelving to create a customized work environment while freeing up desk space. As an added benefit, the slat-wall provides an element of privacy. Winsted Prestige Slat-Wall Consoles offer light privacy with limitless functionality.

PRESTIGE - SLAT-WALL

PRODUCT FEATURES AND HIGHLIGHTS

Three Base Console Widths
Base consoles are available in three widths: 24", 48", and 72". Features the Insta-Lock fastening system for simple construction. Black powder-coat finish.

Corner Fillers
Corner fillers help fit consoles into rooms, and deliver a convenient, ergonomic wrap-around operator console. Choose from 15°, 45°, and 90° concave corner options or 15° and 45° convex corner options.

Easy-Access Cable Management
Enhance reliability while protecting and managing your cables. All Prestige consoles feature convenient cable management solutions that are easily accessible. A large drop-down interior tray is also available as an option.

Multi-Purpose Locking Doors
Double-panel doors are extra-sturdy to support a CPU shelf or file/storage bin for convenient swing-out access.

Anti-Tip Extension
Extensions stabilize the console on all in-line console configurations. Anti-tip extensions come standard with all end frames. Black powder-coat finish.

Data/Power Access
Openings for a universal data mounting plate (RJ-45, HDMI, CAT-5, CAT-5E, CAT-6, BNC, and S-Video) and openings for duplex power are conveniently located at the back of the work surface. Data mounting plates not included, duplex power outlets included.

Decorative TruForm End Panels
Complete the look of your console with our popular TruForm end panels. TruForm panels are available in a wide variety of colors. End panels can also be custom ordered in laminate or solid-surface materials.

Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts and articulating arms easily attach monitors to the Slat-Wall, and provide smooth pivot and pitch adjustment for optimal viewing of smaller flat panel monitors.

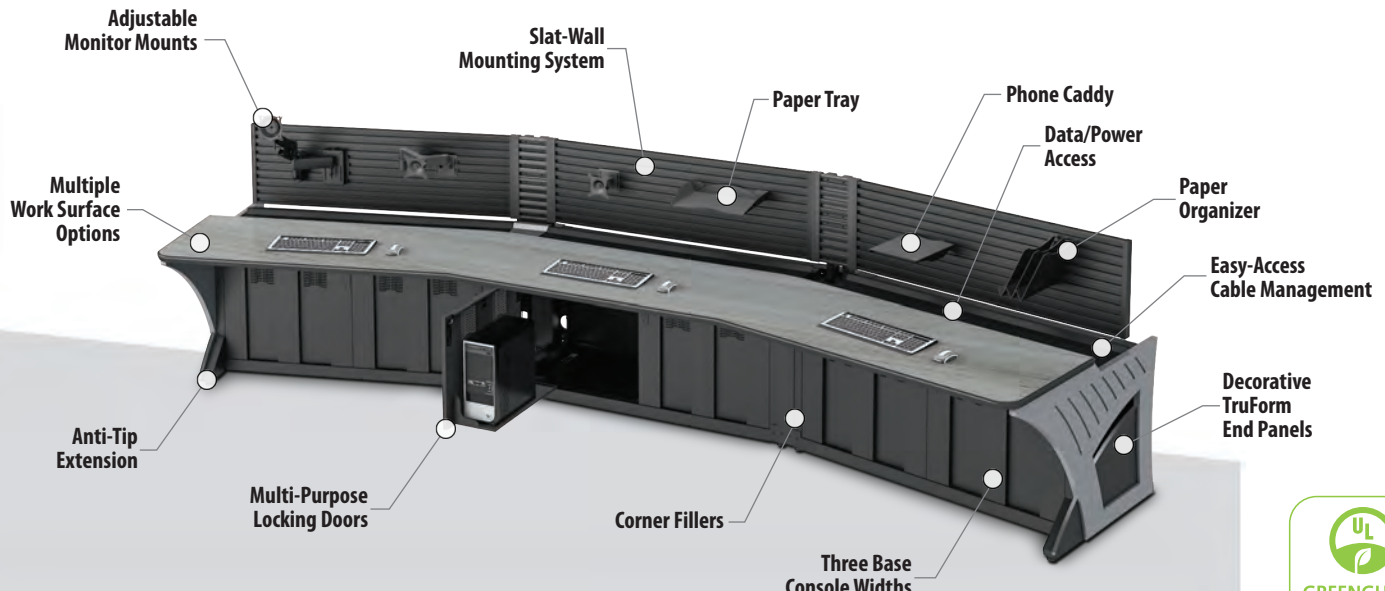
Multiple Work Surface Options
Choose from four durable work surface options. Our innovative Endurance Plus, our proprietary Comfort Edge, our popular laminate with Safeguard, and flexible Corian® work surfaces are all available for our Prestige consoles.

Slat-Wall Mounting System
Constructed of high quality extruded 6105-T5 aluminum, the Slat-Wall system is 15" high and designed to support a variety of monitor mounts and accessories.

Slat-Wall Accessories
Paper Tray: Maximize your work surface with this hanging paper tray.

Phone Caddy: Use this caddy to keep your phone within easy reach.

Paper Organizer: Keep papers organized and out of the way with this stylish organizer



GREENGUARD GOLD

Winsted
Control Room Consoles

INSIGHT™ PRESTIGE SERIES CONSOLES

Winsted Insight Consoles are a compact version of our feature-rich Sight-Line console. Modular, configurable and compatible with Winsted Versa-Trak and M-View monitor mounting solutions. Insight consoles facilitate greater operator density without a loss of configuration options or functionality. Winsted Insight Consoles feature unlimited possibilities for limited spaces.

PRESTIGE - INSIGHT

PRODUCT FEATURES AND HIGHLIGHTS

Three Base Console Widths
Base consoles are available in three widths: 24", 48", and 72". Features the Insta-Lock fastening system for simple construction. Black powder-coat finish.

Corner Fillers
Corner fillers help fit consoles into rooms, and deliver a convenient, ergonomic wrap-around operator console. Choose from 15°, 45°, and 90° concave corner options or 15° and 45° convex corner options.

Easy-Access Cable Management
Enhance reliability while protecting and managing your cables. All Prestige consoles feature convenient cable management solutions that are easily accessible. A large drop-down interior tray is also available as an option.

Multi-Purpose Locking Doors
Double-panel doors are extra-sturdy to support a CPU shelf or file/storage bin for convenient swing-out access.

Anti-Tip Extension
Extensions stabilize the console on all in-line console configurations. Anti-tip extensions come standard with all end frames. Black powder-coat finish.

Data/Power Access
Openings for a universal data mounting plate (RJ-45, HDMI, CAT-5, CAT-5E, CAT-6, BNC, and S-Video) and openings for duplex power are conveniently located at the back of the work surface. Data mounting plates not included, duplex power outlets included.

Optional M-View Monitor Wall
Sight-Line and Insight consoles work in tandem with our M-View monitor wall system to support large monitors over rack mount turrets.

Decorative TruForm End Panels
Complete the look of your console with our popular TruForm end panels. TruForm panels are available in a wide variety of colors. End panels can also be custom ordered in laminate or solid-surface materials.

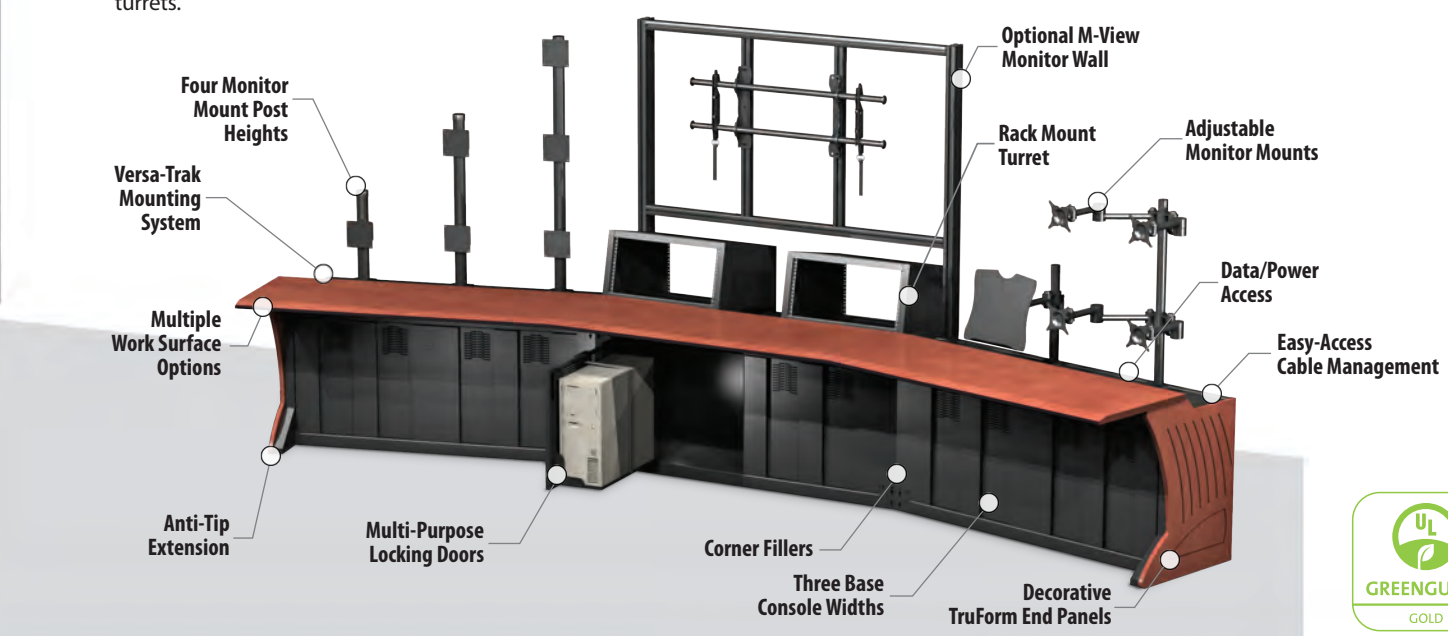
Rack Mount Turret
Optional rack mount turret can be positioned to meet your needs. Available in 10-1/2" (6U) by 19"W EIA rack space. Features a vented top. Decorative wood trim is available.

Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts easily attach monitors to a support post, and provides smooth pivot and pitch adjustment for optimal viewing of flat panel monitors.

Four Monitor Mount Post Heights
Available in four different heights: 15", 28-1/2", 42" and 60" so you can create a monitor array suitable for any application.

Multiple Work Surface Options
Choose from four durable work surface options. Our innovative Endurance Plus, our proprietary Comfort Edge, our popular laminate with Safeguard, and flexible Corian® work surfaces are all available for our Prestige consoles.

Versa-Trak Monitor Mounting System
Integrated horizontal aluminum track system will support a wide variety of monitor arrays. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.



GREENGUARD GOLD

Winsted
Control Room Consoles

ASCEND™ PRESTIGE SERIES CONSOLES

Winsted Ascend Sit/Stand Consoles represent the standard for single-surface height adjustable technical furniture. Available in a range of configurations with standard monitor mounting options and a motorized raise/lower feature, Ascend consoles provide the opportunity to alternate between sitting and standing throughout the workday for wellness and productivity. Winsted Ascend Sit/Stand Consoles bring the benefits of movement in the workplace.

PRESTIGE - ASCEND

PRODUCT FEATURES AND HIGHLIGHTS

Three Base Console Widths
Base consoles are available in three widths: 24", 48", and 72". Features the Insta-Lock fastening system for simple construction. Black powder-coat finish.

Corner Fillers
Corner fillers help fit consoles into rooms, and deliver a convenient, ergonomic wrap-around operator console. Choose from 15°, 45°, and 90° concave corner options or 15° and 45° convex corner options.

Easy-Access Cable Management
Enhance reliability while protecting and managing your cables. All Prestige consoles feature convenient cable management solutions that are easily accessible. A large drop-down interior tray is also available as an option.

Multi-Purpose Locking Doors
Double-panel doors are extra-sturdy to support a CPU shelf or file/storage bin for convenient swing-out access.

Anti-Tip Extension
Extensions stabilize the console on all in-line console configurations. Anti-tip extensions come standard with all end frames. Black powder-coat finish.

Electric-Lift Legs
Quickly and easily adjust the work surface height from 28-1/2" to 44-1/2" at the push of a button. Two, three and four leg systems are available with load capacities of 500, 750 and 1,000 pounds respectively.

Decorative TruForm End Panels
Complete the look of your console with our popular TruForm end panels. TruForm panels are available in a wide variety of colors. End panels can also be custom ordered in laminate or solid-surface materials.

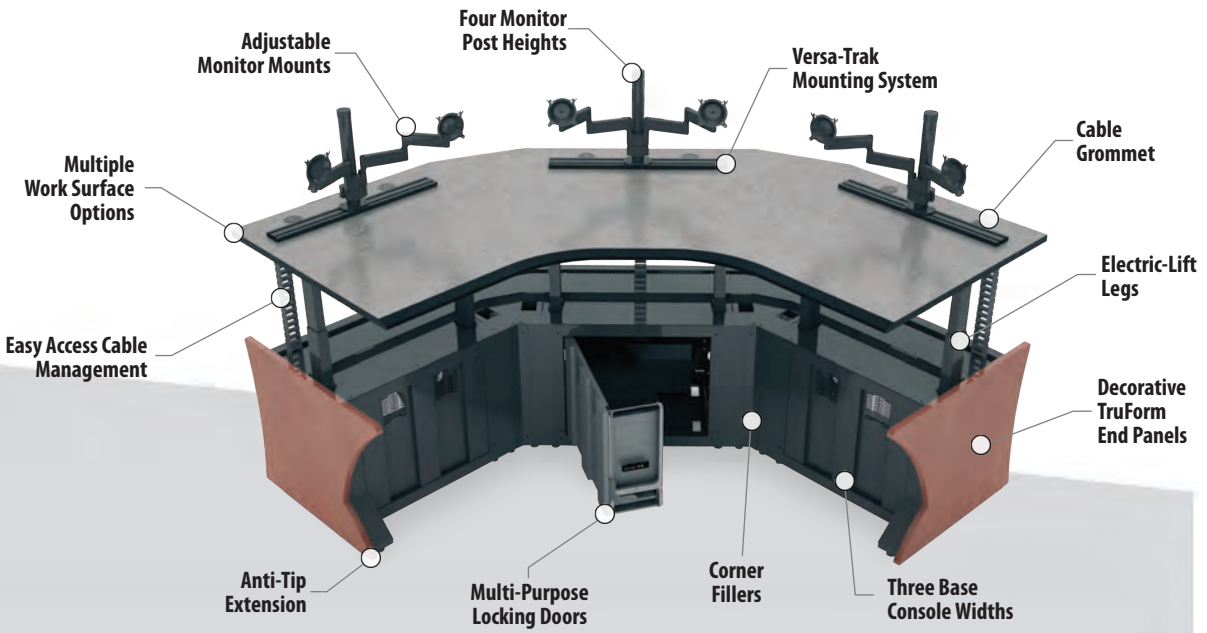
Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts easily attach monitors to a support post, and provides smooth pivot and pitch adjustment for optimal viewing of flat panel monitors.

Four Monitor Mount Post Heights
Available in four different heights: 15", 28-1/2", 42" and 60" so you can create a monitor array suitable for any application.

Multiple Work Surface Options
Choose from four durable work surface options. Our innovative Endurance Plus, our proprietary Comfort Edge, our popular laminate with Safeguard, and flexible Corian® work surfaces are all available for our Prestige consoles.

Cable Grommet
Round plastic grommet with cap allows easy routing of wires from lower cable management to desktop monitors.

Versa-Trak Monitor Mounting System
Integrated horizontal aluminum track system will support a wide variety of monitor arrays. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.



GREENGUARD GOLD

PRESTIGE SIGHT-LINE SERIES™

Our **Flagship Console** is truly one-of-kind with a world class feature set, which is complimented by an impressive appearance, making it ideal for all control room applications. Sight-Line consoles are modular, reconfigurable and expandable to meet your changing needs. Sight-Line consoles can also be customized in numerous ways to create a unique solution.

PRESTIGE SLAT-WALL SERIES™

Our **Slat-Wall Console** is built on the same foundation as our award-winning Sight-Line console. The same world class feature set is incorporated with slat-wall to provide added versatility and an element of privacy. The slat-wall is 15" tall and constructed of high quality, extruded 6105-T5 aluminum. The black anodized finish is attractive and smooth to the touch. A variety of monitor mounts and accessories are available to mount on the slat-wall.

PRESTIGE INSIGHT SERIES™

Our **Compact Console** features a high-density profile, designed for a high performance world. Insight's overall depth of 32" saves valuable space and maximizes control room functionality. Our engineers reduced the overall depth of the chase and work surface on the popular Sight-Line console to create a compact console solution. The result is an efficient footprint that meets ergonomic standards and provides ample desktop workspace.

PRESTIGE ASCEND SERIES™

Our **Sit/Stand Console** offers three programmable height settings for ultimate versatility and optimum comfort in any control room setting. This completely redesigned sit/stand console includes electric-lift legs, which enable operators to quickly and easily adjust the work surface height from 28-1/2" to 44-1/2" with the push of a button. Two-, three- and four-leg systems are available with load capacities of 300, 450 and 600 lbs. respectively.

VERSA-TRAK MONITOR MOUNTING SYSTEM

Integrated horizontal aluminum track system will support a wide variety of monitor arrays. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.

INTEGRATED DATA/POWER

Keep your electronics up and running. Sight-Line, Slat-Wall and Insight consoles feature openings for universal data mounting plates and duplex power outlets, conveniently located at the back of the work surface where they are within easy reach to connect electronics.

EASY-ACCESS CABLE MANAGEMENT

Enhance reliability while protecting and managing your cables. All Prestige consoles feature convenient cable management solutions that are easily accessible. A large drop-down interior tray for additional cable management is also available as an option.

MULTI-PURPOSE DOORS

Double-panel front and rear doors are extra sturdy to support a CPU shelf or file/storage bin for convenient swing-out access. Prevents reaching and working in confined storage spaces.

SINGLE-OPERATOR SIGHT-LINE CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
W5723	28-1/2″ (724mm)	78″ (1981mm)	43-3/4″ (1111mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	SHARK GREY TRUFORM	SHARK GRAY ENDURANCE PLUS

72″ Sight-Line console comes complete with three monitor mounts.

TRIPLE-OPERATOR SIGHT-LINE CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
W5724	28-1/2″ (724mm)	174-1/2″ (4432mm)	61-1/2″ (1562mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	WHITE TRUFORM	GRAPHITE NEBULA COMFORT EDGE

Unique design provides ample space for three operators. Console includes three dual-mount LCD poles.

SINGLE-OPERATOR SLAT-WALL CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
W5832	41-1/8″ (1045mm)	78″ (1981mm)	43-3/4″ (1111mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	FUSION MAPLE LAMINATE	WILLIAMSBURG CHERRY COMFORT EDGE

This 72″ console is perfect for one operator. Comes complete with three monitor mounts.

SLAT-WALL CORNER CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
W5833	41-1/8″ (1045mm)	104-3/8″ (2651mm)	57-1/4″ (1454mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	ICONIC MAPLE LAMINATE	WHITE COMFORT EDGE

Corner design wraps around the operator for maximum comfort. Console includes five monitor mounts.

CURVED INSIGHT CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
W6443	28-1/2″ (724mm)	95″ (2413mm)	39-3/4″ (1010mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	ALMOND CHERRY TRUFORM	BILTMORE CHERRY COMFORT EDGE

Two 15° corners form an ergonomic wrap-around configuration.

INSIGHT CONSOLE WITH CREDENZA

MODEL#	HEIGHT	WIDTH	DEPTH
W6432	28-1/2″ (724mm)	84-3/4″ (2153mm)	68-3/8″ (1737mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	REGIMENTAL BLUE LAMINATE	DOVE GREY COMFORT EDGE

Corner console features a radial credenza for ample storage.

ASCEND CORNER CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
W5739	28-1/2″ (724mm) - to - 44-1/2″ (1030mm)	128-3/4″ (3270mm)	58-5/8″ (1489mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	SLATE GREY LAMINATE	BLUEBERRY MATRIX SAFEGUARD

Sitting or standing, this adjustable console will keep your operators comfortable all day.

ASCEND CONSOLE WITH PENINSULA

MODEL#	HEIGHT	WIDTH	DEPTH
W5729	35″ (889mm) - to - 44-1/2″ (1030mm)	188-1/8″ (4778mm)	105-7/8″ (2689mm)

COLOR	SIDE PANEL	WORK SURFACE
BLACK	WINDSOR MAHOGANY LAMINATE	WINDSOR MAHOGANY COMFORT EDGE

Dual-operator Ascend console features a center peninsula with extra storage space and three rack mount turrets.

AXIOM MONITOR MOUNTS: *(1.5" DIA. MOUNTING POSTS)*

W6471
15" Post - Single Monitor Post Mount, Vertical

W6472
28-1/2" Post - Dual Monitor Post Mount, Vertical

W6473
42" Post - Triple Monitor Post Mount, Vertical

W6491
15" Post - Single Monitor Articulating Arm

W6475
15" Post with Height Adjustable Arm

W6492
28-1/2" Post - Single Monitor Articulating Arm

W6493
28-1/2" Post - Dual Monitor Two Articulating Arms

A custom monitor wall with Titan Poles can be integrated to support your larger monitors. Contact Winsted for details.

PRESTIGE MONITOR MOUNTS: *(1.9" DIA. MOUNTING POSTS)*

E5081
15" Post - Single Monitor Post Mount, Vertical

W5772
28-1/2" Post - Dual Monitor Post Mount, Vertical

W5773
42" Post - Triple Monitor Post Mount, Vertical

W5777
15" Post with Dual 15" Extension Arms

W5690
Dual-Post Large Monitor Mount (Supports 42" - 63" Monitors)

W5774
15" Post with 15" Extension Arm

W5775
28-1/2" Post with 15" Extension Arm

W5779
28-1/2" Post with Two 15" Extension Arm

W5776
42" Post with Two 15" Extension Arms

W5778
15" Post with Height Adjustable Arm

W5698
28-1/2" Post with VESA Mount (Supports 26" - 45" Displays)

** 60" Pole with mounts available. Contact Winsted for details.*

SLAT-WALL MONITOR MOUNTS

58171
Slat-Wall
Monitor Mount

58174
Dual-Hinge Slat-Wall
Monitor Mount

58178
Adjustable Height Slat-Wall
Monitor Mount

SLAT-WALL ACCESSORIES

PAPER TRAY

MODEL#	DIMENSIONS	WEIGHT
58160	1-3/4"H x 15"W x 9-1/2"D (44 x 381 x 241mm)	2 LBS.

Maximize your work surface with this hanging paper tray.

58160

PHONE CADDY

MODEL#	DIMENSIONS	WEIGHT
58161	1-3/4"H x 9"W x 10-3/4"D (44 x 229 x 273mm)	3 LBS.

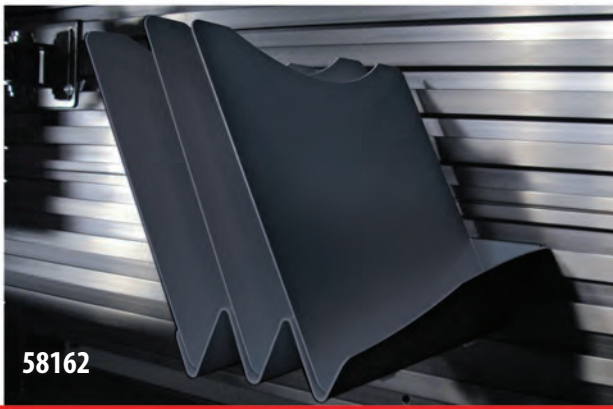
Use this caddy to keep your phone within easy reach.

58161

VERTICAL PAPER ORGANIZER

MODEL#	DIMENSIONS	WEIGHT
58162	8"H x 6"W x 10-1/4"D (203 x 152 x 260mm)	5 LBS.

Keep papers and folders organized and out of the way with this stylish organizer.


58162

RADIAL END CREDENZA

MODEL#	DESCRIPTION	WEIGHT
W5630	Left credenza for Sight-Line, Slat-Wall & Ascend	136 LBS.
W5631	Right credenza for Sight-Line, Slat-Wall & Ascend	136 LBS.
W6430	Left credenza for Insight only	110 LBS.
W6431	Right credenza for Insight only	110 LBS.

Form and function meet as the radial design provides ample storage with a stylish look. Includes work surface top.

RACK RAILS

MODEL#	DESCRIPTION	WEIGHT
56165	19-1/4" (11U) tapped rack rails (1 Pair)	5 LBS.
Easily mounts in the front and/or rear of the 24" wide chase.		
W5642	19-1/4" (11U) tapped rack rails (2 Pair) with brackets	10 LBS.
Rack mount kit for 48" and 72" chase ends.		

LED TASK LIGHTS

MODEL#	DESCRIPTION	WEIGHT
W5664	Versa-Trak mounted task light	6 LBS.
W5665	LED task light for vertical Slat-Wall	6 LBS.
Optional Task Light features a three-bar design for ultimate reach and flexibility. The ultra-adjustable LED head can spin in its socket, sweep side to side, and rotate around the end of the arm to point in any direction. Dimming is easily controlled by a touchstrip located near the LED head for easy access.		
56679	LED light with magnetic base and 18" flexible neck	1 LB.
10679	LED light with VESA mount and 18" flexible neck	1 LB.
Features a 6-foot cord and allows users to switch between white or red lights.		

DOOR MOUNT FILE STORAGE BIN & CPU SHELF

MODEL#	DESCRIPTION	WEIGHT
56088	File storage bin, door mounted	14 LBS.
56087	CPU shelf, door mounted	6 LBS.
Provides convenient swing-out access to files and/or CPU. *Must be used with 56302 door, or the wood doors. Doors sold separately.		

RACK MOUNT TURRETS

MODEL#	DESCRIPTION	WEIGHT
64032	10-1/2" (6U) Rack Turret,12° Slope (Insight Only)	17 LBS.
56030	7" (4U) Rack Turret, 45° Slope	16 LBS.
W5660	7" (4U) Rack Turret with wood trim, 45° Slope	18 LBS.
56032	10-1/2" (6U) Rack Turret,12° Slope	23 LBS.
W5661	10-1/2" (6U) Rack Turret with wood trim, 12° Slope	25 LBS.
56036	19-1/4" (11U) Rack Turret, 12° Slope	29 LBS.
Rack mount turrets mount easily to the chase and keep electronics within reach.		
56981	27" ABS chase filler (Not Shown)	1 LBS.
Use with rack turrets to enclose unused chase openings. Can be cut to size.		

WOOD PRESTIGE CONSOLE DOORS

MODEL#	DESCRIPTION	WEIGHT
56569	Locking TruForm door left-hinged	10 LBS.
56570	Locking TruForm door right-hinged	10 LBS.
56565	Locking Laminate door left-hinged	10 LBS.
56567	Locking Laminate door right-hinged	10 LBS.

Coordinate your console doors with your side panels and/or work surface. Choose from a wide variety of colors.

TELEPHONE TRAY

MODEL#	OVERALL DIMENSIONS	WEIGHT
56250	13"H x 8-1/2"W x 6-3/8"D (330 x 216 x 162mm)	4 LBS.
Mounts at the back of the work surface for quick and easy access to a telephone.		
W6469	13"H x 8-1/2"W x 6-3/8"D (330 x 216 x 162mm)	14 LBS.
Adjustable phone tray designed for Versa-Trak.		

ELECTRICAL

MODEL#	DESCRIPTION	WEIGHT
56264	Single Box with mounting bracket	4 LBS.
56265	Dual Box with mounting bracket	5 LBS.
W5650	Six-Outlet Strip with mounting bracket	3 LBS.
56264 & W5650 brackets mount to intermediate and/or end frames. 56265 mounts to intermediate frame only.		
64264	Single Box with mounting bracket (Insight Only)	3 LBS.
51710	Six-Outlet Strip (Insight Only)	2 LBS.
Mounts to Insight intermediate and/or end frames.		

SIGHT-LINE CPU HOLDER

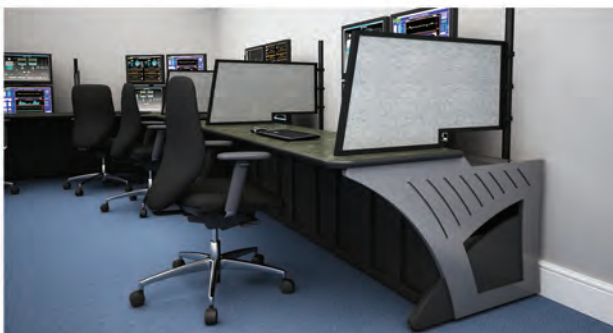
MODEL#	OVERALL DIMENSIONS	WEIGHT
56220	27-1/2"H x 12-1/2"W x 26"D (699 x 318 x 660mm)	47 LBS.

CPU Holder features an adjustable back and shelf. Inside dimensions are: 24-1/4"H x 9-3/8"W x 25"D (616 x 238 x 635mm). Can be positioned in-line or at the end of the console. Not compatible with Insight.

CONSOLE PARTITION

MODEL#	OVERALL DIMENSIONS	WEIGHT
W5900	18"H x 2"W x 26-1/2"D (457 x 51 x 673mm) - SIGHT-LINE	12 LBS.
W6500	18"H x 2"W x 21-1/2"D (457 x 51 x 546mm) - INSIGHT	10 LBS.

This stylish cloth partition helps create a private work space. The panel is affixed to a pole that is mounted on the Versa-Trak so it can be positioned where needed and easily moved. Constructed with a low density fiberboard core wrapped with a steel outer frame. Medium grey material.



INTERNAL CABLE TRAY

MODEL#	DESCRIPTION	WEIGHT
64072	Internal cable tray for 24"W base console	5 LBS.
64074	Internal cable tray for 48"W base console	9 LBS.
64076	Internal cable tray for 72"W base console	12 LBS.

Internal cable tray offers a large surface area for mounting cables and routing wires. Features four spring hinges for easy installation and repositioning. Works with all Prestige consoles. Can be mounted horizontally, front-to-back in Insight. Must be mounted vertically or at an angle in Sight-Line, Slat-Wall and Ascend. Can not be used with optional rack rails.

17-1/2" (10U) PRESTIGE RACK CABINET

MODEL#	DIMENSIONS	WEIGHT
56029	19-3/16"H x 23-3/4"W x 12"D (487 x 603 x 305mm)	40 LBS.

Welded rack mounts directly to the front frame of any Prestige console. Features spring pins for easy installation and repositioning, vented sides for cooling and all steel construction for durability. Black textured powder-coat finish.

PRESTIGE UTILITY SHELF

MODEL#	DIMENSTIONS	WEIGHT
W5780	15"H x 22"W x 18"D (381 x 559 x 457mm)	20 LBS.
W5781	28-1/2"H x 32"W x 16"D (724 x 813 x 406mm)	34 LBS.

Add storage space and keep your work space clean and organized with this functional utility shelf. Shelf is affixed to poles that are mounted on the Versa-Trak so it can be positioned where needed and easily moved. W5780 features steel construction with black power coat paint. W5781 features laminated wood construction.

PRESTIGE LIFT-OFF PANEL

MODEL#	DESCRIPTION	WEIGHT
64100	Lift-off panel	9 LBS.

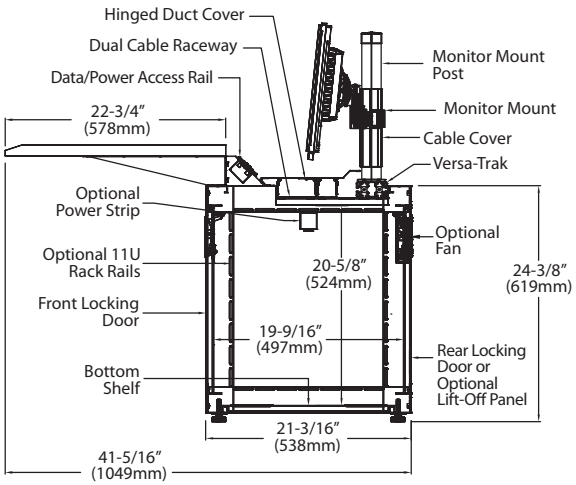
Lift off panel mounts to the front or the rear of any Prestige console and features a static latch for closure and easy removal.

PRESTIGE ASCEND REMOTE AND SMARTPHONE APP

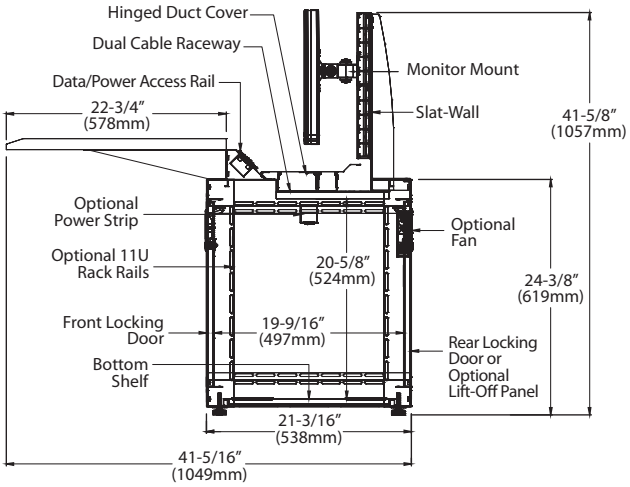
MODEL#	DIMENSIONS	WEIGHT
W5749	1/2"H x 1-3/4"W x 5-1/2"D (13 x 44 x 140mm)	0.5 LBS.
Wireless remote allows the user to adjust the height of the Ascend work surface.		
57730	7/16"H x 2-3/8"W (11 x 60mm) - Bluetooth® Adapter Only	0.25 LBS.

The new, innovative and free Desk Control app allows you to use your phone to adjust your Ascend console. With the Bluetooth® Adapter you are easily up and running. • iOS (minimum 9.0) • Android (minimum 5.0)

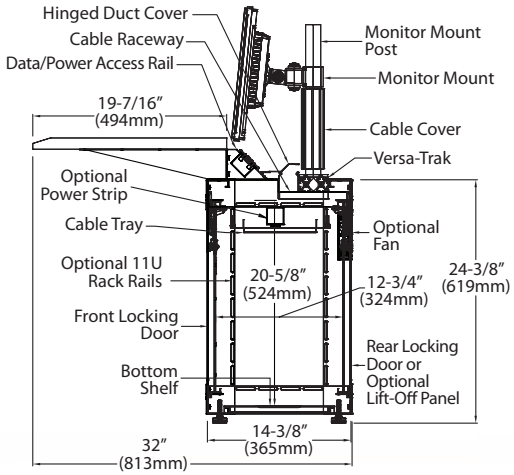
SIGHT-LINE



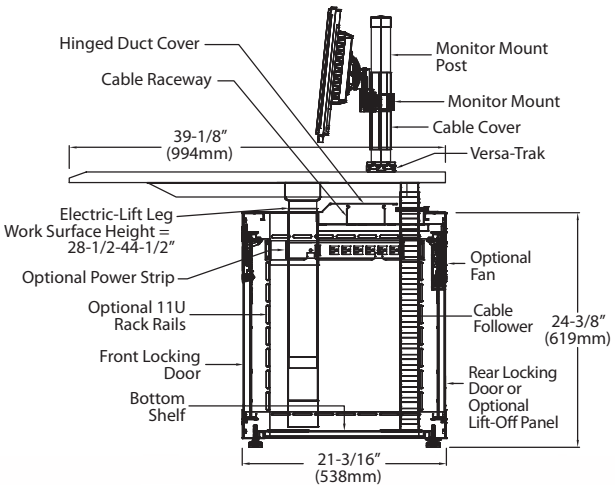
SLAT-WALL



INSIGHT



ASCEND



DYNA-LINQ™ MODULAR ELECTRICAL SYSTEM

SMART BOX

56730 - Smart Box

JUMPER CORD

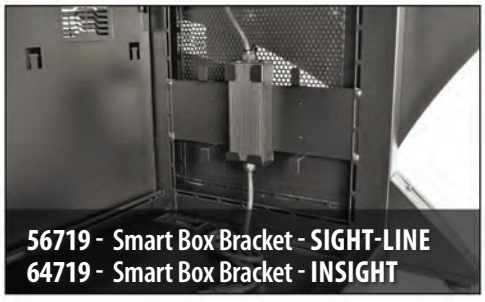
56721 - 26″
56726 - 34″
56728 - 48″

DUPLEX OUTLET

56720 - Outlet
56115 - Mounting Plate

ENERGIZE YOUR CONSOLE

Dyna-Linq is a simple, flexible "plug and play" electrical system designed to power your Winsted Sight-Line or Insight console. Dyna-Linq is UL 962 approved and provides a modular, expandable and reconfigurable electrical system that doesn't require an electrician to install. Simply plug it into any standard outlet. **It couldn't be more convenient!**



56719 - Smart Box Bracket - SIGHT-LINE
64719 - Smart Box Bracket - INSIGHT

HOW IT WORKS

- Each 12 amp Smart Box powers up to 8 duplex outlets
- Mount the outlets in the desired locations on the console
- Connect Jumper Cords to the outlets and link together
- Connect Smart Box anywhere in the run of outlets
- Plug the Smart Box into any standard wall outlet

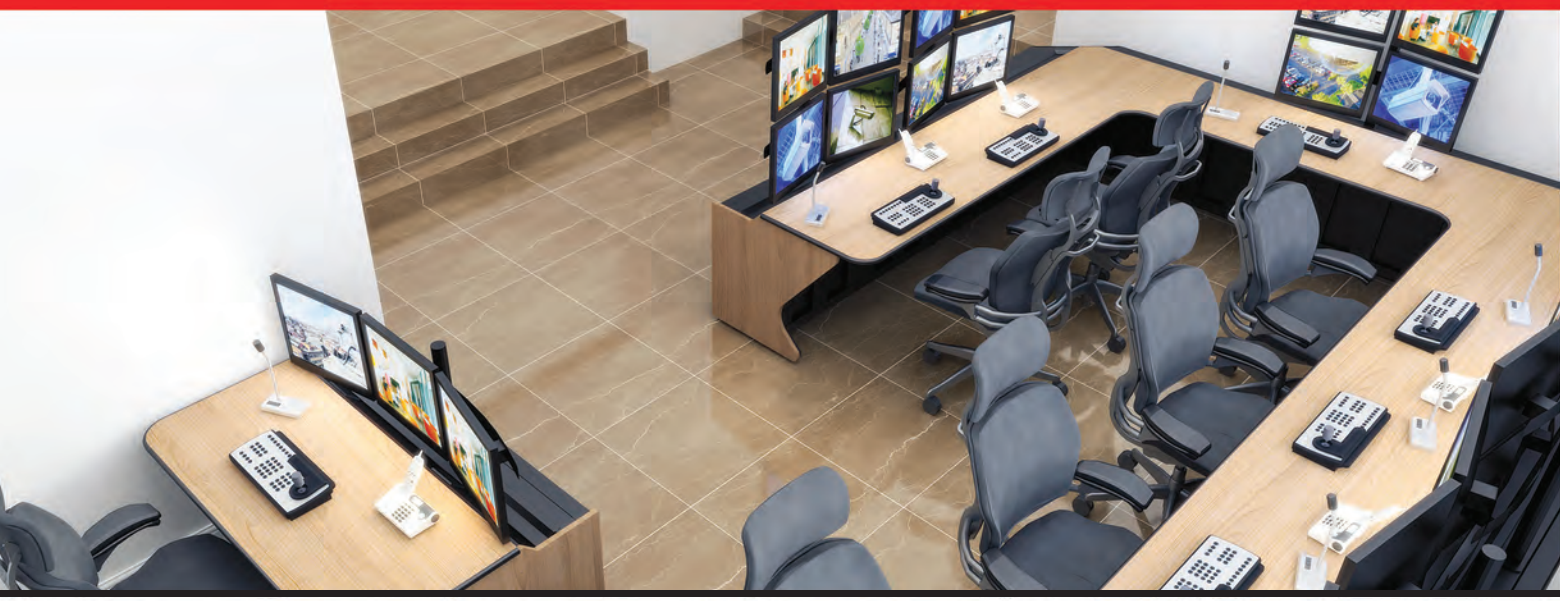
*If you purchase a Dyna-Linq system with your console, Winsted will waive the installation charge and install it for **free** prior to shipping!*

AIR COMMAND™ PERSONAL ENVIRONMENTAL CONTROL SYSTEM

56751 - Single Bay - **SIGHT-LINE & INSIGHT** • **56752** - Double Bay - **SIGHT-LINE & INSIGHT**
56754 - Single Bay **ASCEND CONSOLE** • **56755** - Double Bay **ASCEND CONSOLE**

CLIMATE CONTROL AT YOUR FINGERTIPS

Designed exclusively for our Prestige Series consoles, Air Command is a UL® listed personal environmental control system that is convenient and easy to use. Now your operators can adjust the temperature to suit their own personal preferences. The Air Command system offers three fan speeds to circulate heated or ambient air. The system also cleans the air with a washable, replaceable, open-cell foam filter. The work surface vents are directionally adjustable and there is also an adjustable vent on the climate control unit mounted below the work surface. The 500 watt heater can raise the ambient temperature around the operator 30 degrees. The system will automatically shut off after 2 hours.



LAMINATE WITH SAFEGUARD™

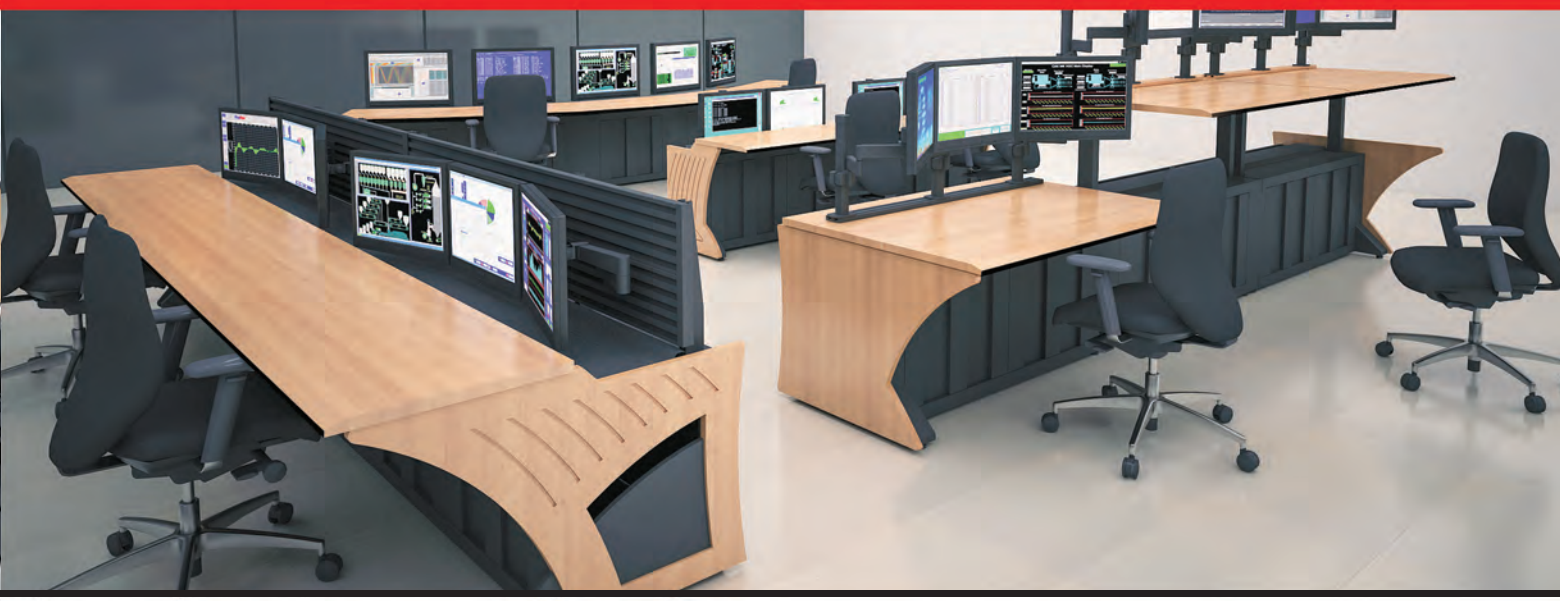
Choose from a broad range of colors, textures and patterns. We supply laminates from all the major manufacturers. The high-pressure laminate is bonded to a 1-1/8" thick industrial grade 45 lb. particle board core for strength. The work surface is finished with our durable Safeguard Edge.

FEATURES:

- Durable high-pressure plastic laminate surface
- Available in a wide variety of colors and patterns
- Optional textures and gloss levels available
- Easy to clean and maintain
- Safeguard Edge provides exceptional durability
- Laminate is bonded to 1-1 /8" thick industrial grade 45 lb. particle board

LAMINATE WITH SAFEGUARD

The sample Colors, Stains, Grains and Finishes shown may vary slightly from actual product samples. If necessary, please request an actual product sample. ***Many more colors available.***



ENDURANCE PLUS™

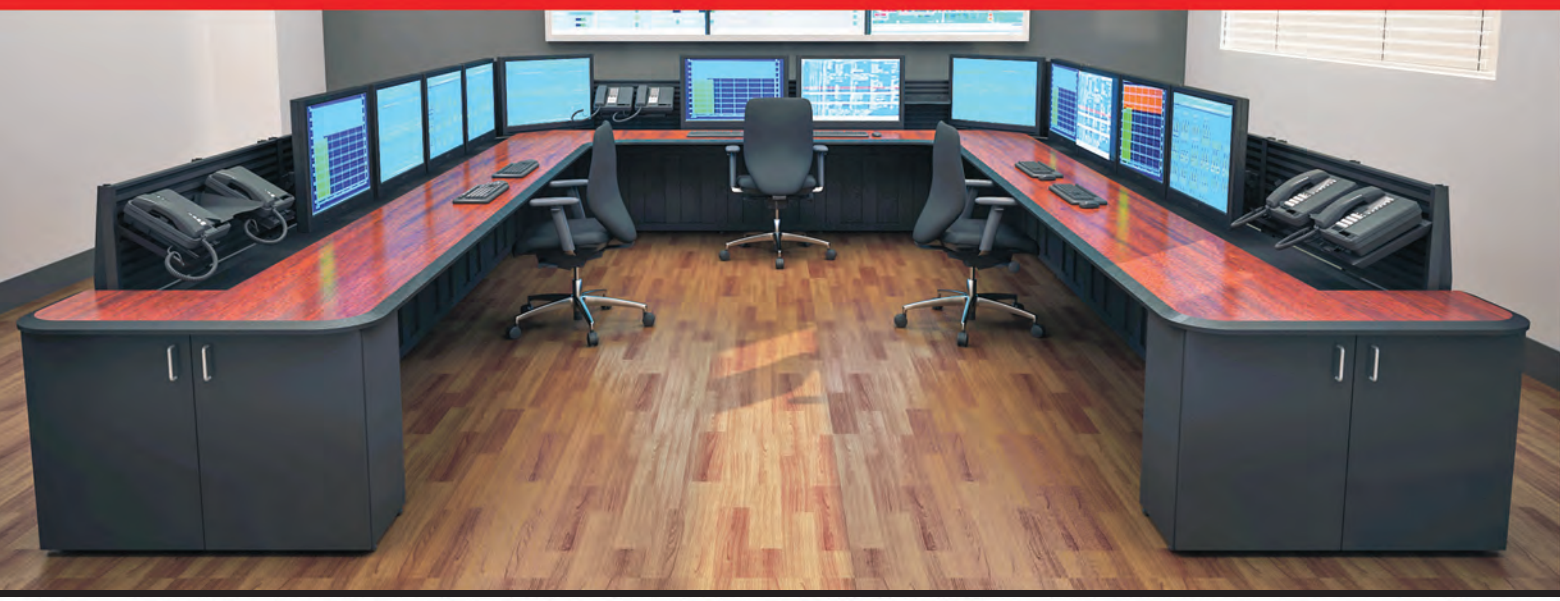
Through a proprietary process, we insert a continuous protective bumper material in the front edge of the work surface. This protective bumper significantly increases the durability of the work surface, which is often subject to heavy physical stress in 24/7 control room environments.

FEATURES:

- Continuous protective bumper inserted in the front edge for improved durability
- Ability to produce multidimensional profiles for comfortable edges and aesthetics
- Easily conforms to three-dimensional surfaces
- Easy to clean with soap and water
- Reduces visible seams

ENDURANCE PLUS WORK SURFACE

The sample Colors, Stains, Grains and Finishes shown may vary slightly from actual product samples. If necessary, please request an actual product sample. ***Many more colors available.***



COMFORT EDGE™

Our urethane Comfort Edge work surface offers the ultimate in flexibility and durability. The black urethane edge is molded to 1-1/8" laminated industrial grade 45 lb. particle board. We can supply laminates from any of the major manufacturers. The Comfort Edge work surface features a smooth, contoured profile to improve operator comfort and maximize productivity.

FEATURES:

- Permanently bonded black urethane creates a long-lasting, water-tight seam with a smooth finish
- Ergonomic profile provides comfort and reduces the risk of injury due to sharp edges
- Antibacterial and antifungal additives promote a healthy work environment
- UV resistant urethane will not change color or deteriorate over time
- Suitable for the most demanding 24/7 control room operations

COMFORT EDGE WORK SURFACE

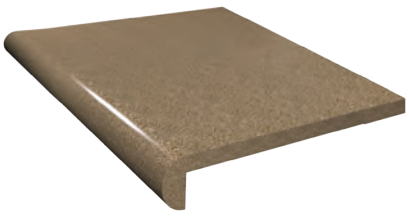
The sample Colors, Stains, Grains and Finishes shown may vary slightly from actual product samples. If necessary, please request an actual product sample. ***Many more colors available.***

CORIAN®

Corian® work surfaces are durable and feature an attractive, seamless appearance. The solid colors penetrate through the entire thickness of the material so blemishes are easily repaired. The smooth, nonporous finish is hygienic and easy to clean, while being resistant to liquids and heat.

FEATURES:

- Whatever the spill, Corian® is easy to clean and stain resistant because liquid cannot penetrate the surface
- Corian's durability and renewability with common abrasive cleaners reduces the need for replacement, which makes Corian® inherently environmentally friendly
- Joints are unobtrusive and impermeable with a seamless appearance
- Colors and patterns penetrate through the surface and cannot wear away
- Corian® is inert, nontoxic, chemically unreactive, hypoallergenic and fire resistant
- Advanced blend of natural minerals and acrylic polymer
- Corian's nonporous surface is very hygienic



CORIAN® WORK SURFACE

The sample Colors, Stains, Grains and Finishes shown may vary slightly from actual product samples. If necessary, please request an actual product sample. ***Many more colors available.***

Winsted
Control Room Consoles

CUSTOM END PANEL GRAPHICS

Winsted Custom End Panel Graphics add visual impact and dimension to your console and an unexpected yet striking element to your workplace. Supply your photos and images or use our design service. Highest quality inks and premium-grade large format UV protected digital film deliver vibrant, long-lasting graphics. Make your console stand out with Winsted Custom End Panel Graphics.

CUSTOM - END PANEL GRAPHICS

ROUTERED PANEL WITH LOGO

SOLID PANEL WITH LOGO

SHOW YOUR IDENTITY

Add personality to your control room. We offer simple logo decals or complete end panel wraps with custom graphics. Contact Winsted for details.

FULL COLOR WRAP EXAMPLES:

Winsted
Control Room Consoles

IMPULSE™ DUAL SIT/STAND CONSOLES

Winsted Impulse Series Dual Sit/Stand Consoles feature dual adjustability for the most configurable workspace solution. At the push of a button, users can adjust monitor and work surfaces independent of each other to meet their specific needs. Ideal for multi-user multi-shift 24/7 applications, Impulse consoles easily configure for the broadest range of staff while still delivering the ergonomic advantages of a sit/stand desk system. Winsted Impulse Dual Sit/Stand Consoles are ergonomic designed and infinitely configurable.

IMPULSE - DUAL SIT/STAND

PRODUCT FEATURES AND HIGHLIGHTS

Safeguard Edge Work Surface
Impulse consoles come standard with a durable, high pressure Graphite Nebula laminated work surface featuring our proprietary Safeguard Edge.

Versa-Trak Monitor Mounting System
Integrated horizontal aluminum track system will support a wide variety of monitor arrays. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.

Electric-Lift Legs
Quickly and easily adjust the work surface height from 30" to 46" at the push of a button. Each work surface has a load capacity of 520 lbs.

Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts easily attach monitors to a support post, and provides smooth pivot and pitch adjustment for optimal viewing of flat panel monitors.

Perforated Privacy Panel
Decorative, perforated privacy panel conceals cables, enhances the look of the console and adds an element of privacy for the operator.

Easy-Access Cable Management
Enhance reliability while protecting and managing your cables. All Impulse consoles feature a large cable channel incorporated into the modesty panel. In addition, there are four vertical cable carriers that travel with the work surfaces.

Three Monitor Mount Post Heights
Available in three different heights: 15", 28-1/2", and 42" so you can create a monitor array suitable for any application.

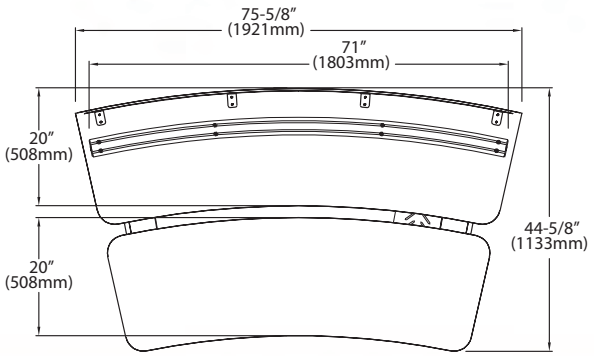
CPU Pedestal
CPU pedestal with leg levelers mounts to the inside of the leg and features two slots for adjustable Velcro® straps to keep your CPU safe and secure.

Decorative End Panels (Optional)
Complete the look of your console with our popular TruForm end panels, which are available in a wide variety of colors. Optional end panels can also be custom ordered in laminate or solid-surface materials.

Powder-Coat Paint
The Impulse infrastructure is coated with a durable black powder-coat paint that accentuates the work surface. Textured finish prevents fingerprints and lasts for years.

GREENGUARD GOLD

IMPULSE
PARADIGM



HEALTHY MOVEMENT

Standing at your desk for three hours a day during the typical five-day workweek burns about 750 calories. Over the course of a year that adds up to more than 30,000 extra calories, which is the equivalent of running about 10 marathons.[1]

IMPULSE PARADIGM DUAL SIT/STAND CONSOLE

MODEL#	WORK SURFACE HEIGHT	WIDTH	DEPTH
B3211	30″-46″ (762-1168mm)	75-5/8″ (1921mm)	44-5/8″ (1133mm)
Dual surface sit/stand console.			
B3311	30″-46″ (762-1168mm)	75-5/8″ (1921mm)	44-5/8″ (1133mm)
Single surface sit/stand console.			
B3216	30″ (762mm)	75-5/8″ (1921mm)	44-5/8″ (1133mm)
Single surface stationary console. Monitor mounts sold separately, see page 37.			

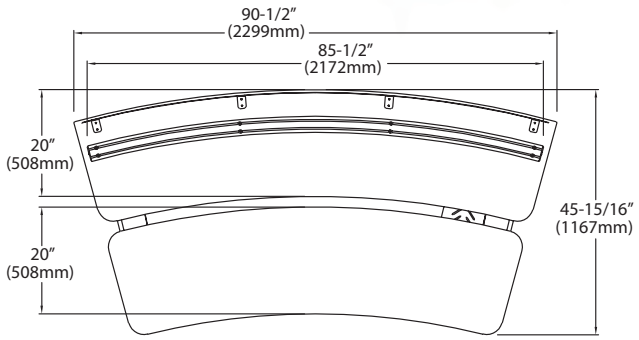
[1] *Mosley, M. (2013, Oct. 16). Calorie Burner. Retrieved from www.bbc.com*

IMPULSE
AMPLIFY

BOOST MORALE

Sit/stand desks are height-adjustable to provide the ideal fit for each individual. People who are more comfortable and better able to accomplish their tasks will find greater satisfaction in their jobs, thus improving the morale of the organization.

B3231

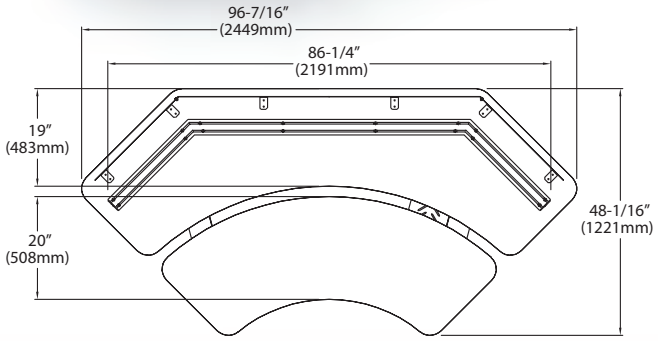


IMPULSE AMPLIFY DUAL SIT/STAND CONSOLE

MODEL#	WORK SURFACE HEIGHT	WIDTH	DEPTH
B3231	30"-46" (762-1168mm)	90-1/2" (2299mm)	45-15/16" (1167mm)
Dual surface sit/stand console.			
B3321	30"-46" (762-1168mm)	90-1/2" (2299mm)	45-15/16" (1167mm)
Single surface sit/stand console.			
B3236	30" (762mm)	90-1/2" (2299mm)	45-15/16" (1167mm)
Single surface stationary console. Monitor mounts sold separately, see page 37.			

IMPULSE
ALCOVE

B3251



ACHIEVE MORE

According to a study conducted by the Draugiem Group, standing leads to a 10 percent increase in productivity. Standing for periods during the workday also results in higher energy levels, improved concentration and fewer headaches. [2]

IMPULSE ALCOVE DUAL SIT/STAND CONSOLE			
MODEL#	**WORK SURFACE HEIGHT**	**WIDTH**	**DEPTH**
B3251	30"-46" (762-1168mm)	96-7/16" (2449mm)	48-1/16" (1221mm)
Dual surface sit/stand console.			
B3331	30"-46" (762-1168mm)	96-7/16" (2449mm)	48-1/16" (1221mm)
Single surface sit/stand console.			
B3256	30" (762mm)	96-7/16" (2449mm)	48-1/16" (1221mm)
Single surface stationary console. Monitor mounts sold separately, see page 37.			

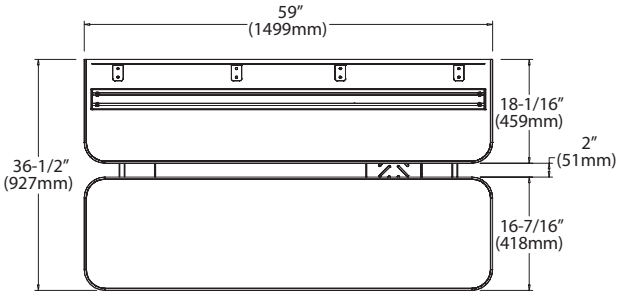
[2] *Gifford, G. (2013, Sept. 26). We Tested Standing Desks. Retrieved from: readwrite.com*

IMPULSE LINEAR

COMPACT PROFILE

All the great features of our popular curved Impulse consoles in a space-saving straight configuration. This 59″ wide console is perfect for a single operator working with multiple monitors.

B3261

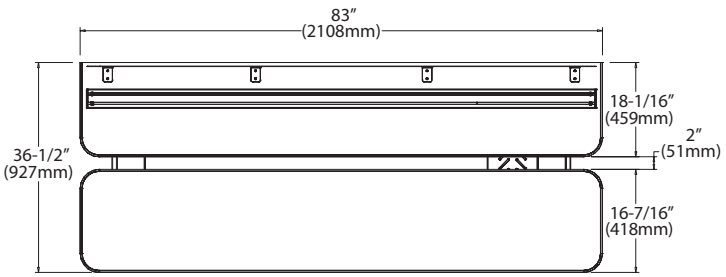


IMPULSE LINEAR DUAL SIT/STAND CONSOLES

MODEL#	WORK SURFACE HEIGHT	WIDTH	DEPTH
B3261	30″-46″ (762-1168mm)	59″ (1499mm)	36-1/2″ (927mm)
Dual surface sit/stand console.			
B3341	30″-46″ (762-1168mm)	59″ (1499mm)	36-1/2″ (927mm)
Single surface sit/stand console.			
B3266	30″ (762mm)	59″ (1499mm)	36-1/2″ (927mm)
Single surface stationary console. Monitor mounts sold separately, see page 37.			

IMPULSE
LINEAR XL

B3271



EXTRA WORK SPACE

Movement throughout the day is important to maintaining good health. Alternating between sitting and standing is a healthy activity that increases energy and reduces fatigue. This 83″ wide linear sit/stand console offers extra work space for your operators.

IMPULSE LINEAR XL DUAL SIT/STAND CONSOLES

MODEL#	WORK SURFACE HEIGHT	WIDTH	DEPTH
B3271	30″-46″ (762-1168mm)	83″ (2108mm)	36-1/2″ (927mm)
Dual surface sit/stand console.			
B3351	30″-46″ (762-1168mm)	83″ (2108mm)	36-1/2″ (927mm)
Single surface sit/stand console.			
B3276	30″ (762mm)	83″ (2108mm)	36-1/2″ (927mm)
Single surface stationary console. Monitor mounts sold separately, see page 37.			

AXIOM MONITOR MOUNTS: (1.5" DIA. MOUNTING POSTS)

W6471
15" Post - Single Monitor Post Mount, Vertical

W6472
28-1/2" Post - Dual Monitor Post Mount, Vertical

W6473
42" Post - Triple Monitor Post Mount, Vertical

W6469
Adjustable Phone Tray Mounts to Versa-Trak

W6491
15" Post - Single Monitor Articulating Arm

W6492
28-1/2" Post - Single Monitor Articulating Arm

W6493
28-1/2" Post - Dual Monitor Two Articulating Arms

W6475
15" Post with Height Adjustable Arm

M-VIEW RIZE

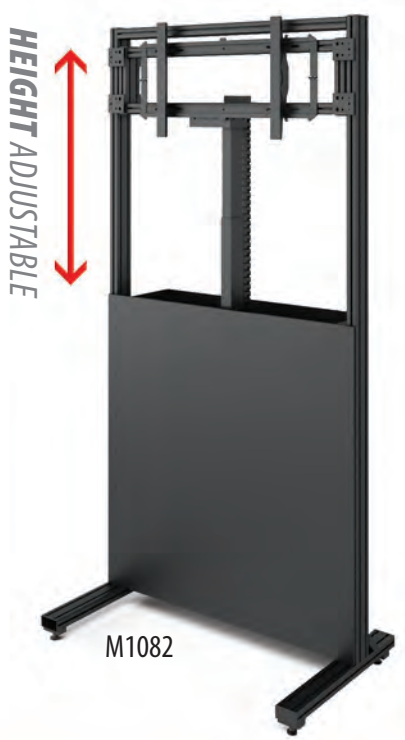
SIT/STAND MONITOR WALL

M-View Rize is the perfect compliment to any console system, including all Impulse consoles. As the operator changes the height of the console, the M-View Rize is able to adjust the height of the monitors on the wall in order to maintain proper ergonomics and optimal sight lines. Available in two standard configurations. We offer a 43" wide configuration for a single monitor and an 83" wide configuration for dual monitors.

M-VIEW RIZE MONITOR WALLS

MODEL#	DIMENSIONS
M1082	87"H x 43"W x 24-3/8"D (2210 x 1092 x 619mm)
M1088	87"H x 83"W x 24-3/8"D (2210 x 2108 x 619mm)

Electric actuators adjust monitor height at the push of a button. Remote control included.



M1082

IMPULSE PARADIGM PENINSULA

MODEL#	DIMENSIONS
B3219	30"H x 36-1/4"W x 68-7/8"D (762 x 921 x 1749 mm)

Peninsula for Impulse Paradigm consoles.

IMPULSE AMPLIFY PENINSULA

MODEL#	DIMENSIONS
B3239	30"H x 40"W x 68-7/8"D (762 x 1016 x 1749 mm)

Peninsula for Impulse Amplify consoles.

IMPULSE LINEAR AND LINEAR XL PENINSULA

MODEL#	DIMENSIONS
B3269	30"H x 28"W x 65-1/2"D (762 x 711 x 1664 mm)

Peninsula for Impulse Linear and Linear XL consoles.

IMPULSE ALCOVE CREDENZA

MODEL#	DIMENSIONS
B3259	30"H x 53-3/4"W x 43-1/2"D (762 x 1365 x 1105mm)

Credenza with two file cabinets for Impulse Alcove consoles.

IMPULSE KEYBOARD TRAY

MODEL#	INSIDE TRAY DIMENSIONS
32250	2"H x 20-3/4"W x 6-1/2"D (51 x 528 x 165mm)

Keyboard tray conveniently mounts to the underside of the work surface.

IMPULSE WIRELESS REMOTE

MODEL#	DIMENSIONS	WEIGHT
B3249	1/2"H x 1-3/4"W x 5-1/2"D (13 x 44 x 140mm)	0.5 LBS.

Wireless remote allows the user to adjust the height of both Impulse work surfaces.

POWER OUTLET WITH CIRCUIT BREAKER

MODEL#	DESCRIPTION	AMP	OUTLET LENGTH	WEIGHT
30701	Six-outlet	15	12-1/4" (311mm)	3 LBS.

Lighted On/Off switch. Mounts anywhere on the underside of any standard Impulse work surface. Features a 15 foot cord.

CPU PEDESTAL

MODEL#	DESCRIPTION	WEIGHT
32087	CPU Pedestal - 8"W x 19-1/2"D (203 x 495mm)	5 LBS.

CPU pedestal with leg levelers mounts to the inside of the end frame and includes two adjustable Velcro straps (Part# 12765).

FLOOR CABLE MANAGEMENT SYSTEM

MODEL#	DESCRIPTION
B3201	Floor Cable System for Linear and Linear XL
B3203	Floor Cable System for Paradigm
B3205	Floor Cable System for Amplify and Alcove

Conveniently routes and protects cables between Impulse end frames.

Winsted
Control Room Consoles

ENVISION™ COMMAND CONSOLES

Winsted EnVision Series Command Consoles represent the ultimate in customizability. EnVision consoles are available in three widths with single, double, or triple tier slat-walls and can take full advantage of the extensive offering of Winsted accessories for mounting monitors, LED lighting, organization and storage. Winsted EnVision Command Consoles put you in total control.

ENVISION - COMMAND CONSOLES

PRODUCT FEATURES AND HIGHLIGHTS

Multiple Configurations
EnVision comes standard in 42", 60" and 84" widths and can be designed as a single, double or triple tier configuration. Each tier can support single or dual Slat-Wall sections for a track height of 7-1/2" or 15". Combine multiple widths with your choice of corner angles to create the perfect solution.

Multiple Work Surface Options
Choose from multiple work surface options. Our proprietary Endurance Plus, Comfort Edge and laminate with Safeguard are available for EnVision consoles.

Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts easily attach monitors to the Slat-Wall and provide smooth pivot and pitch adjustment for optimal viewing angles and ergonomic sight lines.

Slat-Wall Accessories
Put the finishing touches on your console and maximize it's functionality with a wide variety of accessories specifically designed to mount on EnVision's Slat-Wall.

Slat-Wall Mounting System
Constructed of high-quality extruded 6105-T5 aluminum, the Slat-Wall system can be designed as a 7-1/2"or 15" high solution designed to support a variety of monitor mounts and convenient accessories. Multiple mounting positions on each tier means the Slat-Wall can be positioned exactly where you need it.

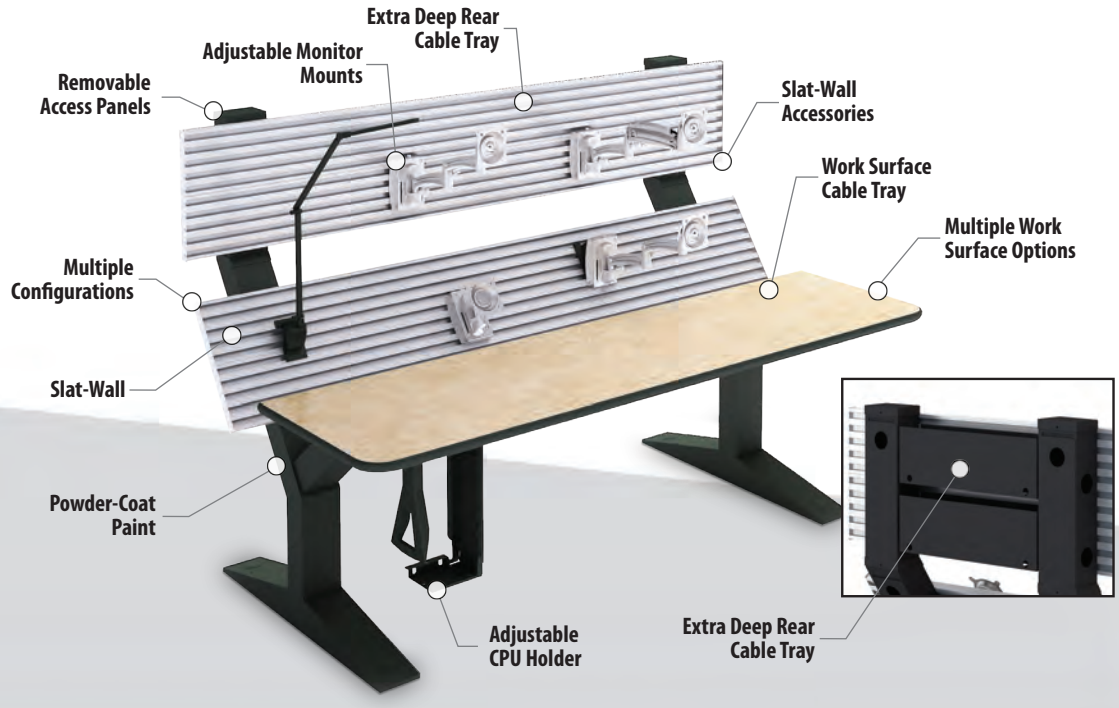
Extra-Deep Rear Cable Tray
Cable management should be convenient and flexible. EnVision Command Consoles come standard with a cable trough that simply hooks onto the Slat-Wall, no tools required. Place the cable trough where you need it and you'll have fast, easy access for installation, maintenance and upgrades. The extra-deep design allows room for power outlets and large cable bundles on integrated lacing loops.

Work Surface Cable Tray
Located where you work the most, the integrated cable tray located behind the work surface keeps your work area clean and organized while protecting and organizing your wires and cables.

Adjustable CPU Holder
CPU mount provides easy access to the front and rear of your computer system. The articulating mount extends forward, includes a 90° swivel, and fits CPUs from 13-1/2" to 21-1/2"H by 5-3/8" to 9-3/8"W.

Powder-Coat Paint
EnVision's steel infrastructure is coated with a durable black powder-coat paint that accentuates the work surface and Slat-Wall. The elegant textured finish prevents fingerprints and provides uncompromising durability.

Removable Rear Access Panels
EnVision's support legs feature full-length removable rear access panels to provide quick, easy access to cables for simple installation and reduced maintenance time.



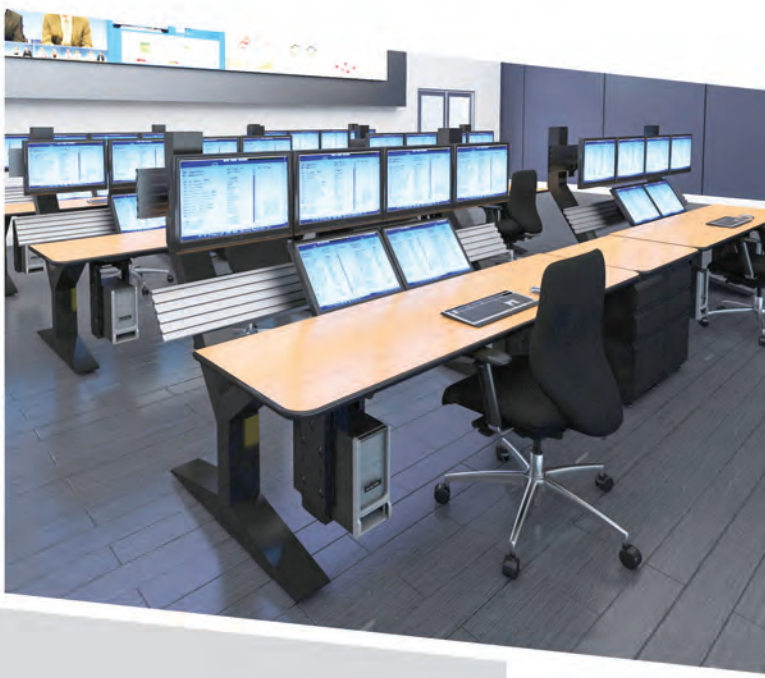
GREENGUARD GOLD

COMMAND YOUR VISION

Winsted EnVision Series Command Consoles feature a modular design which offers the perfect balance of form, function and ergonomics. Suitable for any size control room application, EnVision consoles feature a modern, open architecture design without the limitations of predefined corner angles and is available as a single, double or triple tier slat-wall arrangement which is fully-expandable as needs and technology change. No matter what configuration you choose, sight lines and viewing angles will be ergonomically correct and your operators will be comfortable and productive.

FEATURES

- Modern Ergonomic Design
- No Predefined Corner Angles
- Unlimited Corner Configurations
- Fully-Expandable Slat-Wall
- Extensive Accessory Offering
- Optimized Sight Lines



NEED HELP?

Let Winsted design a console for you: ***winsted.com/designservice***

B3047

PRECONFIGURED ENVISION CONSOLES

MODEL#	DESCRIPTION	OVERALL DIMENSIONS	COLOR
B3013	42"WIDE - SINGLE TIER WITH 7-1/2"H SLAT-WALL	40-1/8"H x 42"W x 43-5/8"D (1019 x 1067 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3015	60"WIDE - SINGLE TIER WITH 7-1/2"H SLAT-WALL	40-1/8"H x 60"W x 43-5/8"D (1019 x 1524 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3017	84"WIDE - SINGLE TIER WITH 7-1/2"H SLAT-WALL	40-1/8"H x 84"W x 43-5/8"D (1019 x 2134 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3023	42"WIDE - SINGLE TIER WITH 15"H SLAT-WALL	40-1/8"H x 42"W x 43-5/8"D (1019 x 1067 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3025	60"WIDE - SINGLE TIER WITH 15"H SLAT-WALL	40-1/8"H x 60"W x 43-5/8"D (1019 x 1524 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3027	84"WIDE - SINGLE TIER WITH 15"H SLAT-WALL	40-1/8"H x 84"W x 43-5/8"D (1019 x 2134 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3033	42"WIDE - DOUBLE TIER WITH 7-1/2"H SLAT-WALL	57-1/8"H x 42"W x 43-5/8"D (1451 x 1067 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3035	60"WIDE - DOUBLE TIER WITH 7-1/2"H SLAT-WALL	57-1/8"H x 60"W x 43-5/8"D (1451 x 1524 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3037	84"WIDE - DOUBLE TIER WITH 7-1/2"H SLAT-WALL	57-1/8"H x 84"W x 43-5/8"D (1451 x 2134 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3043	42"WIDE - DOUBLE TIER WITH 15"H SLAT-WALL	57-1/8"H x 42"W x 43-5/8"D (1451 x 1067 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3045	60"WIDE - DOUBLE TIER WITH 15"H SLAT-WALL	57-1/8"H x 60"W x 43-5/8"D (1451 x 1524 x 1108mm)	BLACK WITH SILVER SLAT-WALL
B3047	84"WIDE - DOUBLE TIER WITH 15"H SLAT-WALL	57-1/8"H x 84"W x 43-5/8"D (1451 x 2134 x 1108mm)	BLACK WITH SILVER SLAT-WALL

In stock and ready to ship with Graphite Nebula laminate work surface with Safeguard edge. Monitor mounts sold separately. See page 46.

DOUBLE-TIER ENVISION CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
B3065	57-1/8" (1451mm)	84" (2134mm)	47-1/4" (1200mm)

COLOR	WORK SURFACE COLOR	SLAT-WALL
BLACK	GRAPHITE NEBULA SAFEGUARD EDGE	DOUBLE-TIER 15" HIGH

Double-Tier EnVision console features a customized kidney bean shaped work surface with grey Safeguard Edge. Comes complete with monitor mounts and task light as shown.

DUAL-WING ENVISION CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
B3067	57-1/8" (1451mm)	145" (3683mm)	66" (1676mm)

COLOR	WORK SURFACE COLOR	SLAT-WALL
BLACK	PAPIER LUNE SAFEGUARD EDGE	SINGLE & DOUBLE TIER 7-1/2" HIGH

Dual-Wing EnVision Console features a single-tier center section for open monitor wall viewing. Comes complete with nine pivot/tilt monitor mounts (75 x 75mm/100 x 100mm).

ENVISION CORNER CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
B3068	57-1/8" (1451mm)	135" (3429mm)	93" (2362mm)

COLOR	WORK SURFACE COLOR	SLAT-WALL
BLACK	MAROOCHY BRUSH SAFEGUARD EDGE	DOUBLE-TIER 15" HIGH

EnVision Corner Console comes complete with two 4U Rack Cabinets, three Task Lights, six Articulating Monitor Arms and eight pivot/tilt monitor mounts.

THREE-POSITION ENVISION CONSOLE

MODEL#	HEIGHT	WIDTH	DEPTH
B3066	40-1/8" (1019mm)	122" (3099mm)	122" (3099mm)

COLOR	WORK SURFACE COLOR	SLAT-WALL
BLACK	VOUS METAL SAFEGUARD EDGE	SINGLE-TIER 15" HIGH

Three-Position EnVision Console comes complete with six pivot/tilt monitor mounts and three radial credenzas for ample storage.

MONITOR MOUNTS

MODEL#	DESCRIPTION	WEIGHT
30175	Articulating arm monitor mount - Vertical Slat-Wall	6 LBS.
Articulating arm monitor mount features adjustable tension at pivot points for customized control suitable for touchscreen use. Silver finish.		
30172	Pivot/tilt monitor mount - Vertical and Sloped Slat-Wall	4 LBS.
Monitor mount features adjustable tension at pivot points for customized control, suitable for touchscreen use. Grey finish.		

HEIGHT-ADJUSTABLE PIVOT/TILT MONITOR MOUNTS

MODEL#	DESCRIPTION	WEIGHT
30178	Articulating arm monitor mount - Vertical Slat-Wall	10 LBS.
B3053	Articulating arm monitor mount - Sloped Slat-Wall	13 LBS.
Articulating arm monitor mount features adjustable tension at pivot points for customized control suitable for touchscreen use. Designed for 10″ - 30″ monitors and is compatible with 75 x 75mm and 100 x 100mm VESA mounting patterns. Mounts have a weight capacity of 25 pounds. Arm extends 20.08″ and features 13″ of dynamic height adjustment using smooth-motion gas spring technology. Silver finish.		

MONITOR MOUNT - PHONE TRAY

MODEL#	DESCRIPTION	WEIGHT
B3090	Adjustable phone tray - Sloped Slat-Wall	11 LBS.
Phone tray is designed to mount to the sloped EnVision Slat-Wall.		
B3091	Articulating monitor mount - Sloped Slat-Wall	8 LBS.
Monitor mount designed to mount to the sloped EnVision Slat-Wall.		

UNIVERSAL LARGE MONITOR MOUNT

MODEL#	OVERALL DIMENSIONS	COLOR	WEIGHT
B3055	16-1/2″H x 30-3/4″W x 2″D (419 x 781 x 51mm)	BLACK	14 LBS.
Heavy-Duty construction provides a low-profile mounting solution for 32″-52″ monitors. Mount allows 0-12° of tilt and has a weight capacity of 125 pounds. Designed for vertical Slat-Wall.			

4U ENVISION RACK MOUNT CABINET

MODEL#	DIMENSIONS	WEIGHT
30031	9-1/8″H x 21-1/16″W x 6″D (232 x 535 x 152mm)	5 LBS.
4U rack cabinet easily mounts to the sloped or vertical Slat-Wall tiers providing convenient access to rack mounted equipment. Black textured powder coat finish.		

POWER OUTLET WITH CIRCUIT BREAKER

MODEL#	DESCRIPTION	AMP	OUTLET LENGTH	WEIGHT
30701	Six-outlet	15	12-1/4" (311mm)	4 LBS.

Lighted On/Off switch. Mounts inside rear lift-off cable tray. Features a 15 foot cord.

CONTEMPORARY LED TASK LIGHT

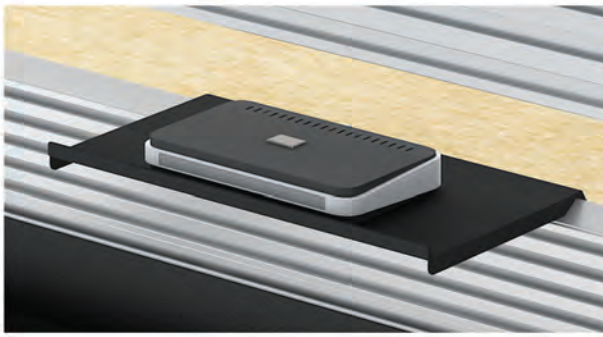
MODEL#	DESCRIPTION	WEIGHT
W5665	LED task light - Vertical Slat-Wall	4 LBS.
B3056	LED task light - Sloped Slat-Wall	4 LBS.

Optional Task Light features a three-bar design for ultimate reach and flexibility. The ultra-adjustable LED head can spin in its socket, sweep side to side, and rotate around the end of the arm to point in any direction. Dimming is easily controlled by a touchstrip located near the LED head for easy access.

REAR ACCESSORY TRAY FOR SLOPED SLAT-WALL

MODEL#	DESCRIPTION	WEIGHT
30080	EnVision accessory tray	4 LBS.

This convenient accessory tray mounts to the rear of the sloped EnVision Slat-Wall. The surface is 16" wide by 8" deep and has a 20 pound weight capacity. Black textured powder coat finish.



ENVISION PENCIL DRAWER

MODEL#	DIMENSIONS	WEIGHT
B3099	2-3/8"H x 13-3/4"W x 18"D (60 x 349 x 457mm)	4 LBS.

Mounts to the underside of any EnVision work surface. Pulls out 12-3/4" (324mm). Black formed plastic.

ENVISION CPU MOUNTS

MODEL#	DESCRIPTION	WEIGHT
B3057	Rear mouted stationary CPU mount	10 LBS.
Fits CPU's from 13-1/2" to 21-1/2" High (343 to 546mm) by 5-3/8" to 9-3/8" Wide (137 to 238mm). Black finish.		
B3098	Extends forward with 90° swivel	12 LBS.
Fits CPUs from 13-1/2" to 21-1/2" High (343 to 546mm) by 5-3/8" to 9-3/8" Wide (137 to 238mm). Black finish.		

Winsted
Control Room Consoles

E-SOC™ CONTROL STATION

Winsted E-SOC Control Stations are the perfect balance between console and workstation. A combination of Winsted Prestige Series Console and Winsted Multimedia Workstation, E-SOC control stations feature Winsted Versa-Trak monitor mounts for complete adjustability and ergonomic viewing comfort, lift-off access panels, integrated cable management and a hinged corner for a scalable, flexible and cost-effective solution suitable for any application. Winsted E-SOC Control Stations provide cost-effective configurations for operator success.

E-SOC - CONTROL STATION

PRODUCT FEATURES AND HIGHLIGHTS

Endurance Plus Work Surface
E-SOC comes standard with our proprietary Endurance Plus Work Surface. Comfort Edge and Laminate with Safeguard work surface options are also available.

Versa-Trak Monitor Mounting System
Integrated horizontal aluminum track system will support a wide variety of monitor arrays. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.

Rack Mount Turret
Optional 10-1/2" (6U) 7° sloped rack mount turret easily mounts to the E-SOC chase to keep electronics within easy reach. Features a vented top to keep electronics cool. Black textured power-coat finish.

Adjustable Monitor Mounts
VESA-compliant pivot/tilt mounts easily attach monitors to a support post, and provides smooth pivot and pitch adjustment for optimal viewing of flat panel monitors.

Vented Modesty Panel
Decorative, vented modesty panel features convenient lift-off panels for easy access to cables, electronics and CPUs. Integrated cable management with lacing loops enhances the feature set of the E-SOC.

Rack Mount Cabinet
Winsted offers a 19" EIA Rack Mount Cabinet to compliment your Control Station. A wide range of shelves and accessories are available to build the perfect rack solution.

Easy-Access Cable Management
Enhance reliability while protecting and managing your cables. All E-SOC Control Stations feature a cable channel with lacing loops incorporated into the modesty panel and a large, drop-down hinged cable tray that spans the length of the modesty panel.

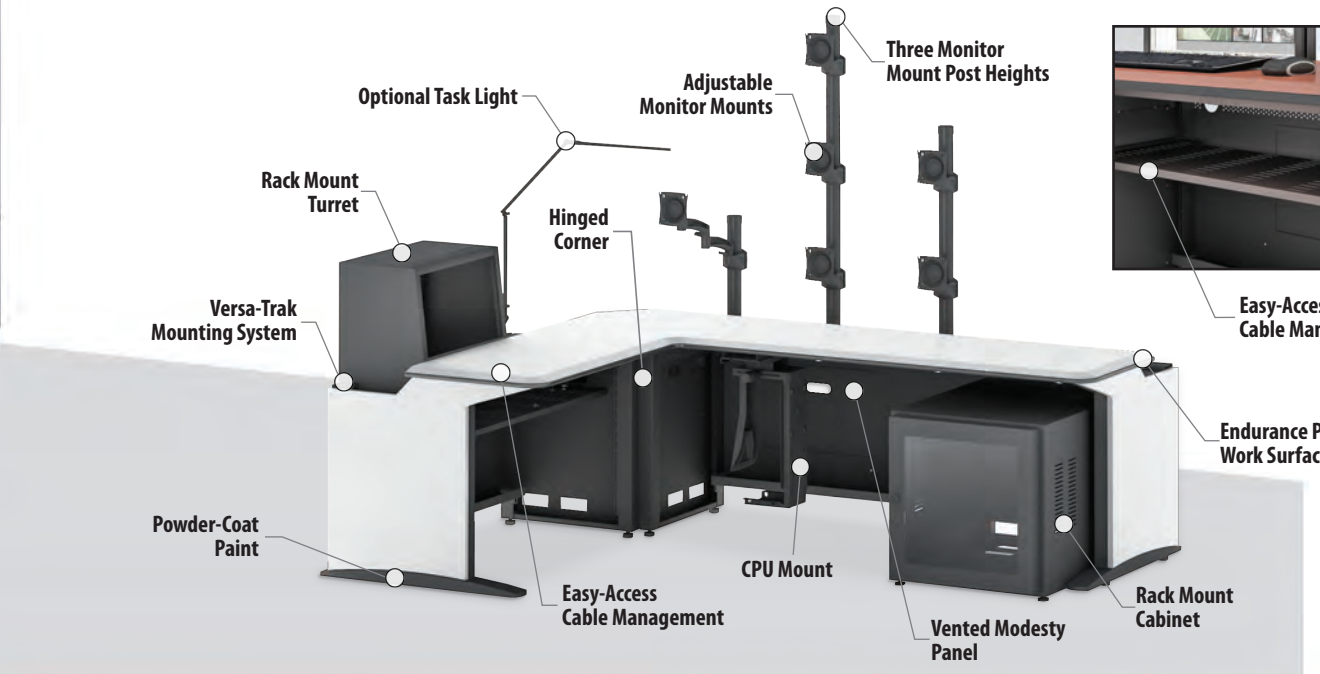
Three Monitor Mount Post Heights
Available in three different heights: 15", 28-1/2", and 42" so you can create a monitor array suitable for any application.

CPU Mount
CPU mount provides easy access to the front and rear of your computer system. The articulating mount extends forward, includes a 90° swivel, and fits CPUs from 13-1/2" to 21-1/2"H by 5-3/8" to 9-3/8"W.

Optional Task Light
Optional Task Light features a three-bar design for ultimate reach and flexibility. The ultra-adjustable LED head can spin in its socket, sweep side to side, and rotate around the end of the arm to point in any direction. A brightness touchstrip is located near the LED head for easy access.

Powder-Coat Paint
The E-SOC infrastructure is coated with a durable black powder-coat paint that accentuates the work surface. Textured finish prevents fingerprints from showing and lasts for years.

Hinged Corner
E-SOC's innovative hinged corner offers the ultimate in flexibility. With no pre-defined corner angles, E-SOC can be designed to fit in your unique space.



GREENGUARD GOLD

HYBRID FOR PERFORMANCE

Winsted E-SOC Control Stations are designed to promote operator performance when monitoring complex systems. Combining the enhanced ergonomics and functional flexibility of Winsted workstations and consoles for a cost-effective hybrid control station that yields greater comfort, operator attention, and usage satisfaction. E-SOC offers the flexibility, the feature set and the price point to suit any control room installation small or large.

FEATURES

- Modular and Expandable
- Cost-Effective
- Ergonomically Correct
- Improved Operator Performance
- Ample Cable Management
- Infinite Corner Configurations
- Easily Expandable

NEED HELP?

Let Winsted design a console for you: ***winsted.com/designservice***

60″ E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4314	28-7/8″ (733mm)	60″ (1524mm)	34-5/8″ (879mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	CONCRETE TRUFORM	CONCRETE ENDURANCE PLUS

60″ wide E-SOC Control Station features the Versa-Trak monitor mounting system and comes complete with three W6491 articulating monitor mounts (See page 55). To order this Control Station without the monitor mounts, please use model number B4304.

48″ E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4312	28-7/8″ (733mm)	48″ (1219mm)	34-5/8″ (879mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	CONCRETE TRUFORM	CONCRETE ENDURANCE PLUS

48″ wide E-SOC Control Station features the Versa-Trak monitor mounting system and comes complete with two W6491 articulating monitor mounts (See page 55). To order this Control Station without the monitor mounts, please use model number B4302.

72″ E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4316	28-7/8″ (733mm)	72″ (1829mm)	34-5/8″ (879mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	CONCRETE TRUFORM	CONCRETE ENDURANCE PLUS

72″ wide E-SOC Control Station features the Versa-Trak monitor mounting system and comes complete with four W6491 articulating monitor mounts (See page 55). To order this Control Station without the monitor mounts, please use model number B4306.

60″ E-SOC CONTROL STATION WITH RACK

MODEL#	HEIGHT	WIDTH	DEPTH
B4324	28-7/8″ (733mm)	60″ (1524mm)	34-5/8″ (879mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	CONCRETE TRUFORM	CONCRETE ENDURANCE PLUS

60″ wide E-SOC Control Station with 19-1/4″ (11U) equipment rack features the Versa-Trak monitor mounting system and comes complete with three W6491 articulating monitor mounts (See page 55).

U-SHAPED E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4363	28-7/8" (733mm)	113-1/8" (2873mm)	78-7/16" (1992mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	AMERICAN NATURAL TRUFORM	BASKET WEAVING LAMINATE

This U-shaped Control Station consists of two 60" sections, one 72" section and two 90 degree corners. Comes complete with Versa-Trak monitor mounting system and ten W6491 articulating monitor mounts (See page 55).

CORNER E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4360	28-7/8" (733mm)	140-1/4" (3562mm)	60-1/2" (1537mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	SHARK GREY TRUFORM	CARBON EV LAMINATE

This Corner Control Station consists of three 48" sections and two 45 degree corners. Comes complete with Versa-Trak monitor mounting system and six W6471 pivot/tilt monitor mounts (See page 55).

L-SHAPED E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4361	28-7/8" (733mm)	92-3/16" (2342mm)	92-3/16" (2342mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	BOSTON CHERRY TRUFORM	NATURAL PEAR LAMINATE

This L-shaped Control Station consists of two 72" sections and one 90 degree corner. Comes complete with Versa-Trak monitor mounting system and six W6491 articulating monitor mounts (See page 55).

CURVED E-SOC CONTROL STATION

MODEL#	HEIGHT	WIDTH	DEPTH
B4362	28-7/8" (733mm)	234-11/16" (5961mm)	54-3/4" (1391mm)

BASE COLOR	SIDE PANEL	WORK SURFACE
BLACK	SHARK GREY TRUFORM	VOUS MOD LAMINATE

This Curved Control Station consists of five 48" sections and four 10 degree corners. Comes complete with Versa-Trak monitor mounting system and ten W6471 pivot/tilt monitor mounts (See page 55).

43009

43260

43032

WELDED 19-1/4" (11U) RACK WITH PLEXI DOOR

MODEL#	DIMENSIONS	WEIGHT
43009	22-7/16"H x 22"W x 28"D (570 x 559 x 711mm)	82 LBS.

Welded 19-1/4" (11U) equipment rack comes complete with front and rear tapped rack rails, removable back panel, leg levelers and plexiglas front door. Side panels are vented and the removable back panel allows for two 1-3/4" openings at the top and bottom for cooling and cabling.

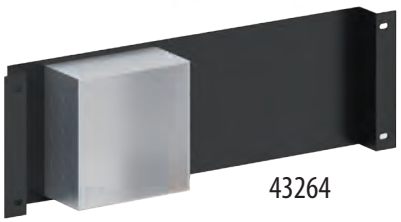
CPU MOUNTS

MODEL#	DESCRIPTION	WEIGHT
43260	Stationary CPU mount	8 LBS.
	Fits CPU's from 13-1/2" to 21-1/2" High (343 to 546mm) by 5-3/8" to 9-3/8" Wide (137 to 238mm). Black finish.	
43261	Pull-out swivel CPU mount	6 LBS.
	Fits CPU's from 8" to 16-3/4" High (203 to 425mm) by 3" to 7" Wide (76 to 178mm). Black finish.	

RACK MOUNT TURRET

MODEL#	DIMENSIONS	WEIGHT
43032	16-1/16"H x 21-3/16"W x 12-7/8"D (408 x 538 x 327mm)	18 LBS.

10-1/2" (6U) 7° sloped rack mount turret easily mounts to the E-SOC chase to keep electronics within easy reach. Features a vented top to keep electronics cool. Black textured power-coat finish.

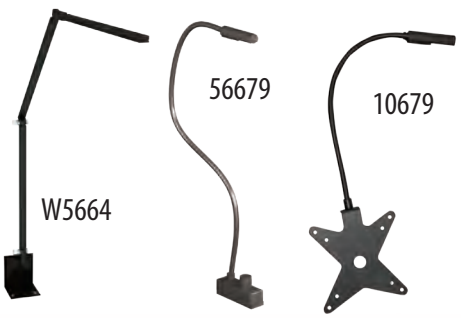


43264

ELECTRICAL BOX

MODEL#	DESCRIPTION	WEIGHT
43264	Single box with mounting bracket	4 LBS.

Mounts to intermediate and/or end frames. Can hold two duplex outlets.



LED TASK LIGHTS

MODEL#	DESCRIPTION	WEIGHT
W5664	Versa-Trak mounted task light	6 LBS.
	Optional Task Light features a three-bar design for ultimate reach and flexibility. The ultra-adjustable LED head can spin in its socket, sweep side to side, and rotate around the end of the arm to point in any direction. Dimming is easily controlled by a touchstrip located near the LED head for easy access.	
56679	LED light with magnetic base and 18" flexible neck	1 LB.
10679	LED light with VESA mount and 18" flexible neck	1 LB.
	Features a 6-foot cord and allows users to switch between white or red lights.	

AXIOM MONITOR MOUNTS: (1.5" DIA. MOUNTING POSTS)

W6471
15" Post - Single Monitor
Post Mount, Vertical

W6472
28-1/2" Post - Dual Monitor
Post Mount, Vertical

W6473
42" Post - Triple Monitor Post
Mount, Vertical

W6469
Adjustable Phone Tray
Mounts to Versa-Trak

W6491
15" Post - Single Monitor
Articulating Arm

W6492
28-1/2" Post - Single Monitor
Articulating Arm

W6493
28-1/2" Post - Dual Monitor
Two Articulating Arms

W6475
15" Post with
Height Adjustable Arm

PRESTIGE MONITOR MOUNTS: (1.9" DIA. MOUNTING POSTS)

E5081
15" Post - Single Monitor
Post Mount, Vertical

W5772
28-1/2" Post - Dual Monitor
Post Mount, Vertical

W5773
42" Post - Triple Monitor
Post Mount, Vertical

W5777
15" Post with
Dual 15" Extension Arms

W5690
Dual-Post Large Monitor Mount
(Supports 42" - 63" Monitors)

W5774
15" Post with
15" Extension Arm

W5775
28-1/2" Post with
15" Extension Arm

W5779
28-1/2" Post with Two
15" Extension Arm

W5776
42" Post with Two
15" Extension Arms

W5778
15" Post with
Height Adjustable Arm

W5698
28-1/2" Post with VESA Mount
(Supports 26" - 45" Displays)

Winsted
Control Room Consoles

SPECTRUM-2™ CONSOLES

Winsted's Spectrum-2 consoles offer flexible equipment mounting options, ergonomic viewing angles and easy expansion. Whether you're creating a single-bay edit suite for video production or a sophisticated multi-operator control room, Winsted offers the perfect console for your precise needs. Each of our rack mount turrets conform to 19"W EIA standards and provide easy access to rack mounted electronics.

SPECTRUM-2 - CONSOLES

PRODUCT FEATURES AND HIGHLIGHTS

Multiple Work Surface Options
Choose from three work surface options. Our proprietary Endurance Plus, Comfort Edge and laminate with Safeguard options are available for all Spectrum-2 consoles.

Base Units
Adaptable lower equipment units can be configured for 19-1/4" (11RU) of rack space, CPU pull-out tray or adjustable shelf storage. Each features a hinged front access panel and a removable rear access panel.

Turret Units
Upper turret units each accommodate 4U rack-mount equipment. Each is vented and features a removable top access panel.

Front Tapped Rack Rails
Upper and lower front 14-gauge tapped rack rails for equipment installation. Rails are stamped with numbered rack increments for easy equipment installation.

High Pressure Laminate Finish
All structural panels are finished in high-pressure plastic laminates, with hundreds of color options to choose from.

Cable Routing
Thoughtful, well-engineered cable pathways accommodate the need for clean, convenient cable management.

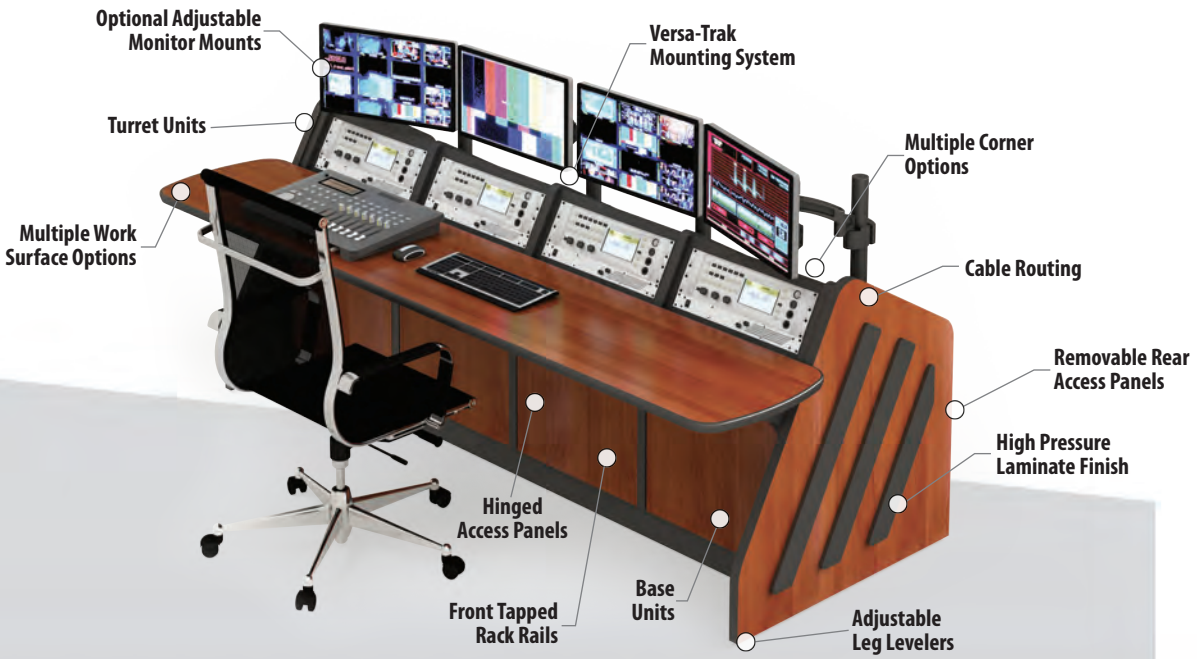
Versa-Trak Mounting System
Integrated horizontal aluminum track system will support a wide variety of monitor mounts. Versa-Trak offers the ultimate in versatility with easy horizontal adjustment. Post-mounted VESA brackets provide vertical adjustability along with the ability to tilt and pivot the monitors.

Optional Adjustable Monitor Mounts
VESA-compliant pivot/tilt articulating monitor mounts easily attach monitors to the Versa-Trak and provide smooth pivot and pitch adjustment for optimal viewing angles and ergonomic sight lines.

Adjustable Leg Levelers
Easily fine-tune the height and levelness of your console with the adjustable leg levelers.

Multiple Corner Options
Standard corner options include 15, 45 and 90 degree concave corners as well as 15 and 45 degree convex corners. Custom corner angles are available as needed to help Spectrum-2 conform to your unique space.

Hinged & Removable Access Panels
Spectrum-2 features full-length removable rear access panels and lower hinged front panels to provide quick, easy access to cables and equipment for simple installation and reduced maintenance time.



GREENGUARD GOLD

M-VIEW™ MONITOR WALLS

Winsted's M-View monitor wall, in-stock or custom built, is flexible in design and completely modular. M-View is fabricated from light-weight, high-strength extruded aluminum with a black anodized finish. The monitor wall can support virtually any monitor configuration and can be designed as an in-line, concave or convex mounting solution. The M-View seamlessly integrates technology and space to optimize viewing angles.

M-VIEW - MONITOR WALLS

PRODUCT FEATURES AND HIGHLIGHTS

Stock and Custom Monitor Walls
Choose an in-stock monitor wall that is preconfigured and ready to ship or let Winsted design a custom monitor wall built to your specific monitor configuration.

Large Flat Panel Mounts
Our heavy-duty large monitor mounts combine a low profile design with integrated security features. The mount features a rapid leveling system, quick connect-disconnect installation, fingertip-tilt and a pullout bottom for convenient cable access. Allows for portrait or landscape flat panel installation.

Standard VESA Mounts
Universal VESA mounts easily attach flat panel monitors to the M-View Monitor Wall and provide smooth pivot and pitch adjustments for different viewing angles and ergonomic needs. The VESA mounts move freely along the M-View framework and are available to support almost any monitor.

1-1/2" x 3" Exterior Frame
The exterior framing is constructed of 1-1/2" x 3" extruded aluminum for superior strength and modularity. Custom frames can be manufactured to any height and length.

Power Strips
Ten, eleven or twenty outlet power strips are available with on/off switches and circuit breakers. Power strips mount to the rear of the horizontal and/or vertical frame sections.

Black Anodized Finish
All M-View frames feature a black anodized finish that fits seamlessly into any environment. When installed, the M-View frame blends in with attached monitors, creating a pleasing shadow effect.

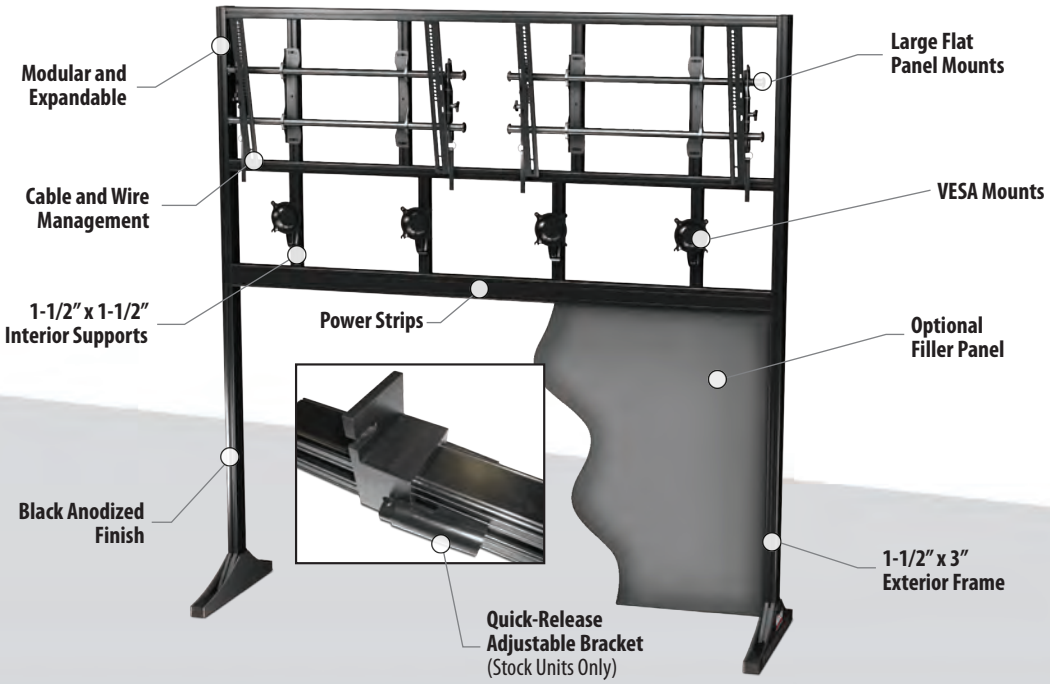
1-1/2" x 1-1/2" Interior Supports
The interior supports are constructed of extruded aluminum for superior strength and modularity. Custom frames can be manufactured to any height and length.

Cable and Wire Management
Multiple raceway channels are available for wire management. Run the cables horizontally or vertically using model M1032 (scored walls). Use model M1030 (solid walls) to run cables vertically to the floor.

Modular and Expandable
All M-View monitor walls are designed to support your monitor configuration. The M-View can be expanded and reconfigured based on your changing needs.

Optional Filler Panel
Complete your M-View with custom filler panels, available in a variety of colors and materials. Can be cut to provide access to electronics or vertical rack.

Quick-Release Adjustable Bracket
Our quick-release bracket makes adjusting and reconfiguring your monitors fast and easy on our stock monitor walls.



GREENGUARD GOLD

Winsted
Control Room Consoles

M-VIEW RIZE™ MONITOR WALLS

M-View Rize is the perfect compliment to any console system, including all Impulse consoles. As the operator changes the height of the console, the M-View Rize is able to adjust the height of the monitors on the wall in order to maintain proper ergonomics and optimal sight lines. Available in two standard configurations. We offer a 43" wide configuration for a single monitor and an 83" wide configuration for dual monitors.

M-VIEW RIZE - MONITOR WALLS

PRODUCT FEATURES AND HIGHLIGHTS

Electric-Lift Actuators
Quickly and easily adjust the height of the monitors at the push of a button. Remote control included. The M1088 with two actuators has a weight capacity of 520 pounds. The M1082 with one actuator has a weight capacity of 260 pounds.

Large Flat Panel Mounts
Our heavy-duty large monitor mounts combine a low profile design with integrated security features. The mount features a rapid leveling system, quick connect-disconnect installation, fingertip-tilt and a pullout bottom for convenient cable access. Allows for portrait or landscape flat panel installation.

1-1/2" x 3" Exterior Frame
The exterior framing is constructed of 1-1/2" x 3" extruded aluminum for superior strength and modularity. Custom frames can be manufactured to any height and length.

Power Strips
Ten, eleven or twenty outlet power strips are available with on/off switches and circuit breakers. Power strips mount to the rear of the horizontal and/or vertical frame sections.

Filler Panel
M-View Rize comes standard with a 1/4" thick black filler panel on the front of the monitor wall. Custom filler panels are also available in a variety of colors and materials. Contact Winsted for details.

Black Anodized Finish
All M-View frames feature a black anodized finish that fits seamlessly into any environment. When installed, the M-View frame blends in with attached monitors, creating a pleasing shadow effect.

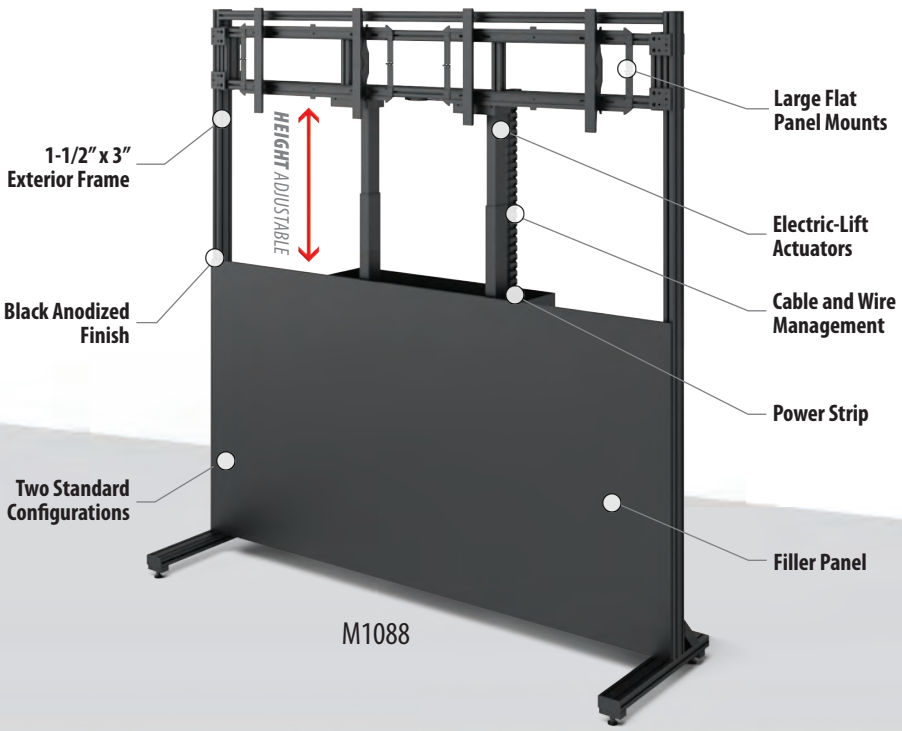
Cable and Wire Management
M-View Rize features integrated cable management that moves with the monitors as they are adjusted vertically with the electric-lift actuators.

Two Standard Configurations
The M-View Rize is available in two standard configurations. We offer a 43" wide configuration (Model# M1082) for a single monitor and an 83" wide configuration (Model# M1088) for dual monitors.

M-VIEW RIZE MONITOR WALLS

MODEL#	DIMENSIONS
M1082	87"H x 43"W x 24-3/8"D (2210 x 1092 x 619mm)
M1088	87"H x 83"W x 24-3/8"D (2210 x 2108 x 619mm)

Electric actuators adjust monitor height at the push of a button. Remote control included.



M1088

GREENGUARD GOLD

CUSTOM MONITOR WALLS

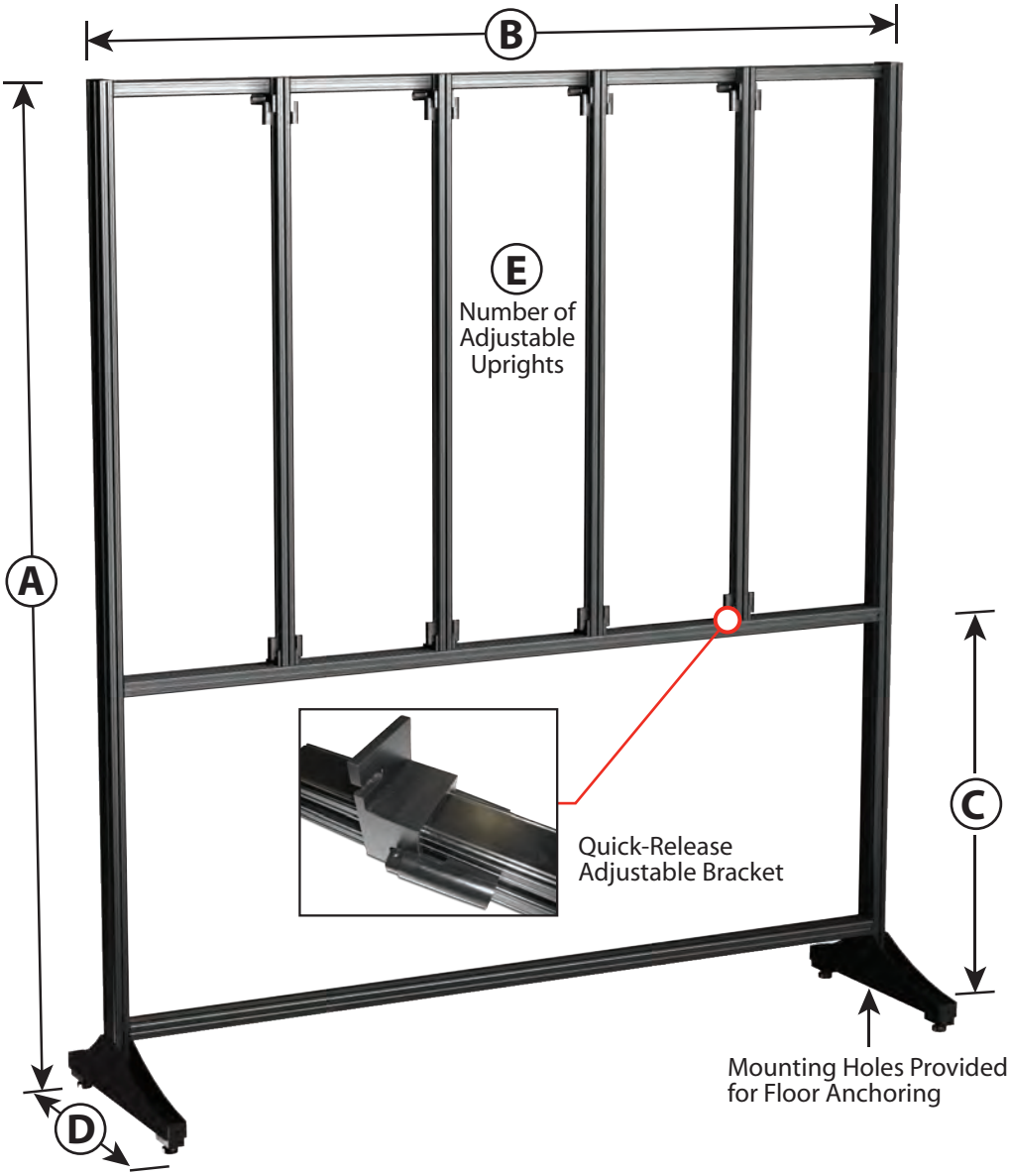
If you require a custom-built monitor wall to support your specific monitor configuration, or to fit in your unique space, please contact Winsted and we will provide the perfect solution. Each custom M-View is designed and manufactured from the ground up to meet your specifications. The M-View is fabricated from light-weight, high-strength extruded aluminum and will support any size flat-panel monitor.

FEATURES

- Built to Your Exact Specifications
- Light Weight and High Strength
- Easy to Wire and Maintain
- Adapts to Changing Technology
- Prevents Damage to Interior Walls
- Modular and Expandable

QUESTIONS:

Let Winsted design a monitor wall for you.
Send us an email to: ***info@winsted.com***



STOCK FRAMES WITH ADJUSTABLE UPRIGHTS

MODEL#	A	B	C	D	E	COLOR	WEIGHT
M1100	80" (2032mm)	43" (1092mm)	24-1/2" (622mm)	24" (610mm)	2	BLACK	91 LBS.
M1102	80" (2032mm)	53" (1346mm)	24-1/2" (622mm)	24" (610mm)	2	BLACK	93 LBS.
M1104	80" (2032mm)	63" (1600mm)	24-1/2" (622mm)	24" (610mm)	3	BLACK	98 LBS.
M1106	80" (2032mm)	73" (1854mm)	24-1/2" (622mm)	24" (610mm)	4	BLACK	103 LBS.
M1108	80" (2032mm)	83" (2108mm)	24-1/2" (622mm)	24" (610mm)	4	BLACK	105 LBS.
M1121	94" (2388mm)	43" (1092mm)	38-1/2" (978mm)	24" (610mm)	2	BLACK	96 LBS.
M1123	94" (2388mm)	53" (1346mm)	38-1/2" (978mm)	24" (610mm)	2	BLACK	98 LBS.
M1125	94" (2388mm)	63" (1600mm)	38-1/2" (978mm)	24" (610mm)	3	BLACK	103 LBS.
M1127	94" (2388mm)	73" (1854mm)	38-1/2" (978mm)	24" (610mm)	4	BLACK	108 LBS.
M1129	94" (2388mm)	83" (2108mm)	38-1/2" (978mm)	24" (610mm)	4	BLACK	110 LBS.

Stock frames are pre-configured and ready to ship. All stock frames feature our exclusive quick-release adjustable bracket.

VESA MOUNTS

MODEL#	DESCRIPTION	VESA MOUNT	WEIGHT CAPACITY	WEIGHT
51237	LCD Mount 10"-32" Monitor	75 x 75mm 100 x 100mm	40 LBS.	3 LBS.
51239	LCD Mount 26"-45" Monitor	100 x 100mm 100 x 200mm 200 x 200mm	75 LBS.	8 LBS.

VESA monitor mounts allow smooth range of motion and hassle free, fingertip positioning of the monitors. Low profile appearance and sleek, attractive design conceals all hardware.

UNIVERSAL LARGE FLAT PANEL MOUNT

MODEL#	OVERALL DIMENSIONS	COLOR	WEIGHT
11104	13-1/4"H x 34-7/16"W x 2"D (335 x 875 x 51 mm)	BLACK	19 LBS.

Heavy-Duty construction provides a secure mounting solution for monitors up to 63" wide and/or 200 pounds.

POWER SUPPLY OUTLETS WITH CIRCUT BREAKERS

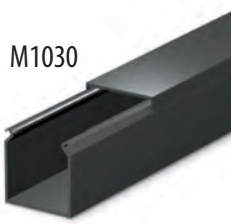
MODEL#	DESCRIPTION	AMP	Outlet Length	WEIGHT
M1020	Ten-outlet	15	34" (864mm)	4 LBS.
M1021	Ten-outlet	15	68" (1727mm)	6 LBS.
M1022	Twenty-outlet	15	68" (1727mm)	7 LBS.
M1023	Eleven-outlet	20	68" (1727mm)	8 LBS.

On/Off switch. Mounts to any vertical or horizontal frame section where power is needed.

PANEL CHANNEL WIRE MANAGEMENT DUCTS

MODEL#	OVERALL DIMENSIONS	COLOR	WEIGHT
M1030	1-1/2"H x 1-1/2"W x 72" L (38 x 38 x 1829mm)	BLACK	3 LBS.
M1032	2"H x 2"W x 78"L (51 x 51 x 1981mm)	BLACK	3 LBS.
M1034	2"H x 4"W x 78"L (51 x 102 x 1981mm)	BLACK	4 LBS.

Black plastic channel with scored sidewalls for easy breakout. Protective channel can be cut to size. Model M1030 has solid walls. Covers included.



ADJUSTABLE CPU HOLDER

MODEL#	DESCRIPTION	COLOR	WEIGHT
60082	Adjustable CPU holder with Velcro® strap	BLACK	5 LBS.

CPU holder mounts to the bottom rail of the M-View and securely holds your CPU. Side brackets adjust independently to accommodate a wide variety of CPU sizes.

Winsted
Control Room Consoles

PRO SERIES II™ VERTICAL RACKS

Winsted Pro-Series Vertical Racks consolidate and protect sensitive electronics. Backed by a lifetime warranty, Pro-Series Vertical Racks are available in sizes up to 45U with a range of accessories for thermal management, enclosing, protecting and providing cable management.

PRO SERIES II - VERTICAL RACKS

PRODUCT FEATURES AND HIGHLIGHTS

Top Panel Options
Individual racks include a variety of top options: raised vented panels, solid and vented blank panels and internal/external mounted fans. Full or partial top coverage provides flexible ceiling cabling options.

Welded Frames
Racks utilize extra-heavy-duty welded construction delivering robust solutions in the most demanding environments.

Lacing Bars
A variety of vertical and horizontal lacing bars are available for each rack style, including a 71″ solid copper bus bar.

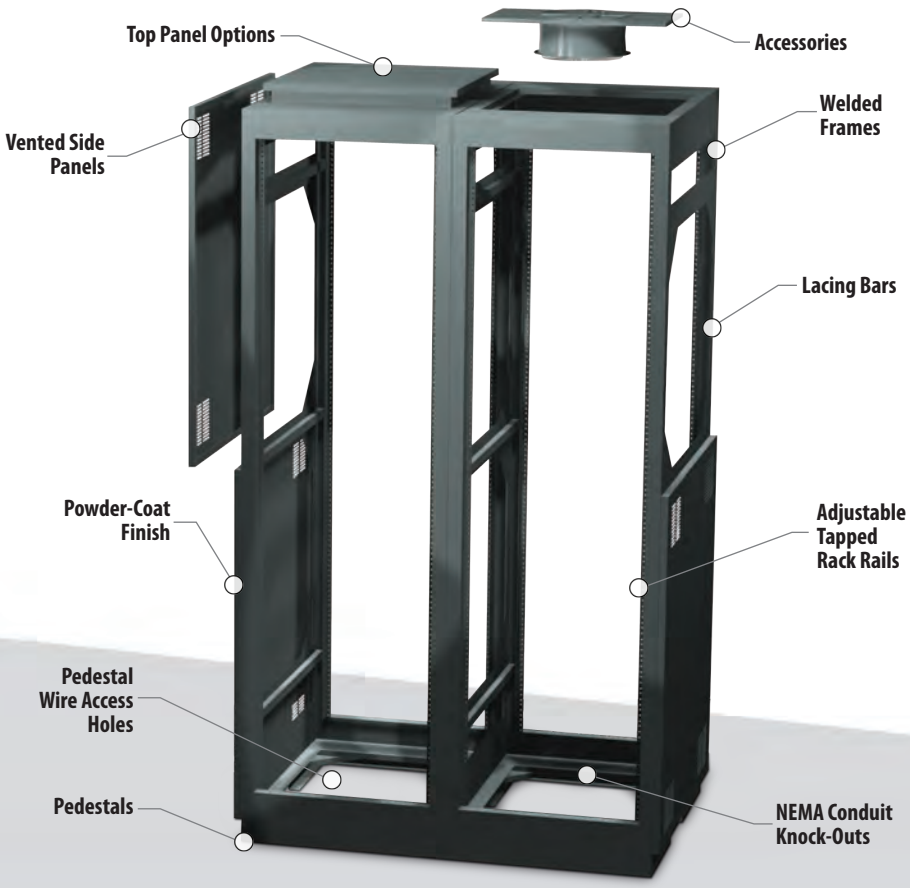
Adjustable Tapped Rack Rails
Adjustable front and rear 14-gauge tapped rack rails for equipment installation. Rails are stamped with numbered rack increments.

NEMA Conduit Knock-outs
Pro Series II rack frames include NEMA - approved knock-outs which provide excellent wire management with multiple conduit sizes.

Pedestal Wire Access Holes
Rack frame includes two 4″ x 10″ openings in the pedestal for air intake and cable management.

Powder-Coat Finish
The heavy-duty steel infrastructure of each rack is coated with a durable black powder-coat paint. Textured paint provides a beautiful finish in all environments.

Vented Side Panels
Removable half-height side panels are standard. Convection-cooling side panel venting can be covered when vertical thermal management fans are used.



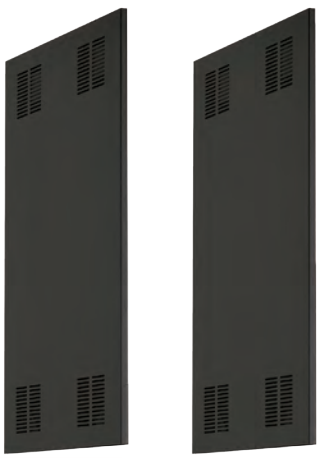
GREENGUARD GOLD

PRO SERIES II WELDED VERTICAL RACKS

MODEL#	RACK HEIGHT	OVERALL HEIGHT	WEIGHT
24"D (610mm) RACK CABINET			
90012	35" (20U)	42" (1067mm)	66 LBS.
90016	70" (40U)	77" (1956mm)	107 LBS.
90018	78-3/4" (45U)	85" (2159mm)	116 LBS.
21-3/4" D from front rack rail to rear rack rail.			
32"D (813mm) RACK CABINET			
90022	35" (20U)	42" (1067mm)	75 LBS.
90026	70" (40U)	77" (1956mm)	130 LBS.
90028	78-3/4" (45U)	85" (2159mm)	129 LBS.
29-3/4"D from front rack rail to rear rack rail.			
38-3/8"D (975mm) RACK CABINET			
90032	35" (20U)	42" (1067mm)	104 LBS.
90036	70" (40U)	77" (1956mm)	139 LBS.
90038	78-3/4" (45U)	85" (2159mm)	149 LBS.
36"D from front rack rail to rear rack rail.			

DVR RACK - BLACK

MODEL#	DESCRIPTION	WEIGHT
V9019	78-3/4"H (45U) x 38-3/8"D vertical rack with vented side panels, locking rear solid door, vented top panel & 5-1/4"H (3U) 300 CFM rack mount filtered fan.	302 LBS.
Whether you are populating a single vertical rack with DVRs or have an entire room to fill, the Pro Series II DVRack is perfect for this application. Order one model number for a complete single rack.		
V9021	78-3/4"H (45U) x 38-3/8"D vertical rack with locking rear solid door, vented top panel & 5-1/4"H (3U) 300 CFM rack mount filtered fan.	204 LBS.
Filling a room? Order multiple racks frames without side panels to create in-line bays.		



VENTED SIDE PANELS - BLACK (PAIRS)

MODEL#	RACK HEIGHT (UNITS)	WEIGHT
24"D (610mm) RACK CABINET		
90112	35" (889mm) (20U)	33 LBS.
90116	70" (1778mm) (40U)	60 LBS.
90118	78-3/4" (2000mm) (45U)	62 LBS.
32"D (813mm) RACK CABINET		
90122	35" (889mm) (20U)	42 LBS.
90126	70" (1778mm) (40U)	74 LBS.
90129	78-3/4" (2000mm) (45U)	83 LBS.
38-3/8"D (975mm) RACK CABINET		
90132	35" (889mm) (20U)	50 LBS.
90136	70" (1778mm) (40U)	88 LBS.
90138	78-3/4" (2000mm) (45U)	99 LBS.
Side panels provide ample venting for convection cooling.		

VENTED TOP PANELS - BLACK

MODEL#	RACK CABINET DEPTH	WEIGHT
90051	24" (610mm)	8 LBS.
90053	32" (813mm)	11 LBS.
90055	38-3/8" (975mm)	13 LBS.

Includes bracket for Model 10705 exhaust fan. (Fan sold separately - Page 71)

SOLID BLANK TOP PANELS - BLACK (19"W)

MODEL#	RACK SIZE	PANEL SIZE	WEIGHT
99145	24"D	19"W (483) x 10-1/2"H (6U)	4 LBS.
99149	32"D	19"W (483) x 19-1/4"H (11U)	8 LBS.
99152	38-3/8"D	19"W (483) x 24-1/2"H (14U)	11 LBS.

Solid top panels easily mount in the standard 19" vertical rack top.

VENTED BLANK TOP PANELS - BLACK (19"W)

MODEL#	RACK SIZE	PANEL SIZE	WEIGHT
86142 (2)	24"D	19"W (483) x 5-1/4"H (3U)	2 LBS.
86149	32"D	19"W (483) x 19-1/4"H (11U)	4 LBS.
86142 (1)	38-3/8"D	19"W (483) x 5-1/4"H (3U)	1 LB.
86149 (1)	38-3/8"D	19"W (483) x 19-1/4"H (11U)	4 LBS.

Vented beehive panels reduce heat build-up.

TAPPED OUTER RACK RAIL - PAIRS

MODEL#	RACK CABINET DEPTH	WEIGHT
90262	35" (20U)	4 LBS.
90266	70" (40U)	8 LBS.
90269	78-3/4" (45U)	9 LBS.

Right and left rails sold as pairs. 12-Gauge steel with numbered rack units and black zinc plating. Order 10-32 mounting screws separately. Model 10800 (Silver) or 10814 (Black). 50 each per pack.

SCREWS AND WASHERS

MODEL#	DESCRIPTION	WEIGHT
10800	10-32 x 3/4" Silver Pilot screws and washers. 50 each.	0.5 LB.
10814	10-32 x 3/4" Black Pilot screws and washers. 50 each.	0.5 LB.

Pilot screws make it easy to install your electronics.

2-1/2" (64MM) PLATE CASTERS - SET OF FOUR

MODEL#	DESCRIPTION	WEIGHT
85782	For 24"D, 32"D & 38-3/8"D rack cabinets (mount to pedestal only)	4 LBS.

Heavy duty casters allow you to move your vertical rack with ease.

LEG LEVELERS & GUSSETS — SET OF FOUR

MODEL#	HEIGHT	WEIGHT
90270	For 24"D, 32"D & 38-3/8"D rack cabinets	1 LB.

Mounts to rack bottom or pedestals.

STANDARD BLACK PEDESTAL - 22-1/8"W

MODEL#	DIMENSIONS	WEIGHT
90072	24"D x 2-1/2"H (610 x 64mm)	15 LBS.
90076	32"D x 2-1/2"H (813 x 64mm)	16 LBS.
90078	38-3/8"D x 2-1/2"H (975 x 64mm)	18 LBS.

Pedestals provide conduit knock-outs and removable side sections for horizontal cable management.

10" COOLING FAN - BLACK

MODEL#	FAN MEASURES	CFM	WEIGHT
G9085	3-1/2"H x 10"W (89 x 254mm)	550	9 LBS.

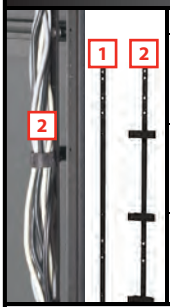
Comes complete with 5 foot cord, two finger guards and a 10-1/2" (6U) blank panel for mounting in the Pro Series II vertical rack top.

PRO SERIES II LOCKING DOORS

Rack → Frame Size	35" (20U) Mounts to the front/rear frame of Models 90012, 90022, 90032		70" (40U) Mounts to the front/rear frame of Models 90016, 90026, 90036		78-3/8" (45U) Mounts to the front/rear frame of Models 90018, 90028, 90038	
DESCRIPTION	**MODEL#**	**WEIGHT**	**MODEL#**	**WEIGHT**	**MODEL#**	**WEIGHT**
PLEXIGLASS	**90332** Front Only	18 LBS.	**90336** Front Only	31 LBS.	**90338** Front Only	37 LBS.
VENTED SOLID	**90322** Front Only	16 LBS.	**90326** Front Only	31 LBS.	**90328** Front Only	34 LBS.
SOLID	**90312** Rear Only	12 LBS.	**90316** Rear Only	24 LBS.	**90318** Rear Only	26 LBS.

All doors can be installed to open from left or right. Black texture powder coat finish.

VERTICAL RACK LACING OPTIONS - BLACK



	MODEL#	DESCRIPTION	WEIGHT
1	**88217**	71-3/4" Lacing strip, supplies multiple binding locations. Fits models 90018, 90028, 90038	2 LBS.
2	**88218**	Eight 14" long Velcro straps, mounted on a pre-drilled 72"H x 3/4"W x 1/8" Thick metal strap	2 LBS.
3	**88226**	71" Copper bus bar. 1/4" thick x 1"W strap. Fits models 90018, 90028 and 90038. (Not Shown)	6 LBS.

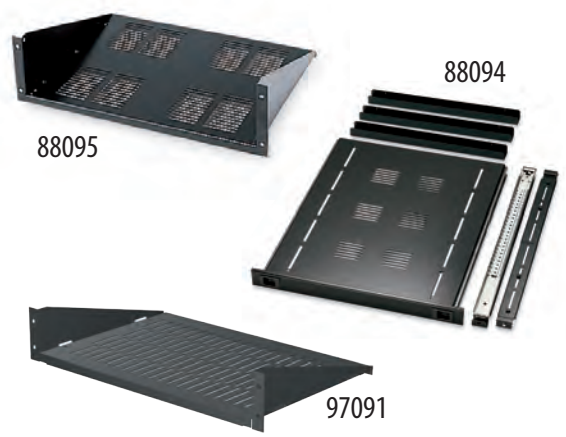
Enhance reliability while protecting and managing your cables.

HORIZONTAL RACK LACING OPTIONS - BLACK

	MODEL#	DESCRIPTION	WEIGHT
4	**10220**	1-3/4" Slotted lacing rack mount panel with horizontal slots	1 LB.
5	**85276**	Aluminum round bar rack mount cable guide extends cable life	0.5 LB.

All horizontal lacing options mount in any standard 19" opening.

UNIVERSAL RACK MOUNT SHELVES - BLACK



MODEL#	DESCRIPTION	WEIGHT
88091	3-1/2" (2U) Stationary shelf. 2-7/8"H x 18"D (73 x 457mm)	8 LBS.
88093	5-1/4" (3U) Stationary shelf. 4-5/8"H x 18"D (117 x 457mm)	9 LBS.
88095	8-3/4" (5U) Stationary shelf. 8-1/8"H x 18"D (206 x 457mm)	10 LBS.
97091	3-1/2" (2U) Stationary shelf. 2-7/8"H x 12"D (73 x 305mm) Includes Strap Model 12765 for securing electronics	6 LBS.
88094	20" (508mm) Extension pullout shelf. Locks in closed position. Uses 1-3/4" (1U) rack space	17 LBS.

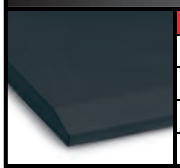
Fits into any 19" EIA (482mm) rack. Heavy 14 gauge sides, 16 gauge bottom, and 12" or 18" deep vented bottom for cooling and strapping down electronics.

UNIVERSAL SHELF SUPPORT BRACKETS - BLACK

MODEL#	SIZE	WEIGHT
88220	Brackets support up to a 24"D work surface	9 LBS.

Fastens to front and rear rack rails of any standard 19" EIA cabinet ranging from 22" to 36" D (559 to 914mm).

PRO SERIES I & II TRUFORM WORK SURFACES - 18"D



MODEL#	DESCRIPTION	WIDTH	WEIGHT
90661	Single-Bay	22-1/8"	29 LBS.
90662	Two-Bay	44-1/4"	62 LBS.
90663	Three-Bay	66-3/8"	75 LBS.
90664	Four-Bay	88-1/2"	96 LBS.

18"D (457mm) work surface with a 1-3/4" (44mm) beveled front edge. Black TruForm finish.

MULTI-PURPOSE UTILITY DRAWER - BLACK

MODEL#	DESCRIPTION	WEIGHT
88323	3-1/2"H (2U) Utility Drawer	15 LBS.

Can be rack mounted or mounted to the underside of any wood work surface. 3-3/8" (86mm) inside height.

SQUARE HOLE RACK RAILS - BLACK

MODEL#	HEIGHT	WEIGHT
90267	70"	3 LBS.
90271	78-3/4"	3 LBS.
G8060	Square Tinnerman Nut 25 Each	1 LB.

Designed to mount in Pro Series II vertical racks.

UTILITY DRAWER WITH LOCK - BLACK

MODEL#	DESCRIPTION	WEIGHT
88321	8-3/4" (5U) rack mountable pullout utility drawer	18 LBS.

All drawers feature heavy duty ball bearing slides for years of reliability.

MAGNETIC VENT COVER

MODEL#	DESCRIPTION	WEIGHT
10740	6" x 6" (152 x 152mm)	.5 LBS.

Magnetic panel to cover side panel or door vents. Use when positive air flow is needed from bottom to top in cabinet.

COOLING FAN - WITH 5' CORD & PLUG

MODEL#	VOLTS	DECIBELS	CFM	WEIGHT
10705	115	43	105	2 LBS.
10724	220	43	105	2 LBS.
10725	115	30	55	2 LBS.

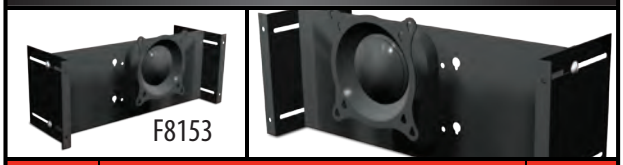
Easily mounts to vented side panels or vented top panels.

FAN FILTER ASSEMBLY

MODEL#	TYPE	WEIGHT
10720	Filter with finger guard	.5 LB.

Washable filter covers cooling fans and cleans particles from air before entering cabinet. Black plastic guard.

LCD MONTOR RACK KIT - BLACK



MODEL#	DIMENSIONS	WEIGHT
F8153	19-1/16"W x 5-1/4" (3U)H (484 x 133mm)	5 LBS.

Flat Screen Mounting Kit that allows larger LCDs to be mounted in front of the rack face. Black Finish.

STATIC FLAT SCREEN MOUNTING BRACKET - BLACK

MODEL#	DESCRIPTION	WEIGHT
92186	Up to 19" (483mm) Flat Screen with VESA mount. Maximum LCD width 17-3/8" (441mm) 5-1/4"H (3U)	4 LBS.

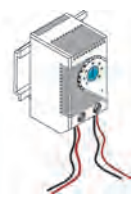
Detachable mounting bracket makes installation quick and easy.

RACK MOUNT POWER PANELS - BLACK

MODEL#	DESCRIPTION	AMP	CORD LENGTH	WEIGHT
98703	Six-Outlet	15	15' (4.5M)	4 LBS.
Six-outlet - 2 front, 4 back. 15 amp circuit breaker with on/off switch.				
98708	Eight-Outlet	15	15' (4.5M)	4 LBS.
Eight-outlet. Outlets rotated 90˚ to accept multiple transformer plugs.				
98709	Eight-Outlet	15	15' (4.5M)	4 LBS.
98714	Twelve-Outlet	15	15' (4.5M)	6 LBS.

Rack mount power panels with surge suppressor.

THERMOSTAT CONTROL



MODEL#	TYPE	WEIGHT
10670	DMS 1141	1 LB.

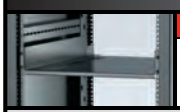
For inline applications. Set between 32˚-140˚F (0˚-60˚C) and the fan(s) will run until the set temperature is reached. Mounts using the supplied DIN rail.

RACK MOUNT KEYBOARD SHELF - BLACK

MODEL#	DESCRIPTION	WEIGHT
88397	Holds keyboards up to 16-1/2"W (419mm)	14 LBS.
88398	Holds keyboards up to 21"W (533mm) Swivels 90° to fit in a rack	18 LBS.

Conveniently stores your keyboard inside the vertical rack.

EXTRA DEEP VENTED STATIONARY SHELF - BLACK



MODEL#	DESCRIPTION	WEIGHT
88090	Rear supports adjust 22" to 37-3/4"D (559 x 956mm)to fit a wide variety of rack cabinets	11 LBS.

Inside tray dimensions: 17-3/8"W x 21-3/4"D (441 x 552mm). Requires just 3-1/2" (2U) of rack space. Overall dimensions: 3-1/2"H x 19"W x 21-3/4"D (89 x 483 x 552mm).

19″ WIDE EIA BLANK PANELS

MODEL# BLACK	HEIGHT	RACK UNIT	WEIGHT
99140	1-3/4″ (44mm)	(1U)	1 LB.
99141	3-1/2″ (89mm)	(2U)	1 LB.
99142	5-1/4″ (133mm)	(3U)	2 LBS.
99143	7″ (178mm)	(4U)	3 LBS.
99144	8-3/4″ (222mm)	(5U)	3 LBS.
99145	10-1/2″ (267mm)	(6U)	4 LBS.
99146	12-1/4″ (311mm)	(7U)	4 LBS.
99147	14″ (356mm)	(8U)	6 LBS.
99148	15-3/4″ (400mm)	(9U)	7 LBS.
99149	19-1/4″ (489mm)	(11U)	8 LBS.
99152	24-1/2″ (622mm)	(14U)	10 LBS.

Our 16 gauge steel blank panels are flanged for extra strength and they are finished attractively in textured powder coat paint. Just choose the appropriate size blank panel to provide the perfect finishing touch for all of your installations.

PANEL PILOT SCREWS WITH WASHER & CAPTIVE NUTS

MODEL#	QUANITY	COLOR	WEIGHT
G8051	50 each per pack	Silver	.5 LB.
G8054	50 each per pack	Black	.75 LB.
G8101	100 each per pack	Silver	1 LB.
G8104	100 each per pack	Black	1.5 LBS.
G8056 Security Screws	50 each per pack Includes Torx® bit	Black	1 LB.

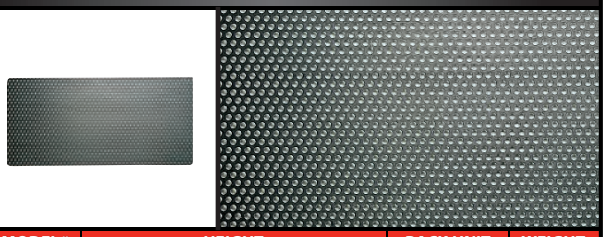
Pilot screws make it easy to install your electronics.

BLANK PANEL FILLER KITS

KIT #1			KIT #2			KIT #3		
MODEL#	QTY.	WT.	MODEL#	QTY.	WT.	MODEL#	QTY.	WT.
G9101	4ea. (1U) 2ea. (2U) 1ea. (3U)	9 LBS.	**G9102**	4ea. (1U) 2ea. (2U) 1ea. (9U)	14 LBS.	**G9103**	4ea. (1U) 2ea. (2U) 1ea. (11U)	16 LBS.

All blank panel kits include mounting hardware (50 bolts and clips).

19″W BEEHIVE VENTED BLANK PANELS - BLACK



MODEL#	HEIGHT	RACK UNIT	WEIGHT
86140	1-3/4″ (44mm)	(1U)	.5 LB.
86141	3-1/2″ (89mm)	(2U)	.75 LB.
86142	5-1/4″ (133mm)	(3U)	1 LB.
86143	7″ (178mm)	(4U)	1.5 LBS.
86144	8-3/4″ (222mm)	(5U)	2 LBS.
86149	19-1/4″ (489mm)	(11U)	4 LBS.
86151	21″ (533mm)	(12U)	4 LBS.

Our vented blank panels are available in a variety of sizes and are made from black anodized aluminum. They are flanged for durability and the honeycomb construction provides added ventilation for a variety of rack systems.

BLACK RACK RAIL TRIM

MODEL#	DIMENSIONS	WEIGHT
85744	Sold in 1 ft. increments	.5 LB.

Made of flexible PVC with internal metal clips to provide a permanent grip. Trim has a fine pebble finish to dress up your installation. Use to cover unused rack rail holes. Trim can be cut to size with a scissors.

PLASTIC WIRE DUCT

MODEL#	SIZE	COLOR	WEIGHT
42750	4″H x 2″W x 72″L (102 x 51 x 1829mm)	Black	2 LBS.
42752	2″H x 4″W x 78″L (51 x 102 x 1981mm)	Black	3 LBS.
42755	4″H x 4″W x 72″L (102 x 102 x 1829mm)	Black	4 LBS.
42757	2″H x 2″W x 78″L (51 x 51 x 1981mm)	Black	2 LBS.
Wire ducts are slotted and come complete with cover except 42750.			
42756	1-1/2″H x 1-1/2″W x 72″L (38 x 38 x 1829mm)	Black	2 LBS.

42756 has solid walls and comes complete with cover.

RECESSED PATCH PANEL BRACKET - PAIR

MODEL#	SIZE	COLOR	WEIGHT
86227	3-1/2"H (2U) - pair	PEARL GREY	2 LBS.

Recess a patch panel back into the rack 4" (102mm) to create extra space for the cable connectors. Pearl Grey.

POWER SUPPLY OUTLETS

MODEL#	DESCRIPTION	AMP	CORD LENGTH	WEIGHT
10710	34" - Ten-outlet	15	72" (1829mm)	4 LBS.
10712	69" - Ten-outlet	15	72" (1829mm)	6 LBS.
10713	68" - Twenty-outlet	15	180" (4572mm)	7 LBS.
10684	70" - Eleven-outlet	20	72" (1829mm)	8 LBS.

Lighted On/Off switch. Mounts to the back of any base/slope rack combination, M-View or vertical rack. Also mounts horizontally in all consoles.

METAL TABLE TOP RACKS - BLACK

MODEL#	DESCRIPTION	WEIGHT
V4211	21"H (12U) Table Top Rack 23-5/8"H x 21-9/16"W x 18-3/4"D (600 x 548 x 476mm)	36 LBS.
V4221	28"H (16U) Table Top Rack 30-5/8"H x 21-9/16"W x 18-3/4"D (778 x 548 x 476mm)	41 LBS.

Standard EIA 19"W cabinets. Two sides, top and bottom. Winsted's "High-Tech" table top rack design fits perfectly in the security market. Steel construction protected by a Black enamel finish. Vented sides to cool your electronics.

LAMINATED TABLE TOP RACKS - BLACK

MODEL#	DESCRIPTION	WEIGHT
99484	7"H (4U) Table Top Rack 8-1/4"H x 20-3/8"W x 18"D (210 x 518 x 457mm)	19 LBS.
99488	14"H (8U) Table Top Rack 15-1/4"H x 20-3/8"W x 18"D (387 x 518 x 457mm)	23 LBS.

Comes complete with laminated top, bottom, a pair of side panels and tapped zinc plated rack rails. Black finish.

FREE DESIGN SERVICE

Winsted
CUSTOM WOOD
COMMERCIAL CABINETRY & CASEWORK

PROFESSIONAL GRADE

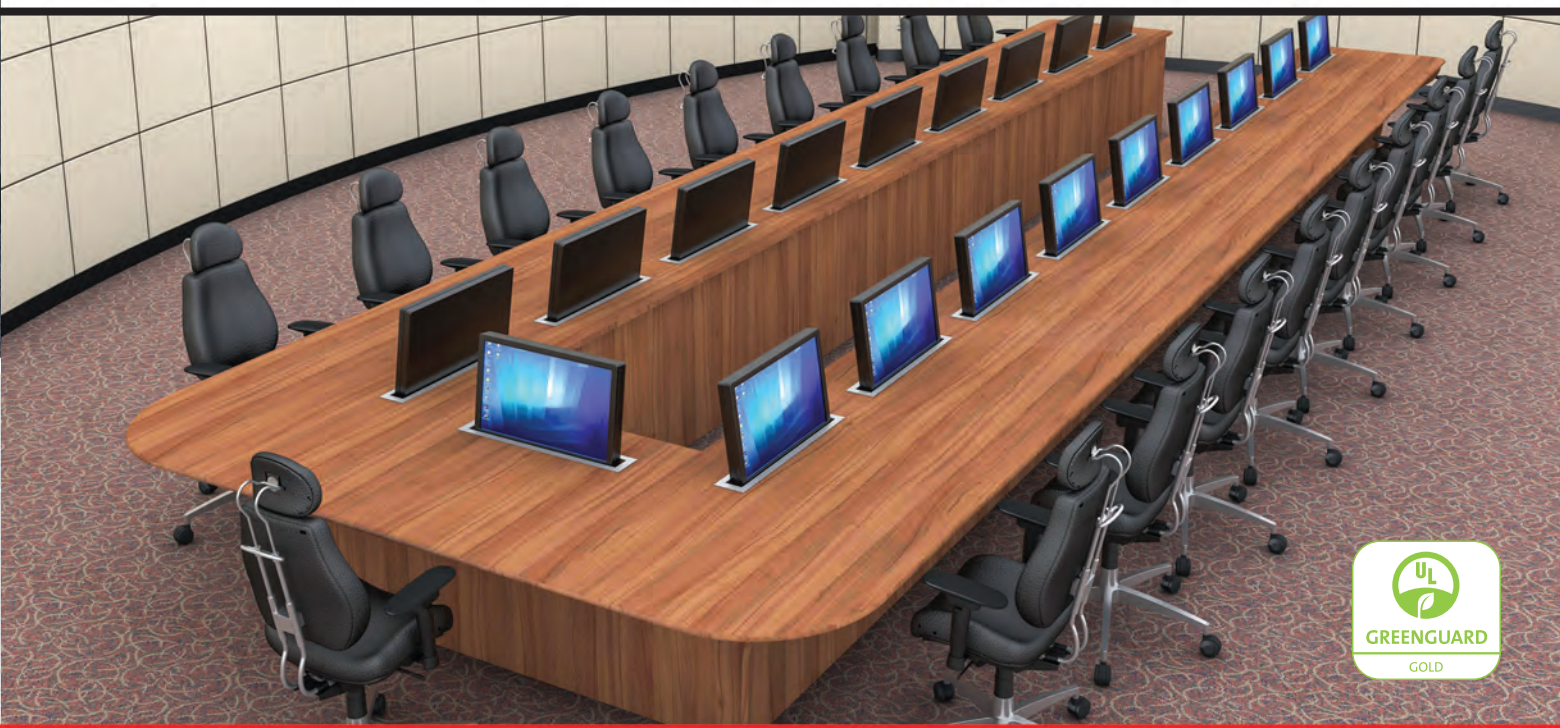
Winsted Custom Wood offers the highest quality architectural woodwork and commercial cabinetry for all installations. We can custom manufacture to your specifications, or you can work with our expert designers to create a one-of-a-kind environment. Your timeline and budget are a priority and we work hard to achieve both.

CUSTOM WOOD

CONSOLES AND FURNITURE

Winsted built its reputation with control room consoles, but we also have extensive experience in the design and construction of custom wood products for control room environments. Some projects require a custom solution, and Winsted delivers. In addition to our acclaimed catalog products, we have a state-of-the-art custom manufacturing facility and a staff of skilled craftsmen with extensive woodworking experience to accomplish additional custom technical furniture solutions for technology-heavy spaces. And, with over 55 years of control room experience, we are uniquely positioned to create solutions that are sensitive to the human and technical needs of high-use furniture, integrating ergonomic and technology requirements. Following are additional areas of expertise:

- **Reception Desks**
- **Lobby Consoles**
- **Conference Room Tables**
- **Operator Pods**
- **File Cabinets**
- **Custom Cabinetry**
- **Wood Consoles**
- **Credenzas**
- **Collaboration Tables**
- **Technology Tables**
- **Podiums**
- **Bookcases**
- **Workstations**
- **Work Surfaces**
- **Casework**
- **Accessories**



Winsted
CUSTOM WOOD
COMMERCIAL CABINETRY & CASEWORK

CONFERENCE TABLES

Let Winsted Custom Wood division design and construct your technical-enabled wood conference tables. Choose the level of technology you need from drop-in data ports, power outlets, channel raceways, custom colors and recessed monitors. We also address the human consideration and factor for viewing angles, reach distance and appropriate leg space. Let Winsted provide a complimentary quotation and color rendering for your project today.

CONFERENCE - TABLES

PRODUCT FEATURES AND HIGHLIGHTS

Tops
High pressure laminate comes standard but you can select from a variety of veneer or solid surface options as well. All tops are available in a variety of sizes and shapes.

Custom Shapes and Sizes
U-shaped, V-shaped, round, or whatever else you can imagine, we can help design and build exactly what you need.

Access Panels and Heavy-Duty Uprights
Sturdy upright legs feature large access panels to route cables and wires into raised floors or into floor-mounted data/power ports.

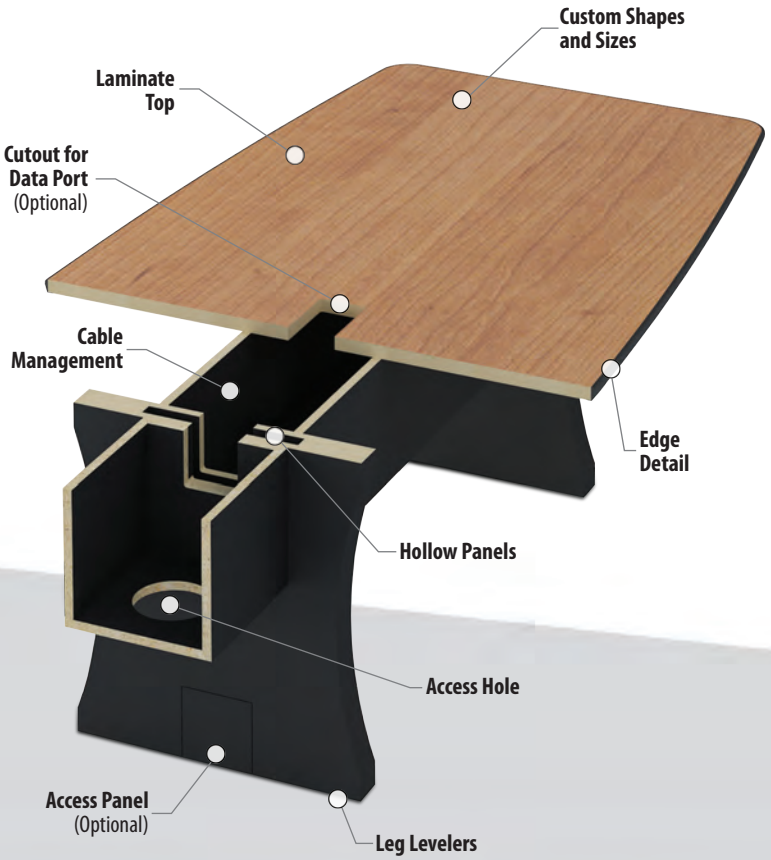
Leg Levelers
Most floors are at least somewhat out of level, our tables come with leg levelers to account for this.

Edge Detail
Black Safeguard Edge comes standard, but you can also select a 3mm PVC in a variety of colors, or we can do a hardwood edge with a variety of profiles.

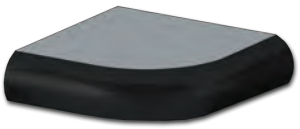
Data/Power Ports and Cutouts
We can provide the proper cutouts for your ports. We have several data port options available or you can provide your own and we will make the appropriate cutouts.

Cable Management with Access Holes
Large cable troughs and access holes are provided so hard wired systems are organized. We can also accommodate special requirements.

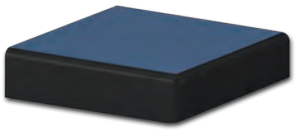
STANDARD TOP AND BASE DETAILS



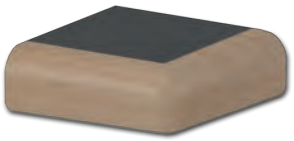
EDGE OPTIONS



Safeguard Edge
Heavy duty, rubber T-edge available in black only.



3mm PVC
A durable 3mm thick PVC edge, available in a variety of solid colors and wood grains.



Wood Bull-nose
1-1/2"H x 3/4" thick hardwood edge with top and bottom radius. Laminate or veneer top surface.

Wood Reverse Bevel
1-3/4"H x 3" thick hardwood edge with a 30 degree back bevel. Laminate or veneer top surface.

Winsted
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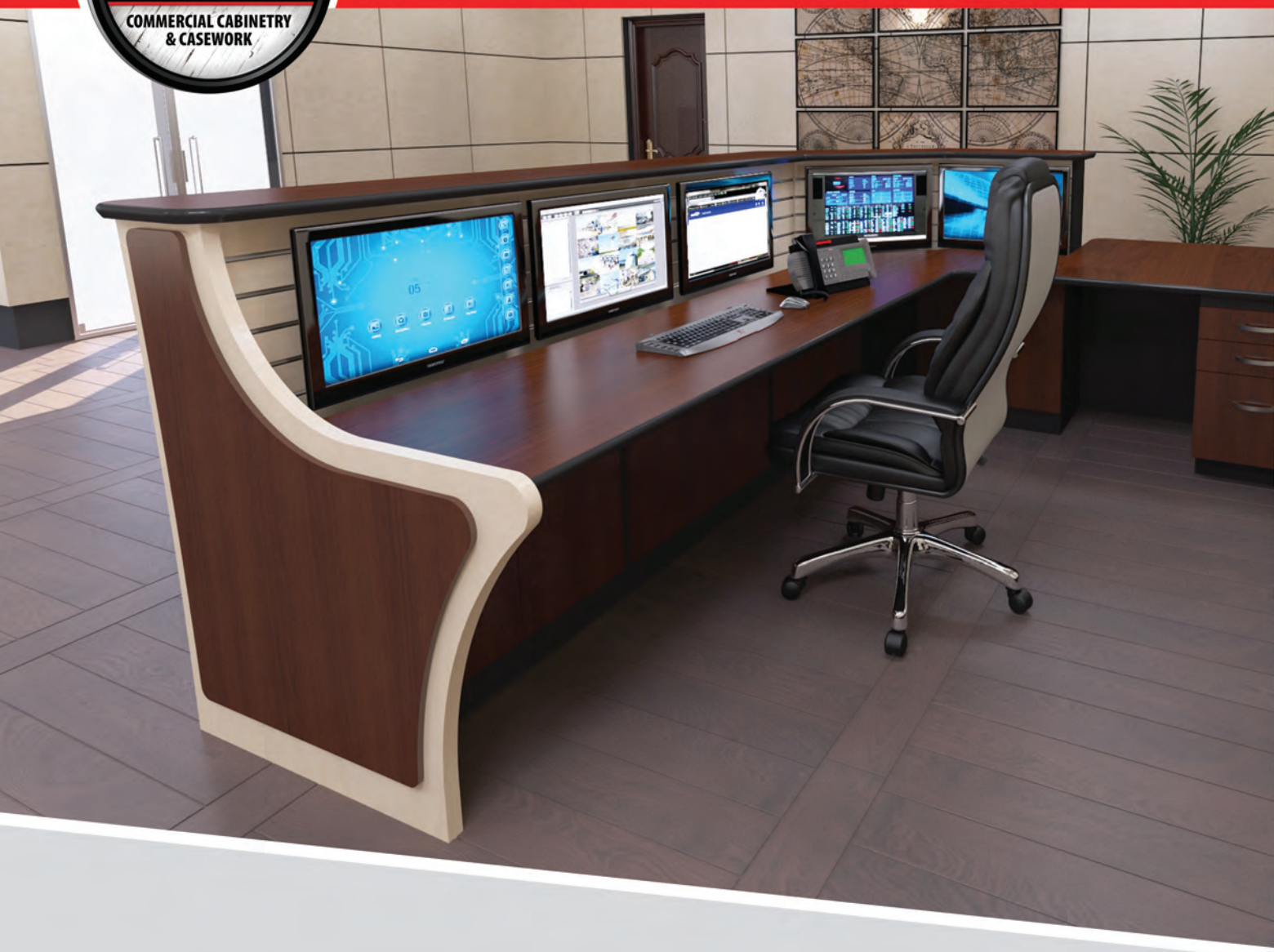


RECEPTION & LOBBY DESKS

Winsted Reception and Lobby desks, though similar by definition are very different by application. A reception desk receives guests to your company and should be attractive without presenting a barrier but also provide a functional work surface for reception staff. Lobby desks, while often located in reception areas, can also appear in entryways and hallways where spaces vary significantly in size. Winsted lobby desks can be outfitted to accommodate security electronics and VESA-mount monitors.

RECEPTION & LOBBY - DESKS

First Impression

Functional and Durable

Winsted
CUSTOM WOOD
COMMERCIAL CABINETRY & CASEWORK

NEED HELP?

Let Winsted design a reception desk or lobby console for you.
Send us an email to: ***info@winsted.com***

RECEPTION & LOBBY - DESKS

Steel Infrastructure

Quality Craftmanship

Winsted
CUSTOM WOOD
COMMERCIAL CABINETRY & CASEWORK

CREDENZAS - CABINETRY

Winsted Credenzas and Cabinetry are purpose-built for everything from break rooms to boardrooms. Our highest quality cabinets and credenzas are suitable for all installations with base cabinets constructed of plastic laminate or wood veneer and countertops in plastic laminate or solid surface. We will work from your specification,or our team of experienced designers can work with you to develop a custom solution to fit your specific needs for function, budget and delivery.

CREDENZAS - CABINETRY

STANDARD COMPONENTS AND OPTIONS

Order your own custom credenza or cabinet layout using our standard components. Cabinet interiors are black or white melamine. You can choose from a wide variety of high pressure laminates for the exterior colors. Counter tops are made to order, available in high pressure laminate or solid surface (ie. Corian®). Soft close doors and drawers are available upon request.

CREDENZA COMPONENTS

Standard credenzas are 30-3/4" high by 20" deep, or we can manufacture custom sizes to fit your requirements.

FILE/FILE

BOX/BOX/FILE

TWO-DOOR BASE WITH SHELVES

SLIDING DOORS WITH ADJUSTABLE SHELF

CABINET COMPONENTS

Standard base cabinets are 36" high by 24" deep. Standard wall cabinets are 12" deep.

BASE CABINET WITH ADJUSTABLE SHELF
(Drawer Optional)

4-DRAWER STACK

WALL CABINET WITH TWO ADJUSTABLE SHELVES

WALL CABINET WITH MICROWAVE CUBBIE

EXTRAS/OPTIONS

ROLL-OUT SHELF
Any adjustable shelf can be replaced with a full extension roll-out.

UNDER CABINET LIGHTING
LED strip or puck lighting is available (will require installation).

VENTILATION EXHAUST FANS
Exhaust fans can be installed to keep your computer equipment cool.

LOCKS
Cabinet locks can be keyed alike or differently. Master keys available.

15500

TWO-DRAWER FILE CABINET

MODEL#	DESCRIPTION
15500	Letter Sized File Cabinet. Custom Colors Available.

Overall Dimensions: 31"H x 18-1/4"W x 20"D (787 x 464 x 508mm).

15580

BOOKCASE

MODEL#	DESCRIPTION
15580	36"Wide Bookshelf. Custom Colors and Sizes Available.

Overall Dimensions: 48"H x 36"W x 13"D (1219 x 914 x 330mm).

M1504

SINGLE-FILE CREDENZA WITH STORAGE

MODEL#	DESCRIPTION	TOP SURFACE
M1502	Single-File Credenza with Storage	Laminate
M1503	Single-File Credenza with Storage	Endurance Plus
M1504	Single-File Credenza with Storage	Comfort Edge
M1505	Single-File Credenza with Storage	Corian

Overall Dimensions: 30-3/4"H x 72"W x 20"D (781 x 1829 x 508mm).

M1513

BOOKSHELF CREDENZA WITH STORAGE

MODEL#	DESCRIPTION	TOP SURFACE
M1512	Bookshelf Credenza with Storage	Laminate
M1513	Bookshelf Credenza with Storage	Endurance Plus
M1514	Bookshelf Credenza with Storage	Comfort Edge
M1515	Bookshelf Credenza with Storage	Corian

Overall Dimensions: 30-3/4"H x 72"W x 20"D (781 x 1829 x 508mm).

M1525

DUAL-FILE CREDENZA WITH STORAGE

MODEL#	DESCRIPTION	TOP SURFACE
M1522	Dual-File Credenza with Storage	Laminate
M1523	Dual-File Credenza with Storage	Endurance Plus
M1524	Dual-File Credenza with Storage	Comfort Edge
M1525	Dual-File Credenza with Storage	Corian

Overall Dimensions: 30-3/4"H x 72"W x 20"D (781 x 1829 x 508mm).

BOAT-SHAPED CONFERENCE TABLE

MODEL#	DIMENSIONS
M4564	30"H x 48"W x 96"L (762 x 1219 x 2438mm)

More sizes available. Top available in racetrack or rectangle as well. Safeguard edge standard, other edge options available.

LARGE BOAT-SHAPED CONFERENCE TABLES

MODEL#	DIMENSIONS
M4567	30"H x 48"W x 144"L (762 x 1219 x 3658mm)

More sizes available. Top available in racetrack or rectangle as well. Safeguard edge standard, other edge options available.

COLLABORATION TABLE

MODEL#	DIMENSIONS
M1156	**TABLE:** 41"H x 48"W x 72"L (1041 x 1219 x 1829mm) **WALL:** 72"H x 54"W x 5"D (1829 x 1372 x 127mm)

The M1156 collaboration table features a durable, high-pressure laminate top with our proprietary Safeguard Edge. Choose from hundreds of standard laminate colors for the table top and monitor wall. The table base incorporates a wire management trough and hinged doors for easy access. Optional data/power ports available.

ARCHED MEDIA TABLE

MODEL#	DIMENSIONS
M4572	28-1/2"H x 154-1/2"W x 46-1/2"D (724 x 3924 x 1181mm)

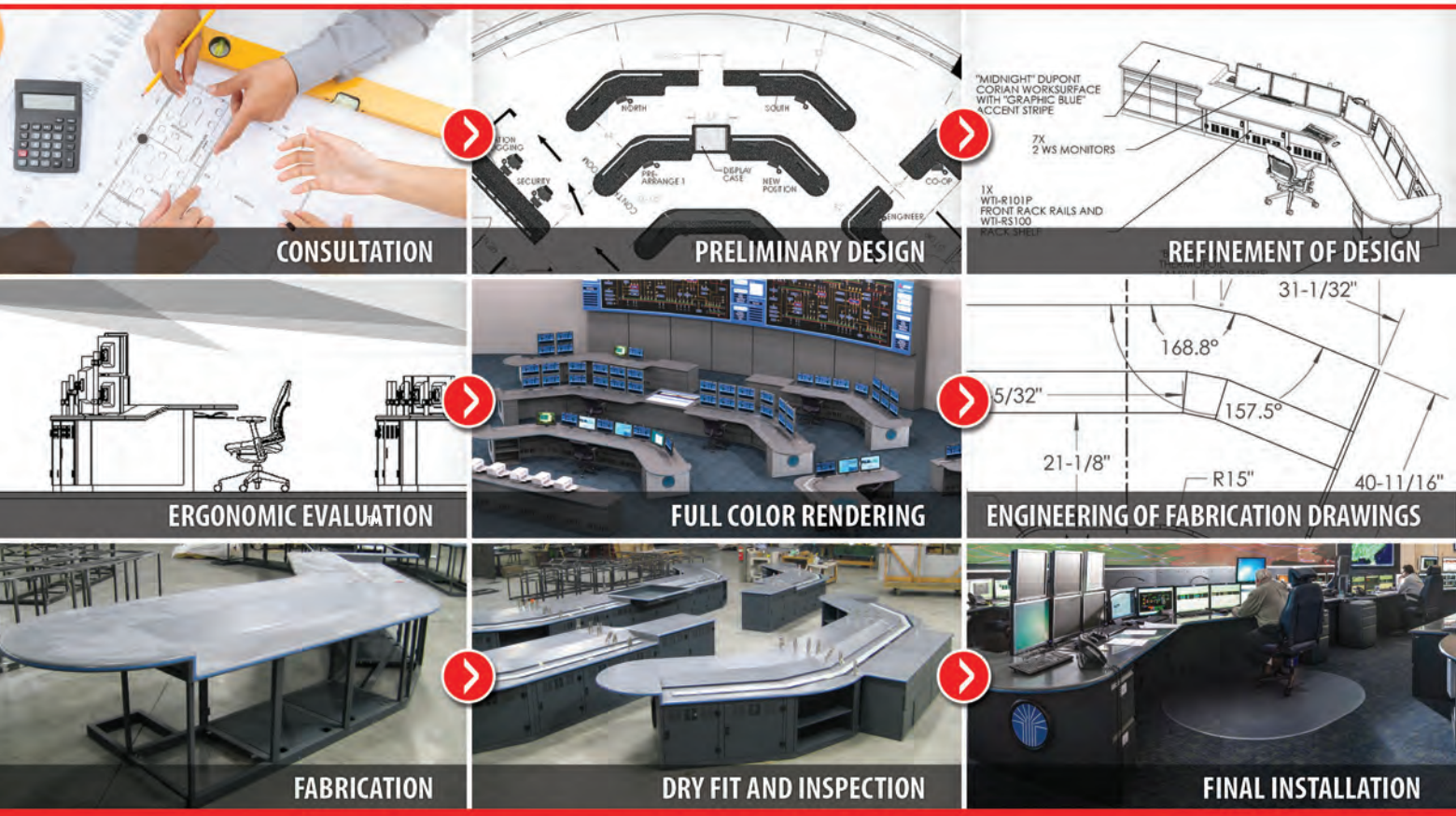
A one-sided conference/media table with seating for six. Integrated wire management and hidden work surface supports. Larger versions available.

FROM CONCEPT > TO REALITY

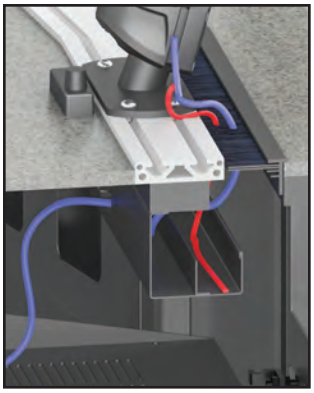
Winsted Custom Division starts with your criteria, and we develop a solution that exactly fits your needs instead of trying to meet your requirements with pre-configured modules. Your solution is designed for YOUR application to exactly match your requirements, space and functionality. We combine the disciplines of industrial design, human factors and interior design to create workspaces that are both efficient and beautiful. We carefully consider the ergonomic requirements of your operators to design consoles and technical furniture that facilitate the complex interactions between personnel, technology and the environment. We work with you to develop custom console solutions for every possible control room application, regardless of the scale or complexity. From the layout of the room, to determining the precise placement of every keyboard, monitors, and telephone, not a single detail is left to chance.

THE MOST DEMANDING INSTALLATIONS

Winsted's custom consoles are installed in nuclear power plants, military command centers, security control rooms and mission critical communication centers around the world. Our installation team has years of experience working in highly secured control room environments. We are experts at working in a 24/7 live environment, yet we can also accommodate phased installations with multiple deliveries and installations to fit your outage schedule. Below is an outline of the comprehensive process we go through to make sure the final installation exceeds your highest expectations.



DETAILED FEATURES

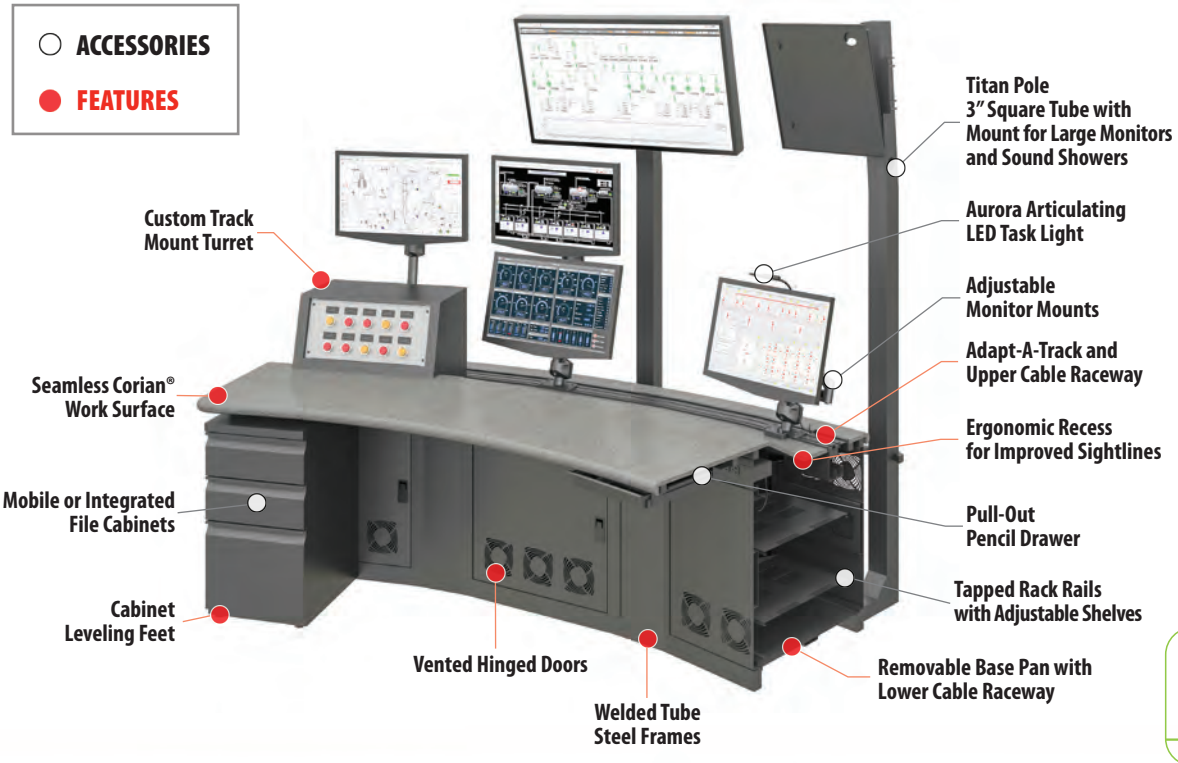


Cables run through wire brush and along cable raceway

Monitor pole bolts to track for positioning

Base pan allows cable access

Powder coated tube steel supports Corian countertop and allows for mounting pencil drawer



GREENGUARD GOLD

Public Transit Control Room

FORM AND FUNCTION

With every project we strive to create the perfect balance between form and function. Our ergonomic designs maximize operator comfort and productivity, while our aesthetic options such as custom woodworking achieve a truly superior upscale appearance. Contact one of our designers today and let us help you create the perfect custom solution.

Hydroelectric Control Room

Transmission & Distribution - CASE STUDY: winsted.com/gsoc

Height-Adjustable Console with Fixed-Height Push Button Panel

CUSTOM HEIGHT - ADJUSTABLE CONSOLES

Our designers and project managers work closely with A&E firms, contractors and in-house engineers to facilitate everything from initial control center designs to final installation. From single consoles to complete command centers we have the experience and resources to build each project to your every specification.

Reception/Security Desk

Electric Co-Op Distribution Control Room

NUCLEAR CONTROL ROOMS

Control rooms for nuclear plants are without a doubt some of the most complex. Safety and security are chief concerns for these power plants and are a primary focus of control room design. An ergonomic approach to the design of control workstations and the layout of the control room contribute to achieving their strict safety and performance objectives.

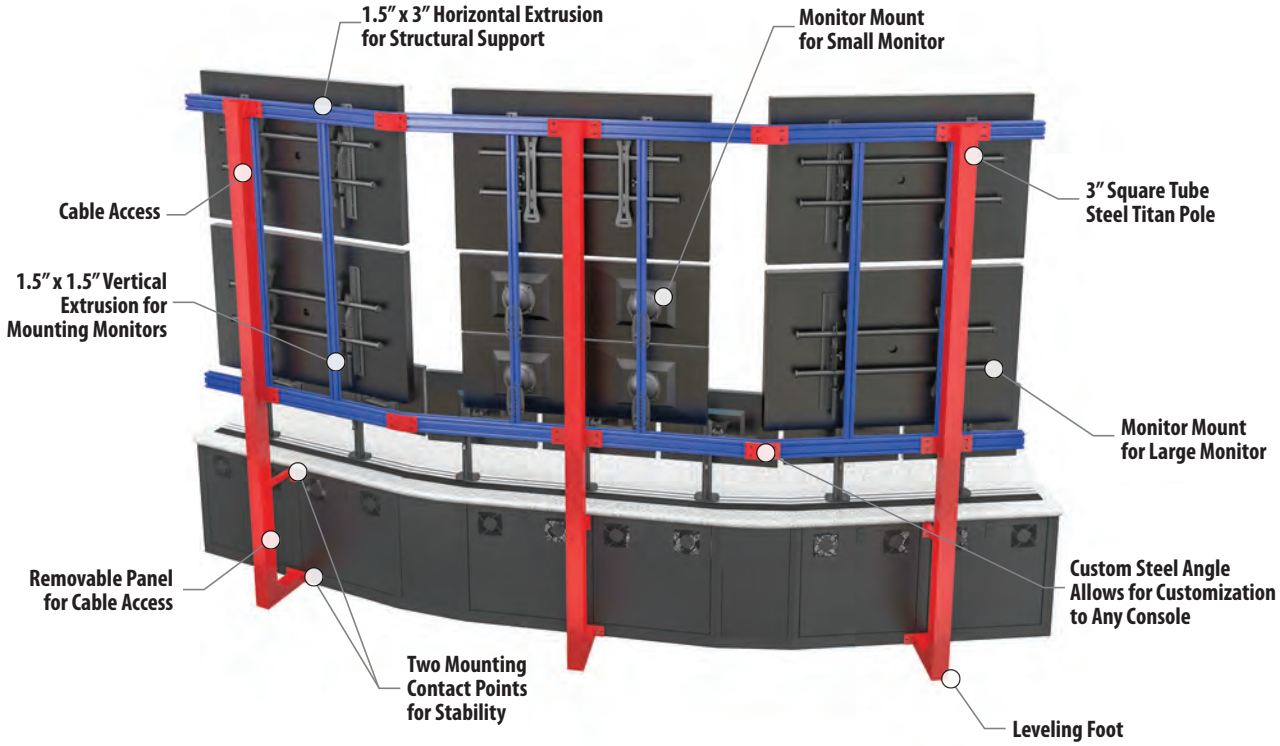
Coal Power Control Room - CASE STUDY: winsted.com/gre

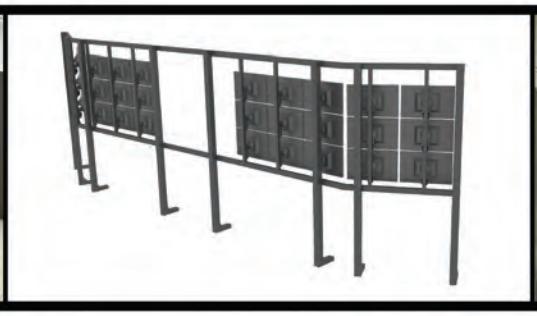
Space Port Control Console

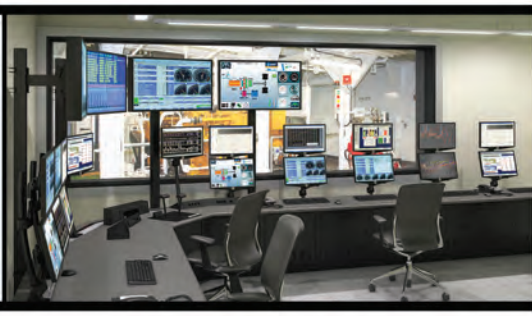
Combined Cycle Power Gen Control Room - CASE STUDY: winsted.com/bg

Talon 2 Console

Emergency Operations Center







SKY TRACK™ MONITOR WALL FEATURES

- Mount multiple large monitors to the console base instead of a wall
- Update your existing console with the Sky Track System
- Provides the ability to control monitor viewing distances
- Versatile Sky Track can handle changes in monitor sizes
- Removable panel on 3″ Titan pole provides access to wiring
- Leveling foot for height adjustment and stability
- Can be added to all Prestige, Custom, and existing consoles
- Mount storage cabinets above work surface

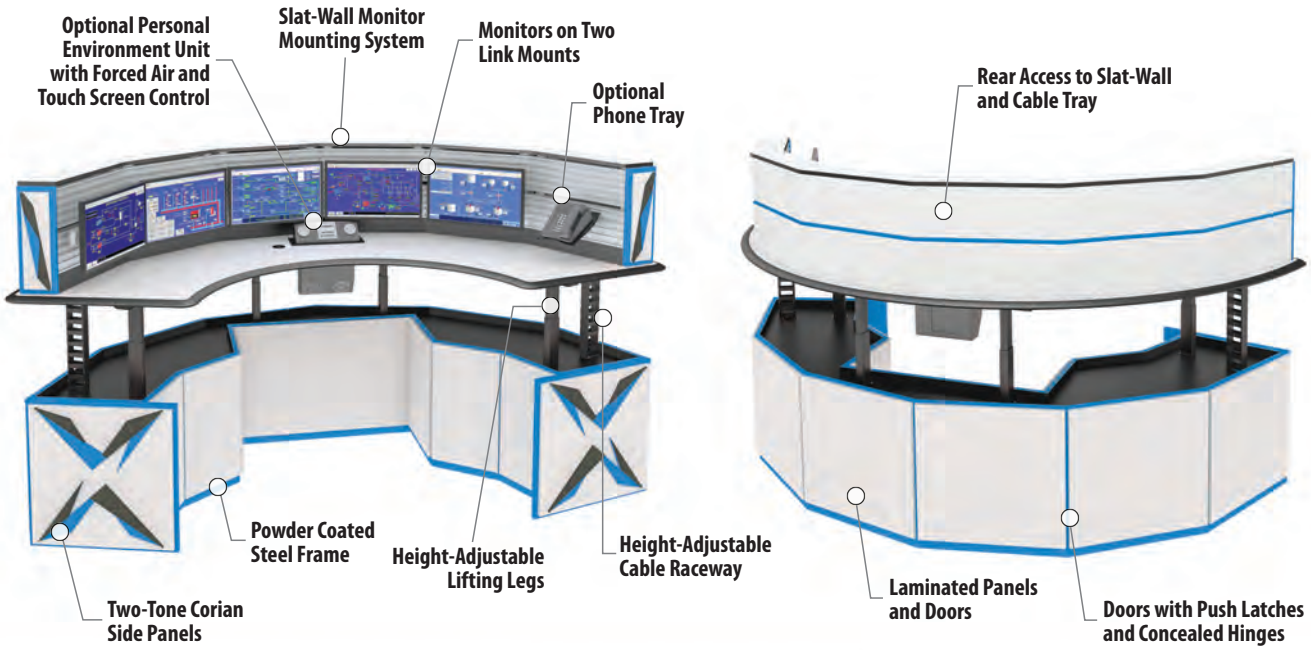
Custom configurations can be added to any control room installation, large or small.

CUSTOM IMPULSE CONSOLES

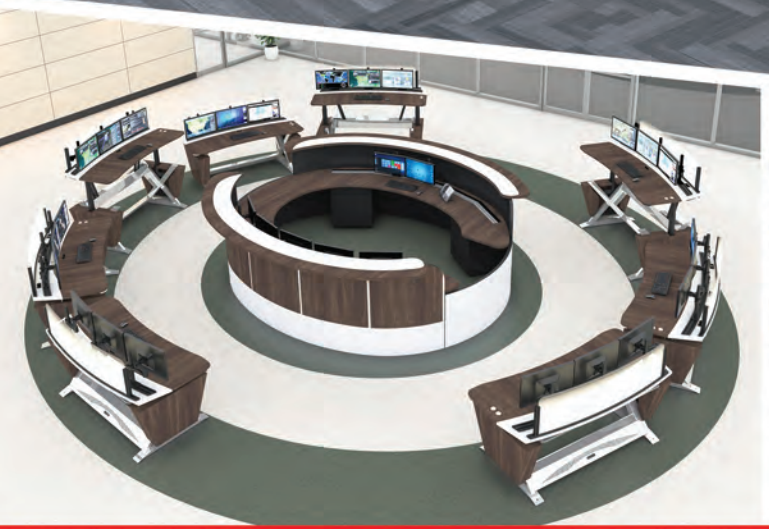
WE HAVE RAISED THE BAR

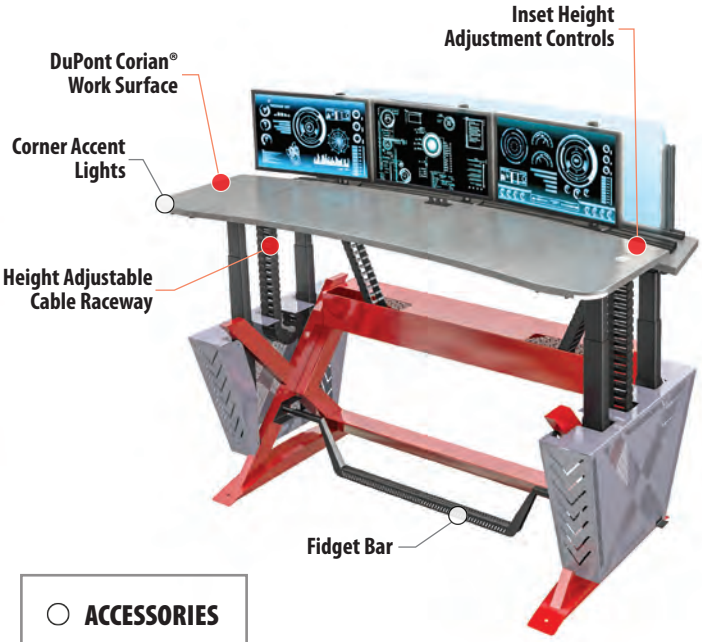
Do you have a unique requirement for a sit/stand console? We can design a custom console to fit the exact dimensions of your space and meet the specific needs of your operators. Small or large work spaces, dual or single height-adjustable surfaces, and curved or straight configurations are just a few of the options available to create the perfect sit/stand console solution.

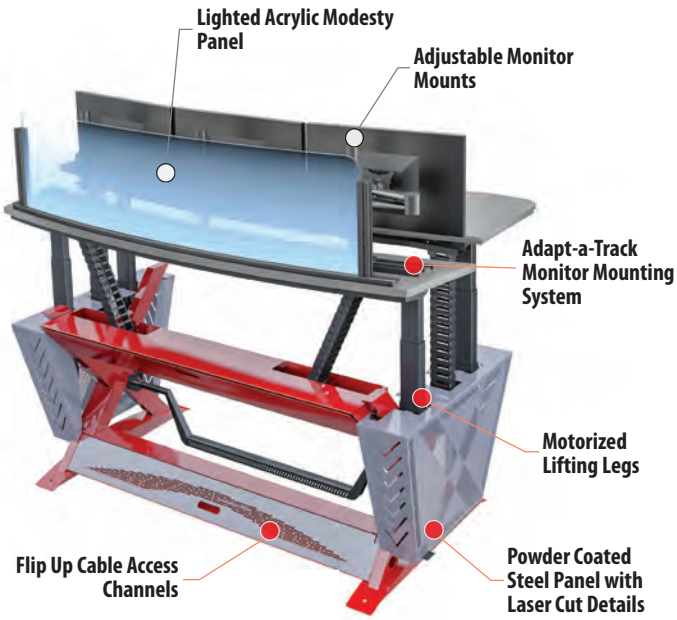
HEIGHT-ADJUSTABLE SLAT WALL CONSOLE



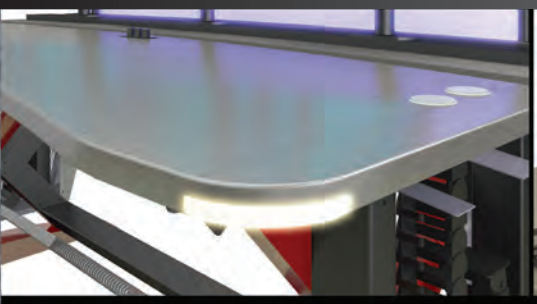
XSPAND CONSOLE



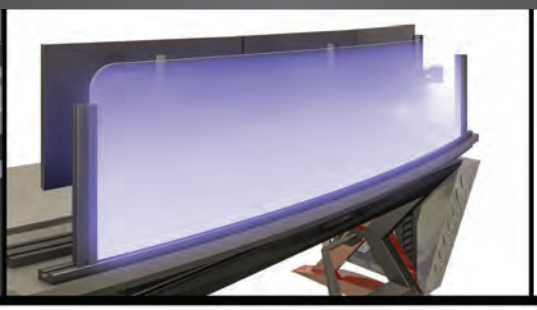




XSPAND CONSOLE ACCESSORIES



WORK SURFACE CORNER LIGHTS



MODESTY PANEL LIGHT

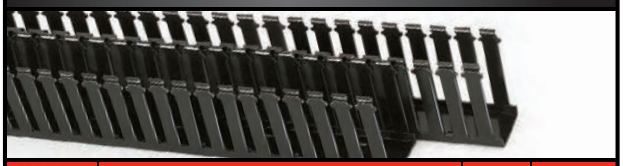
FIDGET BAR

CUSTOM XSPAND CONSOLE FEATURES

- Side panels can be powder coated steel or laminate construction
- Height adjustment range 30"- 48"
- 76" wide by 38" deep
- Work surface can be laminate, Corian® or steel
- Many colors and material options available. Go to page **24-27** for additional work surface colors
- Easy conversion from fixed height to single height-adjustable to dual height-adjustable

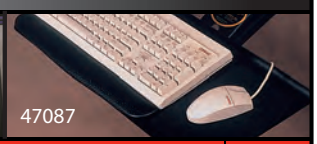
Contact our designers today to create the perfect custom solution and request pricing.

PLASTIC WIRE DUCT



MODEL#	SIZE	COLOR	WEIGHT
42750	4"H x 2"W x 72"L (102 x 51 x 1829mm)	Black	2 LBS.
42752	2"H x 4"W x 78"L (51 x 102 x 1981mm)	Black	3 LBS.
42755	4"H x 4"W x 72"L (102 x 102 x 1829mm)	Black	4 LBS.
42757	2"H x 2"W x 78"L (51 x 51 x 1981mm)	Black	2 LBS.
Wire ducts are slotted and come complete with cover except 42750.			
42756	1-1/2"H x 1-1/2"W x 72"L (38 x 38 x 1829mm)	Black	2 LBS.
42756 has solid walls and comes complete with cover.			

KEYBOARD TRAYS



MODEL#	SIZE	WEIGHT
46250	22"W x 9"D (559 x 229mm) - pulls out 12" (305mm)	9 LBS.
Mounts to the underside of any flat desk top. Outside dimension measures 23-3/4"W (603mm).		
47087	25"W x 10"D (635 x 254mm)	11 LBS.
Features 20° tilt and 9" (229mm) height adjustment. Shelf swivels 180° and stores under the work surface. Mounts to the underside of any flat desk top. Padded wrist support. Black enamel finish.		

MAGNETIC VENT COVER

MODEL#	TYPE	WEIGHT
10740	6" x 6" (152 x 152mm)	.5 LBS.
Magnetic panel to cover side panel or door vents. Use when positive air flow is needed from bottom to top in cabinet.		

POWER SUPPLY OUTLETS

MODEL#	DESCRIPTION	AMP	CORD LENGTH	WEIGHT
10710	34" - Ten-outlet	15	72" (1829mm)	4 LBS.
10712	69" - Ten-outlet	15	72" (1829mm)	6 LBS.
10713	68" - Twenty-outlet	15	180" (4572mm)	7 LBS.
10684	70" - Eleven-outlet	20	72" (1829mm)	8 LBS.
Lighted On/Off switch. Mounts to the back of any base/slope rack combination, M-View or vertical rack. Also mounts horizontally in all consoles.				

THREE DRAWER FILE CABINET - BLACK

MODEL#	DIMENSIONS	WEIGHT
10765	27"H x 15"W x 17-1/2"D (686 x 381 x 445mm)	70 LBS.
10767	27"H x 15"W x 19-3/4"D (686 x 381 x 502mm)	73 LBS.
Compact cabinet fits neatly under a work surface for storage of files in the bottom drawer. Middle drawer is perfect for items that are 4" high and top drawer works well for paper, pens and pencils. Plastic sliding pencil tray comes with cabinet. Master key - 10743		
10764	12"H x 14-3/4"W x 17"D (305 x 375 x 432mm)	14 LBS.
Converts the 10767 and 10765 from a three drawer cabinet to a two drawer file cabinet. 10764 replaces the two box drawers that come standard with 10767 & 10765.		

LED TASK LIGHTS

MODEL#	DIMENSIONS	WEIGHT
56679	LED light with magnetic base and 18" (457mm) flexible neck	1 LB.
10679	LED light with VESA mount and 18" (457mm) flexible neck	1 LB.
Features a 6-foot cord and allows users to switch between a white & red light.		

VELCRO STRAP - BLACK

MODEL#	DESCRIPTION	WEIGHT
12765	Velcro Strap 1" x 96" long (25 x 2438mm)	.5 LB.
Perfect for securing electronics to a shelf.		

PULLOUT, SWIVEL CPU MOUNT

MODEL#	DESCRIPTION	WEIGHT
46260	Extends forward with 90° swivel	15 LBS.
Fits CPU's from 13-1/2" to 21-1/2" High (343 to 546mm) by 5-3/8" to 9-3/8" Wide (137 to 238mm). Black finish. Does not fit E-SOC.		

3-1/2"H UTILITY DRAWER - BLACK

MODEL#	DIMENSIONS	WEIGHT
88323	3-3/8"H x 16"W x 18"D (86 x 406 x 457mm)	14 LBS.
Rack mountable and/or attaches to the bottom of any flat wood work shelves.		

SECTIONAL WALL MOUNT CABINETS - BLACK

MODEL#	RACK HEIGHT	OVERALL DIMENSIONS	WEIGHT
97020	15-3/4"H (9U)	19"H x 21"W x 22-1/4"D (483 x 533 x 565mm)	64 LBS.
97026	28"H (16U)	31-1/4"H x 21"W x 22-1/4"D (794 x 533 x 565mm)	92 LBS.

Made from heavy-gauge steel with 10-32 tapped front rack rails, louvered sides and 270° hinges. This symmetrical cabinet hinges either left or right. Key locking front door. Cabinet section depths: 4-1/2"D (114mm) rear, 16"D (406mm) center, 1-3/4"D (44mm) front. Maximum wt. load 100 lbs.

SECURITY CABINET W/HINGED DOOR - BLACK

MODEL#	OVERALL DIMENSIONS	WEIGHT
96030	9-1/2"H x 19-1/2"W x 23"D (241 x 495 x 584mm)	28 LBS.

Heavy-duty locking cabinet comes with rear cord access slot and vent holes for 10705 cooling fan.

WALL MOUNT MONITOR SHELVES

11081

11093

MODEL#	OVERALL DIMENSIONS	WEIGHT
11081	17"W x 18"D (432 x 457 mm) with 1/2"H (13mm) front retainer lip	10 LBS.

16" centers for wall mounting along with adjustable tilting tray for better viewing angle. 5/16" x 1-1/2" (8 x 38mm) long slots for 96"L (2.4m) monitor safety strap (included). Pearl Grey Finish.

11093	10"H x 18"W x 17"D (254 x 457 x 432mm)	19 LBS.

Supports both electronics on one shelf. Opening size: 5-5/8"H x 17-7/8"W (143x 454mm). 16-gauge steel. Maximum weight 80 lbs. 16" Center wall mounting. Black Finish.

24-1/2" LOCKING SECURITY CABINET - BLACK

MODEL#	OVERALL DIMENSIONS	WEIGHT
G9939	Extra-Deep – 26-5/8"H x 22-5/8"W x 25-1/2"D (676 x 575 x 648mm)	87 LBS.

Cabinet sits on desk or wall mount, front door is 1-1/4" deep for electronic clearance and symmetrical for left- or right-hand mounting. 19" depth from front rack rail to inside back. NEMA electrical knockouts.

ROLL-UP RACK 19-1/4" (11U) CABINET

MODEL#	DESCRIPTION	WEIGHT
E4741	25"H x 24"W x 24"D (635 x 610 x 610mm)	64 LBS.

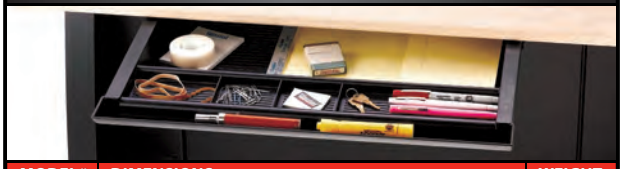
Includes 2" (51mm) swivel carpet casters. Black Graphite Nebula laminate top and black side panels with black welded steel frame. 19" EIA Equipment Rack.

DESKTOP POWER GROMMET

MODEL#	DESCRIPTION	WEIGHT
10660	Three Power Outlets and Two Cat 5 Connections	1 LB.
10661	Three Power Outlets and Two USB Ports	1 LB.

Easily converts any desk, table or work surface into a ready-to-access power center. Simply rotate the grommet with it's easy 180° rotation system and the grommet is ready to use. 4-3/8" outer ring requires 4.21" hole size. Eight foot power cord included. Many options and configurations available. Contact Winsted for more information.

13-3/4" W PENCIL DRAWER - BLACK



MODEL#	DIMENSIONS	WEIGHT
55233	2-3/8"H x 13-3/4"W x 18"D (60 x 349 x 457mm)	4 LBS.

Mounts to the underside of any work shelf. This drawer will fit between shelf brackets. Pulls out 12-3/4" (324mm). Black formed plastic.

WINSTED WARRANTY

- *A **LIFETIME WARRANTY** on all fixed steel structure frame components.*
- *A 10 year warranty on adjustable, sliding or hinged components and laminated surfaces.*
- *A 5 year warranty on Endurance Plus and TruForm surfaces.*
- *A 2 year warranty on all electrical components and chairs.*

All warranties are effective from date of shipment. All products shall be free from defects in material and workmanship under normal usage and conditions for which the products were designed.

Winsted's obligation under this warranty shall be limited to the exchange of the product or parts that proved to be defective or unsatisfactory. Winsted reserves the right to have the product inspected at the buyer's location or have the product returned to the factory for inspection. The above warranty does not extend to consumable products, goods damaged or subjected to accident, abuse or misuse after shipment from Winsted's factory or to goods that are altered or modified.

VALUE
Winsted provides support second to none in the industry. Trained representatives gather project information, give design support to help lay out the project and even provide infield support.

PRODUCT DEVELOPMENT
This process never stops. Winsted is known as the industry leader. We provide new solutions daily as technology continues to change.

AVAILABILITY
Winsted supplies metal consoles and racks from stock and custom wood within 4 weeks. Call for Corian delivery times.

FREIGHT
Call Winsted for your free freight quotation, this takes the guesswork out of the quotation. We can provide CIF quotations for all orders, which helps the customer understand the true cost of the product.

FLAT-PACKED, PRE-ASSEMBLED, INSTALLED
Winsted will drop-ship orders directly. Every order has three options for shipment:

1. **Flat-packed -**
   Reduces shipping costs and provides the fastest delivery.
2. **Pre-assembled prior to shipping -**
   Reduces customer set-up time.
3. **Installed -**
   Product installed by trained Winsted technicians. Call for on-site installation cost.

CUSTOMER SERVICE
Specialists are individually empowered to handle issues and resolve situations efficiently and fairly.

PRODUCT OFFERING
Winsted offers the most complete line of products in the industry, designed to fit a variety of needs within almost any organization. From control room consoles and military command centers, to network operation centers and process control applications. Winsted pledges to provide products that meet today's needs, as well as anticipating future technology requirements.

SATISFACTION GUARANTEED
Winsted Products are guaranteed to be free of manufacturing defects. If any product is determined to be unsatisfactory, call our Customer Service Department Toll-Free 800.447.2257. Our policy is that you must be completely satisfied with our products. For fast service or for additional product information call Toll-Free 800.447.2257.

SHIPPING
All shipments are F.O.B. shipping point. Every attempt will be made to ship your order as soon as possible via the most direct and economical way. If a specific carrier is preferred, the purchase order must be clearly marked.

LIABILITY
No liability is assumed by our company for damage and/or injury resulting from use of the specified carrier.

CREDIT
For new accounts that have not established credit with Winsted, a sufficient amount of time should be allowed to obtain proper credit information. Please be sure to provide your bank information and two trade references with initial order. If immediate shipment of order is desired, Winsted does accept credit cards, ACH payments or send check for full amount. Special order merchandise and large orders may require 50% cash in advance before shipping.

DROP SHIPMENTS
Winsted will ship orders directly to any authorized dealer's customer. Drop shipments are sent pre-paid with freight charges, plus a small handling charge added to the dealers invoice.

FREIGHT SHORTAGES OR DAMAGES
All shipments should be inspected carefully upon receipt. Before signing the freight bill have the delivering carrier note any damage, shortage or loss in writing on the freight bill. Concealed damage must be reported to Winsted within 15 days. Failure to do so places responsibility for loss with the consignee.

RETURNED GOODS
No merchandise may be returned without prior authorization. Custom items will not be accepted on a return. Call Toll-Free 800.447.2257 to our Customer Service Department and obtain a "Return Authorization Number." All returns are to be prepaid. All return merchandise is subject to a 15% restocking and handling charge. Credit will be issued provided products are returned in undamaged condition, and in their original packaging.

TERMS OF SALE
Terms are Net 30 days after credit has been established. Outstanding past due balances are subject to a finance charge of 1-1/2% per month. All terms, conditions, specifications and prices are subject to change without notice.

YOUR SATISFACTION IS GUARANTEED!

AT YOUR SERVICE

FROM CONCEPT TO REALITY

FREE ON-SITE CONSULTATION

Winsted designers have a keen eye for the details that can assist or impede a project, which is why an initial on-site design consultation is on us. We will collect the necessary measurements, document structures and note complications, as well as meet with decision makers – all at our expense. It's our commitment to success.

COMPLIMENTARY DESIGN SERVICE

Winsted is committed to creating a console solution that meets every specification for your project. From ergonomics to electronics, our designers will work with you to include every detail. Once your design is complete, you will receive a design and specification package ready for presentation.

ALL-INCLUSIVE PROJECT SUPPORT

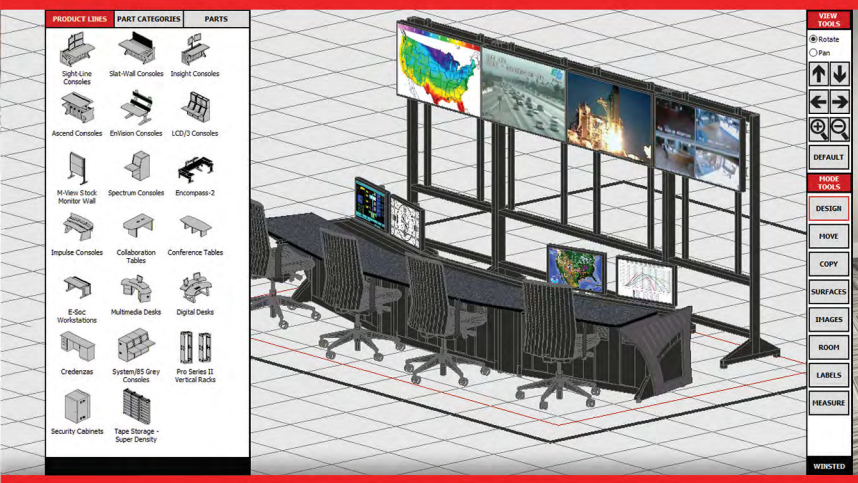
Winsted is your project partner and we strive to exceed your expectations. We provide Building Information Modeling (BIM) files for Revit®, full CAD drawings in multiple views, photo-quality color renderings of the final design and can even create animated "walk-through" videos of the proposed installation.

WORLD CLASS CUSTOMER SERVICE

Winsted strives to provide the best customer service in the industry. Your total satisfaction is the foundation of our success, and you can count on our expert customer service staff before, during and after the sale. And, we stand by our products, which is why so many carry a lifetime warranty.
See page 103 for Winsted's Warranty.

WELS™ 4

WINSTED EQUIPMENT LAYOUT SOFTWARE



THE **MOST ADVANCED** CONSOLE DESIGN SOFTWARE IS HERE!

WELS™ IS A WINSTED-EXCLUSIVE CONSOLE DESIGN SOFTWARE TOOL THAT MAKES CONTROL ROOM DESIGN AND LAYOUT FAST, EASY, ACCURATE AND FUN!

This interactive, user-friendly, 3D console design software program lets you use Winsted consoles and furniture to quickly design control room solutions that meet your needs. WELS is easy to use - and requires no additional design/CAD software to operate.

WELS4 FEATURES

- WELS 4 is a FREE Winsted-exclusive tool. With it you can design your control room with any of our Consoles and Desks, Vertical Racks, M-View Monitor Walls and Conference Room Tables.
- On-screen toolbars and windows allow quick selection of products and accessories.
- Built-in control room designer lets you create a room to match your exact floor plan.
- Generate part lists and design specification sheets.
- Place multiple consoles and command centers anywhere in the room.
- Change the color of the work surface and side panels to show how the console will look in your room.
- Smart design programming helps you place parts where they belong.
- Accessorize designs with monitors, LCDs, DVD players, keyboards, blank panels, doors and more.
- WELS 4 is a true 3D design program. You can view your designs from any vertical or horizontal angle.
- WELS 4 is a stand-alone program requiring no additional software.
- Export your design to DWG or DXF to import into your CAD program or export to JPEG format to use in presentations and design discussions.

WELS4 SYSTEM REQUIREMENTS:

Operating System: Microsoft Windows - Windows XP - or newer

DOWNLOAD YOUR FREE COPY OF WELS AT: winsted.com/WELS

800.447.2257 winsted.com info@winsted.com

MILLER at WORK

*** All items and prices are available on the NC State Contract***
NC State Contract 420A Furniture all Types Bid # 201400059
GA State Contract #99999-SPD0000100
Alabama State Contract # 4012012 for T390 / 2233882

End User Price List

What's in a model number?

Here at Miller at Work we have a specific way of doing our model numbers so that it makes it easier for customers to understand.
The first 3 to 4 digits of the model number is the actual model number for the chair, the next two digits are to specify the arms, the next two digits specify the base, the next two digits specify the mechanism and the last two digits are the width of the seat.

Example:

Model# of chair ⟶ **1697-16-5-31-21** ⟵ Seat Width

Arm Base Mechanism

Bases

#1 Heavy duty 5 Prong low profile black base

#2 Heavy duty 5 Prong low profile black base

#3 Heavy duty 6 Prong black base

#5 Heavy duty 5 Prong low profile polished aluminum base

Arms

#4 Height adjustable arm

#9 Fixed C arm polished aluminum

#10 Fixed C arm Black

#16 Height and Width adjustable sliding arm (Gel Arm Pad slides front to back)

Mechanisms

***Multifunction Mech:** #31
7 Position control

1) Fingertip height adjustment
2) Forward tilt seat adjustment
3) Level seat angle
4) Backward seat angle adjustment
5) Side mounted tension control activation rotating wheel
6) Forward tilt back angle adjustment
7) Back tilt backward adjustment with infinite lock

***Advanced Control:** #32

1) 2 to 1 knee tilt
2) Back is independent from seat
3) Back locks in upright position or free float
4) Tension Control

***Maxine Only:** #34

1) Swivel only

***Rocking Mech:** #35

1) Knee tilt
2) Infinite angle lock
3) Side mounted tension control
4) Seat depth adjustment

***Synchro Tilt:** #36

1) Infinite lock
2) Side mount tension control

***Mid-Pivot:** #37

1) With tilt lock

270 lbs Chair

1699-9-5-37-21 High Back
BH from seat 29.5"
Seat Height from floor: 16" - 20"
Adjustable Seat Depth: 17" - 19.5"
Seat Width: 21"
(will accommodate a 6'6" person)
Shown in Dillon Lipstick

1698-9-5-37-21 Medium Back
BH from seat 26.75"
Seat Height from floor: 16" - 20"
Adjustable Seat Depth: 17" - 19.5"
Seat Width: 21"
(will accommodate a 6'1" person)
Shown in Dillon Black

1697-9-5-37-21 Low Back
BH from seat 24"
Seat Height from floor: 14" - 18"
Adjustable Seat Depth: 17" - 19.5"
Seat Width: 21"
(will accommodate a 4'10" - 5' 4"person)
Shown in Dillon Williamsburg

400 lbs Chair

1799-16-2-32-23 High Back
BH from seat: 29.5"
Seat Height from floor: 16" - 20"
Seat Depth: 19"
Seat Width: 23"
(will accommodate a 6'6" person)
Shown in Dillon Black

1798-16-2-32-23 Medium Back
BH from seat: 26.75"
Seat Height from floor: 16" - 20"
Seat Depth: 19"
Seat Width: 23"
(will accommodate a 6'1" person)
Shown in Dillon Cordovan

1797-16-2-32-23 - Low Back
BH from seat: 24"
Seat Height from floor: 16" - 20"
Seat Depth: 19"
Seat Width: 23"
(will accommodate a 4'10" to 5'4" person)
Shown in Dillon Apple Sage

- Family owned business - made in High Point, NC.
- Ships fully assembled.
- Lifetime warranty on frame construction, heavy duty 3/8" tempered steel J - Bar.
  Normal wear and tear on upholstery is not covered under warranty.
- 10 year warranty on HD Gas Cylinder, arm mechanism, chair mechanism, base and foam.
- 5 prong HD metal polished aluminum base standard.
- 60mm HD casters standard, 75mm optional, no upcharge.
- PVC free / Bleach cleanable (only applicable on Vinyls).

- **Kool Memory Foam** in all cushions.
  - Mechanisms available:
  400 lbs heavy duty synchro tilt with 5 year warranty. (Advanced control)
  280 lbs heavy duty synchro tilt with 10 year warranty. (Multi Function)
  - Optional arms:

4 - Height adjustable
9 - Fixed C arm polished aluminum
10 - Fixed C arm black
#16 - Height and Width adjustable - gel pad slides front to back.
  - Optional bases:

#1 Heavy duty 5 Prong low profile black base
#2 Heavy duty 5 Prong low profile black base
#3 Heavy duty 6 Prong black base (upcharge)
#5 Heavy duty 5 Prong low profile polished aluminum base

- **2 million product liability insurance per incident.**

Max Miller
maxmiller@mawhp.com
336-964-5490

Felix

50% deposit balance due when ready to ship
Prepaid in full, get a 2% discount

Place orders at orders@mawhp.com

Kool Foam standard on all Non 24/7 models

Felix

270 lbs series	NON 24/7 Seating		Arms		Fabric	COM / COL Vinyl	Leather
1697-4-1-37-21	Low back	Mid Pivot Mech.	Height Adj.	Will accom. a 4'8"-5'8" person	$980.00	$1,050.00	$1,372.00
1697-16-1-37-21-M	Low back/ Mesh Seat	Mid Pivot Mech.	H&W - Sliding	Will accom. a 4'8"-5'8" person	$980.00	$1,050.00	$1,372.00
1697-9-5-37-21	Low back	Mid Pivot Mech.	Polished Alum C	Will accom. a 4'8"-5'8" person	$980.00	$1,050.00	$1,372.00
1697-16-5-37-21-M	Low back/ Mesh Seat	Mid Pivot Mech.	H&W - Sliding	Will accom. a 4'8"-5'8" person	$980.00	$1,050.00	$1,372.00
1698-4-1-37-21	Medium back	Mid Pivot Mech.	Height Adj.	Will accom. a 4'8"-6'0" person	$1,050.00	$1,120.00	$1,533.00
1698-16-1-37-21-M	Med. Back / Mesh seat	Mid Pivot Mech.	H&W - Sliding	Will accom. a 4'8"-6'0" person	$1,050.00	$1,120.00	$1,533.00
1698-9-5-37-21	Medium back	Mid Pivot Mech.	Polished Alum C	Will accom. a 4'8"-6'0" person	$1,050.00	$1,120.00	$1,533.00
1698-16-5-37-21-M	Med. Back / Mesh seat	Mid Pivot Mech.	H&W - Sliding	Will accom. a 4'8"-6'0" person	$1,050.00	$1,120.00	$1,533.00
1699-4-1-37-21	High Back	Mid Pivot Mech.	Height Adj.	Will accom. up to a 6'6" person	$1,190.00	$1,260.00	$1,610.00
1699-16-1-37-21-M	High Back / Mesh seat	Mid Pivot Mech.	H&W - Sliding	Will accom. up to a 6'6" person	$1,190.00	$1,260.00	$1,610.00
1699-9-5-37-21	High Back	Mid Pivot Mech.	Polished Alum C	Will accom. up to a 6'6" person	$1,190.00	$1,260.00	$1,610.00
1699-16-5-37-21-M	High Back / Mesh seat	Mid Pivot Mech.	H&W - Sliding	Will accom. up to a 6'6" person	$1,190.00	$1,260.00	$1,610.00
1700-4-1-37-21	Ex. Tall back	Mid Pivot Mech.	Height Adj.	Will accom. up to a 6'10" person	$1,330.00	$1,400.00	$1,890.00
1700-16-1-37-21-M	Ex. Tall back/Mesh seat	Mid Pivot Mech.	H&W - Sliding	Will accom. up to a 6'10" person	$1,330.00	$1,400.00	$1,890.00
1700-9-5-37-21	Ex. Tall back	Mid Pivot Mech.	Polished Alum C	Will accom. up to a 6'10" person	$1,330.00	$1,400.00	$1,890.00
1700-16-5-37-21-M	Ex. Tall back/Mesh seat	Mid Pivot Mech.	H&W - Sliding	Will accom. up to a 6'10" person	$1,330.00	$1,400.00	$1,890.00

Felix

Kool Foam standard on all Non 24/7 models

400 lbs series	24/7 Seating		Arms		Fabric	COM / COL Vinyl	Leather
1797-16-2-32-23	Low back	Advanced Control	H&W- Sliding	Will accom. a 4'8"-5'8" person	$1,260.00	$1,400.00	$1,540.00
1797-9-2-32-23	Low back	Advanced Control	Polished Alum C	Will accom. a 4'8"-5'8" person	$1,260.00	$1,400.00	$1,540.00
1798-16-2-32-23	Medium back	Advanced Control	H&W- Sliding	Will accom. a 4'8"-6'0" person	$1,400.00	$1,540.00	$1,680.00
1798-9-2-32-23	Medium back	Advanced Control	Polished Alum C	Will accom. a 4'8"-6'0" person	$1,400.00	$1,540.00	$1,680.00
1799-16-2-32-23	High back	Advanced Control	H&W- Sliding	Will accom. a 4'8"-6'6" person	$1,540.00	$1,680.00	$1,820.00
1799-9-2-32-23	High back	Advanced Control	Polished Alum C	Will accom. a 4'8"-6'6" person	$1,540.00	$1,680.00	$1,820.00
1800-16-2-32-23	Ex. Tall back	Advanced Control	H&W- Sliding	Will accom. up to a 6'10" person	$1,680.00	$1,820.00	$1,960.00
1800-9-2-32-23	Ex. Tall back	Advanced Control	Polished Alum C	Will accom. up to a 6'10" person	$1,680.00	$1,820.00	$1,960.00

Enhancements:				
	Long Slip Cover w/ or w/logo	**$100.00**	**Seat slip cover**	**$56.00**
	Lumbar Pillow	**$84.00**	**Back Slip Cover**	**$56.00**
	Neck Roll Cushion	**$65.00**	**6 prong heavy duty base (#3)**	**$126.00**
	Back bumper guard	**$80.00**	**#9 & # 4 arm pads per pair**	**$30.00**
	Casters each	**$5.00**	**Arm Pad 16 arm (per pair)**	**$30.00**
	specify 75 or 55 mm carpet or solid flooring	**N/C**	**No Arms specify in model# -0-**	**-$25.00**
	Optional # 10 black C arm	**N/C**	**Kool Foam Seat Pads (blk fabric)**	**$48.00**
	Black, Red, Blue & Beige stitching available must specify	**N/C**	**Kool Foam Back Pads (blk fabric)**	**$65.00**

Prices do not included shipping cost/FOB High Point, NC

All chairs ship fully assembled

** Must specify hard floor or soft floor casters for chairs**

Leather clean with soap and water, then use a leather conditioner 3 times a year to keep supple

10 year warranty on all parts except for arm pads, casters and upholstery. Lifetime warranty on frame construction & base Normal wear and tear not included

Black, Beige, Red and Blue stitching available

Non 24/7 Seating 40hr work week

5 year warranty

Shown with optional neck roll and lumbar cushion

270 lbs Chair

3394-4-5-36-21
User size 4’10” - 5’10”
Maximum weight: 270lbs
Seat Height from floor: 16” - 20”
Seat Depth: 16” - 18.5”
Seat Width: 21”
Dillon Balsa

3294-4-5-36-21-HR
User size 4’10” - 5’10”
Maximum weight: 270 lbs
Seat Height from floor: 16” - 20” (with headrest add 6”)
Seat Depth: 16” - 18.5”
Seat Width: 21”
Dillon Lipstick

270 lbs Chair

3194-16-5-31-21-HR
User size 5’4” - 5’10”
Maximum weight: 270 lbs
Seat Height from floor: 16” - 20” (with headrest add 6”)
Seat Depth: 16” - 18.5”
Seat Width: 21”
All Mesh

ALL MESH

Non 24/7 Seating 40hr work week

M arcell a

Max Miller
maxmiller@mawhp.com
336-964-5490

50% deposit balance due when ready to ship
Prepaid in full, get a 2% discount

Place orders at orders@mawhp.com
Kool Foam standard on all Non 24/7 models

Marcella	**NON 24/7 Seating**		**Arms**			**All Mesh**		
3194-16-5-31-21	Mid Back	Multi-Function	H&W - Sliding	270 lbs	Mesh Back and seat	$812.00		
						Fabric	**COM / COL Vinyl**	**Leather**
3294-4-1-37-21	Mid Back	Mid Pivot Mech.	Height Adj.	270 lbs	Mesh back/Uph seat	$685.00	$699.00	$900.00
3294-9-5-37-21	Mid Back	Mid Pivot Mech.	Polished Alum C	270 lbs	Mesh back/Uph seat	$685.00	$699.00	$900.00
3294-4-1-36-21	Mid Back	Synchro Tilt	Height Adj.	270 lbs	Mesh back/Uph seat	$800.00	$840.00	$1,000.00
3294-9-5-36-21	Mid Back	Synchro Tilt	Polished Alum C	270 lbs	Mesh back/Uph seat	$800.00	$840.00	$1,000.00
3397-4-1-37-21	Low Back	Mid Pivot Mech.	Height Adj.	270 lbs	Fully Upholstered	$820.00	$868.00	$1,200.00
3397-9-5-37-21	Low Back	Mid Pivot Mech.	Polished Alum C	270 lbs	Fully Upholstered	$820.00	$868.00	$1,250.00
3398-4-1-37-21	Med Back	Mid Pivot Mech.	Height Adj.	270 lbs	Fully Upholstered	$850.00	$898.00	$1,230.00
3398-9-5-37-21	Med Back	Mid Pivot Mech.	Polished Alum C	270 lbs	Fully Upholstered	$850.00	$898.00	$1,280.00
3399-4-1-36-21	High Back	Snychro Tilt	Height Adj.	270 lbs	Fully Upholstered	$873.60	$1,030.40	$1,350.00
3399-9-5-36-21	High Back	Snychro Tilt	Polished Alum C	270 lbs	Fully Upholstered	$896.00	$1,030.40	$1,400.00

Enhancements:				
5 prong high profile base (#5)	**N/C**	**Arm Pad 16 arm (per pair)**	**$30.00**	
Bumper Guard -BG-	**$80.00**	**#16 Arm must specify in model # 16**	**$75.00**	
Mesh Headrest (Suffix -HR)	**$100.00**	**6 prong heavy duty base (#3)**	**$126.00**	
Large Neck Roll Cushion	**$65.00**	**Smaller Neck Roll Cushion**	**$55.00**	
specify 75 or 55 mm carpet or solid flooring	**N/C**	**Lumbar Pillow**	**$75.00**	
Back Slip Cover for Logo ea. Chair	**$85.00**	**No Arms specify in model# -0-**	**-$25.00**	
On time Embroidery Setup for Back Slip Cover	**$120.00**	**Kool Foam Seat Pads (blk fabric)**	**$48.00**	
Black, Red, Blue & Beige stitching available must specify	**N/C**	**Kool Foam Back Pad (blk fabric)**	**$65.00**	

Prices do not included shipping cost/FOB High Point, NC
** Must specify hard floor or soft floor casters for chairs**

5 year warrantly on all parts execpt arm pads, casters, upholstery

Height adjustable back, ships assembled

3294-16-5-31-21-HR-Lumbar pillow

Black, Beige, Red and Blue stitching available

Marcella chair shown with logo on slip cover

Non 24/7 Seating 40hr work week

M axine

Non 24/7 Seating 40hr work week

270 lbs Chair

778-4-5-37-21
Dillon Nimbus

779-16-5-37-21
Dillon Mesh Blk w/headrest

W - 30”
D - 24”
H - 40” - 45”
SW - 21”
SD - 19”
SH - 17” - 24”

778-4-1-37-21

Maxine

270 lbs	NON 24/7 Seating	Arms		Mechanism	Fabric	COM / COL Vinyl	Leather
778-4-1-37-21	Mesh Back / Uph Seat	Height Adj.	270 lbs	Mid Pivot Mech.	$495.00	$520.00	$600.00
778-9-1-37-21	Mesh Back / Uph Seat	Polished C	270 lbs	Mid Pivot Mech.	$495.00	$520.00	$600.00
778-4-5-37-21	Mesh Back / Uph Seat	Height Adj.	270 lbs	Mid Pivot Mech.	$525.00	$545.00	$625.00
778-9-5-37-21	Mesh Back / Uph Seat	Polished C	270 lbs	Mid Pivot Mech.	$525.00	$545.00	$625.00
						All mesh	
779-16-1-37-21	Mesh Back and Seat	H&W - Sliding			$575.00		
779-16-5-37-21	Mesh Back and Seat	H&W - Sliding			$575.00		
Enhancements:	One time Embroidery Setup	$120.00		Black C Arm #10 must denote	-$10.00		
	Embroidery logo ea chair	$80.00		Optional Vinyl Headrest	$100.00		
	Optional # 16 arm	$50.00					
	Casters each	$5.00		Arm Pad 16 arm (per pair)	$30.00		
	specify 75 or 55 mm carpet or solid flooring	N/C		#9 & # 4 arm pads per pair	$30.00		
	Hard Floor Locking Casters ea. (sitting)	$5.00		No Arms specify in model# -0-	-$25.00		
	Optional Sychro tilt w/ Infinite angle lock	$75.00		Kool Foam Seat Pads	$48.00		

Shown in Winslow Moonbeam

270 lbs Chair

W - 30”
D - 24”
H - 47” - 58”
SW - 23”
SD - 19”
SH - 24” - 35”

Shown in all mesh

Maxine Stool

	NON 24/7 Seating		Arms			Fabric	COM / COL Vinyl	Leather
777-4-1-34-21	Low / Uph. back	Swivel Only	Height Adj.	270 lbs		$700.00	$750.00	$850.00
777-9-1-34-21	Low / Uph. back	Swivel Only	Polished Alum C	270 lbs		$700.00	$750.00	$850.00
777-10-1-34-21	Low / Uph. back	Swivel Only	Black C Arm	270 lbs		$700.00	$750.00	$850.00
						All Mesh		
778-16-1-34-21	All Mesh	Swivel Only	H&W - Sliding	270 lbs		$808.50		
Enhancements:	On time Embroidery Setup		$120.00		Seat slip cover	$56.00		
	Embroidery logo ea chair		$80.00		Back Slip Cover	$56.00		
	Casters each		$5.00		6 prong heavy duty base #3	$126.00		
	specify 75 or 55 mm carpet or solid flooring		N/C		Arm Pad 16 arm (per pair)	$30.00		
	Hard Floor Locking Casters ea. (not sitting)		$5.00		#9 & # 4 arm pads per pair	$30.00		
	Hard Floor Locking Casters ea. (sitting)		$5.00		No Arms specify in model# -0-	-$25.00		
					Optional Vinyl Headrest	$100.00		
	Optional # 5 black base		N/C		Kool Foam Seat Pads	$48.00		

Non 24/7 Seating 40hr work week

L ucy

Lucy

270 lbs	Stacking				Fabric	COM / COL Vinyl	Leather
40	Sled base		Armless		$89.00	$99.00	$140.00
40A	Sled base		With Arms		$119.00	$129.00	$160.00
41	Leg Base		Armless		$89.00	$99.00	$140.00
41A	Leg Base		With Arms		$119.00	$129.00	$160.00

Sally

Sally

350 lbs	Guest Chair				Fabric	COM / COL Vinyl	Leather
332			Fixed Arms		$320.00	$340.00	$600.00

Non 24/7 Seating 40hr work week

Skylar

Skylar

270 lbs	Side Chair				Fabric	COM / COL Vinyl	Leather
50	legs		Arms		$139.00	$149.00	$199.00
50A	w/ casters		With Arms		$173.00	$180.00	$300.00

Skylar

270 lbs	Side Chair				Stock Fabric		
51			Arms	Black, Blue, Red, Grey	$100.00		

Prices do not included shipping cost/FOB High Point, NC

All chairs ship fully assembled*

** Must specify hard floor or soft floor casters for chairs**

Leather clean with soap and water, then use a leather conditioner 3 times a year to keep supple

Non 24/7 Seating 40hr work week

C helsea

Chelsea

270 lbs	Stacking				Non Uph		
400	Arm less		Armless		$110.00		
400	Ships 6 per box		With Arms		$129.00		

Non 24/7 Seating 40hr work week

Cynthia

CY-001-WL

W	D	H	SH	SW	SD
32	31	33	17.5	23	19.5

CY-003-WL

W	D	H	SH	SW	SD
57	31	33	17.5	45	19.5

CY-004-WL

W	D	H	SH	SW	SD
72	31	33	17.5	68	19.5

Black, Beige, Red and Blue stitching available

maple | walnut | honey cherry | auburn cherry | mahogany | espresso

Customer's Own Finish. Leaving the creativity up to you.

Provide us with a color chip or wood sample and we'll match your finish at no additional charge.

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MILLER at WORK

Cynthia

Club Chair						Fabric	COM / COL Vinyl	Leather
CY-001-WL	Wooden Legs			300 lbs		$845.00	$1,040.00	$1,885.00

Love Seat						Fabric	COM / COL Vinyl	Leather
CY-002-WL	Wooden Legs			850 LBS		$1,235.00	$1,560.00	$2,730.00

Sofa						Fabric	COM / COL Vinyl	Leather
CY-003-WL	Wooden Legs			950 lbs		$1,560.00	$1,930.00	$3,770.00
Accessories:		Embroidery Setup	$120.00					
		Embroidery logo ea chair	$80.00					

Prices do not included shipping cost/FOB High Point, NC

** Must specify hard floor or soft floor casters for chairs**

Frame Construction made with hardwoods and plywood, with lifetime warranty. Foam Warranty 5 years. Upholstery not included.

Non 24/7 Seating 40hr work week

Philo

Black, Beige, Red and Blue stitching available

	W	D	H	SH	SW	SD
CLUB PH-001	32	31	33	17.5	23	19.5
LOVE SEAT PH-004	57	31	33	17.5	45	19.5
SOFA PH-005	72	31	33	17.5	68	19.5

Finish Options

maple | walnut | honey cherry | auburn cherry | mahogany | espresso

Customer's Own Finish. Leaving the creativity up to you.

Provide us with a color chip or wood sample and we'll match your finish at no additional charge.

Philo

Club Chair	NON 24/7 Seating					Fabric	COM / COL Vinyl	Leather
PH-001-WL	Wooden Legs			300 lbs		$845.00	$1,040.00	$1,885.00
PH-001WLWT	Wooden Legs	Wooden Tablet		300 lbs		$986.66	$1,186.66	$2,053.32
PH-001-CST-BP	Front casters	Back Pull		300 lbs		$986.66	$1,186.66	$2,053.32
PH-001-ML	Metal Alum. Legs			300 lbs		$986.66	$1,186.66	$2,053.32
PH-001-4CST	Four Casters			300 lbs		$986.66	$1,186.66	$2,053.32
PH-006	OTTOMAN					$520.00	$550.00	$960.00

Love Seat	NON 24/7 Seating					Fabric	COM / COL Vinyl	Leather
PH-003-WL	Wooden Legs			500 lbs		$1,235.00	$1,560.00	$2,730.00
PH-003-ML	Metal Alum. Legs			500 lbs		$1,235.00	$1,560.00	$2,730.00

Sofa	NON 24/7 Seating					Fabric	COM / COL Vinyl	Leather
PH-004-WL	Wooden Legs			950 lbs		$1,560.00	$1,930.00	$3,770.00
PHL-004-ML	Metal Alum. Legs			950 lbs		$1,560.00	$1,930.00	$3,770.00

Accessories:		
	Embroidery Setup	$120.00
	Embroidery logo ea chair	$80.00

Frame Construction made with hardwoods and plywood, with lifetime warranty. Foam Warranty 5 years. Upholstery not included.

Prices do not included shipping cost/FOB High Point, NC

** Must specify hard floor or soft floor casters for chairs**

Non 24/7 Seating 40hr work week

Dorothy

DO-001

W	D	H	SD	SH	SW
40	35	37	21	20	20

DO-002

W	D	H	SD	SH	SW
62	35	37	21	20	42

DO-003

W	D	H	SD	SH	SW
83	35	37	21	20	63

maple | walnut | honey cherry | auburn cherry | mahogany | espresso

Black, Beige, Red and Blue stitching available

Customer's Own Finish. Leaving the creativity up to you.

Provide us with a color chip or wood sample and we'll match your finish at no additional charge.

Dorthy

Club Chair	NON 24/7 Seating					Fabric	COM / COL Vinyl	Leather
DO-001-WL	Wooden Legs			300 lbs		$845.00	$1,040.00	$1,885.00

Love Seat	NON 24/7 Seating					Fabric	COM / COL Vinyl	Leather
DO-002-WL	Wooden Legs			850 LBS		$1,235.00	$1,560.00	$2,730.00

Sofa	NON 24/7 Seating					Fabric	COM / COL Vinyl	Leather
DO-003-WL	Wooden Legs			950 lbs		$1,560.00	$1,930.00	$3,770.00
Accessories:		Embroidery Setup	$120.00					
		Embroidery logo ea chair	$80.00					

Prices do not included shipping cost/FOB High Point, NC

** Must specify hard floor or soft floor casters for chairs**

Frame Construction made with hardwoods and plywood, with lifetime warranty. Foam Warranty 5 years. Upholstery not included.

Non 24/7 Seating 40hr work week

Z eno

300 lbs Chair

Zeno

Logo included no upcharge

300 lbs series

					Fabric	COM/COL Vinyl	Leather
5000	XL Recliner		300 lbs		$2,112.50	$2,362.50	$3,125.00

5000 Heavy Duty Recliner
Shown in Dillon Black
BH from seat: 30”
Seat Depth: 22.5”
Seat Width: 23”
Overall Size:
33” Deep
40” Wide
42” Tall

Non 24/7 Seating 40hr work week

Z eno

300 lbs Chair

Zeno

Logo included no upcharge

300 lbs series

					Fabric	COM/COL Vinyl	Leather
5000	XL Recliner		300 lbs		$2,112.50	$2,362.50	$3,125.00

5000 Heavy Duty Recliner
Shown in Dillon Black
BH from seat: 30"
Seat Depth: 22.5"
Seat Width: 23"
Overall Size:
33" Deep
40" Wide
42" Tall

Non 24/7 Seating 40hr work week

24/7 Intensive use Seating

What's in a model number?

Here at Miller at Work we have a specific way of doing our model numbers so that it makes it easier for customers to understand.
The first 3 to 4 digits of the model number is the actual model number for the chair, the next two digits are to specify the arms, the next two digits specify the base, the next two digits specify the mechanism and the last two digits are the width of the seat.

Example:

Model# of chair ⟶ **697-16-8-31-21** ⟵ Seat Width

Arm Base Mechanism

Bases

5 Prong heavy duty low profile black base #2

Heavy Duty 6 prong black base #3

5 Prong heavy duty low profile polished aluminum base #8

Arms

#16 Height and Width adjustable sliding arm (Gel Arm Pad slides front to back)

#15 Fixed T-Arm

#16 Height adjustable and arm pad slides front to back (All mesh seats only)

Mechanisms

***Multifunction Mech:** #31
7 Position control

1) Fingertip height adjustment
2) Forward tilt seat adjustment
3) Level seat angle
4) Backward seat angle adjustment
5) Side mounted tension control activation rotating wheel
6) Forward tilt back angle adjustment
7) Back tilt backward adjustment with infinite lock

***Advanced Control:** #32

1) 2 to 1 knee tilt
2) Back is independent from seat
3) Back locks in upright position or free float
4) Tension Control

***Tank Only:** #34

1) Swivel only

***Rocking Mech:** #35

1) Knee tilt
2) Infinite angle lock
3) Side mounted tension control
4) Seat depth adjustment

***Synchro Tilt:** #36

1) Infinite lock
2) Side mount tension control

Felix

600 lbs Chair

6000-15-3-34-23 Medium Back
BH from seat: 26.75”
Seat Height from floor: 16” - 20”
Seat Depth: 19”
Seat Width: 23”
(will accommodate a 6’1” person)
Shown in Lipstick

6001-15-3-34-23 High Back
BH from seat: 29.5”
Seat Height from floor: 16” - 20”
Seat Depth: 19”
Seat Width: 23”
(will accommodate a 6’6” person)
Shown in Lipstick

No charge on all Felix Chairs for Custom Embroidered Logos

- Family owned business - made in High Point, NC.
- Ships fully assembled.
- Lifetime warranty on frame construction, heavy duty 3/8” tempered steel J - Bar.
  Normal wear and tear on upholstery is not covered under warranty.
- 3 year warranty on HD Gas Cylinder, arm mechanism, chair mechanism, base and foam.
- 6 prong heavy duty base standard.
- 75mm HD casters standard.
- PVC free / Bleach cleanable (only applicable on Vinyls).
- **Kool Memory Foam** in all cushions.
  - Mechanism:
    600 lbs heavy duty Swivel & Height adjustable only, 3 year warranty.
    No Tilting Mechanism
- Optional arms:
  #18 - Fixed T-Arm
  - High back standard with neck roll cushion & lumbar pillow. (Felix chairs only)
  - Medium and low back standard with lumbar pillow. (Felix chairs only)
- **2 million product liability insurance per incident.**

Max Miller
maxmiller@mawhp.com
336-964-5490

50% deposit, Net 15
Prepaid in full, get a 2% discount

Place orders at orders@mawhp.com
Kool Foam standard on all 24/7 models

Felix

Logo included no upcharge

600 lbs series	24/7 Seating		Arms		Fabric	COM/COL Vinyl	Leather
6000-15-3-34-23	Medium back	Swivel & Height Adj. Only	Fixed Arm Height	Will accom. a 4'8"-6'0" person	$2,650.00	$2,850.00	$3,350.00
6001-15-3-34-23	High Back	Swivel & Height Adj. Only	Fixed Arm Height	Will accom. up to a 6'6" person	$2,850.00	$3,050.00	$3,550.00

Enhancements:				
Long Slip Cover w/ or w/logo	$100.00	Seat slip cover	$56.00	
Lumbar Pillow	$84.00	Back Slip Cover	$56.00	
Neck Roll Cushion	$65.00	T-Arm Cap Vinyl Cover per pair	$50.00	
Bumper guard (Back bumper guard)(suffix -BG)	$100.00	No Arms specify in model# -0-	-$25.00	
Casters each	$5.00	Kool Foam Seat Pads (blk fabric)	$48.00	
specify 75 or 55 mm carpet or solid flooring	N/C	Kool Foam Back Pads (blk fabric)	$65.00	
Black, Red and Beige stitching available must specify	N/C	Bumper Guard -BG	$80.00	

Prices do not included shipping cost/FOB High Point, NC

All 24/7 chair ships fully assembled

Leather - clean with soap and water, then use a leather conditioner 3 times a year to keep supple

Warranty: 3 years on gas cylinder, Lifetime on base, arm metal structure. No warrant on seat foam.

Kool Foam Seat and Back pads standard on 600lb Felix.

MILLER at WORK

Felix

Shown with neck roll cushion and lumbar pillow. Standard at no upcharge on high back chair.

500 lbs Chair

Both shown with lumbar pillow standard.

699-20-3-32-21
BH from seat 29.5”
Seat Height from floor: 16” - 20”
Adjustable Seat Depth: 17” - 19.5”
Seat Width: 21”
(will accommodate a 6’6” person)
Shown in Dillon Luggage

698-20-3-32-21
BH from seat 26.75”
Seat Height from floor: 16” - 20”
Adjustable Seat Depth: 17” - 19.5”
Seat Width: 21”
(will accommodate a 6’1” person)
Shown in Dillon Cordovan

697-20-3-32-21
BH from seat 24”
Seat Height from floor: 14” - 18”
Adjustable Seat Depth: 17” - 19.5”
Seat Width: 21”
(will accommodate a 4’10” - 5’ 4”person)
Shown in Dillon Fiesta

500 lbs Chair

Both shown with lumbar pillow standard.

799-20-3-32-23 High Back
BH from seat: 29.5”
Seat Height from floor: 16” - 20”
Seat Depth: 19”
Seat Width: 23”
(will accommodate a 6’6” person)
Shown in Dillon Thunder

798-20-3-32-23 Medium Back
BH from seat: 26.75”
Seat Height from floor: 16” - 20”
Seat Depth: 19”
Seat Width: 23”
(will accommodate a 6’1” person)
Shown in Dillon Apple Sage

797-20-3-32-23 - Low Back
BH from seat: 24”
Seat Height from floor: 16” - 20”
Seat Depth: 19”
Seat Width: 23”
(will accommodate a 4’10” to 5’4” person)
Shown in Dillon Lipstick

No charge on all Felix Chairs for Custom Embroidered Logos

- Family owned business - made in High Point, NC.
- Ships fully assembled.
- Lifetime warranty on frame construction, heavy duty 3/8” tempered steel J - Bar.
  Normal wear and tear on upholstery is not covered under warranty.
- 5 year warranty on HD Gas Cylinder, arm mechanism, chair mechanism, base and foam.
- 6 prong heavy duty base optional with upcharge.
- 60mm HD casters standard, 75mm optional, no upcharge.
- PVC free / Bleach cleanible (only applicable on Vinyls).

- **Kool Memory Foam** in all cushions.
- Mechanisms available:
  500 lbs heavy duty synchro tilt with 5 year warranty. (Advanced control)
- Optional arms:
  #19 Height and Width adjustable heavy duty arm.
  #20 Fixed reinforced steel heavy duty arm.

High back standard with neck roll cushion & lumbar pillow. (Felix chairs only)
Medium and low back standard with lumbar pillow. (Felix chairs only)

- **2 million product liability insurance per incident.**

Max Miller
maxmiller@mawhp.com
336-964-5490

50% deposit, Net 15
Prepaid in full, get a 2% discount

Place orders at orders@mawhp.com

Kool Foam standard on all 24/7 models

Felix

Logo, Neck & Lumbar cushions included no upcharge

500 lbs series	24/7 Seating		Arms		Fabric	COM/COL Vinyl	Leather
697-20-3-32-21	Low back	Advanced Control	Fixed	Will accom. a 4'8"-5'8" person	$1,415.00	$1,572.50	$1,750.00
698-20-3-32-21	Medium back	Advanced Control	Fixed	Will accom. a 4'8"-6'0" person	$1,488.50	$1,650.00	$1,850.00
699-20-3-32-21	High back	Advanced Control	Fixed	Will accom. up to a 6'6" person	$1,656.50	$1,824.50	$1,950.00
700-20-3-32-21	Ex. Tall back	Advanced Control	Fixed	Will accom. up to a 6'10" person	$1,908.50	$1,992.50	$2,050.00

Felix

Kool Foam standard on all 24/7 models

500 lbs series	24/7 Seating		Arms		Fabric	COM/COL Vinyl	Leather
797-20-3-32-23	Low back	Advanced Control	Fixed	Will accom. a 4'8"-5'8" person	$1,672.50	$1,750.00	$1,950.00
798-20-3-32-23	Medium back	Advanced Control	Fixed	Will accom. a 4'8"-6'0" person	$1,777.50	$1,830.00	$2,000.00
799-20-3-32-23	High back	Advanced Control	Fixed	Will accom. up to a 6'6" person	$1,882.50	$1,950.00	$2,050.00
800-20-3-32-23	Ex. Tall back	Advanced Control	Fixed	Will accom. up to a 6'10" person	$2,145.00	$2,150.00	$2,350.00

Enhancements:				
Long Slip Cover w/ or w/logo	$100.00	Seat slip cover	$56.00	
Lumbar Pillow	$84.00	Back Slip Cover	$56.00	
Neck Roll Cushion	$65.00	#19 & # 20 arm pad (ea pari)t	$24.00	
Bumper guard (Back bumper guard))	$80.00	No Arms specify in model# -0-	-$25.00	
specify 75 or 55 mm carpet or solid flooring	N/C	Kool Foam Seat Pads (blk fabric)	$48.00	
Black, Red, Blue & Beige stitching available must specify	N/C	Kool Foam Back Pads (blk fabric)	$65.00	
Dispatcher of the year slip cover (specify which chair)	$120.00	Casters each	$5.00	
Dispatcher of the month slip cover (specify which chair)	$120.00	#19 arm H/W adjustable	$75.00	

Prices do not included shipping cost/FOB High Point, NC
All 24/7 chair ships fully assembled*
Leather - clean with soap and water, then use a leather conditioner 3 times a year to keep supple

Chair shownbwith Kool Foam Seat Pad

Black, Beige, Red and Blue stitching available

The Tank

674-9-3-34-21

270 lbs Chair

680-19-8-34-21

Dillon Thunder

350 lbs Chair

675-19-2-34-21

W - 30”
D - 24”
H - 47” - 58”
SW - 21”
SD - 19”
SH - 24” - 35”

Shown in Dillon Luggage

500 lbs Chair

6 prong heavy duty base standard with no upcharge

696-19-3-34-23

W - 30”
D - 24”
H - 47” - 58”
SW - 23”
SD - 19”
SH - 24” - 35”

Shown in Dillon Thunder both chairs

695-19-3-34-23

- Heavy Duty foot ring (Life time warranty)
- Heavy duty black metal 28” base width
- 75mm casters
- Swivel Only
- Pneumatic Lift
- Height and width adjustment on arms
- Maximum weight limit - 270lbs, 350 lbs & 500 lbs
- Lifetime Warranty on plywood frame, molded foam seat, back and foot ring, heavy duty 3/8” tempered steel J - Bar, arm mechanism, metal base & casters.
- 10 year warranty on mesh back option, HD Gas Cylinder

Max Miller
maxmiller@mawhp.com
336-964-5490

50% deposit, Net 15
Prepaid in full, get a 2% discount

Place orders at orders@mawhp.com

Kool Foam standard on all 24/7 models

The Tank

	24/7 Seating		Arms			Fabric	COM/COL Vinyl	Leather
674-19-3-34-21	***Low / Mesh Back / Uph seat***	Swivel & Height Adj. Only	HD H&W	270 lbs		$950.00	$1,000.00	$1,100.00
675-16-3-34-21-M	***Low / Uph Back / Mesh seat***	Swivel & Height Adj. Only	HD H&W	350 lbs		$1,205.00	$1,410.00	$1,545.00
675-19-3-34-21	Low / Uph. back	Swivel & Height Adj. Only	HD H&W	350 lbs		$1,205.00	$1,410.00	$1,620.00
680-19-3-34-21	Low / Mesh back	Swivel & Height Adj. Only	HD H&W	350 lbs		$1,100.00	$1,310.00	$1,567.50
695-19-3-34-23	Low / Uph. back	Swivel & Height Adj. Only	HD H&W	500 lbs		$1,362.50	$1,467.50	$1,725.00
696-19-3-34-23	Low / Mesh back	Swivel & Height Adj. Only	HD H&W	500 lbs		$1,310.00	$1,415.00	$1,672.00

Enhancements:				
	On time Embroidery Setup	$120.00	Seat slip cover	$56.00
	Embroidery logo ea chair	$80.00	Back Slip Cover	$56.00
	Casters each	$5.00	Bumper guard (suffix -BG)	$80.00
	specify 75 or 55 mm carpet or solid flooring	N/C	Arm Pad 16 arm (per pair)	$30.00
	Hard Floor Locking Casters ea. (not sitting)	$5.00	No Arms specify in model# -0-	-$25.00
	Hard Floor Locking Casters ea. (sitting)	$5.00	Kool Foam Seat Pads	$48.00
	Dispatcher of the year slip cover (specify which chair)	$120.00	19 & 20 arm pads per pair	$24.00
	Dispatcher of the month slip cover (specify which chair)	$120.00	#20 fixed arm available not on mesh	N/C

Prices do not included shipping cost/FOB High Point, NC

All 24/7 chair ships fully assembled

***Floor glides availabe -GL at end of model # ***

Leather - clean with soap and water, then use a leather conditioner 3 times a year to keep supple

*5 year warranty on all parts except upholstery.
Lifetime warranty on frame construction, footring & base*

MILLER at WORK

24/7 Intensive use Seating

5 year warranty

Shown with optional neck roll and lumbar cushion

270 lbs Chair

3098-19-3-36-21
User size 5’4” - 5’10”
Maximum weight: 270 lbs
Seat Height from floor: 16” - 20”
Seat Depth: 16” - 18.5”
Seat Width: 21”
Dillon Balsa

3095-19-3-36-21-HR
User size 5’4” - 5’10”
Maximum weight: 270 lbs
Seat Height from floor: 16” - 20” (with headrest add 6”)
Seat Depth: 16” - 18.5”
Seat Width: 21”
Dillon Lipstick

4195-16-3-36-21-HR
User size 5’4” - 5’10”
Maximum weight: 270 lbs
Seat Height from floor: 16” - 20” (with headrest add 6”)
Seat Depth: 16” - 18.5”
Seat Width: 21”
All Mesh

ALL MESH

24/7 Intensive use Seating

Max Miller
maxmiller@mawhp.com
336-964-5490

50% deposit, Net 15
Prepaid in full, get a 2% discount

Place orders at orders@mawhp.com
Kool Foam standard on all 24/7 models

Logo included no upcharge

Marcella

	24/7 Seating		Arms			Fabric	COM/COL Vinyl	Leather
3095-19-3-36-21		Synchro Tilt	HD H&W	270 lbs	Mesh back/Uph seat	$1,395.00	$1,425.00	$1,572.00
3096-19-3-36-23		Synchro Tilt	HD H&W	270 lbs	Mesh back/Uph seat	$1,445.00	$1,475.00	$1,600.00
3097-19-3-36-21	Low Back	Synchro Tilt	HD H&W	270 lbs	Fully Upholstered	$1,500.00	$1,550.00	$1,700.00
3097-16-3-36-21-M	Low Back	Synchro Tilt	H&W- Sliding	270 lbs	Uph Back / Mesh seat	$1,500.00	$1,550.00	$1,700.00
3097-19-3-36-23	Low Back	Synchro Tilt	HD H&W	270 lbs	Fully Upholstered	$1,550.00	$1,650.00	$1,800.00
3098-19-3-36-21	Medium Back	Synchro Tilt	HD H&W	270 lbs	Fully Upholstered	$1,550.00	$1,600.00	$1,800.00
3098-16-3-36-21-M	Medium Back	Synchro Tilt	H&W- Sliding	270 lbs	Uph Back / Mesh seat	$1,550.00	$1,600.00	$1,800.00
3098-19-3-36-23	Medium Back	Synchro Tilt	HD H&W	270 lbs	Fully Upholstered	$1,600.00	$1,650.00	$1,850.00
3099-19-3-36-21	High Back	Synchro Tilt	HD H&W	270 lbs	Fully Upholstered	$1,600.00	$1,700.00	$1,900.00
3099-16-3-36-21-M	High Back	Synchro Tilt	H&W- Sliding	270 lbs	Uph Back / Mesh seat	$1,600.00	$1,700.00	$1,900.00
3099-19-3-36-23	High Back	Synchro Tilt	HD H&W	270 lbs	Fully Upholstered	$1,650.00	$1,750.00	$1,900.00
						All Mesh		
4195-16-3-36-21		Synchro Tilt	H&W- Sliding	270 lbs	All Mesh	$1,125.00		

Enhancements:				
	Black, Red, Blue & Beige stitching available must specify	N/C	Arm Pad 16 arm (per pair)	$30.00
	Large Neck Roll Cushion	$75.00	Mesh Headrest (Suffix -HR)	$100.00
	Smaller Neck Roll Cushion	$65.00	Lumbar Pillow	$85.00
	Back Slip Cover for Logo ea. Chair	$85.00	No Arms specify in model# -0-	-$25.00
	On time Embroidery Setup for Back Slip Cover	$120.00	Kool Foam Seat Pads (blk fabric)	$60.00
	specify 75 or 55 mm carpet or solid flooring	N/C	Kool Foam Back Pad (blk fabric)	$75.00
	Dispatcher of the year slip cover (specify which chair)	$120.00	Casters each	$5.00
	Dispatcher of the month slip cover (specify which chair)	$120.00	Bumper Guard -BG	$80.00

Prices do not included shipping cost/FOB High Point, NC
All 24/7 chair ships fully assembled
Leather - clean with soap and water, then use a leather conditioner 3 times a year to keep supple

5 year warrantly on all parts except upholstery

*Height adjustable back, *

3095-19-3-36-21-HR-Lumbar pillow

Black, Beige, Red and Blue stitching available

Marcella chair shown with logo on slip cover

24/7 Intensive use Seating

Maxine

881-16-3-36-21 Medium Back
Shown in All Mesh
Seat Height from floor: 16" - 20"
Seat Depth: 18"
Seat Width: 21"
(will accommodate a 5'9" person)

Shown with optional headrest

880-19-3-36-21 Medium Back
Shown in Dillon Nimbus
Seat Height from floor: 16" - 20"
Seat Depth: 18"
Seat Width: 21"
(will accommodate a 5'9" person)

Maxine

270 lbs series

	24/7 Seating				Fabric	COM/COL Vinyl	Leather
880-19-3-36-21	Mesh Back Uph. Seat	Synchro Tilt	270 lbs	accommodates up to 5'9"	$950.00	$1,000.00	$1,100.00
					Mesh only		
881-16-3-36-21	Mesh back and seat	Synchro Tilt	270 lbs	accommodates up to 5'9"	$975.00		
Enhancements:		Vinyl Optional Head rest both model #'s	$100.00				

Prices do not included shipping cost/FOB High Point, NC

All 24/7 chair ships fully assembled

Leather - clean with soap and water, then use a leather conditioner 3 times a year to keep supple

5 year warrantly on all parts except upholstery

***New lumbar pillow included no upcharge**

commend

SECURITY AND COMMUNICATION

for People, Buildings and Assets.

COMMEND INTERCOM LANDSCAPE

COMMEND provides communication with a system: solutions designed and manufactured with people and the environment in mind. The COMMEND product portfolio covers every Intercom need, from simple point-to-point intercom systems to complex integrated solutions. COMMEND's building-block design concept ensures that all of the various security systems like CCTV, Access Control, Mobile Radio etc. combine to form a single, easy-to-use-and-manage platform.

Intercom Terminals

Commend manufactures Intercom terminals for every application and environment – including, for example, stations with anti-bacterial surfaces for hospitals, vandal resistant help points for subway stations, and vigorously robust units with explosion-proof certification for the petrochemical industry.

Wallmount Stations

Membrane Protected Stations

Vandal Resistant Emergency Call Stations

Vandal Resistant Stations

Intercom Stations with touch screen

Stations for people with visual and hearing impairments

Intercom Modules for Customer Specific Stations

Desktop Stations

Detention Cell Terminals

Door Stations and Access Control Modules

Stations for Ex Zones

Stations for Industrial Environments

Intercom Control Systems

Control Desk systems by Commend provide a continuous system-wide overview to support instant reaction in case of an emergency. Even the most complex Intercom networks or video and control functions can be handled with ease, thanks to the clearly structured Commend solution user interfaces for CONDUCTOR and DUETTO.

Control Desk solutions

Intercom Server

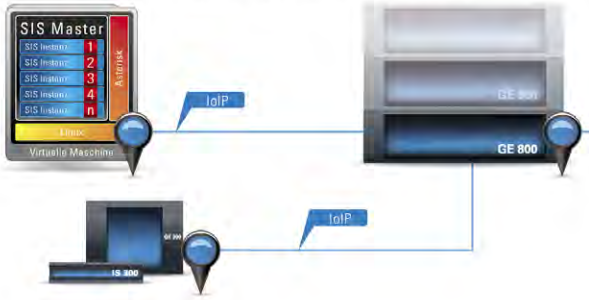
The Commend Hardware and Software Intercom Servers (SIS) form the core element of our Intercom solutions. As dedicated "audio specialists" and interface managers the Servers integrate seamlessly into security systems to give them a strong, reliable voice.

Software Intercom Terminals

Commend's Software Intercom Terminal transforms regular Smartphones, Tablets or regular Windows-based PCs into Intercom Stations and gets Intercom communication mobile.

Local Networking

Hardware-based Intercom Servers can easily be networked locally via a variety of different technologies. Upgrading the number of plug-in slots allows for easy installation of additional subscriber, interface and input/output cards. Software Intercom Servers can be upgraded with licenses and it takes only a few clicks to add extra instances (subscribers and functions). What is more, software-based and hardware-based Servers can be linked together via IP network connections.



Configuration and Remote Maintenance

The Intercom systems can be configured and maintained either from within their own data network or remotely via connections over the Internet.

System diagnostics, adding additional features and extending system capacity is easily provided and is achieved remotely on a software license basis.

Software Intercom Control Systems

What has happened? Where and when has it happened? How can one help the caller? STUDIO provides the necessary information within a single, uniform software application. All Control Desk functions of the Intercom Server support interactive on-screen visualisation.

Control Desk Management – STUDIO

ICX Protocol

InterCom eXchange protocol (ICX) provides a standard, open protocol for communication between Intercom Servers, Commend software applications and other third party systems.

Worldwide Networking

IP connections (LAN/WAN) enable worldwide multi-site networking for communication in Commend's trademark high quality. Up to 30,000 subscribers can communicate within these networks.

Standard Interfaces

Commend Intercom systems support widely available standards such as OPC, SIP, TETRA, as well as a large number of existing and well-proven interfaces to third-party systems.

Custom Interfaces

Implementing custom tailored audio, data and video interfaces is no problem either. Supported options range from the use of simple signal contacts for control and messaging purposes to the full integration of third-party systems.

Public Address and Induction Loop Amplifiers

Advanced networking technologies and unique functions such as IVC (Intelligent Volume Control) are the hallmark of the Commend Amplifier and IP Loudspeaker series. They are designed for universal use in applications up to complex Public Address and Intercom solutions.

Actual distance: 3,935 km // Felt distance: 1 m

A natural communication experience as
loud and crystal clear as a face-to-face conversation...
...made possible by a Commend Intercom system.

22:47
UTC +10 h

Incoming call from a car park in Perth.
A customer is having difficulties paying
with her credit card at the exit gate.

22:48
UTC +10 h

The call centre agent responds to
the request by talking the customer
through the payment process, then
wishes her a nice evening.

Perth

Sydney

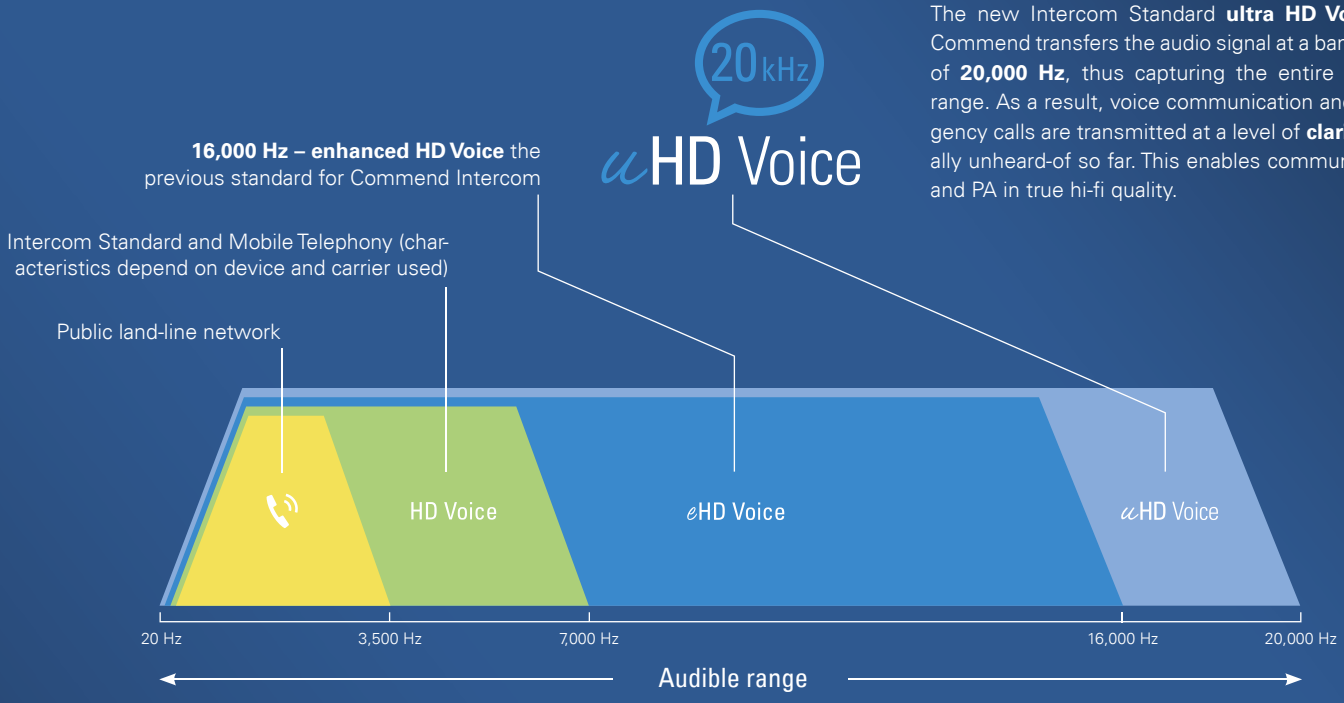
Discover the outstanding
Audio Technology from Commend

audio.commend.com

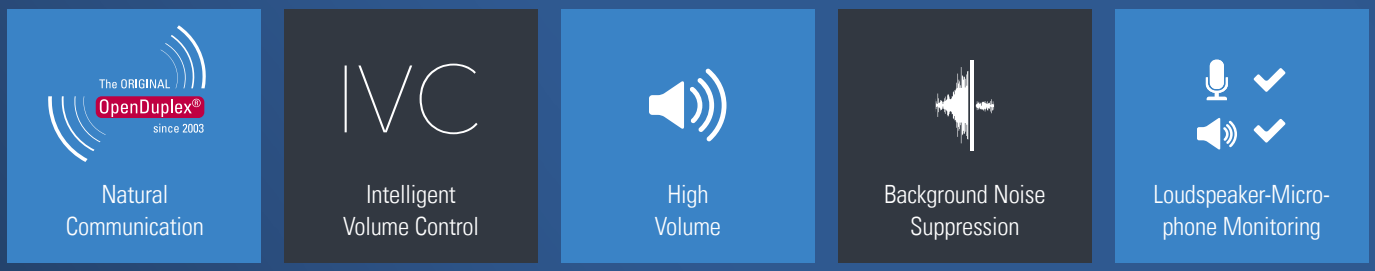
ULTIMATE SPEECH INTELLIGIBILITY IN ANY SITUATION

Since its foundation over 40 years ago, Commend has been researching and perfecting the speech quality of its systems to provide customers and users with the highest possible speech intelligibility even under the harshest conditions.
In the multi-faceted world of Intercom acoustics, everything down to the smallest influencing factor is taken into consideration when it comes to perfecting acoustic qualities – from basic physical sound properties to signal processing and the selection of individual electronic components.

In doing so, Commend keeps extending the technical frontier. **Passion for Audio by Commend**



The new Intercom Standard **ultra HD Voice** by Commend transfers the audio signal at a bandwidth of **20,000 Hz**, thus capturing the entire audible range. As a result, voice communication and emergency calls are transmitted at a level of **clarity** literally unheard-of so far. This enables communication and PA in true hi-fi quality.



Audio Facts

- **OpenDuplex®** – Commend Standard for **natural conversation** experience since 2003 – simultaneous loud speaking and listening.
- **STI (Speech Transmission Index) 0.96** – measured under acoustic laboratory conditions; STI is a standard measure for speech intelligibility. It has a possible maximum value of 1.00, which corresponds to perfect intelligibility.
- Clear voice transmission at **high volumes** with **intelligent volume control (IVC)** to ambient noise conditions.
- Dynamic **background noise suppression** virtually eliminates all ambient noise.
- **Loudspeaker/microphone monitoring** – ensures the availability of the Intercom station while reducing the need for manual verification of its functionality.
- **Audio Monitoring** – user security with support for fully automated system actions (e. g., emergency call) at defined noise levels
- **Public Address functions**
- **Audio recording** and **lip synchronous Audio/Video recording** of conversations for documentation and evidence keeping purposes.
- **Peer2Peer Audio** reduces network and server load to ensure efficient use of resources.
- **Conference Call function** for simultaneous talking with multiple conversation partners.
- **Speech activity detection** senses when calls are finished (no microphone signal) and terminates the connection automatically.
- **Simplex mode** for applications requiring controlled communication – e.g., security solutions based on the 'push-to-talk/release-to-listen' method.
- **Equalizer** for fine-tuning Intercom stations to ambient acoustic conditions.

INTERCOM TERMINALS

A CONCERT OF SECURITY AND EFFICIENCY

The new Commend Concerto Series. Security meets Aesthetics.

Commend's performance and perfection are set to raise security communication to a new level of a superior concert experience. Concerto Intercom stations, the world's first Intercom stations with "Emergency Mode", bring together security, communication, design and functionality to provide the best of all worlds. The devices come fully equipped to support your daily work and, most importantly, to ensure security in crisis situations. Whatever their stage, the digital guardians from Commend always stay on top of things and excel with a leading performance in everyday situations and in case of an emergency.

Crystal clear sound

Two loudspeakers and high-quality audio technology ensure a perfect listening and speaking experience with up to 20 kHz speech quality.

Straightforward communication

without interfering background noise, thanks to two concealed digital MEMS microphones, which enhance the voice sound to ensure perfect speech intelligibility.

Design and quality

Made from carefully chosen high-quality materials, the Intercom stations are equally suited for mounting on a wall or placing on a desktop.

In an emergency, every second counts

The stations' Emergency Mode provides instant information, relevant data and helpful functions to enable fast, decisive action.

Always ready for action

Built-in motion sensors enable the stations to react rapidly in a variety of ways, e.g., by displaying information graphics or playing back voice messages.

Cybersecure

Effective protection of IT infrastructures from digital and physical cyber attacks.

SECURITY AND FUNCTIONALITY IN PERFECT HARMONY

concerto by commend

OUTDOOR STATIONS WITH TOUCH SCREEN – SERIES OD10

Key features:

- Suitable for outdoor and indoor use
- IP 65 and IK 07 rating
- High-quality front panel made from 3 mm hardened glass
- Bright 10-inch multi-touch display
- With built-in colour video camera
- Installation kits for flush and surface mounting, with interlocking mechanism
- Emergency Mode provides helpful functions to enable fast, decisive action
- OpenDuplex® for natural, hands free communication with high volume
- Crystal clear uHD Voice speech quality
- Continuous line and function self-monitoring
- Easy add-on options via USB port

Technical specifications: Two digital MEMS microphones; 2.5 W Class-D amplifier; two 8 Ω loudspeakers with special membrane; PoE+ (IEEE 802.3at/Class 4); two USB ports.

OD10 TDCM

20 kHz | IP 65 | SIP

Multi-functional Intercom Station suitable for outdoor use with brilliant 10-inch touch screen with 800 × 1280 pixel resolution.

IP-based web video camera (140° horizontal angle, 104° vertical angle), high-luminosity aperture, max. resolution 1280 × 960 pixels (1.2 megapixels), H.264 and Motion JPEG (MJPEG) video streams, frame rate 30 pictures/second.

Dimensions when flush mounted: W 175 mm, H 325 mm, D 20 mm 3,000 g
Dimensions when surface mounted: W 175 mm, H 325 mm, D 40 mm

INDOOR STATIONS WITH TOUCH SCREEN – SERIES ID5

Key features:

- Suitable for desktop use and wall mounting
- High-quality front panel made from high quality glass, with loudspeaker grill made from high-grade steel, set in an aluminium bezel
- Bright 5-inch multi-touch display
- Optionally available with built-in colour video camera
- Installation kits for flush and surface mounting, with interlocking mechanism
- OpenDuplex® for natural, hands free communication with high volume
- Crystal clear uHD Voice speech quality
- Continuous line and function self-monitoring
- Easy add-on options via USB port

Technical specifications: Two digital MEMS microphones; 2.5 W Class-D amplifier; two 8 Ω loudspeakers with special membrane; power supply via PoE (IEEE 802.3af); two USB ports.

ID5 TDCM

20 kHz | IP 40 | SIP

Multi-functional Indoor Station, brilliant 5-inch touch with 720 × 1280 pixel resolution, and integrated wide-angle colour video camera.

IP-based web video camera with wide viewing angle (128° horizontal angle, 96° vertical angle), high-luminosity aperture, max. resolution 960 × 1280 pixels (1.2 megapixels), H.264 and Motion JPEG (MJPEG) video streams, frame rate 30 pictures/second.

Dimensions when flush mounted: W 86 mm, H 228 mm, D 11 mm
Dimensions when surface mounted: W 86 mm, H 228 mm, D 31 mm

ID5 TD

20 kHz | IP 40 | SIP

Multi-functional Indoor Station, brilliant 5-inch touch with 720 × 1280 pixel resolution.

Dimensions when flush mounted: W 86 mm, H 228 mm, D 11 mm
Dimensions when surface mounted: W 86 mm, H 228 mm, D 31 mm

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ACCESSORIES FOR SERIES CONCERTO

Power Injector PA 25W POE-DC

Power adaptor for external power supply; optimised for installation with Surface-Mount Kit WSSH 50V or Flush-Mount Kit WSFB 50V; connects to Intercom station via Ethernet cable; input range 24 – 48 V AC ±20%; conforms to IEEE 802.3af/at.

W 34,5 mm, H 130 mm, D 20 mm 80 g

Input/Output Module EB3E2A-AUD

I/O add-on module for the Intercom Station: adds three inputs as floating contacts and two relay outputs, as well as connection ports for a loudspeaker, microphone, headset and handset; optimised for installation with Surface-Mount Kit WSSH 50V or Flush-Mount Kit WSFB 50V; connects to Intercom station via USB cable.

W 37 mm, H 135 mm, D 17 mm 70 g

IP Secure Connector IP-CON

Optional protect switch box that safeguards your network connection. In case of an unauthorised attempt to remove the Intercom station, the IP Secure Connector will disconnect the Intercom station from the network. As an added benefit, the IP Secure Connector provides an external power source via PoE+ as well as two additional floating inputs and three relay outputs.

W 59 mm, H 262 mm, D 26 mm 415 g

Audio Induction Loop Extension Kit AFIL-USB

IEC 60118-4 compliant induction loop amplifier kit for transmitting Intercom audio signals to hearing aids; Sticker for the station front included; connects to a USB port on the Intercom station.

W 16 mm, H 200 mm, D 12 mm 140 g

USB Output Module EB1A

Relay output (make contact) for retrofitting into Intercom stations of the Indoor Series; connects to a USB port on the Intercom station; colour: black.

Desktop Kit ID5 DKHS

This kit allows Intercom stations from the Indoor Series to be placed conveniently on a desktop. To ensure optimum usability, the ID5-DKHS positions the device at a 45° angle. It comes with a handset that plugs into the USB port on the Intercom station.

W 170 mm, H 174 mm, D 140 mm 800 g

Desktop Kit ID5 DK

This kit allows Intercom stations from the Indoor Series to be placed conveniently on a desktop. To ensure optimum usability, the ID5-DK positions the device at a 45° angle.

W 85 mm, H 67 mm, D 120 mm 280 g

Desktop Kit ID5 DKAD

This kit allows Intercom stations from the Indoor Series to be placed conveniently on a desktop. With the ID5-DKAD, the tilt angle of the Intercom station can be adjusted individually to any setting between 30° and 60°.

W 105 mm, H 85 mm, D 106 mm 164 g

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Surface-Mount Kit OD10 SH

Surface-Mount Kit with anti-tamper contact, made of powder coated sheet steel, for installing Series OD10 Intercom Stations.

W 171 mm, H 323 mm, D 18 mm 1,000 g

Flush-Mount Kit OD10 FB

Flush-Mount Kit made of stainless steel, for installing Series OD10 Intercom Stations.
The wall box is intended for installation in a cavity wall.

W 170 mm, H 322 mm, D 27 mm 1,200 g

Flush-Mount Box OD10 FBS

Wall box made of stainless steel, for installation in brick or concrete walls. To install a Series OD10 Intercom Station, you will also need a Flush-Mount Kit OD10 FB.

W 175 mm, H 328 mm, D 50 mm 1,400 g

Surface-Mount Kit ID5 SH

Surface-Mount Kit made from polycarbonate, for installing Series ID5 Intercom Stations.

W 85 mm, H 228 mm, D 21 mm 130 g

Flush-Mount Kit ID5 FB

Flush-Mount Kit made from polycarbonate, for installing Series ID5 Intercom Stations.
The wall box is intended for installation in a cavity wall.

W 84 mm, H 226 mm, D 60,5 mm 265 g

Flush-Mount Box ID5 FBS

Wall box made from polycarbonate, for installation in brick or concrete walls. To install a Series ID5 Intercom Station, you will also need a Flush-Mount Kit ID5 FB. Colour: red

W 92,5 mm, H 233,5 mm, D 64 mm 165 g

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Perfect industrial communication

Multi-functional main and sub stations for indoor and out door use. Apart from voice and video communication, the stations also allow for the control of other systems. In an in-house training room, for example, the projector can be switched on and off, lights switched on and off and blinds opened and closed – all via a wallmount station.

Applications

- Training and recreation rooms
- Warehouses, workshops and passageways
- Outdoor or door station for works premises or car parks

WALLMOUNT STATIONS – SERIES WS 810P | 800P

Key features:

- Intercom stations with Colour-TFT or Mono-LCD display
- Back-lit standard keypad and function keys
- Resistant polycarbonate construction
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush Mount Kit WSFB 50P and Surface Mount Kit WSSH 50P; Desktop/Wallmount Kit WSDK 50P (for surface mount version only).

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 3 inputs for floating contacts and 2 relay outputs; multi-functional LED // Analogue 4-wire stations: 2 inputs for floating contacts and 2 Open Collector outputs; red call status LED.

WS 810P

16 kHz | IP 66 | IoIP

Wallmount station with Colour-TFT display for graphical menu interface and display of IP based video streams or analogue video signals in PAL or NTSC.

3.5" TFT display; resolution: 320 x 240 pixels; 65,000 colours

WS 810P I	IP – Communication via IoIP

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 920 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

WS 800P

16 kHz | IP 66 | IoIP | SIP | Digital | Analogue

Wallmount station with Mono-LCD display.

Illuminated Mono-LCD display with 128 x 64 pixels.

WS 800P I	IP – Communication via IoIP
SIP-WS 800P	IP – Communication via SIP (7 kHz HD Voice)
WS 800P D	Digital 2-wire
WS 800P A	Analogue 4-wire

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 820 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

WALLMOUNT STATIONS – SERIES WS 200P

Key features:

- Intercom stations with built-in colour video camera
- Illuminated call buttons and label areas
- Resistant polycarbonate construction
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush Mount Kit WSFB 50P and Surface Mount Kit WSSH 50P; Desktop/Wallmount Kit WSDK 50P (for surface mount version only).

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 3 inputs for floating contacts and 2 relay outputs; multi-functional LED // Analogue 4-wire stations: 2 inputs for floating contacts and 2 Open Collector outputs; red call status LED.

WS 200P CM

16 kHz | IP 66 | IoIP

Wallmount station with call buttons, integrated colour video camera with illumination, built-in heater, viewing angle mechanically adjustable horizontally/vertically by 30°.

IP network camera with M-JPEG video format (max. resolution 640 x 480 pixels) or as analogue camera for colour systems PAL or NTSC.

WS 201P I CM	1 call button – IP – Communication via IoIP
WS 203P I CM	3 call buttons – IP – Communication via IoIP

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm
(dimensions do not include 20 mm camera top clearance)
950 g

WS 201P CA

16 kHz | IP 66 | IoIP

Wallmount station with one call button, integrated colour video camera with illumination, viewing angle mechanically adjustable horizontally/vertically by 30°.

Video streams H.264 (MPEG-4 Part 10/AVC) and M-JPEG with max. resolution 1440 x 900 Pixel (1.3 MP); compatible to video components e.g. NVRs; support of video functions like motion detection, recording, etc.

WS 201P I CA	1 call button – IP – Communication via IoIP

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm
(dimensions do not include 20 mm camera top clearance)
950 g

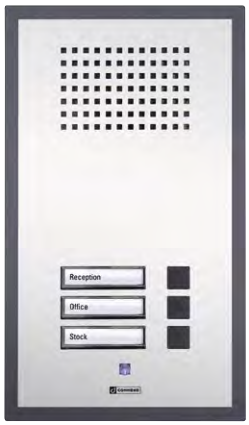
WS 200P

16 kHz | IP 66 | IoIP | SIP | Digital | Analogue

Wallmount station with call buttons.

WS 201P I	1 call button – IP – Communication via IoIP
SIP-WS 201P	1 call button – IP – Communication via SIP (7 kHz HD Voice)
WS 201P D	1 call button – Digital 2-wire
WS 201P A	1 call button – Analogue 4-wire
WS 203P I	3 call buttons – IP – Communication via IoIP
SIP-WS 203P	3 call buttons – IP – Communication via SIP (7 kHz HD Voice)
WS 203P D	3 call buttons – Digital 2-wire

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm
750 g



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Membrane protected Intercom Stations

Sealed surface for even better protection

These Master Stations have been developed to meet the specific needs of medical facilities, clean rooms and light industrial environments. Despite their membrane-sealed surface, they provide convenient, efficient communication with excellent speech quality. What is more, they are fully protected against dust, dirt and water jets. The special membrane on the front panel is dirt-resistant and can be cleaned quickly and easily with regular over-the-counter detergents and disinfectants. The large membrane protected keys are easy to use, even when wearing protective gloves. A built-in amplifier provides the necessary sound volume in areas with high ambient noise levels.

Typical applications

- Light industry (production facilities and workshops)
- Medical environments (operating theatres and laboratories)
- Clean rooms, indoor and outdoor areas

MEMBRANE PROTECTED INTERCOM STATIONS – SERIES WS 810F | 800F

Key features:

- Closed-sealed membrane surface, detergent and disinfectant resistant
- Intercom stations with Colour-TFT or Mono-LCD display
- Resistant polycarbonate construction
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush Mount Kit WSFB 50P and Surface Mount Kit WSSH 50P; Desktop/-Wallmount Kit WSDK 50P (for surface mount version only).

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 3 inputs for floating contacts and 2 relay outputs; multi-functional LED // Analogue 4-wire stations: 2 inputs for floating contacts and 2 Open Collector outputs; red call status LED.

WS 810F

16 kHz | IP 66 | IoIP

Membrane protected wallmount station with Colour-TFT display for graphical menu navigation, caller ID and display of IP based video streams or analogue video signals.

3.5" TFT display; resolution: 320 x 240 pixels; 65,000 colours.

WS 810F I IP – Communication via IoIP

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 920 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

WS 800F

16 kHz | IP 66 | IoIP | SIP | Digital | Analogue

Membrane protected wallmount station with Mono-LCD display.

Illuminated Mono-LCD display with 128 x 64 pixels.

WS 800F I IP – Communication via IoIP

SIP-WS 800F IP – Communication via SIP (7 kHz HD Voice)

WS 800F D Digital 2-wire

WS 800F A Analogue 4-wire

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 820 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

MEDICAL AND CLEAN-ROOM STATIONS – SERIES WS 800F MD

Key features:

- Closed-sealed membrane surface, detergent and disinfectant resistant
- Intercom stations with Colour-TFT or Mono-LCD display
- Resistant polycarbonate construction
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush Mount Kit WSFB 50P and Surface Mount Kit WSSH 50P; Desktop/Wallmount Kit WSDK 50P (for surface mount version only).

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 3 inputs for floating contacts and 2 relay outputs; multi-functional LED

WS 800F MD

16 kHz | IP 66 | SIP | Digital

Membrane protected medical and clean room station with Mono-LCD display and anti-bacterial membrane covered surface.

Illuminated Mono-LCD display with 128 x 64 pixels.

SIP-WS 800F MD	IP – Communication via SIP (7 kHz Voice)
WS 800F D MD	Digital 2-wire – Complies with IEC 60601-1 (2nd Edition)

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 820 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

EXTENSION MODULES FOR SERIES WS

The wallmount and membrane protected Intercom stations of Series WS can be custom enhanced with powerful extra features by means of extension modules. These can be mounted above, below or on either side of the Intercom station, or positioned freely within the room. For example, loudspeaker modules are usually placed fairly high up for indoor or outdoor public address purposes. These extension modules are protected against dust, dirt and water jets and carry an IP 65 rating. Surface Mount and Flush Mount Kits are available separately – see Accessories.

Camera Module WSCM 50P

IP 66

Camera module with colour video camera, adjustable white balance and built-in heater. Can be used as an IP network camera (M-JPEG video format with max. resolution of 640 x 480 pixels) or as analogue camera for colour systems PAL or NTSC. Viewing angle mechanically adjustable horizontally/vertically by 30°. Polycarbonate construction.

External power supply via 22 – 24 V AC / 20 – 35 V DC power adapter or via PoE IEEE 802.3af.

Dimensions when flush mounted: W 165 mm, H 140 mm, D 13 mm 450 g
Dimensions when surface mounted: W 165 mm, H 140 mm, D 51 mm
(dimensions do not include 20 mm camera top clearance)

TFT Display Module WSTM 50P

IP 66

Colour-TFT display module for IP based video streams or analogue video signals in PAL or NTSC. Polycarbonate construction.

3.5" Colour-TFT display; resolution: 320 x 240 pixels; 65,000 colours; External power supply via 22 – 24 V AC / 20 – 35 V DC power adapter or via PoE IEEE 802.3af.

Dimensions when flush mounted: W 165 mm, H 140 mm, D 13 mm 410 g
Dimensions when surface mounted: W 165 mm, H 140 mm, D 51 mm

Audio Induction Loop Amplifier Module WSIL 50P

IP 66

IEC 60118-4 compliant audio induction loop amplifier module for transmitting Intercom audio signals to hearing aids; integrated induction loop; front panel made from polycarbonate

External 15 – 26 V DC power supply; input impedance 10 kΩ; frequency response 80 Hz – 8 kHz; max. loop voltage 6.5 V; loop resistance 0.1 Ω – 1,0 Ω effective resistance; MLC (Metal Loss Correction) 0 to -3dB/ octave.

Dimensions when flush-mounted: W 165 mm, H 140 mm, D 13 mm 800 g
Dimensions when surface-mounted: W 165 mm, H 140 mm, D 51 mm

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Loudspeaker Module WSLM 52P

IP 66

Active loudspeaker module with 2 loudspeakers for use in high-noise environments. Polycarbonate construction.

Power supply: 12 – 24 V AC / 15 – 35 V DC; frequency range: 200 – 16,000 Hz; 2 W nominal power; sound pressure max. 100 dB/W/m.

Dimensions when flush mounted: W 165 mm, H 140 mm, D 13 mm 250 g
Dimensions when surface mounted: W 165 mm, H 140 mm, D 51 mm

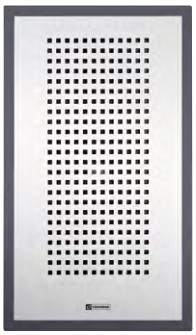
Loudspeaker Module WSLM 56P

IP 66

Active loudspeaker module with 6 loudspeakers for use in very high-noise environments. Polycarbonate construction.

Power supply: 12 – 24 V AC / 15 – 35 V DC; frequency range: 200 – 16,000 Hz; 6 W nominal power; sound pressure max. 108 dB/W/m.

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 590 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm



Loudspeaker Module WSLM 52F

IP 66

Active loudspeaker module with 2 loudspeakers for use in high-noise environments. Polycarbonate construction with closed membrane surface.

Power supply: 12 – 24 V AC / 15 – 35 V DC; frequency range: 200 – 16,000 Hz; 2 W nominal power; sound pressure max. 100 dB/W/m.

Dimensions when flush mounted: W 165 mm, H 140 mm, D 13 mm 250 g
Dimensions when surface mounted: W 165 mm, H 140 mm, D 51 mm

Loudspeaker Module WSLM 56F

IP 66

Active loudspeaker module with 6 loudspeakers for use in very high-noise environments. Polycarbonate construction with closed membrane surface.

Power supply: 12 – 24 V AC / 15 – 35 V DC; frequency range: 200 – 16,000 Hz; 6 W nominal power; sound pressure max. 108 dB/W/m.

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 590 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

Dummy Module WSDU 52P

IP 66

Half height format. Polycarbonate construction.

WSDU 52P	Standard version
WSDU 52P AM	Version with access reader symbol
WSDU 52P TW	Version with transparent window

Dimensions when flush mounted: W 165 mm, H 140 mm, D 13 mm 140 g
Dimensions when surface mounted: W 165 mm, H 140 mm, D 51 mm

Dummy Module WSDU 50P

IP 66

Full height format. Polycarbonate construction.

Dimensions when flush mounted: W 165 mm, H 280 mm, D 13 mm 240 g
Dimensions when surface mounted: W 165 mm, H 280 mm, D 51 mm

Handset Module WSHS 50P-JST

IP 40

Handset with integral "Push to Talk" button. Polycarbonate construction; with JST connector.

Dimensions when surface mounted: W 82 mm, H 280 mm, D 51 mm 420 g

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Expansion Card WSEB RJ45

Expansion card for integration in cameras and TFT display extension modules of Series WS. Installing an IP Intercom station with an extension module for a camera or TFT display typically requires two ports on the switch. The expansion card provides an additional downlink port on the module. This solution occupies only one port on the switch; it also requires less cabling and still leaves the option of simply adding these modules later on as needed.

Audio Induction Loop Amplifier - Extension Card WSEB IL

IEC 60118-4 compliant audio induction loop amplifier extension card for transmitting Intercom audio signals to hearing aids; induction loop and adhesive label for front panel included; suitable for installation in Series WS wall-mounted Intercom stations (without camera or TFT display).

External 15 – 26 V DC power supply; input impedance 10 kΩ; frequency response 80 Hz – 8 kHz; max. loop voltage 6.5 V; loop resistance 0.1 Ω – 1,0 Ω effective resistance; MLC (Metal Loss Correction) 0 to -3dB/ octave.

ACCESSORIES FOR WALLMOUNT AND MEMBRANE PROTECTED INTERCOM STATIONS – SERIES WS

Flush Mount Kit WSFB 50P

Flush Mount Kit for flush mounting of Series WS Intercom stations and extension modules – full height format.

W 160 mm, H 275 mm, D 54 mm / thickness on installation surface 13 mm 380 g

Flush Mount Kit WSFB 52P

Flush Mount Kit for flush mounting of Series WS Intercom stations and extension modules – half height format.

W 160 mm, H 134 mm, D 54 mm / thickness on installation surface 13 mm 230 g

Surface Mount Kit WSSH 50P

Surface Mount Kit for surface mounting of Series WS Intercom stations and extension modules – full height format.

W 160 mm, H 275 mm, D 47 mm / thickness on installation surface 51 mm 300 g

Surface Mount Kit WSSH 52P

Surface Mount Kit for surface mounting of Series WS Intercom stations and extension modules – half height format.

W 160 mm, H 135 mm, D 47 mm / thickness on installation surface 51 mm 150 g

Surface Mount Kit WSSH 54P

Polycarbonate Surface Mount Kit for Dummy Module WSDU 54P and Handset Module WSHS 50P; half-width format. Using the handset module in combination with an Intercom station with Desktop Kit requires two Connector Kits WSCP 50SH

W 77 mm, H 275 mm, D 47 mm / thickness on installation surface 51 mm 160 g

WSDM P

Tool for easy opening polycarbonate and membrane stations of Series WS.

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Desktop and Wallmount Kit WSDK 50P

This kit allows Series WS Wallmount stations and extension modules with a surface mount box to be used as desktop units. Doing so requires the appropriate Surface Mount Kit. The same kit can also be used for mounting devices (e.g. loudspeaker modules) on slanted walls. Material: powder coated steel.

W 119 mm, H 66 mm, D 162 mm 400 g

Connector Kit WSCP 50P SH

This optional extension kit allows for interconnecting surface mount boxes of Series WS wallmount stations.

W 42 mm, H 118 mm, D 1,5 mm

Ethernet Socket RJ45-MONT

The ethernet socket can be used to fix the inflexible connection cable to the surface or flushmount boxes of Series WS. The included connection cable (Length: 0.3 m) is then used to connect to the station.

Wallmount Stations with Handset function

WALLMOUNT STATIONS – SERIES EE 320 | EE 420

Key features:

- Digital or analogue stations
- 6-digit alphanumeric display (16-segment)
- Standard keypad and function keys
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Handset function
- Available in bright red for use as emergency call stations
- Version available with restricted dialling
- Polycarbonate construction

Technical data of EE 320A und EF 320A: Power supply via Intercom Server (optional external power supply for longer cable lengths or external loudspeakers); 2.5 W Class "D" amplifier; 8 Ω loudspeakers; Electret microphone; multi-functional LED.

Technical data of EE 420: Power supply via Intercom Server; 50 Ω loudspeakers; Electret microphone; red call status LED.

EE 320A

16 kHz Digital

Digital 2-wire wallmount station with display, standard keypad and function keys. The unit can be removed from its holding frame to use it as a handset for private conversations.

EE 320AS	Black
EE 320AG	Light Grey
EE 320AR	Bright Red

W 73 mm, H 232 mm, D 57 mm 460 g

EE 420

16 kHz Analogue

Analogue 4-wire wallmount station with display, standard keypad and function keys. The unit can be removed from its holding frame to use it as a handset for private conversations.

EE 420S	Black
EE 420G	Light Grey

W 73 mm, H 232 mm, D 57 mm 442 g

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Protection against malicious damage

In some areas, wanton destruction is a frequent occurrence. This range of Intercom stations are protected against malicious attacks by durable front panels made from high grade steel, poke protection and special screws. The robust construction provides full protection against water jets, dirt and dust. Continuous monitoring function ensures reliable availability around the clock.

Applications:

– Outdoor areas – Public locations – Doors and gates – Parking lots and garages

VANDALISM-RESISTANT INTERCOM STATIONS – SERIES WS 300V | 200V

Key features:

- Vandalism-resistant
- IP 66 and IK 09 rating
- Poke protection and special screws
- Front plate made from 3 mm V-2A steel
- Intercom stations with built-in video camera
- Backlit call buttons and label fields
- OpenDuplex® for natural hands-free communication with high volume capacity
- Crystal clear speech quality
- Continuous line and function self-monitoring
- Expansion modules for even more functions

Accessories: Flush-Mount Kit WSFB 50V and WSFB 50V SS FL, Surface-Mount Kit WSSH 50V and Rain Protection Roof WSRR 50V. // WS 300V: Power Injector PA 25W POE-DC, Input-/Output Module EB3E2A-AUD, IP-Secure-Connector IP-CON.

Technical data: Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE // WS 300V: Two digital MEMS microphones; USB and Mini-USB; two multi-functional LEDs // WS 200V: Electret microphone; 3 inputs for floating contacts and 2 relay outputs; multi-functional LED // Analogue 4-Wire: 50 Ω loudspeaker; red call status LED.

WS 300V

20 kHz | IP 66 | SIP

Vandalism-resistant Intercom station with backlit call buttons, label fields, and built-in colour video camera with camera light;

IP-based web video camera with wide viewing angle (128° horizontal angle, 96° vertical angle), high-luminosity aperture, max. resolution 960 × 1280 pixels (1.2 megapixels), H.264 and Motion JPEG (MJPEG) video streams, frame rate 30 pictures/second.

WS 301V CM 1 call button – IP – communication via SIP

WS 303V CM 3 call buttons – IP – communication via SIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,200 g

WS 200V CM

16 kHz | IP 66 | IoIP

Vandal resistant station with call buttons, integrated colour video camera with illumination, built-in heater, viewing angle mechanically adjustable horizontally/vertically by 30°.

IP network camera with M-JPEG video format (max. resolution 640 x 480 pixels) or as analogue camera for colour systems PAL or NTSC.

WS 201V I CM 1 call button – IP – Communication via IoIP

WS 203V I CM 3 call buttons – IP – Communication via IoIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,700 g

WS 200V CA

16 kHz | IP 66 | IoIP

Vandal resistant station with one call button, integrated colour video camera with illumination, viewing angle mechanically adjustable horizontally/vertically by 30°.

Video streams H.264 (MPEG-4 Part 10/AVC) and M-JPEG with max. resolution 1440 x 900 Pixel (1.3 MP); compatible to video components e.g. NVRs; support of video functions like motion detection, recording, etc.

WS 201V I CA 1 call button – IP – Communication via IoIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,700 g

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WS 200V

16 kHz | IP 66 | IoIP | SIP | Digital | Analogue

Vandal resistant station with call buttons.

WS 201V I	1 call button – IP – Communication via IoIP
SIP-WS 201V	1 call button – IP – Communication via SIP (7 kHz HD Voice)
WS 201V D	1 call button – Digital 2-wire
WS 201V A	1 call button – Analogue 4-wire
WS 203V I	3 call buttons – IP – Communication via IoIP
SIP-WS 203V	3 call buttons – IP – Communication viwa SIP (7 kHz HD Voice)
WS 203V D	3 call buttons – Digital 2-wire

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,500 g

VANDAL RESISTANT INTERCOM STATIONS – SERIES WS 500V | 800V

Key features:

- Vandal resistant design
- IP 66 and IK 07 rating
- Poke protection and special screws
- Front plate made from 3 mm V-2A steel
- Back-lit keypad and function keys
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush Mount Kits WSFB 50V and WSFB 50V SS FL, Surface Mount Kit WSSH 50V and Rain Protection Roof WSRR 50V.

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 3 inputs for floating contacts and 2 relay outputs; multi-functional LED.

WS 500V CM

16 kHz | IP 65 | IoIP

Vandal-resistant Intercom station with backlit keypad, 3 function keys, bell/call button and key button to enter access code.

Integrated colour video camera with adjustable white balance and built-in heater; M-JPEG video format (max. 640 x 480 pixels); horizontal/vertical viewing angle adjustable mechanically by an additional 30 degrees.

WS 500V I CM	IP – Communication via IoIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,700 g

WS 800V

16 kHz | IP 66 | IoIP | SIP | Digital

Vandal resistant station with standard keypad and LCD graphic display.

Illuminated LCD display with 128 x 64 pixels; white backlight.

WS 800V I	IP – Communication via IoIP
SIP-WS 800V	IP – Communication via SIP (7 kHz HD Voice)
WS 800V D	Digital 2-wire

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,300 g

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Vandal Resistant ADA/DDA Compliant Stations

VANDAL RESISTANT ADA/DDA COMPLIANT STATIONS – SERIES WS 311 V DA | 211V DA

Key features:

- Vandal resistant design
- IP 66 and IK 09 rating (WS 211V DA IK 07 rating)
- Poke protection and special screws
- Front plate made from 3 mm V-2A steel
- Integrated IEC 60118-4 compliant loop amplifier
- Large icons and very bright LEDs for Call Requested, Call Established, Door Opener Active
- Large, easy-to-use call button with tactile bell symbol
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Expansion modules for even more functions

Accessories: Flush-Mount Kit WSFB 50V and WSFB 50V SS FL, Surface-Mount Kit WSSH 50V and Rain Protection Roof WSRR 50V. // WS 300V: Power Injector PA 25W POE-DC, Input-/Output Module EB3E2A-AUD, IP-Secure-Connector IP-CON.

Technical data: 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE // WS 300V: Two digital MEMS microphones; USB and Mini-USB; two multi-functional LEDs // WS 200V: Electret microphone; 3 inputs for floating contacts and 2 relay outputs; multi-functional LED

WS 311V DA

20 kHz | IP 66 | SIP

Vandalism-resistant, multi-functional Intercom station with backlit call button, integrated colour video camera with camera light, four pictograms, and built-in induction loop module for barrier-free buildings and living space. Conforms to requirements for people with visual and hearing impairments and accessibility regulations in accordance with the Equal Opportunities for the Disabled Principle.

IP-based web video camera with wide viewing angle (128° horizontal angle, 96° vertical angle), high-luminosity aperture, max. resolution 960 × 1280 pixels (1.2 megapixels), H.264 and Motion JPEG (MJPEG) video streams, frame rate 30 pictures/second.

WS 311V CM DA	1 call button – IP – communication via SIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,400 g

WS 211V DA

16 kHz | IP 66 | IoIP | SIP | Digital

Vandal resistant, multi-functional Intercom station with three pictograms, large call button and built-in induction loop module for indoor and outdoor areas; special functions for barrier-free buildings and living space. Conforms to requirements for people with visual and hearing impairments and Accessibility Regulations in accordance with the Equal Opportunities for the Disabled Principle. Country-specific text and/or symbol labels for the button are available on request.

WS 211V I DA	IP – Communication via IoIP
SIP-WS 211V DA	IP – Communication via SIP (7 kHz HD Voice)
WS 211V D DA	Digital 2-wire

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,430 g

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Vandal Resistant Emergency Call Stations

Assistance and information at the push of a button

These vandal resistant Intercom stations have many uses. In public areas they serve as information and help points for passers-by to request help and receive assistance in cases of emergency.
The technology ensures excellent speech quality and clarity, regardless of the ambient noise level. Continuous monitoring function ensures reliable availability around the clock. The durable high grade steel front plates with poke protection and special screws provide protection against vandalism. The compact construction is fully protected against water jets, dirt and dust. The extra large emergency call buttons are easily visible even distance and activate easily and reliably.

Applications:

– Public transport stations
– Public areas, parks and city centres
– Parking lots and garages
– Leisure facilities
– Schools and universities

VANDAL RESISTANT EMERGENCY CALL STATIONS – SERIES WS 311V | 211V | 210V

Key features:
- Vandal resistant design
- IP 66 and IK 09 rating
- Poke protected and fitted with special security screws
- Front panel made from 3 mm thick V-2A steel
- Intercom stations with built-in colour video camera
- Back-lit call buttons and label areas
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush-Mount Kit WSFB 50V and WSFB 50V SS FL, Surface-Mount Kit WSSH 50V and Rain Protection Roof WSRR 50V. // WS 300V: Power Injector PA 25W POE-DC, Input-/Output Module EB3E2A-AUD, IP-Secure-Connector IP-CON.

Technical data: Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE // WS 300V: Two digital MEMS microphones; USB and Mini-USB; two multi-functional LEDs // WS 200V: Electret microphone; 3 inputs for floating contacts and 2 relay outputs; multi-functional LED // Analogue 4-Wire: 50 Ω loudspeaker; red call status LED.

WS 311V

20 kHz | IP 66 | SIP

Vandalism-resistant Intercom station with backlit call buttons, label fields, and built-in colour video camera with camera light.

IP-based web video camera with wide viewing angle (128° horizontal angle, 96° vertical angle), high-luminosity aperture, max. resolution 960 × 1280 pixels (1.2 megapixels), H.264 and Motion JPEG (MJPEG) video streams, frame rate 30 pictures/second.

WS 311V CM 1 call button – IP – communication via SIP

W 164 mm, H 279 mm / wall stand-off height depends on mounting kit used 1,200 g

WS 211V CA

16 kHz | IP 66 | IoIP

Emergency call station with one call button, integrated colour video camera with illumination, viewing angle mechanically adjustable horizontally/vertically by 30°.

Video streams H.264 (MPEG-4 Part 10/AVC) and M-JPEG with max. resolution 1440 x 900 Pixel (1.3 MP); compatible to video components e.g. NVRs; support of video functions like motion detection, recording, etc.

WS 211V I CA 1 emergency call button – IP – Communication via IoIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,700 g

WS 210V CM

16 kHz | IP 66 | IoIP

Emergency call station with call buttons, integrated colour video camera with illumination, built-in heater, viewing angle mechanically adjustable horizontally/vertically by 30°.

Optional external power supply 22 – 24 V AC / 20 – 35 V DC; IP network camera with M-JPEG video format (max. resolution 640 x 480 pixels) or as analogue camera for colour systems PAL or NTSC.

WS 211V I CM	1 emergency call button – IP – Communication via IoIP

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,700 g

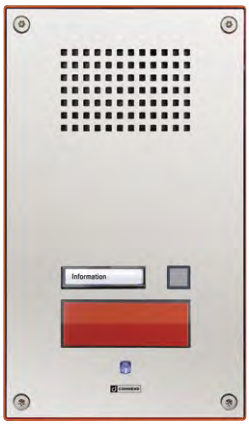
WS 210V

16 kHz | IP 66 | IoIP | SIP | Digital

Emergency call station with call buttons.

WS 211V I	1 emergency call button – IP – Communication via IoIP
SIP-WS 211V	1 emergency call button – IP – Communication via SIP (7 kHz HD Voice)
WS 211V D	1 emergency call button – Digital 2-wire
WS 212V I	1 emergency call button and 1 regular call button – IP – Communication via IoIP
SIP-WS 212V	1 emergency call button and 1 regular call button – IP – Communication via SIP (7 kHz HD Voice)
WS 212V D	1 emergency call button and 1 regular call button – Digital 2-wire

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,500 g



VANDAL RESISTANT EMERGENCY CALL STATIONS – SERIES WS 211V M

Key features:

- Vandal resistant design
- IP 66 and IK 10 rating
- Poke protected and fitted with special security screws
- Front panel made from 3 mm thick V-2A steel
- Emergency mushroom button with continuous function check (NC Contact)
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Continuous line and function checks
- Extension modules for additional functions

Accessories: Flush Mount Kits WSFB 50V and WSFB 50V SS FL, Surface Mount Kit WSSH 50V and Rain Protection Roof WSRR 50V.

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 3 inputs for floating contacts and 2 relay outputs; multi-functional LED.

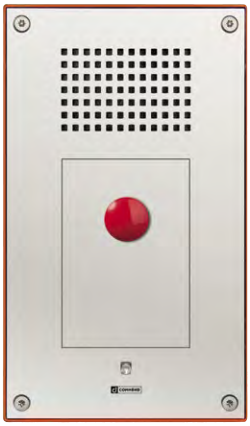
WS 211V M

16 kHz | IP 66 | IoIP | Digital

Vandal resistant emergency call station with mushroom button

WS 211V I M	1 emergency call button – IP – Communication via IoIP
WS 211V D M	1 emergency call button – Digital 2-wire

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,500 g



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VANDAL RESISTANT EXTENSION MODULES – SERIES WS

The Series WS Intercom stations can be custom enhanced with powerful extra features by means of extension modules. These can be mounted above, below or on either side of the Intercom station, or positioned freely within the room. For example, loudspeaker modules are usually placed fairly high up for indoor or outdoor public address purposes. The front panel made from 3 mm thick V-2A steel, (optional) sabotage detection contacts and special screws provides optimum protection against vandalism for these modules. Surface Mount and Flush Mount Kits are available separately -- see Accessories.

Camera Module WSCM 50V

IP 66

Vandal resistant camera module with colour video camera with adjustable white balance and built-in heater. Can be used as an IP network camera (M-JPEG video format with max. resolution of 640 x 480 pixels) or as analogue camera for colour systems PAL or NTSC. Viewing angle mechanically adjustable horizontally/vertically by 30°.

External power supply via 22 – 24 V AC / 20 – 35 V DC power adapter or via PoE IEEE 802.3af.

Dimensions when flush mounted: W 164 mm, H 139 mm, D 14 mm 875 g
Dimensions when surface mounted: W 164 mm, H 139 mm, D 50 mm
(dimensions do not include 20 mm camera top clearance)

TFT Display Module WSTM 50V

IP 66

Vandal resistant Colour-TFT display module for IP based video streams or analogue video signals in PAL or NTSC.

3.5" TFT display; resolution: 320 x 240 pixels; 65,000 colours; External power supply via 22 – 24 V AC / 20 – 35 V DC power adapter or via PoE IEEE 802.3af.

Dimensions when flush mounted: W 164 mm, H 139 mm, D 14 mm 820 g
Dimensions when surface mounted: W 164 mm, H 139 mm, D 50 mm

Audio Induction Loop Amplifier Module WSIL 50V

IP 66

IEC 60118-4 compliant audio induction loop amplifier module for transmitting Intercom audio signals to hearing aids; integrated induction loop; front panel made from 3mm V-2A steel.

External 15 – 26 V DC power supply; input impedance 10 kΩ; frequency response 80 Hz – 8 kHz; max. loop voltage 6.5 V; loop resistance 0.1 Ω – 1,0 Ω effective resistance; MLC (Metal Loss Correction) 0 to -3dB/ octave.

Dimensions when flush-mounted: W 164 mm, H 139 mm, D 14 mm 1,100 g
Dimensions when surface-mounted: W 164 mm, H 139 mm, D 50 mm

Loudspeaker Module WSLM 52V

IP 66

Vandal resistant active loudspeaker module with 2 loudspeakers for use in high-noise environments.

Power supply: 12 – 24 V AC / 15 – 35 V DC; frequency range: 200 – 16,000 Hz; 2 W nominal power; sound pressure max. 100 dB/W/m.

Dimensions when flush mounted: W 164 mm, H 139 mm, D 14 mm 695 g
Dimensions when surface mounted: W 164 mm, H 139 mm, D 50 mm

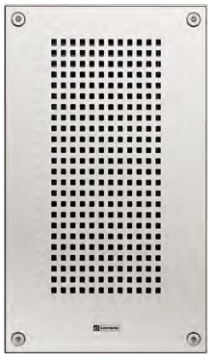
Loudspeaker Module WSLM 56V

IP 66

Vandal resistant active loudspeaker module with 6 loudspeakers for use in very high-noise environments.

Power supply: 12 – 24 V AC / 15 – 35 V DC; frequency range: 200 —16,000 Hz; 6 W nominal power; sound pressure max. 108 dB/W/m.

W 164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,500 g



Dummy Module WSDU 52V

IP 66

Vandal resistant dummy module. Half height format.

WSDU 52V AM	Version with access reader symbol
WSDU 52V TW	Version with transparent window

Dimensions when flush mounted: W 164 mm, H 139 mm, D 14 mm 490 g
Dimensions when surface mounted: W 164 mm, H 139 mm, D 50 mm

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Direct Dialling Button Module WSDD 53V

IP 66

Vandal resistant module with three illuminated direct dialling buttons and labels. Connects directly to an IP based or digital Intercom station of Series WS and to devices with input level detection (Intercom Modules ET 808A, ET 908A, etc.).

Optional external 12 – 24 V AC / 15 – 35 V DC power supply for illumination.

Dimensions when flush mounted: W 164 mm, H 139 mm, D 14 mm 730 g
Dimensions when surface mounted: W 164 mm, H 139 mm, D 50 mm

Direct Dialling Button Module WSDD 59V

IP 66

Vandal resistant module with nine illuminated direct dialling buttons and labels. Connects directly to an IP based or digital Intercom station of Series WS and to devices with input level detection (e.g. Intercom Modules ET 808A, ET 908A, etc.).

Optional external 12 – 24 V AC / 15 – 35 V DC power supply for illumination.

W164 mm, H 279 mm / thickness on installation surface depending on mounting kit
1,630 g

Expansion Card WSEB RJ45

Expansion card for integration in cameras and TFT display modules of Series WS. Installing an IP Intercom station with an extension module for a camera or TFT display typically requires two ports on the switch. The expansion card provides an additional downlink port on the module. This solution occupies only one port on the switch; it also requires less cabling and still leaves the option of simply adding these modules later on as needed.

Audio Induction Loop Amplifier - Extension Card WSEB IL

IEC 60118-4 compliant audio induction loop amplifier extension card for transmitting Intercom audio signals to hearing aids; induction loop and adhesive label for front panel included; suitable for installation in Series WS wall-mounted Intercom stations (without camera or TFT display).

External 15 – 26 V DC power supply; input impedance 10 kΩ; frequency response 80 Hz – 8 kHz; max. loop voltage 6.5 V; loop resistance 0.1 Ω – 1,0 Ω effective resistance; MLC (Metal Loss Correction) 0 to -3dB/ octave.

ACCESSORIES FOR SERIES WS 300V | 311V | 311V DA

Power Injector PA 25W POE-DC

Power adaptor for external power supply; optimised for installation with Surface-Mount Kit WSSH 50V or Flush-Mount Kit WSFB 50V; connects to Intercom station via Ethernet cable; input range 24 – 48 V AC ±20%; conforms to IEEE 802.3af/at.

W 34,5 mm, H 130 mm, D 20 mm 80 g

Input/Output Module EB3E2A-AUD

I/O add-on module for the Intercom Station: adds three inputs as floating contacts and two relay outputs, as well as connection ports for a loudspeaker, microphone, headset and handset; optimised for installation with Surface-Mount Kit WSSH 50V or Flush-Mount Kit WSFB 50V; connects to Intercom station via USB cable.

W 37 mm, H 135 mm, D 17 mm 70 g

IP Secure Connector IP-CON

Optional protect switch box that safeguards your network connection. In case of an unauthorised attempt to remove the Intercom station, the IP Secure Connector will disconnect the Intercom station from the network. As an added benefit, the IP Secure Connector provides an external power source via PoE+ as well as two additional floating inputs and three relay outputs.

W 59 mm, H 262 mm, D 26 mm 415 g

Audio Induction Loop Extension Kit AFIL-USB

IEC 60118-4 compliant induction loop amplifier kit for transmitting Intercom audio signals to hearing aids; Sticker for the station front included; connects to a USB port on the Intercom station.

W 16 mm, H 200 mm, D 12 mm 140 g

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ACCESSORIES FOR VANDAL RESISTANT STATIONS – SERIES WS

Flush Mount Kit WSFB 50V

Flush mount box for flush mounting vandal resistant Series WS Intercom stations and extension modules – full height format. Other RAL colours are available on request.

WSFB 50V SS	High-grade steel finish levelling frame
WSFB 50V OR	Pure Orange (RAL 2004) levelling frame
WSFB 50V SS FL	Suitable for completely flush installations
WSFB 50V SS MC	Suitable for metal cabinets/columns/facades

W 164 mm, H 279 mm

Flush Mount Kit WSFB 52V

Flush mount box for flush mounting vandal resistant Series WS extension modules – half height format.
RAL colours are available on request.

WSFB 52V SS	High-grade steel finish levelling frame
WSFB 50V SS MC	Suitable for metal cabinets/columns/facades

W 164 mm, H 139 mm

Surface Mount Kit WSSH 50V

Surface mount box made from 1.5 mm thick high-grade steel for surface mounting vandal resistant Series WS Intercom stations and extension modules – full height format. Other RAL colours are available on request.

WSSH 50V SS	High-grade steel
WSSH 50V WA	White Aluminium (RAL 9006)
WSSH 50V OR	Pure Orange (RAL 2004)
WSSH 50V OR EM	Pure Orange (RAL 2004) with inscription "SOS"
WSSH 50V YL EM	Yellow (RAL 1016) with inscription "HELP"

W 164 mm, H 279 mm, D 50 mm / thickness on installation surface 50 mm 945 g

Surface Mount Kit WSSH 52V SS

Surface mount box made from 1.5 mm thick high-grade steel for surface mounting vandal resistant Series WS extension modules – half height format. Other RAL colours are available on request.

W 164 mm, H 139 mm, D 50 mm / thickness on installation surface 50 mm 635 g

Rain Protection Roof WSRR 50V

This optional rain protection roof for Vandal resistant Series WS Intercom stations and extension modules (full height format) provides even higher protection in adverse weather conditions. Material Stainless steel.

W 164 mm, H 277 mm, D 80 mm 465 g

Sabotage Detection Switch WSSK 50V

Micro switch for sabotage surveillance of Vandal resistant extension modules
Not suitable for loudspeaker modules WSLM 56V or WSLM 52V, or Direct Dialling Button Module WSDD 59V.

WSSK 50V SH	For surface mounted extension modules
WSSK 50V FB	For flush mounted extension modules

Ethernet Socket RJ45-MONT

The ethernet socket can be used to fix the inflexible connection cable to the surface or flushmount boxes of Series WS. The included connection cable (Length: 0.3 m) is then used to connect to the station.

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VANDAL RESISTANT STATIONS – SERIES EF 962

Key features:
- Vandal resistant design
- Poke protected and fitted with special security screws
- Front panel made from 3 mm thick V-2A steel
- Emergency mushroom or high grade steel button with continuous function check (NC Contact)
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality
- Indicator LEDs and pictograms for Call Requested, Call Established and Door Opener Active

Accessories: Basic housing GUEF 962 (required for surface mounting and flush mounting), surface mount box EF 62

Technical data: Electret microphone; 2.5 W Class "D" amplifier; two 8 Ω loudspeakers; External power supply or PoE (IEEE 802.3af); 1 input for floating contacts and 1 relay output.

EF 962M

16 kHz | IP 54 | IoIP | SIP

Vandal resistant emergency call station with emergency call button (mushroom button).

EF 962HM 1 emergency call button – IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP)

W 110 mm, H 151 mm / thickness on installation surface depending on mounting kit
700 g

EF 962

16 kHz | IP 54 | IoIP | SIP

Vandal resistant station with call button made from high grade steel.

EF 962H 1 call button – IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP)

W 110 mm, H 151 mm / thickness on installation surface depending on mounting kit
700 g

VANDAL RESISTANT STATIONS – SERIES EF 862

Key features:
- Vandal resistant design
- Poke protection and special screws
- Front plate made from 3 mm V-2A steel
- OpenDuplex® and IVC for natural, hands free communication with high volume
- Crystal clear speech quality

Accessories: Basic housing GUEF 62 (required for surface mounting and flush mounting), surface mount box EF 62

Technical data: Electret microphone; Power supply via Intercom Server (option: external floating power supply for longer cable lengths); Integrated 2.5 W amplifier (1.5 W output when using built-in 8 Ω loudspeaker); multi-functional LED; 1 input for floating contacts and 1 relay output.

EF 862M

16 kHz | IP 54 | Digital

Vandal resistant emergency call station with emergency call button (mushroom button).

EF 862AM 1 call button – Digital 2-wire

W 110 mm, H 151 mm / thickness on installation surface depending on mounting kit
685 g

EF 862

16 kHz | IP 54 | Digital

Vandal resistant station with call button made from high grade steel.

EF 862A 1 call button – Digital 2-wire

W 110 mm, H 151 mm / thickness on installation surface depending on mounting kit
685 g

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VANDAL RESISTANT STATIONS – SERIES EF 562

Key features:
- Vandal resistant design
- Poke protection and special screws
- Front plate made from 3 mm V-2A steel
- Natural, hands free communication with high volume

Accessories: Basic housing GUEF 62 (required for surface mounting and flush mounting), surface mount box EF 62

Technical data: Electret microphone; 50 Ω loudspeakers; line length up to 4,200 m; red call status LED.

EF 562M

16 kHz | IP 54 | Analogue

Vandal resistant emergency call station with emergency call button (mushroom button).

W 110 mm, H 151 mm / thickness on installation surface depending on mounting kit
650 g

EF 562

16 kHz | IP 54 | Analogue

Vandal resistant station with call button made from high grade steel.

W 110 mm, H 151 mm / thickness on installation surface depends on mounting kit
650 g

ACCESSORIES FOR SERIES EF962, EF 862 AND EF 562

Basic housing GUEF 62

Basic housing for Series EF 862 and EF 562, made from 1.5 mm hot galvanised sheet steel. Required for surface mounting and flush mounting.

W 90 mm, H 131 mm, D 48 mm 436 g

Basic housing GUEF 962

Basic housing with RJ45 adapter for Series EF 962, made from 1.5 mm hot galvanised sheet steel. Required for surface mounting and flush mounting.

W 90 mm, H 131 mm, D 48 mm 436 g

Surface Mount Box EF 62

Surface mount box with rain protection roof for outdoor use, made of 1.25 mm thick galvanised sheet steel, powder coated.

EF 62G	Grey (RAL 9006)
EF 62O	Pure Orange (RAL 2004) with "SOS" labelling
EF 62NIRO	High-grade steel

W 114,5 mm, H 155 mm, D 84 mm 631 g

Surface Mount Box EF 62W

Surface mount box without rain protection roof for indoor use, made of 1.25 mm thick galvanised sheet steel, powder coated in RAL 9016 (White).

W 114,5 mm, H 155 mm, D 55 mm 631 g

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Building Security – Protection for People and Valuables

Doors and access points, one might say, provide the first impression of a company or building. Arriving visitors must not be intimidated by strict, impersonal security measures. However, security must not be neglected either. Apart from visitor flow and protected areas, many other factors need to be taken into consideration when it comes to access control solutions – especially people and their individual needs. From door Intercom stations and access readers to software modules, They allow for guiding and controlling the movements of people within buildings without being obstructive while still ensuring the required protection of sensitive areas.

Typical applications:

– Speech communication solution for doors, gates, barriers and turnstiles.
– Integration into columns, plinths and letterbox systems.

DOOR INTERCOM MODULES

Key features:
These Intercom modules provide excellent speech quality at access points and in transit areas. Their timelessly modern design matches that of Siedle's Vario Series. As a result, doors, gates and airlocks – whether indoors or outdoors – integrate smoothly and fully with the Intercom system.

Technical data: Electret microphone; power supply via Intercom Server; loudspeaker with special membrane for optimum sound quality and high volumes; // Digital 2-wire: Class "D" amplifier; Relay output for direct connection of a door opener; Input for floating contacts;

ET 861A | ET 661

16 kHz | Digital | Analogue

Door station module with one call button.

ET 861AWE	Digital 2-wire – White
ET 861ASI	Digital 2-wire – Silver
ET 861ADG	Digital 2-wire – Dark Grey
ET 861AAG	Digital 2-wire – Anthracite gray
ET 661WE	Analogue 4-wire – White
ET 661SI	Analogue 4-wire – Silver
ET 661DG	Analogue 4-wire – Dark Grey
ET 661AG	Analogue 4-wire – Anthracite gray

W 99 mm, H 99 mm, D 9 mm 200 g

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Desktop Stations

IP DESKTOP STATIONS – SERIES EE 900

Key features:
- IP and DSP technology
- Standard keypad and function keys
- Illuminated LCD graphic display
- OpenDuplex® for natural, hands free communication
- High volume capacity thanks to digital Class "D" amplifier
- Multi-functional LED for visual user guidance and information
- Built-in switch

Technical data: Graphic display (8 lines at 14 characters each); 8 Ω loudspeaker with special membrane for optimum speech quality; Class "D" amplifier with 2.5 W (1.5 W output with built-in loudspeaker); Connection for optional handset or headset; Power can be supplied via PoE IEEE 802.3 af – see PoE Injector under Accessories.

EE 900AS

16 kHz IoIP

Master and control desk station with illuminated LCD graphic display and standard keypad with "T" and "X" keys, six function keys, and programmable handset function. Colour black.
Typical applications: Use as a control and desktop station.

W 66 mm, H 58 mm, D 240 mm 500 g

EE 972AS

16 kHz IoIP

Master and control desk station with gooseneck microphone, illuminated LCD graphic display, standard keypad with "T" and "X" keys and six function keys. Colour black.
Typical applications: Control desk and command station.

W 179 mm, H 58 mm, D 240 mm / Length of gooseneck: 430 mm 800 g

ACCESSORIES FOR SERIES EE 900

PoE Injector

PA15WPOE	PoE Injector – Single Port 15,4 W PoE Adapter (including changeable plug attachments for Europe, the UK, USA and Australia)
ASKKAT5-3S	Network cable, 3 m, black

2-WIRE DSP DESKTOP STATIONS – SERIES EE 811

These digital Master Stations are based on DSP technology in a timeless, ergonomic design for handsfree OpenDuplex® speech connections. They come with a large rear-illuminated graphical display and are capable of displaying multiple messages (e.g., alarms). A bright multi-function LED is provided for visual feedback and user guidance.

Technical data: Graphic display (8 lines at 14 characters each); Power supply via Intercom Server (optional external power supply for longer cable lengths or external loudspeakers); 8 Ω loudspeaker with special membrane for optimum speech quality; 2.5 W Class "D" amplifier (1.5 W with built-in loudspeaker, 2.5 W with external 4 Ω loudspeaker); Connection port for external loudspeaker; 1 input for floating contact; 1 Open Collector output; relay contact can be retro-fitted; Plug-in port for handset or headset; 3 m connection cable.

EE 811A

16 kHz Digital

Master and central control station with illuminated graphic display and standard keypad with "T" and "X" keys, six function keys, and programmable handset function.
Typical applications: Use as a control and desktop station.

EE 811AS Black

W 66 mm, H 58 mm, D 240 mm 500 g

EE 872A

16 kHz Digital

Master and control desk station with cardioid gooseneck microphone, illuminated graphic display, and standard keypad with "T" and "X" keys and six function keys.
Typical applications: Control desk and command station.

EE 872AS Black

W 179 mm, H 58 mm, D 240 mm / Length of gooseneck: 430 mm 800 g

EE 872A EG

16 kHz Digital

Master and control desk station with active add-on loudspeaker, cardioid gooseneck microphone, illuminated graphic display, and standard keypad with "T" and "X" keys and six function keys. Special screws and adhesive bonding make these Intercom stations particularly durable.
Typical applications: Use as a control and command station in environments with high ambient noise levels.

Class "D" amplifier with 15 W speech signal; sound pressure: 82 dB/W/m (1 kHz); impedance: 8 Ω; magnetically shielded; external 15 V DC power supply; plug-in power adapter PA20W15V is available separately – see Accessories.

EE 872AEGS Black

W 205 mm, H 95 mm, D 280 mm / Length of gooseneck: 430 mm 800 g

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2-WIRE DSP-DESKTOP STATIONS – SERIES EE 311

Digital master stations in DSP-technology and ergonomic design, for hands free speech in OpenDuplex®, with display for caller identification and indication of multiple messages (e.g. alarms). A bright, multi-functional LED allows for visual signals and user guidance.

Technical data: 6-digit alphanumeric display (16-segment); power supply via Intercom Server (optional: external power supply for greater line length or external loudspeaker); built-in Class "D" amplifier with 2.5 W (1.5 W power with built in loudspeaker or 2.5 W with external 4 Ω loudspeaker); built-in 8 Ω loudspeaker with special membrane type for optimal sound quality; connection possibility for external loudspeaker; one input for floating contact; one open collector output; connection of handset or headset possible; 3 m connection cable.

EE 311A

16 kHz Digital

Master station with standard keypad, complete with "T" and "X" keys and six function keys, and programmable handset function.
Typical applications: Office use and use as control desk and command station.

EE 311AS	Black
EE 311AG	Light Grey

W 66 mm, H 55 mm, D 230 mm 380 g

EE 301A

16 kHz Digital

Master station with standard keypad, complete with "T" and "X" keys and three function keys. Without position switch and handset/headset connection port.
Typical applications: Office use and use as control desk and command station.

EE 301AS	Black
EE 301AG	Light Grey

W 66 mm, H 55 mm, D 230 mm 380 g

EF 311A

16 kHz Digital

Substation with restricted dialling ("T", "0", "X") and programmable handset function.
Typical applications: Substations for offices, supermarket checkouts, etc.

EF 311AS	Black

W 66 mm, H 55 mm, D 230 mm 360 g

EE 372A

16 kHz Digital

Master and control desk station with cardioid gooseneck microphone and standard keypad with "T" and "X" keys and three function keys.
Typical applications: Control desk and command station.

EE 372AS	Black

W 179 mm, H 57 mm, D 230 mm / Length of gooseneck: 430 mm 715 g

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4-WIRE DESKTOP STATION – SERIES EE 411

Analogue master stations in ergonomic design, for hands-free speech even from great distances, with display for caller identification and indication of multiple messages (e.g. alarms). A bright call LED indicates clearly if the station is active. The LCD screen enables scrolling of incoming calls, detailing all call numbers.
Technical data: 6-digit alphanumeric display (16-segment); Power supply via Intercom Server; 3 m connection cable.

EE 411

16 kHz Analogue

Master station in desktop version with reinforced silicone keypad (standard keypad with "T" and "X" buttons as well as three function keys), built-in programmable handset function.
Typical applications: Offices, control desk station in small systems.

EE 411S	Black
EE 411G	Light Grey

W 66 mm, H 55 mm, D 230 mm 370 g

EE 401

16 kHz Analogue

Master station in desktop version with reinforced silicone keypad (standard keypad with "T" and "X" buttons as well as three function keys); without position switch.
Typical applications: Offices, control desk station in small systems.

EE 401S	Black
EE 401G	Light Grey

W 66 mm, H 55 mm, D 230 mm 370 g

EE 472

16 kHz Analogue

Master station – Control Desk – desktop version, with gooseneck microphone with cardioid characteristic and anti-tilt stand. Reinforced silicone keypad (standard keypad with "T" and "X" buttons as well as three function keys).
Typical applications: Control Desk and Command stations.

EE 472S	Black
EE 472G	Light Grey

W 179 mm, H 57 mm, D 230 mm / Length of gooseneck: 430 mm 700 g

EF 401

16 kHz Analogue

Substation with restricted dialling possibilities ("T", "0", "X").
Typical applications: Substation in offices, supermarket check-outs, etc.

EF 401S	Black
EF 401G	Light Grey

W 66 mm, H 55 mm, D 230 mm 350 g

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4-WIRE DESKTOP STATIONS – SERIES EE 400

Analogue master stations in ergonomic design, for hands free speech even from great distances, with individually designable index field that can be used to show call numbers and other important information. A bright call LED indicates clearly if the station is active. Compatible with the previous Intercom Server generation GE 416, GE 501 and GE 601.

Technical data: Power supply via Intercom Server; 3 m connection cable.

EE 400

16 kHz Analogue

Master station in desktop version with reinforced silicone keypad (standard keypad with "T" and "X" buttons).

Typical applications: Offices.

EE 400S	Black
EE 400G	Light Grey

W 66 mm, H 55 mm, D 230 mm 350 g

ACCESSORIES

Plug-in power adapter PA20W15V

20 W switching power supply with high efficiency output; Primary: 90 – 264 V AC; 0.67 A; Secondary 15 V DC; including changeable plug attachments for Europe, the UK, USA and Australia.

EW 401

Wall-bracket for the desktop station Series EE 311A, EE 400 and EE 411.

EW 401S	Black
EW 401G	Light Grey

W 73 mm, H 235 mm, D 58 mm 160 g

EW 102

Wall-Mount Bracket for Series EE 200, EE 300 and EE 400 Desktop Intercom Stations.

EW 102	Transparent

W 72 mm, H 52 mm, D 42 mm 28 g

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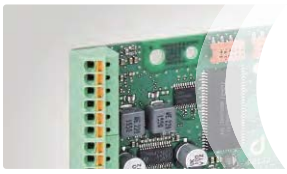
Your Individual Intercom Station

The right choice for individual solution, with modules by Commend it is always going to be the best one. The modules allow for Intercom stations to be built in accordance with customers' requirements and integrated into custom housings or panels. What is more, they make it possible to equip various terminals (ticket vending machines, info terminals, ATMs, etc.) with efficient, space-saving Intercom units. This way, operators can offer their customers extra services with added value.

Applications

- Implementation of special Intercom stations
- Integration into panels and enclosures
- Call terminals and emergency facilities, e.g. for help points, lifts, etc.



IP-MODULES

These modules connect to the Intercom Server over the IP network by direct connection to the Ethernet (LAN/WAN). A built-in switch with downlink function allows for direct connection of another IP device (e.g., IP-camera). The module supports DSP functionalities such as OpenDuplex®, Audio Monitoring and function monitoring.

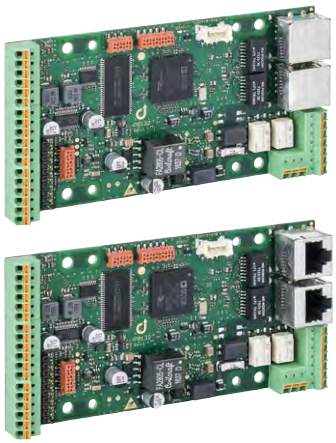
ET 908H

16 kHz | IoIP | SIP

IP-based module with switch and RJ 45 ports for IP Uplink/Downlink. Ready for connection of a keypad with 18 keys or three single buttons, a loudspeaker, a microphone, a headset or handset, and the supplied call status LED. Line input for audio feed (e.g. music, radio conference, etc.).

ET 908H	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP); Version with horizontally installed RJ 45 ports – without microphone
ET 908H-1	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP); Version with vertically installed RJ 45 ports – without microphone

W 130 mm, H 65 mm, D 21 mm 220 g



ET 908HM

16 kHz | IoIP | SIP

IP-based module with switch, microfon MIC 480 and RJ 45 ports for IP Uplink/Downlink. Ready for connection of a keypad with 18 keys or three single buttons, a loudspeaker, a microphone, a headset or handset, and the supplied call status LED. Line input for audio feed (e.g. music, radio conference, etc.).

ET 908HMI	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP); Version with horizontally installed RJ 45 ports – with microphone MIC 480
ET 908HMI-1	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP); Version with vertically installed RJ 45 ports – with microphone MIC 480

W 130 mm, H 65 mm, D 21 mm 220 g

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ET 962H/HR

16 kHz | IoIP | SIP

IP-based Intercom Module in rugged installation enclosure with integrated electret microphone, loudspeaker and multi-functional LED. Supports optional connection of up to 3 call buttons.

Power supply via PoE (Power over Ethernet IEEE 802.3af); 2.5 W class "D" final amplifier (1.5 W amplifier power with integrated 8-Ω loudspeaker); loudspeaker with special membrane for optimum speech quality; 1 input for floating contact, and 1 relay output Optional: I/O expansion with expansion board EB2E2AHE, providing 2 additional inputs for floating contacts and 2 relay outputs.

ET 962H	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP);
ET 962HR	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP); EN 50155 compliant (EN-Standard for railway applications)

W 109 mm, H 87.5 mm, D 45 mm (without Ethernet cable) 220 g

ET 970H/HR

16 kHz | IoIP | SIP

IP-based Intercom Module in rugged installation enclosure with integrated electret microphone and multi-functional LED. Supports optional connection of up to 3 call buttons.

Power supply via PoE (Power over Ethernet IEEE 802.3af); 2.5 W class "D" final amplifier; plug-in port for external loudspeaker (4 - 50 Ω); 1 input for floating contact, and 1 relay output. Optional: I/O expansion with expansion board EB2E2AHE, providing 2 additional inputs for floating contacts and 2 relay outputs.

ET 970H	IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP); with microphone MIC 480
ET 970HR	IP – Communication via IoIP or SIP (7 kHz HD Voice); with microphone MIC 480; EN 50155 compliant (EN-Standard for railway applications)

W 109 mm, H 87.5 mm, D 45 mm (without Ethernet cable) 220 g

2-WIRE DSP MODULES

Digital modules with DSP-technology for easy communication in OpenDuplex®. Used in situations where stations are permanently mounted and special requirements to the station are made. The digital construction allows line-saving cabling. The DSP-technology enables a host of additional features, such as loudspeaker/microphone function tests or Audio-Monitoring. New features can easily be added in the future via software update.

ET 811A

16 kHz | Digital

Module supplied as a build-in kit for building of digital master stations, with large, illuminated graphic display for caller identification and message indication. Includes full keypad, loudspeaker and microphone. Connection possibility for headset, headphones or gooseneck microphone, one input for floating contacts, one open collector output, possibility for later installation of a relay.

Typical applications: Mounting in control panels/desks.

Electret microphone; Power supply via Intercom Server (optional: external floating supply for greater line length); built-in Class "D" amplifier with 2.5 W (1.5 W output power with supplied loudspeaker resp. 2.5 W with 4 Ω loudspeaker); 8 Ω loudspeaker with special membrane type for optimal sound quality; connection possibility for external loudspeaker.

Main print: W 79 mm, H 173 mm, D 18 mm 450 g
Loudspeaker print: W 58 mm, H 83 mm, D 35 mm

ET 808A

16 kHz | Digital

Module for building customised master stations and substations. Ready for connection of a keypad with 18 keys or three single buttons, a loudspeaker, a headset or handset, the supplied call status LED plus a built-in microphone. Line input for audio feed (e.g. music, radio conference, etc.).

Power supply via Intercom Server (option: external floating power supply for longer cable lengths or for loudspeakers with less than 8 Ω resistance); 2.5 W Class "D" amplifier (2.5 W output when using 4 Ω loudspeaker, 1.5 W when using 8 Ω loudspeaker); 3 inputs for floating contacts and 2 relay outputs (switching contacts);. Optional: I/O expansion with expansion board EB2E2AHE, providing 2 additional inputs for floating contacts and 2 relay outputs.

ET 808A	Intercom Module with weatherproof built-in electret microphone MIC 480
ET 808AME	Intercom Module without microphone

W 130 mm, H 65 mm, D 24 mm 200 g

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ET 862A

16 kHz Digital

Module in rugged installation enclosure with integrated electret microphone, loudspeaker and multi-functional LED. Supports optional connection of a keypad (12-button matrix) or up to 12 call buttons.

Power supply via Intercom Server (external floating power supply for longer cable lengths available as an option); 2.5 W Class "D" amplifier (1.5 W output when using built-in 8 Ω loudspeaker); Loudspeaker with special membrane for optimum speech quality; 1 input for floating contact, and 1 relay output. Optional: I/O expansion with expansion board EB2E2AHE, providing 2 additional inputs for floating contacts and 2 relay outputs.

W 109 mm, H 87,5 mm, D 40 mm 195 g

ET 870A | ET 871A

16 kHz Digital

Module in durable installation housing with weatherproof build-in electret microphone MIC 480 and integrated multi-functional LED. Supports optional connection of up to 2 call buttons.

Power supply via Intercom Server (option: external floating power supply for longer cable lengths or for loudspeakers with less than 8 Ω resistance); 2.5 W Class "D" amplifier (1.5 W output when using 8 Ω loudspeaker, 2.5 W when using 4 Ω loudspeaker); 1 input for floating contact, and 1 relay output. Optional: I/O expansion with expansion board EB2E2AHE, providing 2 additional inputs for floating contacts and 2 relay outputs.

ET 870A	Intercom Module without loudspeaker, with connection port for external loudspeaker
ET 871A	Intercom module with built-in 8 Ω loudspeaker

W 109 mm, H 87,5 mm, D 40 mm ET 870A 205 g, ET 871A 220 g

4-WIRE MODULES

With Analogue 4-wire modules it is possible to realise low-cost, customer specific intercom terminals. The various measurements and functionalities ensure a fitting intercom module for all areas of application. In particular for building of special stations, where the shape of the housing, buttons, material, IP-rating and so on must be individually adapted.

ET 508

16 kHz Analogue

Module for building of suW stations, Compact measurements for easy installation. A special circuit allows excellent speech quality even in loud areas. Prepared for connection of a microphone, a loudspeaker, five single buttons and a red operation lamp.
Typical applications: Due to its small measurements this build-in kit fits perfectly into standard installation boxes.

Microphone input for electret or dynamic microphone; Power supply via Intercom Server; connection for a loudspeaker greater than 16 Ω.

W 50 mm, H 50 mm, D 18 mm 42 g

ET 509

16 kHz Analogue

Module, developed in particular for Simplex operation, including loudspeaker and microphone. Prepared for connection of an external call button.
Typical applications: Compact Intercom terminals, built into control desks that are permanently switched to listen to the area which initiated the call.

Omnidirectional electret microphone; Power supply via Intercom Server; loudspeaker with special membrane type for optimal sound quality.

W 85 mm, H 55 mm, D 20 mm 145 g

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ET 562

16 kHz Analogue

Intercom module in rugged build-in housing with mounting tabs, complete with built-in microphone and loudspeaker. A duplex controller ensures highest possible speech quality even with high ambient noise, and from a great distance. Possibility of connecting up to 3 call buttons.

Omnidirectional electret microphone; Power supply via Intercom Server; loudspeaker with special membrane type for optimal sound quality.

W 109 mm, H 87.5 mm, D 40 mm 162 g

ET 570 | ET 571

16 kHz Analogue

Intercom module in durable mounting frame with mounting tabs; includes weather-resistant, omnidirectional add-on Electret Microphone MIC 480. The built-in 2 W amplifier ensures sufficient sound volume on site. Ready for connection of a call button.

ET 570 – requires external power supply (12 – 24 V AC or 16 – 24 V DC); loudspeaker to be connected must be 8 Ω or higher.
ET 571 – requires external power supply (12 – 24 V AC or 16 – 24 V DC); built-in 8 Ω l oudspeaker with special membrane for optimum speech quality.

ET 570	Intercom Module loudspeaker with connection port for external loudspeaker
ET 571	Intercom Module with built-in 8 Ω loudspeaker

W 109 mm, H 87.5 mm, D 40 mm ET 570 190 g, ET 571 205 g

INPUT/OUTPUT MODULES

ET 8E8A-IP

IoIP

Remote in/output module for management of inputs and outputs far from the central. The connection to the module is realised via a ethernet line with up to 100 m length (depending on cable type and power supply). IP downlink to connect further IP devices. Mounting is possible in a 19“ rack on a DIN rail or with the supplied rail for wall mounting. Line-monitoring from ET 8E8A-IP to Intercom Server.

8 inputs for floating contacts; 8 relay outputs 30 V/3 A (4 make and 4 switch over); power supply via PoE (IEEE 802.3af).

W 150 mm, H 110 mm, D 60 mm (incl. mounting rail, screws and dowels) 850 g

ET 8E8A

Digital

Remote in/output module for management of inputs and outputs far from the central. The connection to the module is realised via a 2-wire line with up to 3,000 m length (depending on cable type and power supply). Mounting is possible in a 19“ rack on a DIN rail or with the supplied rail for wall mounting. LEDs for status indication for all inputs and outputs. Line-monitoring from ET 8E8A to Intercom Server.

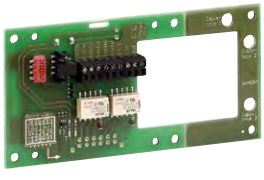
8 inputs for floating contacts; 8 relay outputs 30 V/3 A (4 make and 4 switch over); power supply via Intercom Server (optional: power supply for greater line length).

W 105 mm, H 62 mm, D 105 mm (incl. mounting rail, screws and dowels) 350 g

EB2E2AHE

Option board for I/O expansion of Intercom modules connection of 2 inputs as floating contacts, as well as 2 relay outputs.

W 130 mm, H 65 mm, D 12 mm 30 g



EB8E4A

Option board for I/O expansion of Intercom modules (ET 808A) connection of 8 inputs as floating contacts, as well as 4 relay outputs.

W 130 mm, H 65 mm, D 12 mm 30 g

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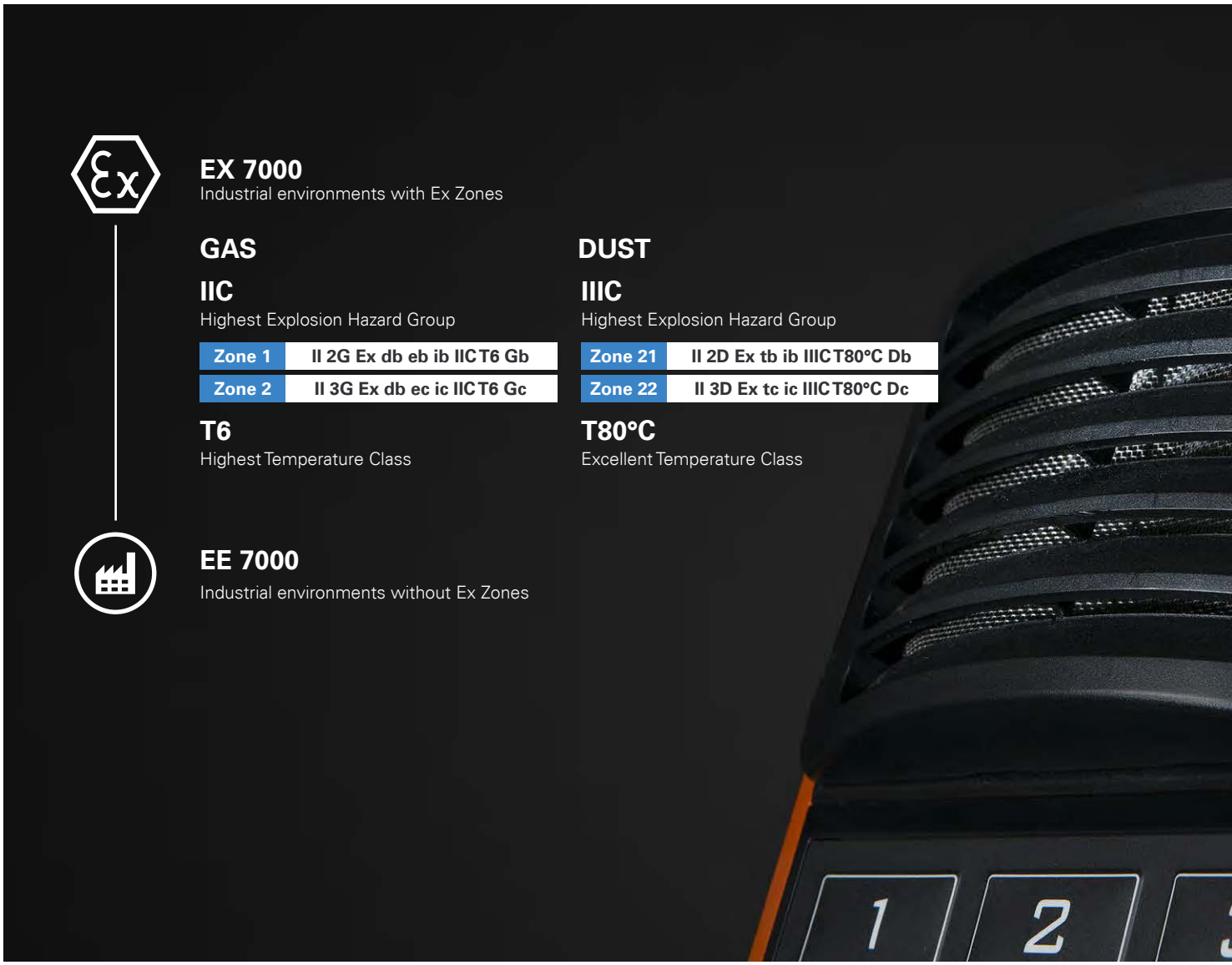
DEVELOPED TO RESIST IN ALL AREAS

The new Commend Industry Series 7000. Versatile and Efficient.



EX 7000
Industrial environments with Ex Zones

GAS

IIC
Highest Explosion Hazard Group

Zone 1	II 2G Ex db eb ib IIC T6 Gb
Zone 2	II 3G Ex db ec ic IIC T6 Gc

T6
Highest Temperature Class

DUST

IIIC
Highest Explosion Hazard Group

Zone 21	II 2D Ex tb ib IIIC T80°C Db
Zone 22	II 3D Ex tc ic IIIC T80°C Dc

T80°C
Excellent Temperature Class

EE 7000
Industrial environments without Ex Zones

CERTIFIED FOR EX ZONES

The "EX" line of Series 7000 has been developed with painstaking attention to the demanding requirements for hazardous and explosive environments. By focusing on the highest safety levels, simple operation and futureproof scalability, Series EX 7000 is especially designed for reliable communication in this areas.
It's based on a rugged, corrosion-resistant and lightweight housing, enabling simple and rapid installation, and at the same time eliminating expensive routine servicing and maintenance costs.

IECEx ATEX CNEX EAC

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VERSATILE WITH 72 VERSIONS

Where communication is concerned, the requirements of the various branches of industry could not be more different. While one industry is focussed on mobility, another necessarily needs stationary terminals. Not to forget the need of flexible operation modes - from point-to-point communication, group conferences and party lines up to paging and PAGA.

This is why Series 7000 is designed to cover all possible scenarios while ensuring consistent, uniform operation anywhere, from regular industrial facilities to explosion-prone areas (Ex zones).

AUDIO QUALITY FOR EFFICIENCY

Maintaining optimum speech intelligibility even against loud background noise is essential to ensure efficient processes and straightforward coordination among co-workers. This is where our highly efficient 20-Watt Class-D amplifiers come in. They provide the outstanding volume capacity with 16 kHz speech quality and assist users with helpful features such as OpenDuplex® for hands-free communication and IVC (Intelligent Volume Control) for auto-adjusting the volume level to ambient acoustic conditions.

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Industrial Station with full keypad and 4 function keys – Series 7504

16 kHz | IP 66 | Digital

integrated loudspeaker				without loudspeaker			
		with handset				with handset	
100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC
Ex Zone 1 and 21 classified environment							
EX 7504D 1 AC S	EX 7504D 1 DC S	EX 7504D 1 AC S H	EX 7504D 1 DC S H	EX 7504D 1 AC	EX 7504D 1 DC	EX 7504D 1 AC H	EX 7504D 1 DC H
Ex Zone 2 and 22 classified environment							
EX 7504D 2 AC S	EX 7504D 2 DC S	EX 7504D 2 AC S H	EX 7504D 2 DC S H	EX 7504D2 AC	EX 7504D 2 DC	EX 7504D 2 AC H	EX 7504D 2 DC H
Industrial environment							
EE 7504D AC S	EE 7504D DC S	EE 7504D AC S H	EE 7504D DC S H	EE 7504D AC	EE 7504D DC	EE 7504D AC H	EE 7504D DC H

W 175 mm, H 344 mm, D 102 mm / without loudspeaker and handset
W 175 mm, H 344 mm, D 127 mm / without handset

Industrial Station with 8 function keys – Series 7008

16 kHz | IP 66 | Digital

integrated loudspeaker				without loudspeaker			
		with handset				with handset	
100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC
Ex Zone 1 and 21 classified environment							
EX 7008D 1 AC S	EX 7008D 1 DC S	EX 7008D 1 AC S H	EX 7008D 1 DC S H	EX 7008D 1 AC	EX 7008D 1 DC	EX 7008D 1 AC H	EX 7008D 1 DC H
Ex Zone 2 and 22 classified environment							
EX 7008D 2 AC S	EX 7008D 2 DC S	EX 7008D 2 AC S H	EX 7008D 2 DC S H	EX 7008D 2 AC	EX 7008D 2 DC	EX 7008D 2 AC H	EX 7008D 2 DC H
Industrial environment							
EE 7008D AC S	EE 7008D DC S	EE 7008D AC S H	EE 7008D DC S H	EE 7008D AC	EE 7008D DC	EE 7008D AC H	EE 7008D DC H

W 175 mm, H 344 mm, D 102 mm / without loudspeaker and handset
W 175 mm, H 344 mm, D 127 mm / without handset

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Industrial Station with party line keypad – Series 7P04

16 kHz | IP 66 | Digital

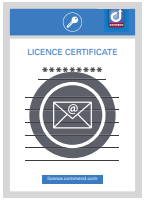
integrated loudspeaker				without loudspeaker			
		with handset				with handset	
100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC	100 – 240 V AC	22 – 60 V DC / 18 – 30 V AC
Ex Zone 1 and 21 classified environment							
EX 7P04D 1 AC S	EX 7P04D 1 DC S	EX 7P04D 1 AC S H	EX 7P04D 1 DC S H	EX 7P04D 1 AC	EX 7P04D 1 DC	EX 7P04D 1 AC H	EX 7P04D 1 DC H
Ex Zone 2 and 22 classified environment							
EX 7P04D 2 AC S	EX 7P04D 2 DC S	EX 7P04D 2 AC S H	EX 7P04D 2 DC S H	EX 7P04D 2 AC	EX 7P04D 2 DC	EX 7P04D 2 AC H	EX 7P04D 2 DC H
Industrial environment							
EE 7P04D AC S	EE 7P04D DC S	EE 7P04D AC S H	EE 7P04D DC S H	EE 7P04D AC	EE 7P04D DC	EE 7P04D AC H	EE 7P04D DC H

W 175 mm, H 344 mm, D 102 mm / without loudspeaker and handset
W 175 mm, H 344 mm, D 127 mm / without handset

ACCESSORIES FOR SERIES 7000

L-EX-AF-OUT

Licence for activation of the second amplifier and power relay, enables drive of high-power loudspeakers and external audible or visual signal devices



INDUSTRIAL STATIONS – SERIES EE 8000

Series EE 8000 Stations are designed specifically to withstand extreme temperatures, moisture and dirt, and providing clearly intelligible audio communication even in areas with extreme ambient noise. This way, they contribute significantly to enhanced safety and smooth workflows in various and extreme applications. The products of the Series EE 8000 are used successfully in numerous projects and industrial applications such as metal and mining, manufacturing industry, oil and gas, chemical industry or energy and public utilities. Because of their useful qualities, the stations are also installed in ports,waterways, tunnels and highways.

Technical data: IP 66 rating; Power supply 24 – 42 V AC/40 VA or 22 – 60 V DC/40 W; built-in Class "D" amplifier with 25 W speech power, 8 Ω; 2 floating relay outputs (30 V/ 3 A) and 2 inputs for floating contacts. Microphone sensitivity adjustable in a range of 30 dB; speaking distance adjustable 3 cm to 5 m (dependent on ambient noise and microphone sensitivity); ambient noise level up to max. 120 dB.

EE 8158M

7 kHz | IP 66 | Digital

Station with 8 programmable LED buttons, built-in loudspeaker and universal microphone. The DSP-technology facilitates a single microphone with both omnidirectional and noise cancelling characteristics. Button labels are included for marking the buttons' functions. The cable glands are within the extent of supply.

W 175 mm, H 312 mm, D 145 mm 3,200 g

EE 8238M

7 kHz | IP 66 | Digital

Station with a full keypad, universal microphone, and 2 programmable LED buttons. The DSP-technology facilitates a single microphone with both omnidirectional and noise cancelling characteristics. An external loudspeaker is required for this station. The cable glands are within the extent of supply.

W 175 mm, H 312 mm, D 145 mm 2,960 g

EE 8108M

7 kHz | IP 66 | Digital

Station with 2 programmable LED buttons, built-in loudspeaker and universal microphone. The DSP provides the characteristics of both a noise cancelling microphone and an electret microphone. The cable glands are within the extent of supply.

W 175 mm, H 312 mm, D 145 mm 3,100 g

EE 81ADMSOS

7 kHz | IP 66 | Digital

Station imprinted with 'SOS' on the front and side panels, built-in loudspeaker, universal microphone, LED button and a large red mushroom button imprinted with 'SOS'. Both buttons can be assigned with various functions. The DSP technology facilitates a single microphone with both omnidirectional and noise cancelling characteristics. This station has no lateral expansion openings. The cable glands are within the extent of supply.

W 175 mm, H 312 mm, D 145 mm 3,100 g

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BASIC HOUSING – SERIES EE 8000

The modular concept of this system allows a flexible, customer specific configuration of digital heavy industrial stations. One basic and two expansion housings can be combined. This way industrial stations with up to 50 freely programmable direct dialling buttons can be configured.

EE 8999M

IP 66

Basic housing with three module slots, includes electronics, cable glands, expansion openings on four sides and dummy plugs.

W 175 mm, H 312 mm, D 122 mm 2,300 g

EE 8999MSOS

IP 66

Basic housing with three module slots, includes electronics, cable glands, 'SOS' imprint on both sides (hence the expansion openings are only at the top side and bottom of the unit).

W 175 mm, H 312 mm, D 122 mm 2,300 g

EE 8999S

IP 66

Expansion housing with three module slots, includes electronics, cable glands, expansion openings on all four sides and dummy plugs. The mounting kit (EE 8999-KIT) for expansion housings has to be ordered separately.

W 175 mm, H 312 mm, D 122 mm 2,240 g

ACCESSORIES

EDI 600

IP 66

Empty housing without electronics and modules, for accommodation of distribution boards, terminal strips or additional electronics. Required cable glands are included.

W 175 mm, H 312 mm, D 122 mm 2,080 g

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MODULES – SERIES EE 8000

There are modules for dialling, modules with inscribable direct dialling buttons, microphone modules and a loudspeaker module. The modules are connected to the PCW of the housing and can be combined as desired.

Product Code	Module Code		
EM 600	**0**	**Dummy module** for covering empty module slots or for mounting of customer specific buttons.	
EM 6A0	**A**	**Dummy module** imprinted **with 'SOS'** for covering empty module slots.	
EM 650	**1**	**Loudspeaker module** for industrial stations. The loudspeaker features high sound pressure and excellent intelligibility of speech. Impedance 8 Ω.	
EM 6CA	**C**	**Camera module** with colour video camera and LED light; vertical/horizontal viewing angle mechanically adjustable by additional 30°; video streams are possible in H.264 (MPEG-4 Part 10/AVC) and M-JPEG format at resolutions up to 1440 x 900 pixels (1.3 MP).	
EM 602	**2**	**Keypad module** with buttons **1** to **6** as part of a full keypad. The buttons can be assigned with various functions.	
EM 603	**3**	**Keypad module** with buttons **7** to **X** as part of a full keypad. The buttons can be assigned with various functions.	
EM 606	**4**	**Keypad module** with 6 buttons that can be custom-labelled. The buttons can be assigned with various functions. Tags are included for labelling the buttons.	
EM 605	**5**	**Keypad module** with 6 **LED buttons** that can be custom-labelled. The buttons can be assigned with various functions. Tags are included for labelling the buttons.	
EM 660	**6**	**Microphone module** with a universal microphone and 2 buttons. The two buttons can be assigned with various functions. Optional button labels **L** and **X** are included in extent of supply. *	
EM 680	**8**	**Microphone module** with a universal microphone and 2 LED buttons. The two buttons can be assigned with various functions. Optional button labels **L** and **X** are included in extent of supply. *	
EM 681	**D**	**Microphone module** with a universal microphone, 1 LED button and 1 large red mushroom button imprinted with 'SOS'. The two buttons can be programmed with various functions. *	
EM 6B0	**B**	**Microphone module** with a universal microphone, white conversation lamp and large red mushroom button imprinted with 'SOS'. The button can be assigned with various functions. *	

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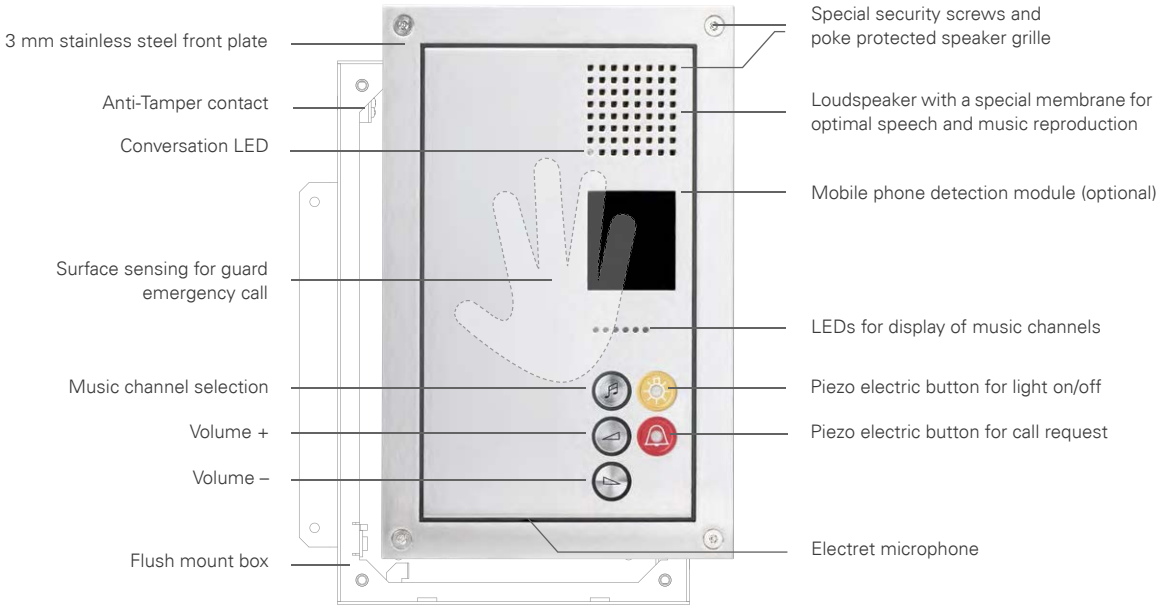
2-Wire Detention Cell Terminal

Commend's Detention Cell Intercom terminal was specifically designed for prison and police cells, correctional and court holding facilities, custody suites, forensic laboratories, etc. To further enhance security, cell terminals not only provide speech communication, they also facilitate control functions signalling, mobile phone detection and emergency alarm calls.

Innovative technologies combined with a modular approach ensures a future-proof investment. The optional mobile phone detection module combats the problem of detainees being illegally in possession of mobile phones. The surface sensing feature helps protects guards whilst in the cell, in critical situations the guard only needs to touch the front plate to activate the guard alert.

Digital 2-wire DSP technology allows Audio-Monitoring and OpenDuplex® as well as loudspeaker/microphone surveillance, which in combination with programmable line monitoring ensures that the operational status of the detention cell intercom terminals is known at all times.



Cell Installation

Option 1 – Mounting with integrated electronics

- UP 030 flush mount box
- EW 330 | EW 330S cell electronics module
- EF 031x front plate

Option 2 – Mounting with remote electronics

- Cell electronics module mounted on "top hat" DIN rail or in surface mount box
- UP 030 flush mount box
- Connectivity board for connection of cell electronics module with front plate
- EF 031x front plate

EF 031 FRONT PLATE SERIES

The front plates are made of 3 mm stainless steel with a brushed surface. Special security screws and speaker grille protect against damage and the insertion of foreign substances, debris, etc. The front plates are suited for flush wall mount using the UP-030 flush mount box.

Technical data: Integrated 2.5 W power amplifier (1.5 W over integrated loudspeaker); 8 Ω loudspeaker with a special membrane for optimal speech reproduction; electret microphone.

EF 031-1

7 kHz Digital

Front panel with piezo electric buttons for call/help request, microphone and loudspeaker.

EF 031-1	Front panel

W 179 mm, H 279 mm, D 3 mm 1,660 g

EF 031-2

7 kHz Digital

Front Panel with 2 piezo electric buttons for call/help request, light, microphone and loudspeaker.

EF 031-2	Front panel
EF 031-2R	Front panel with antenna window for installation of a Mobile Phone Detection Module

W 179 mm, H 279 mm, D 3 mm 1,660 g

EF 031-2M

7 kHz Digital

Front Panel with 2 piezo electric buttons for call/help request, light, microphone and loudspeaker. 3 buttons (TCT technology) for music selection and volume adjustment; 6 LEDs for indicating music channels.

EF 031-2MR	Front panel with antenna window for installation of a Mobile Phone Detection Module

W 179 mm, H 279 mm, D 3 mm 1,740 g

FLUSH MOUNT BOX

Flush in-wall mounting box for accommodation of EF 031x front plates and EW 330 cell electronics. Two diagonally located sabotage break contacts. The flush mount box is to be ordered separately for preparatory mounting.

UP 030

Flush in-wall mounting box for accommodation of EF 031x front plates and EW 330x cell electronics. 5 cable feeds (20 mm diameter) in top and bottom and one in each sidewall.

W 183.5 mm, H 283.5 mm, D 63.5 mm (excluding plaster tabs) 1,700 g
W 223.5 mm, H 283.5 mm, D 63.5 mm (including plaster tabs)

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CELL ELECTRONICS

Various electronics modules are available for mounting options 1 and 2 (integrated or remote electronics). Additionally, there are electronics modules with integrated surface sensing with which front plates can be made touch-sensitive for guard alerts etc. As an alternative to the EF 031 Series of front plates, analogue intercom modules can be connected. This allows for custom front plate design. Please note: Electronics modules and flush mount boxes need to be ordered separately.

Technical data: External 24 V AC/8.5 VA or 24 – 35 V DC/8.5 W power supply; power consumption: 3.5 W standby, 8.5 W max at 24 V AC (current min. 130 mA/h min. / 350 mA/h max. at 24 V AC); 10 floating input contacts; 6 relay outputs (3 breakers and 3 two-way contacts); 60 V DC/V AC – 1A; 30 V DC/V AC – 2A.

EB 330

7 kHz Digital

Cell Electronics Flush Mount Kit for integrated installation and connection of an EF 031 front panel.

EB 330	Cell Electronics Flush Mount Kit
EB 330S	Flush mountable cell electronics module with surface sensing function

W 147 mm, H 162 mm, D 25 mm 360 g

EB 330AH

7 kHz Digital

Cell Electronics Surface Mount Kit for set-off installation (e.g. in risers) and connection of Front Panel EF 031. The module comes attached to a mounting plate with a DIN rail bracket.

EB 330AH	Cell Electronics Surface Mount Kit
EB 330AHS	Flush mountable cell electronics module with surface sensing function

W 150 mm, H 162 mm, D 69,5 mm 800 g
(incl. fitting panel suitable for "top hat" DIN rail mounting and flap)

EB 330A

7 kHz Digital

Cell Electronics Surface Mount Kit for set-off installation (e.g. in risers) and connection of Front Panel EF 031. The Surface Mount Kit comes in a protective housing.

EB 330A	Cell Electronics Surface Mount Kit
EB 330AS	Flush mountable cell electronics module with surface sensing function

W 160 mm, H 296 mm, D 90 mm 1.680 g

IP Converters

IP CONVERTER

IP Converter ET 901 installs between the Ethernet connection (LAN/WAN) and any Intercom Terminal. This will turn the station into a fully-featured IP Intercom station.

Technical data: External power supply via power adapter (24 V AC or 28-35 V DC, 8.4 W) or via PoE (Power over Ethernet) IEEE 802.3af; Connections via RJ 45 ports for IP Uplink / Downlink and Intercom; audio bandwidth 16 kHz for digital 2-wire Intercom stations, and 7 kHz for analogue 4-wire Intercom stations.

ET 901

IoIP

IP Converter Box with built-in switch for Intercom terminals.
Typical applications: Offices, warehouses, switch-boxes, etc.

ET 901-D	Connection of digital 2-wire Intercom terminals
ET 901-A	Connection of analogue 4-wire Intercom terminals

W 159 mm, H 49 mm, D 78 mm 280 g

ET 901HE

IoIP

IP Converter as plug-in board with built-in switch for Intercom terminals.
Typical applications: For integration into existing housings.

ET 901HE-D	Connection of digital 2-wire Intercom terminals
ET 901HE-A	Connection of analogue 4-wire Intercom terminals

W 130 mm, H 24 mm, D 65 mm 230 g

OPTION BOARDS

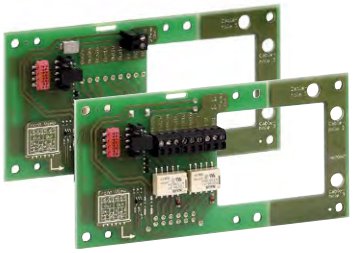
Option boards offer additional powerful features, enabling specific applications to easily be solved.

I/O Module EB2E2A

Option board for I/O expansion of IP Converter box ET 901 for connection of 2 inputs as floating contacts, as well as 2 relay outputs.

EB2E2A	Expansion of IP Converter ET 901
EB2E2AHE	Expansion of IP Converter ET 901HE

W 130 mm, H 65 mm, D 12 mm 30 g



IP CONVERTER FOR 2-WIRE CONNECTIONS

The IP Converter for 2-Wire Connections enables the installation of modern high-speed data communication networks in buildings that do not have structured network connections in place. Using the IP Bridge Module, existing infrastructures can be used and existing Ethernet networks can be extended via 2-wire connections.

Accessories: Top-hat rail Mounting Kit ET 901-HSH35

Technical specifications: External power supply on the transmitter end via power adapter (48 V DC, 65 W); A transmitter can control up to four receivers and provide Power over Ethernet (IEEE 802.3at) for connected devices; the unit supports transfer rates of up to 93 Mbit/s and cable lengths of up to 2,000 m; temperature range: -40°C to +70°C; Plug-and-Play capable – no manual configuration necessary.

IP BRIDGE

IoIP

IP Converter Box for 2-wire connections, with metal casing.
Typical applications: buildings with obsolete networking infrastructures; facilities requiring extensive cable lengths; upgrading of 2-wire solutions; etc.

W 39 mm, H 26 mm, D 156 mm

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Audio Induction Loop Amplifier

AUDIO INDUCTION LOOP AMPLIFIER – SERIES AFIL

Key features:
- IEC 60118-4 compliant design
- High efficiency, low thermal footprint
- Flexible integration into individual installation environments
- Same function range as MLC and AGC; designed for easy start-up and fault-free operation

Technical specifications: Input impedance 10 kΩ; Frequency response 80 Hz – 8 kHz; max. loop voltage 6.5 V; loop resistance 0.1 Ω – 1,0 Ω effective resistance; MLC (Metal Loss Correction) 0 to -3dB/ octave; external power supply 15 – 26 V DC;

AFIL

Audio induction loop amplifier module with polycarbonate casing, for transmission of audio signals to hearing aids; induction loop not included.

W 159 mm, H 49 mm, D 87 mm 300 g

AFIL EB

Audio induction loop amplifier module without casing, for transmission of audio signals to hearing aids; induction loop not included.

Audio Induction Loop Extension Kit AFIL-USB

IEC 60118-4 compliant induction loop amplifier kit for transmitting Intercom audio signals to hearing aids; Sticker for the station front included; connects to a USB port on the Intercom station.

W 16 mm, H 200 mm, D 12 mm 140 g

ACCESSORIES FOR IP CONVERTERS & AUDIO INDUCTION LOOP AMPLIFIER

Mounting bracket for IP Converter

ET 901-HSH35 Mounting bracket for mounting the IP Converter box to a DIN-rail in a switch rack.

Power supply unit for IP Converter PA20W30V

20W high efficiency switched-mode power supply. Primary: 90 – 264 V AC; Secondary: 30 V DC; 0.67 A

PA20W30V-EU Version for Europe

PA20W30V-CA Version for UK, USA, Australia

Switched-Mode Power Supply PA65W48V

65 W primary switched-mode power supply adapter with high efficiency output. Primary: 100 – 240 V AC; Secondary: 48 V DC; 0 °C to +40 °C; Colour: black. Power cords must be ordered separately.

W 53 mm, H 115 mm, D 38 mm 270 g

Power Cord

KAB-C13-EU Version for Europe

KAB-C13-UK Version for UK

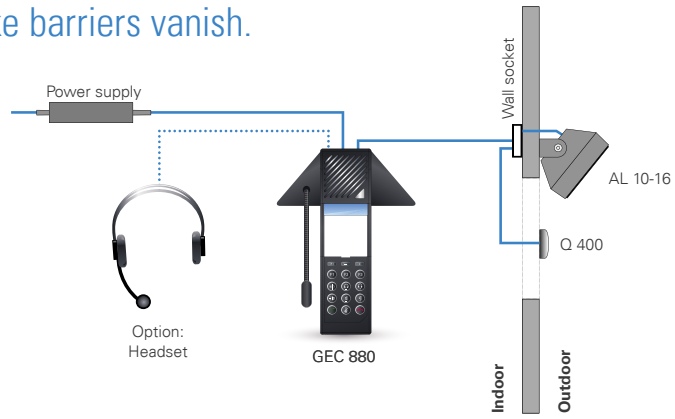
KAB-C13-US Version for USA

KAB-C13-AU Version for Australia

1,5 m

Counter intercom systems from Commend make barriers vanish.

The most modern communication systems are required wherever glass or walls form barriers between staff and the general public. Despite the existence of such barriers, natural and personal speech comprehension should be possible. Commend counter intercom systems satisfy these requirements completely. Thanks to the special speech processor control, naturally sounding speech and full comprehension are guaranteed under all conditions.



SERIES GEC 880

The digital counter intercom GEC 880 is equipped with powerful features. The system automatically adapts to the acoustic conditions on site and provides plentiful output power. An additional amplifier can be connected to enhance the output even further.
The modular construction of the system allows manifold counter intercom configurations. The base of these is an intercom terminal that is available in two versions (with and without gooseneck microphone).

Technical data: Connections: RJ 45 port for outdoor microphone, outdoor loudspeaker, call button/proximity switch and RJ 10 port for a headset/handset. Integrated amplifier with 10/15 W output power. One input for floating contact. Connection option for additional amplifiers, e.g. induction loop amplifiers.

GEC 881

15 kHz Digital

Digital desktop counter call station with plastic reinforced silicon keypad and built-in microphone with omnidirectional characteristic for unrestricted speech. Keypad with 15 keys, printed with easily understood non-verbal pictograms. Extent of supply: Wall mounting box for surface mounting, 3 m connection cable. Colour: Black. Further accessories must be ordered separately.

W 66 mm, H 55 mm, D 230 mm 280 g

GEC 882

15 kHz Digital

Digital desktop counter call station with plastic reinforced silicon keypad, anti-tilt device and cardioid type goose neck microphone. Keypad with 15 keys, printed with easily understood non-verbal pictograms. Extent of supply: Wall mounting box for surface mounting, 3 m connection cable. Colour: Black. Further accessories must be ordered separately.

W 179 mm, H 280 mm, D 230 mm / Length of goose neck: 422 mm 440 g

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SERIES GEC 480

Cost effective counter intercom system with base functionality for simple applications with normal acoustic conditions and low to medium ambient noise. Volume for both sides can be individually set from the inside station. Optionally a proximity sensor or call button can be added on the customer side to activate the system.

Technical data: Power supply via included mains adapter; conversation modes Open (full duplex), Open PLUS (feedback reduce full duplex) or Simplex; built-in amplifier with 2 x 4 W at 4 Ω; gooseneck microphone (electret noise cancelling microphone) hypercardioid characteristic for max. 50 cm speaking distance; frequency range 200 Hz to 12 kHz. Power supply unit 100–240 V AC, 50–60 Hz, 400 mA included. Country-specific power supply available

GEC 480

12 kHz | Analogue

Counter Intercom System as desk station with gooseneck microphone. Colour: Black. Microphone Q 400 for outside station and power supply 230 V included in extent of supply.

Power supply unit with 230 V AC, 6 VA / 12 V AC, 500 mA.

W 179 mm, H 280 mm, D 230 mm / Length of gooseneck: 430 mm 1,185 g

GEC 481

12 kHz | Analogue

Counter Intercom System as desk station without microphone for outside station. Colour: Black. Power supply 230 V included in extent of supply.

Power supply unit with 230 V resp. 120 V AC, 6 VA / 12 V AC, 500 mA.

GEC 481S	with 230 V plug-in power adapter
GEC 481S U	without plug-in power adapter

W 179 mm, H 280 mm, D 230 mm / Length of gooseneck: 430 mm 1,185 g

ACCESSORIES

AL 10-16

IP 44

Compact, high efficiency column speaker. Weatherproof polyamide housing for indoor and outdoor use. Can be rotated and tilted. Mounting bracket included.

Frequency range 220 to 16,000 Hz; 12/15 W output power; Sound pressure 94 dB/W/m (1 kHz); Max. sound pressure 110 dB; Impedance 16 Ω.

AL 10-16S	Black
AL 10-16W	White

W 100 mm, H 300 mm, D 98 mm (including brackets) 1,780 g

Power supply unit PA30W15V

30 W primary switched-mode power supply adapter with high-efficiency output. Power cords KAB-C13 must be ordered separately.

Primary: 90 – 264 V AC; Secondary: 15 V DC; –5°C to +40°C.

W 42 mm, H 106 mm, D 76 mm 200 g

Power Cord

KAB-C13-EU	Version for Europe
KAB-C13-UK	Version for UK
KAB-C13-US	Version for USA
KAB-C13-AU	Version for Australia

1,5 m

Microphones and Headsets

MIC 800 | MIC 473

Gooseneck microphone with hyper cardioid characteristic for building of special stations or control desks. With nut for mounting in build-in panels. Colour Black.

Sensibility 4.2 mV/Pa; directional hyper cardioid characteristic to the front; cable length 0.28 m (shielded).

MIC 800SW	Version with RJ10 connector
MIC 800SWJ	Version with JST connector
MIC 473SW	Version for installation via screw terminal

Length 400 mm / Bore diameter 10 mm

MIC Q400

Miniature, cardioid-type extension microphone. Housing made from impact-resistant and distortion-free plastic, can be bonded to a flat surface. Improved acoustics. Colour: Black.
Typical applications: As outside microphone for counter intercoms.

Sensitivity 15 mV/Pa; directional characteristic: cardioid; frequency range: 100 Hz – 8 kHz; cable length 2.8m (shielded)

MIC Q400	Version for installation via screw terminal
MIC Q400AJ	Version with 3.5 mm jack

W 24 mm, H 43 mm, D 14 mm 58 g

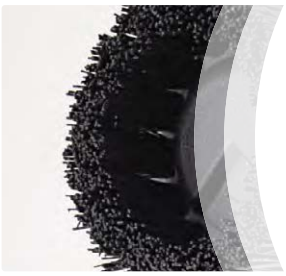
MIC 480

Omnidirectional Electret microphone for installation in up to 10 mm thick glass or aluminium panels; weather proof (IP 53 rating). Colour: Black.
Typical applications: As Intercom terminals in parking gates, ticket vending machines, lift control panels or as external microphone for desktop counter intercom systems.

Sensitivity: 7.1 mV/Pa; hypercardioid characteristic; shielded cable.

MIC 480S-08	Cable length 0.8 m; version for installation via screw terminal
MIC 480S-12	Cable length 1.2 m; version for installation via screw terminal
MIC 480	Cable length 4 m; version for installation via screw terminal
MIC 480AJ	Cable length 2 m; version with 3.5 mm jack

Diameter 14 mm x D 20 mm



MICROPHONE WIND GUARD

Microphones are subject to acoustic problems when exposed to windy environments or air streams caused by passing vehicles. A good wind guard breaks up the energy-rich air streams and air swirls, thus eliminating the energy that causes acoustic distortions. Commend Products are used primarily in outdoor areas. Emergency call stations on motorways, toll roads and railway stations are only a few of the main application environments. Here the devices must withstand ambient conditions such as rain, frost, dust and other environmental influences. Commend has developed a special wind guard attachment made of plastics, which has a unique brush shape to ensure supreme speech intelligibility. Problems such as icing over or becoming encrusted with dust is a thing of the past, thanks to the windBRUSH®!

Microphone wind guard – windBRUSH®

Microphone wind guard in unique brush shape (patent pending) for ultimate speech intelligibility. Quick and easy to install on any MIC480.

WIND MIC480	Brushes black.

Diameter 25 mm, D 13 mm 20 g

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Headset HS 1

Lightweight, wired headset for series GEC 880 and all compatible devices (EE 811A, Conductor, etc.). Connection cable KAB-HS1-RJ has to be ordered separately. Colour: Black.

246 g

Illustration picture

KAB-HS1-RJ

Adapter cable QD to RJ10 for headset HS1 for connection to Intercom Terminals with headset socket and station series GEC 880. Cable length: 0.5 – 2.0m (Spiral cable).

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SOFTWARE TERMINALS

THE CONVENIENT MOBILE SOLUTION

Software Terminals by Commend

Overview of software terminals

Commend Software Terminals come with support for the IoIP and SIP Intercom protocols and the most common operating systems:

- The **Mobile Client** for **Android**® turns your mobile phone or tablet into an Intercom station with worldwide connectivity.
- The **Mobile Client** for **iOS**® provides networking support for your iOS devices.

- The **Intercom Client** for **Windows**® transforms any Windows-based computer into an Intercom station.
- The **Intercom Client** for **Android**® provides ultimate flexibility for your tablet or mobile phone.

Mobile Client and Intercom Client – Overview

	Mobile Client		Intercom Client	
Supported Protocols	SIP	SIP	IoIP	IoIP
Window Layout	Telephone/Tablet	Telephone/Tablet	Telephone/Tablet	Modular single windows
Scalable	Full-screen	Full-screen	Full-screen	Custom scalable
Caller List	Yes	Yes	Yes	Yes
Background Operation	via iOS Message Centre	Yes	Yes	Yes, including num-block binding
Audio Quality	7 kHz HD Voice		7 kHz HD Voice (16 kHz eHD Voice when used with Commend hardware)	
Audio Codecs	G.722, G.711 a-law, G.711 u-law, and many more		G.722	Extended
Special Functions	SIP Early Media Support, server-based and server-less operation, HD video support		Direct volume adjustment; private mode	Direct volume adjustment; private mode
Connection	Status bar	Status bar	Display only	Status bar
Video Quality	HD Video H.264, MPEG-4, VP8		HD Video http/MJPG	HD Video Extended

Download on the App Store

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GET IT ON Google Play

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Software Mobile Client

Turning mobile phones and tablets into a mobile Intercom station

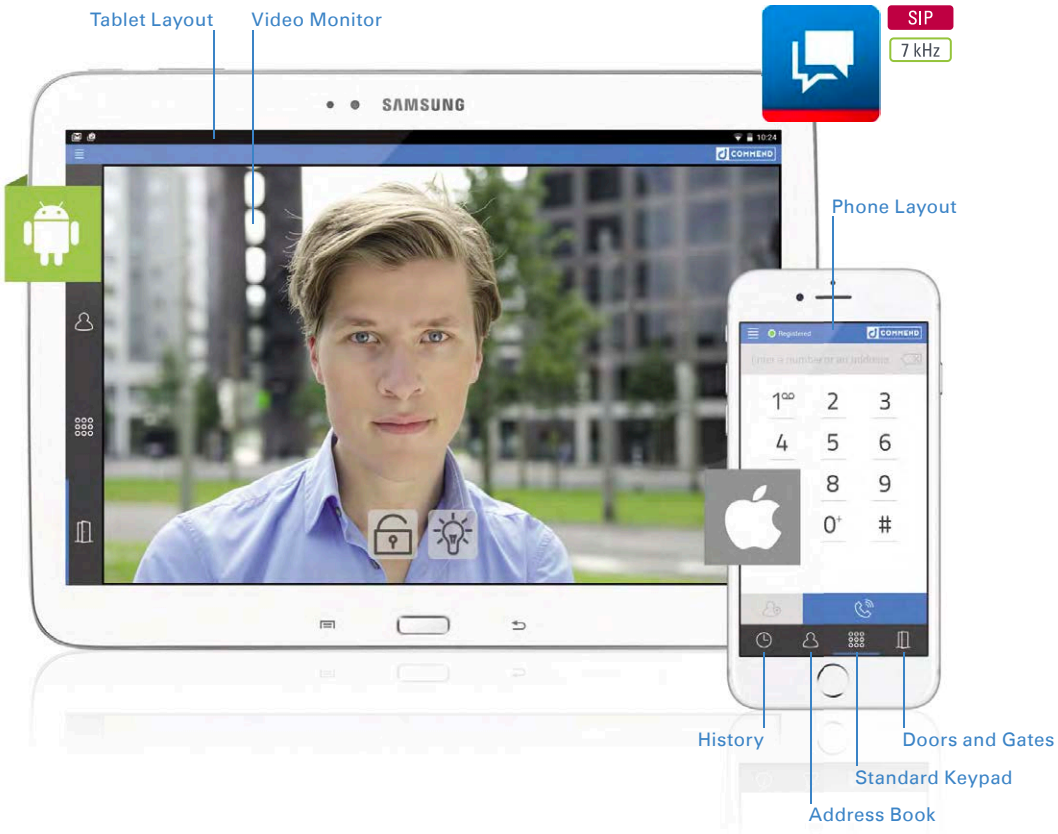
Using the Mobile Client, you can transform mobile phones and tablet devices into Intercom stations with worldwide connectivity. The clear advantage of this solution is that you always have your mobile terminal at hand to answer calls without delay. Whatever you need, whether it's an easy-to-use terminal for handling calls from your outdoor Intercom stations, or a door/gate control function for receiving outdoor camera images, or maybe extended call options such as conference call support – the Commend Mobile Client is at your service to integrate your iOS and Android devices smoothly into the World of Commend. The Mobile Terminal integrates with various infrastructures, from simple home network applications with serverless peer-to-peer communication up to complex business networks with sophisticated server architectures.

Key Features

– HD Video support
– Secure communication TLS, DTLS
– Peer-to-Peer Audio and Video connections without the need for a Media Relay Server
– Support for SIP Early Media, SIP servers, and serverless communication
– Low bandwidth mode for audio calls over 2G networks

Sample applications

– Premium Home solutions
– Solutions for office and administrative buildings
– Mobile solutions for efficient parking management



Mobile door and gate access control

The intuitive user interface is optimised specifically for use with smartphones and tablets, putting controls for functions such as call lists, home actions and access control right at your fingertips. Some functions can be used during ongoing calls, e.g., turning on the lights in the reception area or unlocking doors. Early Media technology provides additional user convenience with the ability to view the video image of a call connection before accepting the call.

Mobile Client – available in the App Store and Play Store

You can download the Commend Mobile Client for mobile phones or tablets free of charge from the Apple App Store and the Google Play Store. Once you have completed the quick and easy SIP account setup wizard, your app is ready to receive calls. The premium add-on feature for Door and Access Control is available as an in-app purchase. It provides the added ability to view live video streams (e.g., front door CCTV video) from any location. What is more, you can switch on building lights or unlock doors remotely without the need for an active call connection.

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Software Intercom Client

Custom tailored Virtual Intercom Stations for ultimate mobility, flexibility and convenience

Use your Commend Intercom stations to your maximum advantage: With proven hardware solutions for large-scale Control Desks, rough environments and any application requiring seamless hardware and software interaction to meet your requirements. Take advantage of the benefits of software-based Intercom Clients in all tasks that require flexibility and location independence. Fully mobile and integrating seamlessly with existing equipment, they deliver reliable performance in a minimum of space and adjust easily to individual user needs. Ideally suited for call centres, embedded terminals, maintenance and office management, the Commend Software Intercom Clients enhance your scope of action while boosting system security.

Secure technology for optimum communication

Expand your freedom of movement – installing the software-based Intercom Client lets you use your notebook as a Commend Intercom station. This way, you are free to expand your existing Control Desks if you want to handle communication peaks or add an instant integrated Intercom solution to your machine control panel.

What is more, Commend's exceptionally high sound transmission quality also allows you to get the most from your other equipment. Combined with optional equipment such as a headset or gooseneck microphone, the Software Client solution makes for a perfect productive working environment.

Commend Software Intercom Clients are designed with ultimate failsafety in mind. They work reliably on various different operating systems, which makes them easy to integrate into existing devices. Your company notebook? Your private mobile? A tablet device in the control room? Utilise existing hardware from within the Commend Software Intercom Client.

Enhancing performance, optimising costs

With the right combination of Commend hardware and Software Intercom Clients you can get the most from your resources while bringing mobility and a new level of service quality to your business.

Of course, the Software Intercom Client provides the same familiar appearance of its hardware counterpart – including numeric keypad, function keys and display. And of course you can also adjust its settings to your individual needs and wants.

You can browse conveniently through the subscriber directory, open gates at a simple click or tap, and even control building management equipment with perfect ease. When you have to leave the Control Desk, you can take all of its functions with you,

as the Software Intercom Clients speak Windows as fluently as Android. Your mobile Software Intercom Client installs easily on your existing computers, telephones and tablet devices to make the most of your equipment.

SOFTWARE INTERCOM CLIENT

Technical specifications: Connection to the Intercom Servers is via Intercom over IP (IoIP®). Each Software Intercom Client instance requires one IP port on an IP subscriber card (similar to ET 901). The IP address and IP address must be specified during configuration. For Windows and Android.

ICCAA Audio Licence

7 kHz IoIP

Standard Intercom Client functions, including Audio functionality for up to 7kHz, depending on audio hardware used.

L-ICCAA1	Licence for 1 Client
L-ICCAA1-4	Licence for 4 Clients
L-ICCAA1-8	Licence for 8 Clients

ICCNA Non-Audio Licence

IoIP

Standard Intercom Client functions, without direct audio support Audio functionality only in combination with Commend Audio hardware (e.g., ET 908A, EE 811A, EE 900A, etc.).

L-ICCNA1	Licence for 1 Client
L-ICCNA1-4	Licence for 4 Clients
L-ICCNA1-8	Licence for 8 Clients

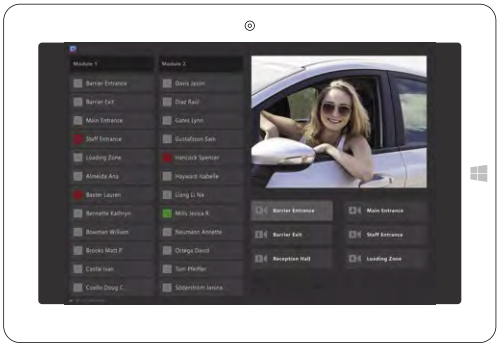
Example with Tile Layout

ICCDDA Direct Dialling Licence

IoIP

Licence for 12-button Direct Dialling module as Software Intercom Client expansion option. The supported maximum number of modules depends on the type of Software Intercom Client used.

L-ICCDDA	Licence for 1 Module (12 Direct dialling buttons)
L-ICCDDA 4	Licence for 4 Modules (4 x 12 direct dialling buttons)
L-ICCDDA 8	Licence for 8 Modules (8 x 12 direct dialling buttons)



Video Licence for Android ICCVA

IoIP

Video Licence as Software Intercom Client expansion option; enables the display of an IP Video image on the Software Intercom Client and provides access to the integrated camera from within the Intercom network. Bi-directional video, Surveillance Mode, etc.

L-ICCVA	Licence for 1 Client
L-ICCVA-4	Licence for 4 Clients
L-ICCVA-8	Licence for 8 Clients

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SOFTWARE INTERCOM CLIENT SDK

Add Commend Intercom power to your Windows and Linux applications. The Software Development Kits for Windows and Linux allow Commend partners to implement powerful integrated Intercom applications quickly and easily.

Build your own Commend Intercom station

Machine operating terminals, automation controls, Control Desk solutions – enhance your equipment with user interfaces that are precision tailored to your requirements. With the Commend Intercom SDKs, integrating helpful Intercom functions into special applications is a breeze. This makes for a seamless user experience while saving valuable resources.

The Intercom SDKs offer a wide range of interfaces for controlling the Software Developer's Kit core. They come with a range of functions for perfect audio processing. In combination with the respective components they and ensure superior audio quality even under extreme ambient conditions.

For illustration purposes only

For illustration purposes only

Typical applications

- Speech-only applications, e.g. for pay-on-foot machines or gate terminals
- Direct dialling buttons for activating outputs and display of inputs
- Intercom stations with one key

Key benefits

- Easy to integrate
- Individual design of graphical user interfaces (GUIs)
- Individually definable scope of user interfaces
- Optional integration into building management systems

ACCESSORIES

MIC Q400

Miniature, cardioid-type extension microphone. Housing made from impact-resistant and distortion-free plastic, can be bonded to a flat surface. Improved acoustics. Colour: Black.
Typical applications: As outside microphone for counter intercoms.

Sensitivity 15 mV/Pa; directional characteristic: cardioid; frequency range: 100 Hz – 8 kHz; cable length 2.8m (shielded)

MIC Q400	Version for installation via screw terminal
MIC Q400AJ	Version with 3.5 mm jack

W 24 mm, H 13 mm, D 43 mm 58 g

MIC 480

Omnidirectional Electret microphone for installation in up to 10 mm thick glass or aluminium panels; weather proof (IP 53 rating). Colour: Black.
Typical applications: As Intercom terminals in parking gates, ticket vending machines, lift control panels or as external microphone for desktop counter intercom systems.

Sensitivity: 5.6 mV/Pa; hypercardioid characteristic; shielded cable.

MIC 480S-08	Cable length 0.8 m; version for installation via screw terminal
MIC 480S-12	Cable length 1.2 m; version for installation via screw terminal
MIC 480	Cable length 4 m; version for installation via screw terminal
MIC 480AJ	Cable length 4 m; version with 3.5 mm jack

Diameter 14 mm x D 20 mm

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UNIFIED PA

MORE POSSIBILITIES, ONE PLATFORM

Unified PA Solutions by Commend. Smart and holistic.

The Unified PA solution is an essential part of Commend's holistic solution approach. This approach provides unique opportunities for operators and efficiency for users in daily operations. For example, it allows any station to make announcements. At the same time, the uniform platform makes it possible to react immediately to announcements and even to respond via the loudspeakers as well as via the stations.

Our solutions are used in buildings, industrial facilities and in public infrastructures from transport to smart cities to ensure enhanced safety and efficiency.

Based on modern IP-networked technology

for ultimate flexibility and scalability

Compatible with other systems

to reduce cost of ownership and enable integrated overall solutions

Raises the bar of classical PA system functionality

by adding two-way audio features and programmable logic functions

Works with virtualized servers or even serverless

to provide even more cost competitive and specialized solutions

Ensures end-to-end system monitoring

as required for security and safety solutions

Power and energy efficiency at its best

due to fewer system components, de-central concepts and modern class-D technology

Announcement broadcast via Intercom stations and immediate talk-back option

Every station can be a PA dispatcher and initiate or receive announcements

Use Mobile Intercom apps for announcements and control

Use PBX telephones for announcements

Loudspeakers connected directly to the IP network with automatic volume adjustment (IVC – Intelligent Volume Control)

Powerful and networked IP amplifiers with 70/100V loudspeakers

Integration and interfaces to third-party systems (VMS, access control, ...)

Networking of multiple sites for decentralised solutions. One platform to reach everyone anytime and anywhere.

Audio Management
- Flexible zoning
- Live and pre-recorded announcements
- Scheduled or event-triggered announcements
- Combination of pre-recorded announcements

Commend Studio for visual Audio Management

Smart IP Amplifiers for Unified PA

Series AF amplifiers come with a high power profile and versatile outputs. As a result, the devices are universally suitable even for complex PA and Intercom solutions. All models are well-suited for a wide range of applications due to their compact housing, efficient design and high performance. They are optimised for installation in 19" racks or decentralised on-site installation. This increases flexibility and reduces cabling costs as well as power and energy consumption. Besides, they are easy to network and provide a range of safety functions such as loudspeaker line monitoring and audio monitoring. This makes Commend PA solutions not only reliable but also highly efficient.

Last but not least, existing PA systems can be modernised step by step. Since Commend IP amplifiers can be used with IoIP and SIP, they can be easily and seamlessly integrated into Commend Intercom systems or VoIP/SIP-PBX systems. The devices also offer a unique level of upward compatibility, and new functions can be easily added via software download.

IP AMPLIFIER – SERIES AF

Key features:

- 20 to 500 watts of output power
- Available in IP (IoIP/SIP), digital and analogue versions
- 70 V/100 V audio output with loudspeaker line monitoring (excluding AF 20)
- Low impedance audio output; min. impedance: 4 Ω (Series AF 20 & AF 50)
- Class-D amplifier, optimised for high efficiency at low operating temperatures
- Short circuit and overload protected
- Suitable for decentralised on-site use
- Rugged polycarbonate and metal housings
- Line monitoring between amplifier and Intercom Server
- Can be used as an interface to PA systems

Technical Data: Audio input adapted to the output of Intercom Server subscribers or standard audio components (input impedance: 10 Ω; input signal sensitivity 390 mV – 3 V); level adjustable audio output; status LEDs for status and error indication; different main and backup power supply options, including 100-240V AC, 24V DC and PoE // Digital and IP based amplifiers: Line output for combination with standard audio components; microphone input; 2 floating inputs and 1 relay output; 0–10 V control input; support for connection of expansion boards; graphic equaliser for sound adjustment; integrated switch (IP version); optional operation via PoE or power supply via Intercom Server at reduced output.

AF 500

16 kHz | IoIP | SIP

500 Watt IP amplifier with metal housing, 1U.

AF 500H IP – Communication via IoIP or SIP (7 kHz HD Voice for communication via SIP)

W 401 mm, H 44 mm, D 251 mm 3,200 g

AF 250

16 kHz | IoIP | SIP

250 Watt IP amplifier with metal housing, 1U.

AF 250H IP – Communication via IoIP or SIP (7 kHz HD Voice for communication via SIP)

W 401 mm, H 44 mm, D 251 mm 3,200 g

AF 125

16 kHz | IoIP | SIP

125 Watt IP amplifier with metal housing, 1U.

AF 125H IP – Communication via IoIP or SIP (7 kHz HD Voice for communication via SIP)

W 401 mm, H 44 mm, D 251 mm 3,200 g

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AF 50

16 kHz | IoIP | SIP | Digital | Analogue

50 Watt amplifier with polycarbonate housing, 1U

AF 50H	IP – Communication via IoIP or SIP (7 kHz HD Voice for communication via SIP)
AF 50D	Digital 2-wire
AF 50A	Analogue 4-wire

W 201 mm, H 44 mm, D 260 mm 1,600 g

AF 20

16 kHz | IoIP | SIP | Digital | Analogue

20 Watt amplifier with audio interface and polycarbonate housing.

AF 20H	IP – Communication via IoIP or SIP (7 kHz HD Voice for communication via SIP)
AF 20D	Digital 2-wire
AF 20A	Analogue 4-wire

W 159 mm, H 49 mm, D 87 mm 240 g

AF 20A EB

16 kHz | Analogue

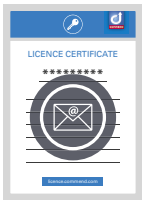
20-Watt amplifier add-in module, without housing (PCB-only); Analogue version; suitable e.g. for integration into Intercom terminals requiring extra volume capacity.

AF 20A EB	Analogue 4-wire

W 130 mm, H 82 mm, D 16 mm 67 g

Licence for loudspeaker line monitoring L-AF-LM

License to activate loudspeaker line monitoring for IP and digital amplifiers with 70V/100V audio output.



Smart IP Loudspeakers for Unified PA

The wide range of innovative functions that powers the network-compatible Commend IP loudspeakers sets them apart from any classic Public Address solution. The integrated microphone, for example, supports new audio features such as IVC (Intelligent Volume Control) for the automatic adjustment of the volume setting to ambient noise, even during message playback. This ensures a high level of acoustic intelligibility, even at extreme, changeable background noise. Additional benefits include the duplex and call-back functions, as well as the "Audio Monitoring" feature, which allows for ambient acoustic surveillance and automatic triggering of actions such as voice announcements or emergency calls. The different product versions enable flexible use from rough outdoor areas to protected indoor areas.

Since IP-based loudspeakers by Commend can be used with IoIP and SIP, they integrate easily and seamlessly into Commend Intercom or VoIP/SIP-PBX systems. Another feature distinguishing the loudspeakers from classic Public Address systems is their upward compatibility. This way, a new functions can easily be added via a simple software download.

IP LOUDSPEAKER – SERIES AFLS

Key features:

- Network loudspeaker individually addressable and configurable
- Microphone for duplex and call-back functionality
- OpenDuplex® and IVC for natural, hands-free communication at high volume levels
- 16 kHz eHD Voice speech quality (7 kHz HD Voice when using SIP connections)
- Continuous line and function self-checking
- Easy adding of new functions via software update
- Different designs for indoor, outdoor and industrial applications
- No need for central amplifiers – ideal for small-sized and remote PA zones

Technical specifications: Power supply via PoE (IEEE 802.3af); nominal load 10 W; nominal impedance 4 Ω; 10 W Class "D" final amplifier; 2 inputs for floating contacts and 2 relay outputs.

IP Horn Loudspeaker

16 kHz | IP 66 | IoIP | SIP

IP horn loudspeaker, designed specifically for Public Address in rough, industrial conditions (e. g., industrial sites, railway stations, etc.); Built-in electret microphone with automatic volume adjustment to ambient noise (IVC) and other functions; Max. sound pressure: 118 dB; Light Grey.

AFLS 10H HG IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP);

W 180 mm, H 120 mm, D 230 mm 1,800 g

IP Projector Loudspeaker

16 kHz | IP 54 | IoIP | SIP

IP projector loudspeaker, designed specifically for Public Address in buildings and halls (e. g., parking garages, exhibition halls, indoor event venues, etc.); Built-in electret microphone with automatic volume adjustment to ambient noise (IVC) and other functions; Max. sound pressure: 101 dB.

AFLS 10H PW IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP);

Diameter 145 mm, D 210 mm 1,850 g

IP Ceiling Loudspeaker

16 kHz | IP 54 | IoIP | SIP

IP ceiling loudspeaker, designed specifically for installation in ceilings and buildings (e. g., schools, conference rooms, hotels, etc.); 1 Microphone port; Max. sound pressure: 105 dB.

AFLS 10H CW IP – Communication via IoIP or SIP (7 kHz HD Voice for Communication via SIP);

Diameter 167 mm, D 112 mm 850 g

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Accessories

DIN rail mounting kit ET 901-HSH35

DIN rail mounting kit for AF 20 amplifiers.

Wallmount and desktop mounting kit PF-WM

Wallmount and desktop mounting kit for AF 50, AF 125, AF 250 and AF 500 amplifiers.

Rack mounting kit PF-RM-1HE

19“ rack mounting kit (1U) for one or two amplifier AF 50 side-by-side or for rack mounting one AF 125, AF 250 and AF 500 amplifier.

Switched-Mode Power Supply PA60W24V

60 W primary switched-mode power supply adapter with high efficiency output. Primary: 100 – 240 V AC; Secondary: 24 V DC; 0 °C to +40 °C; Colour: black. Power cords must be ordered separately.

W 61 mm, H 157 mm, D 43 mm 410 g

Power Cord

KAB-C13-EU	Version for Europe
KAB-C13-UK	Version for UK
KAB-C13-US	Version for USA
KAB-C13-AU	Version for Australia

1,5 m

INTERCOM CONTROL SYSTEMS

Control Desk Management STUDIO

STUDIO by Commend – visualises, controls and automates

Extreme situations such as car accidents or technical faults are just as much part of the job description of STUDIO as 'normal' communication within office applications. STUDIO always provides an instant overview of the system and enables quick reaction in emergencies. All control desk functions of the Intercom Server are displayed on one or several monitors. Interactive icons (on-screen symbols) represent calls and error or alarm messages; they change colour depending on the required level of attention. Reaction plans, help texts, logging details and much more can be displayed in additional on-screen windows. Individually definable status windows provide a quick, general overview of the STUDIO system, showing the operator all important information at a glance. No matter whether it is manual or automated control, STUDIO offers the possibility of integrating a wide range of outputs of the Intercom world (barriers, doors, heaters, lighting, etc.) and third party devices into the STUDIO project visualisation for easy viewing and control.

All information at a glance – WHAT, WHEN, WHERE, HOW

To enable quick assistance in case of an emergency, the following details should be provided: What has happened? Where has it happened? When did it happen? How can one help? STUDIO makes the source of all this information conveniently accessible through a uniform software. Plans with relocatable icons will support the comprehensive locating of an event. Based on pre-defined priority levels, the software switches automatically to the appropriate plan in case of critical event. This helps the operator to stay focused on the most urgent events at all times. Crystal clear speech communication and directly integrated video support help the operator to evaluate situations quickly and correctly. On-screen windows indicating response measures and help texts support the operator in making the correct decisions. ComREPORT logs the when, what and where of each event, along with the actions and decisions taken by the operator (i.e. the how).

The daily challenges at the control desk

Basic Features

- Automatic switching between plans, flashing on-screen items, zooming, notification sounds and the display of overviews in status windows help operators to focus their attention on important events.
- Various visualisation and alarm options.
- E-mail notification in case of system events.
- Multi-monitor support ensures more clarity and a better overview, with options for saving individual layout profiles and free positioning of plan overviews, status windows, actions, etc.
- Subscriber lists for direct call dialling/ending can be loaded as part of the facility configuration profile or imported from Excel or CSV files.
- State-of-the-art client-server architecture.
- Flexible, scalable licensing model to suit individual requirements.

Planset

- Individual user privileges define the ability to access/view plans and icons.
- Depending on their privileges, users can access only specific plansets.
- Plans are organised into plan/map hierarchies (countries, cities, car parks, etc.). These hierarchies can each be assigned several plans (e.g., car park levels).
- Controlled access to specific plans and all sub-plans, or only to specific individual plans.

User Privileges

- Users can be divided into individual roles, users and user groups.
- Access to plansets, permissions and groups based on user privileges.
- The user language can be set for each user individually.

Video integration

- Main monitor, preview monitors and surveillance monitors (video scanning function).
- Automatic video display on preview monitor for incoming calls.
- Automatic additional video display on master monitor during call.
- Integration of various common Video-over-IP solutions (e.g. Axis, Bosch, Mobotix, etc.).

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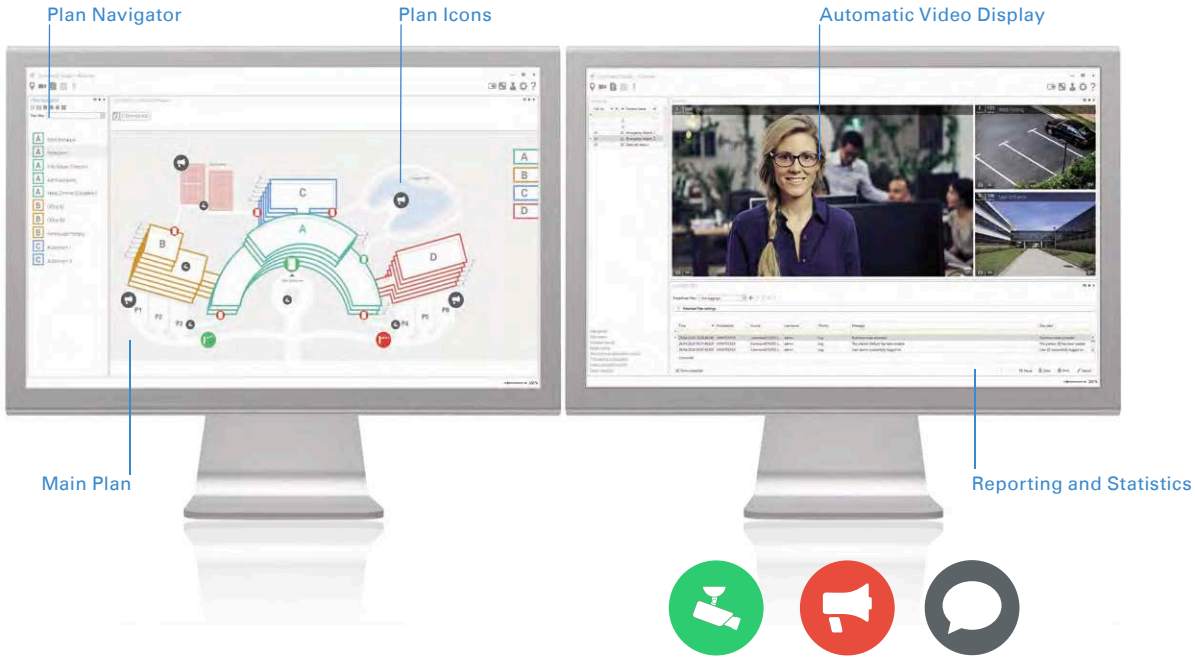
STUDIO MODULES

STUDIO is a powerful family of software products for a professional control desk management. Challenges in control desk management such as solving complex situations and time critical reactions require the visualisation of the Intercom system to fulfil an essential need: providing natural communication in HD audio quality.

The STUDIO family offers modules and products which make it easy and convenient to stay informed and in charge.

ComWIN | ComVIDEO | ComREPORT | ComREC | ComSCHEDULE



ComWIN Measures

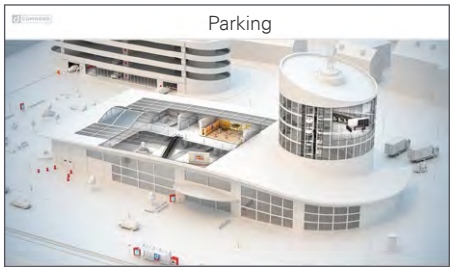
- Flexible design of dialogues for input of remarks or illustrations of required actions, measures and information.
- Display of documents (HTML, PDF, etc.) or images as a measure.
- Individual illustration of workflows to support the operator.
- Detailed logging of operator input in ComREPORT.

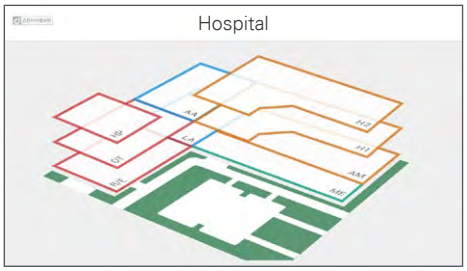
ComWIN Icons

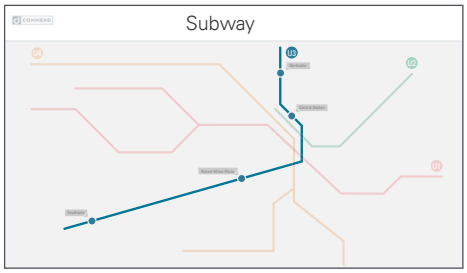
- Individually designable icons (PNG, JPEG, BMP, GIF or XAML format) for indicating any type of situation.
- Icon graphics can be configured and positioned on plans as needed.
- Situations and events can be assigned differently coloured icons to reflect different levels of priority and urgency.
- Sound signals and flashing on-screen elements direct attention to important issues and events.
- Optional integration of animated icons in GIF or XAML format.

ComWIN Plans

- Individually custom configurable plans (overview plans, vertical plans, construction plans, structural and area plans, etc.) in highest graphic resolution.
- ComWIN plans allow for displaying any type of buildings, elements, routes or information.
- The Plan Navigator or navigation icons can be used to switch back and forth between the individual plans of a ComWIN project.
- In case an emergency situation is detected, ComWIN automatically switches to the respective plan.







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ComWIN – Module for Visualisation

ComWIN is the visualisation module of the STUDIO family. Using a ComWIN base licence, one ComWIN Client can be run. Further extension of ComWIN is possible by purchasing additional licences for clients as well as licences to add more data points. The visualisation can be operated in network multi-user mode by adding Client licences.

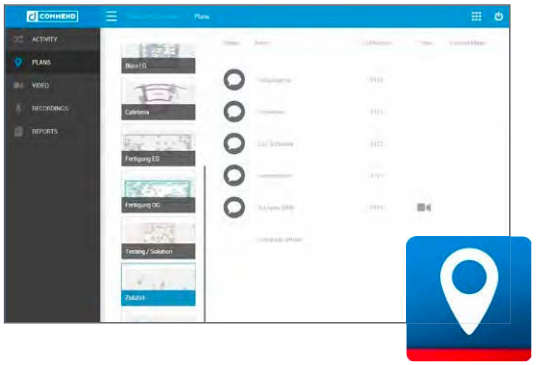
E-WIN-BASE-SPD	Licence: ComWIN base licence, including one visualisation client, and 100 data points
E-WIN-CPF	Licence: ComWIN Client
E-WIN-DP5-SPD	Licence: ComWIN Extention: 500 additional datapoints

ComWIN Webclient – Visualisation

The ComWIN Web Client is a simplified version of the ComWIN Native Client.
No installation required, just a network connection and a browser.

- Fast implementation of easy-to-use control desks consisting of a desktop station, a monitor and a Web Client.
- Easy to configure and use, enables quick reaction to calls and quick return on investment.
- No training required.
- Full multi-client capability allows for operating and processing several Web Clients and a caller list simultaneously.
- Easy to update via the central server.
- Full access from the convenience of the usual work desk. STUDIO control desk settings can be applied as needed throughout the system.

The Web Client uses the licences of the ComWIN native client

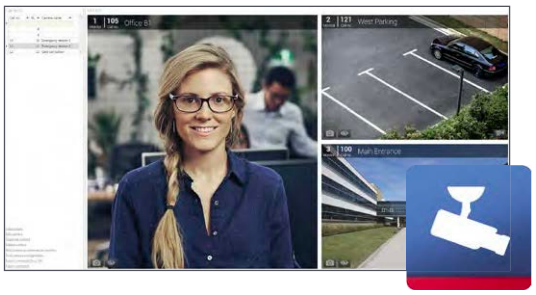


ComVIDEO Module – Module for Video viewing

This application integrates live video streams from Video-over-IP sources into the security and communication solution. The video images are arranged on-screen in a clearly structured grid for easy viewing.

- Master monitor, preview monitors, surveillance monitors (video sequencing function).
- Automatic video display on preview monitor when receiving call requests.
- Automatic video display on master monitor during call
- Intuitive operation via drag-and-drop (e.g. switching to another view or camera)
- Integration of many common Video over IP solutions (e.g. Axis, Bosch, Mobotix, Samsung) see "Supported cameras and codecs for ComVIDEO" for details.

E-VID-CPF	Licence: ComVIDEO Client

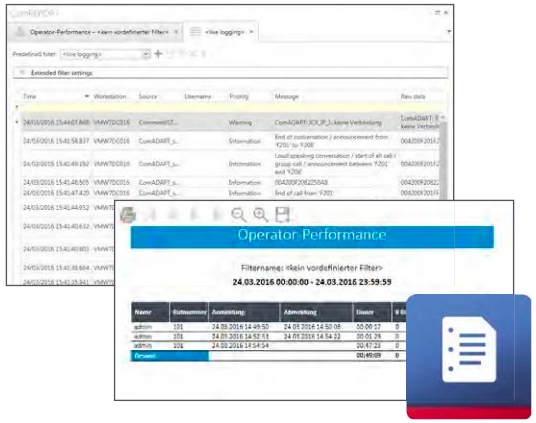


ComREPORT – Module for Reporting and Statistics

ComWIN Modul ComREPORT logs all system events and writes all system messages to an SQL database. This comprehensive system archive can be accessed and compiled into custom reports by means of configurable data filters.

- Consistent logging of all events and data on the Intercom System
- Statistical data analysis for Intercom systems, Emergency Call system and Call Centre systems
  - Number of calls: Temporal distribution over days/weeks/months/years
  - Call waiting time: This indicates the customer's waiting time before the call was answered
  - Operator performance: This registers the log-in times, calculated average call duration, number of calls processed, and call details
- Full Microsoft® SQL Server support – SQL Server 2012 to 2016.
- Report Designer for custom designing reports

E-RPT-CPF	Licence: ComREPORT Client



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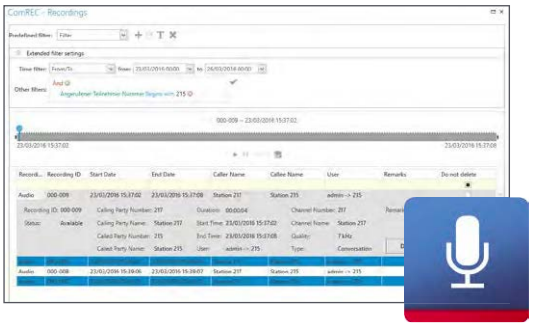
ComREC – Module for Audio Recording

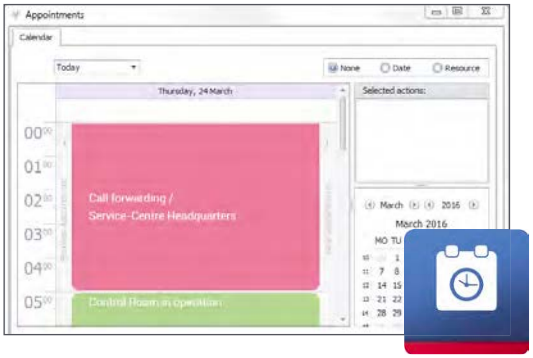


ComREC is a software based recording solution which can handle up to 100 simultaneous recordings and stores them in a single database for further use. It is a Windows® based software and the standard protocol RTP is used.

- Record RTP audio streams from Intercom Servers and/or directly from supported IP Terminals
- Analogue, digital or radio (6T) subscribers can be recorded via the Intercom Server
- It is possible to record up to 100 simultaneous audio streams and save up to 10 million recordings; per IP-card it is possible to use up to five simultaneous clients
- Audio files are stored in the file system either on the local server or in the network, meta data (call information, timestamp, etc.) is stored in a SQL database (not included)
- Additional to client licences for every ComREC client, a licence for every recording channel on the Intercom Server is required.

E-REC-CPF	Licence: ComREC Client
L-IP-REC1	Licence: RTP Recording Channel at the Intercom Server or Intercom Terminal; is needed for each recording channel

ComSCHEDULE – Module for Time-Scheduled Planning and Control



This application, which comes integrated in ComWIN, allows for running functions and procedures of the Intercom system on a definable time schedule. For example, the Scheduler can set ComWIN data points or run various actions in the form of workflow procedures. A wide range of individual solutions are supported, from automated call forwarding during the night shift to fixed-time test calls (eg. for lift emergency call stations) and controls for announcements. Administering scheduled events and series of events is easy, thanks to dialogue windows and views familiar from applications such as MS Outlook®. The application is integrated into the ComWIN_server service and can be used without a ComWIN Visualisation License.

- Scheduling and planning of Intercom functions
- Support for individual events or event series (easy wizard-based scheduling)

E-SCH-CPF	Licence: ComSCHEDULE Client

STUDIO Backup-Server – Redundancy and reliability

STUDIO systems which require a high reliability can be designed redundantly by using the STUDIO backup server. STUDIO Clients automatically connect to the backup server when a connection error to the STUDIO server is detected. As soon as the connection is available again, the clients automatically connect back to the main server.

- Additional fallback level in case of error
- Automatic switchover and seamless operation

E-ST-BK-SPD	Licence: STUDIO backup server including 100 data points
E-WIN-BKD5-SPD	Licence: STUDIO backup server ComWIN extension: 500 data points

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INTERFACES

Video Management Systems

E-VID-MST-SPD	Licence: Integration of Milestone systems into ComVIDEO
E-VID-NUUO-SPD	Licence: Integration of NUUO systems into ComVIDEO
E-VID-SAMS-SPD	Licence: Integration of Samsung SRD Video Recorder into ComVIDEO
E-VID-SEE-SPD	Licence: Integration of Seetec systems into ComVIDEO
E-VID-VDG-SPD	Licence: Integration of VDG systems into ComVIDEO

TAPI

E-WIN-TAPI-SPD	Licence: Integrating telephone systems via TAPI (Telephony Application Programming Interface) under STUDIO

Parking Management Systems

E-WIN-SKI-SPD	Licence: Integration of Skidata systems into STUDIO
E-WIN-SBA-SPD	Licence: Integration of Scheidt & Bachmann systems into STUDIO
E-WIN-DES-SPD	Licence: Integration of Designa systems into STUDIO

Fire Alarm Systems

E-WIN-SHP-SPD	Licence: Integration of Hektatron Fire Alarm Systems into STUDIO

Network and File Systems

E-WIN-SNMP-SPD	Licence: Integration of SNMP into STUDIO
E-WIN-FIL-SPD	Licence: Integration of file monitoring into STUDIO

OPC Client

E-WIN-OPC-SPD	Licence: Integration of OPC into STUDIO

More interfaces available on request.

ComSDK enables the integration of third-party systems or databases – see under ComSDK for details.

SDK

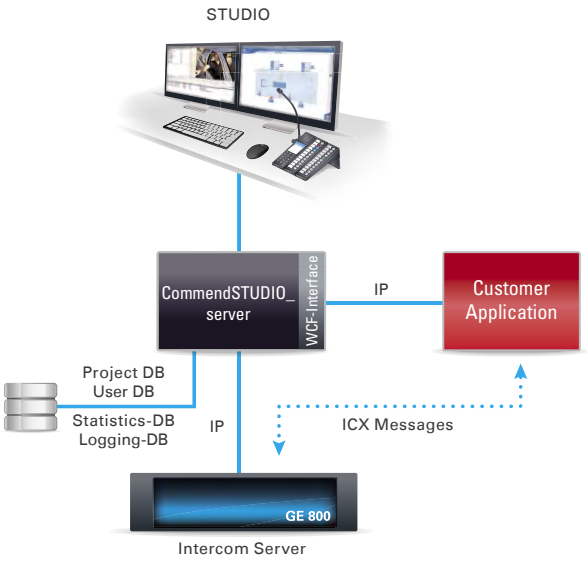
ComSDK – Tailored Control Station Solutions

The software interface on STUDIO_server supports individual solutions to tailor STUDIO operator workstations precisely to the customer's needs. As a result, it is possible to integrate third party systems or databases and to implement solutions without ComWIN visualisations. This means that ComSDK may also be used without a ComWIN Visualisation License.

- Individual allocation of reassurance messages to emergency call stations.
- Database registration of monitored persons and automated display of personal details during calls.
- Integration of accounting systems for car park call centres
- Detention cell telephony: Administration of telephone numbers that the detained person is allowed to call (e.g. lawyer), and automated evidential recording of calls.
- Sending of on-screen messages to displays of Intercom call stations, and management of message templates
- Automated announcements, generated with text-to-speech function

One license per CommendS_server may be activated; there is no limit on the number of SDK applications that may be implemented and run in parallel. The application package comes with a full developer's manual of the software interface.

E-SDK-SPF	Licence: Integration of ComSDK into ComWIN



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Control Desk System CONDUCTOR

Everything under control. Simplicity in concert with power.

Like the harmonious interplay between orchestral instruments, the reliable, well coordinated interplay of the components in a communication and security solution is absolutely essential. Using different hardware and software technologies requires central coordination and control – the essential star quality of all Commend Control Desk solutions. This allows you to keep even the most complex of Intercom infrastructures and integrated external systems under easy, fast and reliable control from a central point.

Comprehensive Control Desk solutions by Commend.

Good conductors can get in tune with the audience, too. Thanks to its modular design, the CONDUCTOR can be fine-tuned in accordance with individual user requirements. As with all Commend systems, the CONDUCTOR's technology and design and have been carefully developed with the users and their environment in mind. Crystal clear 16 kHz eHD Voice speech quality and an extra-high volume capacity are just as essential to Commend's new, comprehensive Control Desk concept as full mobile system access.

Superior speech intelligibility

- 100 dB volume capacity – unique in the industry
- 16 kHz eHD Voice speech quality
- OpenDuplex® for hands-free talking in rooms with high ambient noise levels

Full Overview

- Various display versions with optimised user guidance
- Custom configurable button illumination colours and flashing rhythms to indicate operating status
- Acoustic notification via custom sounds

Security meets durability

- Software routines keep monitoring the device's functionality
- IP 50 rating
- High resistance against chemicals and physical impact
- Suitable for extreme ambient conditions at temperatures up to +70°C

Investment protection

- Upwards compatible
- High product life cycle combined with long-term availability

CCTV integration

- Display of video camera images on Intercom System – for identifying persons, detecting critical situations and assessing activities correctly as they happen
- Optional integration of recording systems

Scalable to any need

- Modular 'building blocks' type system
- Quick and easy to expand
- Fast and easy to install, either as desktop unit or fitted Control Desk console

User-friendliness included

- Intuitive, context-based control
- Large buttons and label areas
- Fast, targeted access to specific Intercom stations, automated announcements with pre-recorded messages, RF conference calls, door and gate controls
- Console unit can be tilted to adjust to ambient seating and viewing conditions

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CONTROL DESK BASIC TERMINAL – SERIES CD 800P | CD 810P

Key features:

- Modular Control Desk Solution
- Control Desk Basic Terminal with TFT or LCD display
- Eight 3-colour LED illuminated direct dialling buttons
- Extension modules for up to 104 direct dialling buttons in total
- Illuminated standard keypad
- IP 50 rating
- Polycarbonate construction
- Expansion modules for even more functions

Technical data: Omnidirectional electret microphone for up to 7 m speaking distance; Integrated 2.5 W Class 'D' amplifier; two 8-ohm loudspeakers; Max. sound pressure 99 dB; Supports PoE and optional external power supply: 20 – 30 V DC; Direct dialling buttons and Touch Screen Module require a separate power supply; 2 inputs for floating contacts and two relay outputs 30 V / 1 A; Multi-functional LED (Colours: rot, green, blue);

CD 810P I

16 kHz | IP 50 | IoIP

Control Desk Basic Terminal with TFT Display for graphical menu navigation and display of IP-based video streams.

3.5" TFT display; resolution: 320 x 240 pixels; 65,000 colours.

W 262 mm, H 196 mm, D 45 mm 1,270 g

CD 800P I

16 kHz | IP 50 | IoIP

Control Desk Basic Terminal with LCD graphic display.

Illuminated LCD display with 128 x 64 pixels; white backlight.

W 262 mm, H 196 mm, D 45 mm 1,200 g

EXTENSION MODULES FOR SERIES CD

Thanks to its modular design, the Control desk adjusts perfectly to individual requirements. The extension modules are easy to install by simple connection to the Basic Terminal.

Direct Dialling Button Module CDDD 32P

IP 50

Up to 3 modules with 32 direct dialling buttons can be attached to a Basic Terminal. The dialling buttons can be programmed as needed: direct dialling with call indication (conversation, call, emergency call), output functions, e.g., for switching lighting fixtures, triggering processes, opening doors and gates, displaying system status information such as door and gate status details.

32 direct dialling buttons with 3-coloured LEDs and four label areas; external 20 – 30 VDC power supply required for first Direct Dialling Button Module – this also powers any additional Direct Dialling Button Modules; recommended power adapter: PA30W24V.

W 262 mm, H 196 mm, D 45 mm 1,040 g

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Gooseneck Microphone Module CDMI 50P HD

IP 50

Extension module with gooseneck microphone and headset connector port. Red LED ring for call indication. Cardioid electret microphone. Material: polycarbonate.

W 55 mm, H 196 mm, D 43 mm; gooseneck microphone length: 365 mm 570 g

Headset Module CDHD 50P

IP 50

Extension module with headset connector port. Material: polycarbonate.

W 55 mm, H 196 mm, D 43 mm 350 g

Handset Module CDHS 50P

IP 40

Handset with "Push to Talk" key. Material: polycarbonate.

W 55 mm, H 238.5 mm, D 74 mm 530 g

ACCESSORIES

Desktop Kit CDDK

Desktop Kit for Basic Terminal, Direct Dialling Button Module and Touch Screen Module. Tilting angle: 20° – 65°; Colour: black.

W 190 mm, H 80 mm, D 50 mm 560 g

Plug-in Power Adapter PA30W24V

30 W switched-mode power supply adapter with high-efficiency output. Primary: 90 – 264 V AC; Secondary: 24 V DC.

PA30W24V-EU Version for Europe

PA30W24V-CA Version for UK, USA and Australia

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Control Desk System DUETTO

One device to bring together different worlds. SIP telephony and Intercom in one device.

Compact but powerful, the new Control Desk DUETTO brings together highly developed functionality and superior flexibility. Designed as a space-saving master Intercom station for desktop use or wall-mounting, it combines IoIP and SIP to provide the best of both worlds. The DUETTO integrates Control Desk solutions with building automation, video communication and video surveillance. As a result, It opens up a world of possibilities for visitor management with excellent video-enhanced communication, even in areas with limited space. Perfect communication via Intercom and telephone

Superior speech intelligibility

DUETTO comes with powerful acoustic capabilities in Commend's typical extra-high audio quality. Equipped with 20 kHz audio support and intelligent acoustic algorithms, the DUETTO sets the standard for excellent speech intelligibility, noise suppression and automatic voice focussing.

Modern video-enhanced Intercom station

Being able to see each other makes communicating information easier. With integrated bi-directional video, the DUETTO optimises the communication experience from the get-go. As a result, visitors feel welcome from the first moment of making contact.

DUETTO also provides high-quality surveillance video to help staff assess sensitive situations quickly and correctly. External video sources, such as weather or traffic cameras, can be integrated seamlessly as well.

Powerful Control Desk in a compact design

No longer restricted to the reception desk environment, modern Control Desks have already found their way into the office, where they offer the operating convenience of a regular desktop device. They can be networked with other systems to integrate seamlessly into the everyday working environment.

DUETTO not only controls communication, it also serves as a switching hub for lighting, shading, heating and multimedia devices. It manages emergency calls and call requests, provides status information and provides an overview of all communication lines.

Well integrated

The DUETTO Video Control Desk enables the integration of telephone and Intercom Control Desks with a compact user interface. Building automation systems for the control of lighting, shading, heating, multimedia etc. integrate just as easily.

As a Control Desk system, the DUETTO also allows for handling two calls in parallel. This way, no emergency call goes unanswered and visitors are not kept waiting at the gate during an ongoing conversation.

Intuitive operation with 7" touch display

The large-sized touch display offers excellent viewing qualities with a viewing angle of almost 180°. The display of multiple pending tasks provides an excellent overview. Easily recognisable interaction controls and symbols ensure intuitive, reliable operation throughout.

Future-proof system architecture

Used as a desktop station or mounted on a wall, the DUETTO adapts perfectly to any space requirements and acts as a convenient all-purpose hub for IP video, SIP and Commend Intercom lines.

Custom-tailored functionality

You decide what ideal user convenience should look like. The powerful DUETTO Screen Designer lets you define and adjust your own on-screen layouts. Using the web interface, you can use logic rules to set up your own dynamic user interface for the device.

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COMPACT CONTROL DESK – SERIES EE 980

Key features:

- Compact Control Desk solution
- Large 7-inch IPS touch display
- Optionally available with built-in megapixel camera
- OpenDuplex® for natural hands-free communication with high volume capacity
- Crystal clear uHD Voice speech quality
- Enclosure made from robust high-grade polycarbonate
- Suitable for desktop use and wall mounting
- Easy to configure via Web Interface

Technical specifications: External power supply or via PoE (IEEE 802.3af); 3 USB 2.0 connections; WLAN ready; MicroSD slot for memory expansion; 2 inputs, active or passive, analogue or digital (configurable); 2 digital outputs; multi-functional LED.

EE 980

20 kHz | IP 20 | IoIP | SIP

Control Desk Terminal with IPS display for graphical menu navigation and display of IP video steams. Desktop and Wall-Mounting Kit not included.

7-inch IPS display, 800 x 480 pixel resolution, and IPS technology.

EE 980	IP – Communication via IoIP or SIP (16 kHz eHD Voice for Communication via IoIP)
SIP-EE 980	IP – Communication via SIP

W 270 mm, H 138 mm, D 37 mm 998 g

EE 980 CM

20 kHz | IP 20 | IoIP | SIP

Control Desk terminal with integrated megapixel camera and IPS display for graphical menu navigation and display of IP video steams. Desktop and Wall-Mounting Kit not included.

7-inch IPS display, 800 x 480 pixel resolution, and IPS technology.

EE 980 CM	IP – Communication via IoIP or SIP (16 kHz eHD Voice for Communication via IoIP)
SIP-EE 980 CM	IP – Communication via SIP

W 270 mm, H 138 mm, D 37 mm 998 g

ACCESSORIES

Handset

IP 20

Handset for EE 980 Control Desk Terminal; JST connector.

EE HS9	Black

USB Output Module EB1A

Relay output (make contact) for retrofitting into Intercom stations of the Indoor Series; connects to a USB port on the Intercom station; colour: black.

PoE Injector

PA15WPOE	PoE Injector – Single Port 15,4 W PoE Adapter (including changeable plug attachments for Europe, the UK, USA and Australia)
ASKKAT5-3S	Network cable, 3 m, black

Desktop Kit

Desktop Kit for EE 980 Control Desk Terminal; tilt angle: 35° – 70°.

EE DK9	Black

Wall-Mounting Frame

Wall-mounting frame for EE 980 Control Desk Terminal;

EE SH9	Silver

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Digital Control Desk System EE 380A

EE 380A – Clear, Compact, Multi-functional.

The digital control desk system EE 380A is a new, compact intercom terminal concept, which perfectly suits the demands of small to medium sized central control workplaces. It provides good control and easy operation in situations where many calls are directed to one central point.
Up to 4 modules with 12 direct access buttons can be connected to a base station. The buttons can be assigned to various functions: direct dialling with call indication (conversation, call, emergency call); output functions, e.g. switching light circuits, starting processes, operating doors and gates etc.; indication of input messages, e.g. status of doors, gates and barriers.
The button modules are equipped with 3-colour LEDs, at which calls or system statues (for example) can be indicated clearly. Thanks to it's newest DSP-technology, the base station offers OpenDuplex® with crystal clear speech quality and standard functions such as loudspeaker/microphone surveillance. Firmware is upgradable for future functionality.

Applications

- Control rooms
- Areas with high ambient noise levels

CONTROL DESK SYSTEM BASE STATIONS

Modular construction enables the system to be optimally configured to a variety of different control desk applications. The base of each control desk is an intercom terminal, available in 4 different versions (with or without gooseneck microphone and with or without an additional loudspeaker. This helps to find the right terminal for each working environment, whether in a quiet office or in a noisy, busy control room.

Technical data: 6-digit alphanumeric display (16-segment); Connection via RJ 11, socket for A/B, mini DIN socket for connection to EM-module, 4-way modular socket for headset, handset or earphones. Built-in Class "D" amplifier with 2.5 W (1.5 W power with built-in 8 ohm loudspeaker or 2.5 W with external 4 ohm loudspeaker). One input for floating contacts and one open collector output.

EE 380AA

16 kHz Digital

Basic terminal with cardioid gooseneck microphone, standard keypad with "T" and "X" keys and three function keys; for connection of up to four keypad modules EM 302.

EE 380AAS Black

W 179 mm, H 57 mm, D 230 mm / Length of gooseneck: 430 mm 740 g

EE 380ABEG

16 kHz Digital

Basic terminal with cardioid gooseneck microphone, active add-on loudspeaker, standard keypad with "T" and "X" keys and three function keys; for connection of up to four keypad modules EM 302EG. Special screws and adhesive bonding make these Intercom stations particularly durable.

Class "D" amplifier with 15 W speech signal; sound pressure: 82 dB/W/m (1 kHz); impedance: 8 ohms; magnetically shielded; 15 VDC external power adapter; plug-in power adapter PA20W15V is available separately – see Accessories.

EE 380ABEGS Black

W 205 mm, H 96 mm, D 271 mm / Length of gooseneck: 430 mm 1,340 g

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EE 380AC

16 kHz Digital

Basic terminal with electret microphone, standard keypad with "T" and "X" keys and three function keys; for connection of up to four keypad modules EM 302. Also suitable for wall mounting with wall mount kit.

EE 380ACS Black

W 66 mm, H 55 mm, D 230 mm 440 g

EE 380ADEG

16 kHz Digital

Basic terminal with cardioid gooseneck microphone, active add-on loudspeaker, standard keypad with "T" and "X" keys and three function keys; for connection of up to four keypad modules EM 302EG. Special screws and adhesive bonding make these Intercom stations particularly durable.

Class "D" amplifier with 15 W speech signal; sound pressure: 82 dB/W/m (1 kHz); impedance: 8 ohms; magnetically shielded; 15 V DC external power adapter; plug-in power adapter PA20W15V is available separately – see Accessories.

EE 380ADEGS Black

W 205 mm, H 96 mm, D 271 mm 1,220 g

KEYPAD AND HANDSET MODULES

Up to four keypad modules can be connected to the basic terminals. This gives each control desk terminal its unique range of functionalities: direct dialling to and from Intercom terminals, switching of outputs and display of system status details. The basic terminal and modules are interlinked via a bus system; connections are by way of Mini-DIN ports.

EM 302

Keypad modules with 12 keys (with 3-colour LEDs) for Basic Terminals EE 380AA and EE 380AC.

External power supply: 12 – 24 V AC / 15 VA; 15 – 35 V DC / 15 W; Plug-in power adapter not included – see Accessories.

EM 302S Black

W 66 mm, H 55 mm, D 230 mm 400 g

EM 302 EG

Keypad modules with 12 keys (with 3-colour LEDs) for Basic Terminals EE 380ABEG and EE 380ADEG.

Power supply via Basic Terminal EE380ABEG or EE380ADEG (15 V DC).

EM 302EGS Black

W 104 mm, H 80 mm, D 45 mm 440 g

Handset Module EE-HS3

Handset module with "Push to Talk" button. Material: polycarbonate.

Power is supplied via the base terminal.

EE-HS3 Black

W 66 mm, H 80 mm, D 230 mm 500 g

ACCESSORIES

Plug-in power adapters PA 20W

20 W primary switched-mode power supply adapter with high-efficiency output. Primary: 90 – 264 V AC; 0,67 A.

PA20W30V-EU	Secondary: 30 V DC – Version for Europe (excl. UK)
PA20W30V-CA	Secondary: 30 V DC – Version for UK, USA, Australia
PA20W15V	Secondary: 15 V DC – Including changeable plug attachments for Europe, the UK, USA and Australia.

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INTERCOM SERVER

Performance Characteristics

Audio

- → 7 kHz audio bandwidth (HD Voice) or 16 kHz (eHD Voice)
- → Conversations in OpenDuplex® (for DSP-stations)
- → Audio Monitoring (with PRO 800)
- → Speech recordings (with PRO 800)
- → Up to 40 music channels can be received
- → Tone signals for different operation states, tone generator to create different tone signals

General Intercom Features

- → Up to 8-digit calling numbers
- → All Calls and Group Calls (up to 90 programmable groups) with automatic answer
- → Handset function
- → Automatic disconnection of conversations after a set time, programmable per subscriber
- → Inquiry/further connection
- → Automatic re-call in instances when line is busy; acoustic and optical indication of waiting subscribers
- → Privacy fix programmable or activated at Intercom Station
- → Feed-in of waiting information for busy, privacy or further connection
- → Priority call with automatic/manual disconnection of busy or private subscribers
- → Send re-call request
- → Direct dialling for all or individual subscribers, also programmable at the station
- → Hierarchy function (programmable)
- → Manifold functions for inputs and outputs (dialling simulation for inputs, attendant contacts)
- → Various possibilities of call forwarding and call transfer (automatic, manual, transfer chain)
- → Call History (list of time stamped calls)

Doors and Gates

- → Door station with one or multiple door opening contacts
- → Ability to listen to the door station whilst opening
- → Automatic cancelling of the conversation after door opening after a programmable time
- → Indication of door status in the display
- → Ringing at one station or a group of stations
- → Forwarding of Group ringing
- → Ability to broadcast waiting information whilst ringing
- → Transfer of door calls to telephone dialer with possibility of opening
- → Access control – 1 to 4 digit codes
- → Programmable number of re-attempts for code entry, security call to a control station in case of misuse

Video

- → Control of video management systems (VMS) and video switchers
- → Allocation of main monitors, observation monitors and preview monitors to a station
- → Automatic camera switching for calls, call requests, input messages and ringing
- → Time delay for camera disconnection after door opening
- → Connection of cameras and definition of scanning sequences for certain monitors via button code

Conference, Radio-conference

- → Conference calls with unlimited number of subscribers
- → OpenDuplex® conference call (with PRO 800)
- → Up to 40 different conferences with automatic connection of predefined subscribers
- → Feed-in of up to 48 radio conferences, listen and speak
- → Listening of up to 8 freely definable radio conferences simultaneously

Alarming

- → Silent alarm activation (e.g. employment offices)
- → Alarm function with playback of message (e.g. evacuation alarm)
- → Initiate alarms via button or input (e.g. foot switch)
- → Up to 8 different alarms simultaneously
- → Automatic change of priorities and alarm groups after programmable time
- → Cancel alarm with code
- → Audio alarm transmission with alphanumeric display (one programmable group)
- → Reception of chime signal

Central Control Functions

- → Indication of call requests from stations at a control desk station
- → Indication of input messages at a control desk station
- → Function monitoring of microphone, loudspeaker and connection lines of the stations
- → Line monitoring of input contacts
- → Parallel indication and operation of functions at several central control stations
- → Manifold possibilities for call transfer (manual call transfer, call transfer after programmable time, day / night switching)
- → Audio-Monitoring
- → Dynamic call distribution (Call Centre)

Licensing (with PRO 800)

- → Features can be unlocked via Licences
- → Unlocking can be performed locally or via remote maintenance

Feature levels

The various applications and functions of the subscribers (Intercom Stations) require the appropriate feature levels (B, D, P). The higher levels provide the entire feature set of the next-lower level plus some additional functions. Feature levels can be unlocked with a licence key.

See the PRO Manual for a detailed list of functions.

B	**Basic Intercom**	Substations
D	**Control Desk Intercom**	Control Desk Intercom Stations, Video Control
P	**Customised Intercom**	Mixed licenses from the feature levels B & D

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INTERCOM SERVER AS AN APP

Commend's Software Intercom Server for virtualised IT platforms

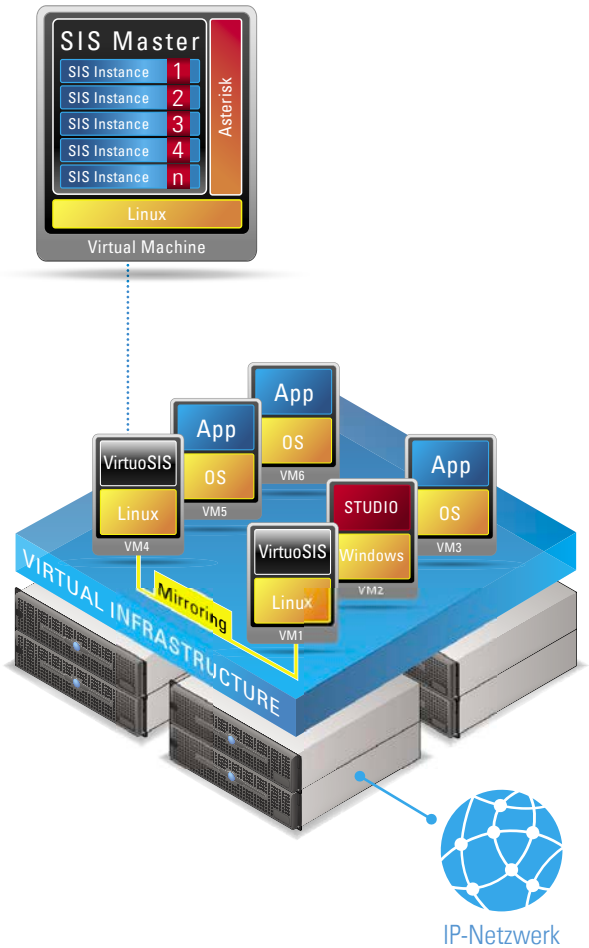
Up to 1,120 IP subscribers per virtual machine

112 IP subscribers per instance

The world's first 100% software-based Intercom Server VirtuoSIS by Commend is designed specifically to integrate seamlessly into the flexible, dynamic world of virtual IT environments.

It is here that the new Software Intercom Server shows its true talents and great benefits: same functionality as its hardware-based cousins at remarkably low investment and operating costs. As a 'fellow inhabitant' of the virtual server landscape without the need for any separate hardware, the Software Intercom Server is child's play to maintain and requires no extra personnel.

Embedded into the virtual server infrastructures, the server can take advantage of the usual extra-high **backup and security mechanisms**. This automatically ensures the essential **high availability** that has become a hallmark of Commend solutions.



Ultimate Availability – Ultimate security (Fault Tolerance*)

Entire virtual environments can be stored and migrated reliably without interruptions. This eliminates the need for planned downtimes, enabling continued operation at levels up to a fully interruption-free switch-over. Full operation can be resumed quickly after unplanned interruptions.

* The Fault Tolerance (FT) option by VMWare provides continued availability in case of a server failure.

SOFTWARE INTERCOM SERVER – VIRTUOSIS

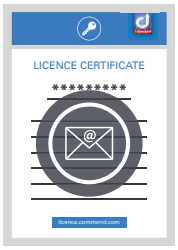
Key features:

- Software Intercom Server based on Linux (Debian 64 bit) for virtualised IT platforms
- Ready for use on virtualisation platforms vSphere by VMWare, and Hyper-V by Microsoft
- Ultimate Availability – Ultimate Security
- Flexible licensing options – expandable at a mouse click
- Intercom system for up to 25,000 subscribers
- Supports IP-based, digital and analogue Stations
- Supports Commend SIP products and 3rd-party SIP phones
- VoIP connectivity via SIP trunk to IP-PBX servers and service providers
- VoIP connectivity to PSTN via SIP gateways
- Supports all Intercom functions and performance levels
- Networkable with all IP Intercom Servers via LAN or WAN
- Networkable with the Intercom Servers S3, S6 and GE 800 via NET
- IP interfaces: ICX over IP, RTP, SIP over TLS and (S)RTP as well as IoIP®
- Convenient configuration via PC software CCT 800
- IPv4 for IoIP®
- IPv4 and IPv6 for SIP clients/trunk connections
- Supports Commend Solution Apps, e.g. ComPLC

Base Licences

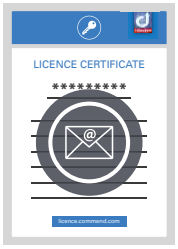
Per VirtuoSIS Master, one base licence is required.

L-SIS-PRO(v.X)	VirtuoSIS Base Professional (v.X) for up to 10 VirtuoSIS Instances
L-SIS32-PRO(v.X)	VirtuoSIS Base Starter licence (v.X) for 1 VirtuoSIS Instance with up to 32 subscribers



Upgrade Licences

L-SIS-PRO(v.X)U	Upgrade licence for VirtuoSIS Professional (v.X)
L-SIS32PRO(v.X)U	Upgrade licence for VirtuoSIS Starter (v.X)
L-SIS32-UPG	Upgrade licence from VirtuoSIS Starter to VirtuoSIS Professional
L-UG-1D	Upgrade licence for 1 subscriber to feature level D (for IoIP and SIP subscribers)
L-UG-8B	Upgrade licence for 8 subscribers from feature level A to feature level B (for SIP subscribers only)



Subscriber Licences

L-SIS-IP-2B	Licence for 2 subscribers, feature level B
L-SIS-IP-8B	Licence for 8 subscribers, feature level B
L-SIS-IP-32B	Licence for 32 subscribers, feature level B
L-SIS-IP-2D	Licence for 2 subscribers, feature level D
L-SIS-IP-8D	Licence for 8 subscribers, feature level D
L-SIS-SIP-8A	Licence for 8 SIP subscriber, feature level A
L-SIS-SIP-2B	Licence for 2 SIP subscribers, feature level B
L-SIS-SIP-8B	Licence for 8 SIP subscribers, feature level B
L-SIS-SIP-2D	Licence for 2 SIP subscribers, feature level D
L-SIS-SIP-8D	Licence for 8 SIP subscribers, feature level D

Network Licences

L-SIS-LAN-4	Licence for 4 LAN connections
L-SIS-LAN-8	Licence for 8 LAN connections
L-SIS-WAN-8	Licence for 8 WAN connections
L-SIS-MI	Licence for more than 2 network interfaces

SIP-Trunk Licences

L-SIS-SIPT8B	Licence for SIP trunk, 8 channels, feature level B
L-SIS-SIPT1D	Licence for SIP trunk, 1 channel, feature level D
L-SIS-SIPT8D	Licence for SIP trunk, 8 channels, feature level D

Upgrade Subscriptions

E-SIS-USUB1	Upgrade Subscription for VirtuoSIS - 1 year contract, 15% of the licence price of the System per year
E-SIS-USUB3	Upgrade Subscription for VirtuoSIS - 3 year contract, 12% of the licence price of the System per year
E-SIS-USUB5	Upgrade Subscription for VirtuoSIS - 5 year contract, 10% of the licence price of the System per year

Interface Licence

L-SIS-ICX	Single licence for ICX interface

In addition, various platform independent licences are available (e.g. Intercom Client, Mobile Client, STUDIO and ComPLC).

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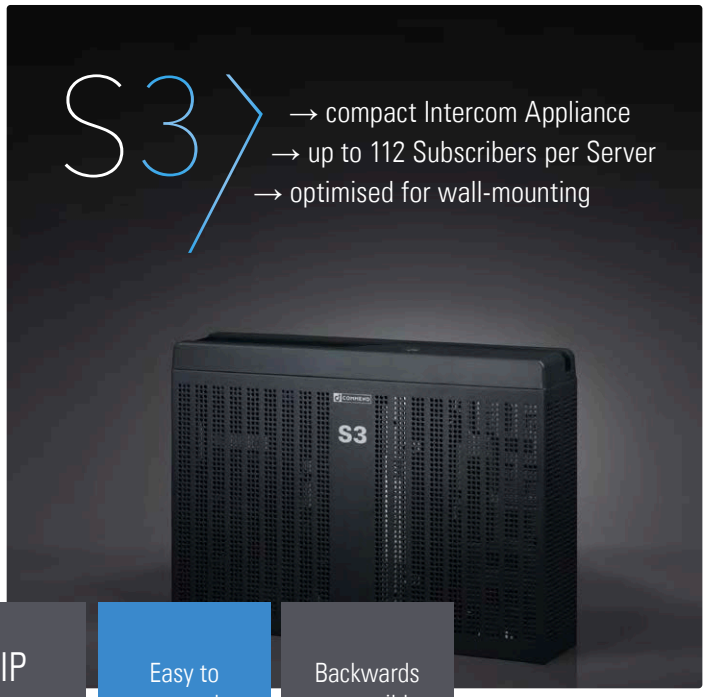
CONNECTED WITH THE FUTURE

Commend's Intercom Server S6 and S3: The ultimate Intercom Appliance



16 kHz eHD Voice | VirtuoSIS on board | IoIP and SIP | Easy to expand | Backwards compatible

Designed as a powerful **all-in-one Intercom Appliance**, the new **S6 and S3 Server Series** now brings to regular server rooms what used to be limited to specialised IT environments: the full spectrum of powerful **VirtuoSIS technology**, and more – in the form of **a compact all-in-one** hardware and software **package**.

Seriously scalable

A single **S6** Server can host up to **448 Subscribers**, a **compact S3** Server at least up to **112 Subscribers** – the exact number and features for your system are up to you, thanks to **easily extensible software licenses**. Need more Intercom stations, new functions or the latest software? Forget costly system extensions – a few mouse clicks is all you need to upgrade your System to your liking. This way, you'll have your newly enhanced system up and running in no time.

Software with all the right connections

Would you like to upgrade to a software-based Intercom server but don't have the proper infrastructures? No problem. The S6 and S3 comes fully equipped and is driven by powerful software that brings together all the benefits of Commend VirtuoSIS technology: **high-level fail safety, crystal clear voice and video communication, easy maintenance/ upgrading, and low costs**.

Life-Enhancing "Evergreen" Technology

Although the S6 and S3 are Commend's most innovative server products to date, they still conforms to our hallmark "Evergreen" policy to provide **full compatibility with previous system generations**. This is a big plus when it comes to step-by-step upgrading of existing systems, as it allows the S6 to form a powerful, yet flexible link between previous-generation devices and future communication and security technologies.

INTERCOM SERVER – S6

Intercom Server S6 is a mono-socket rack server that is powered by Commend's proven VirtuoSIS Intercom Server software (VirtuoSIS Starter Licence). Optimised for rack installation, it's setting new server room standards with its industry-leading performance and energy efficiency. The S6 ensures uninterrupted operation and system availability.

Applications:

– Building Communication – Communication solutions for parking operators

Key features:

– Ultimate availability and security
– Optimised for rack installation (1U, min. depth 800 mm)
– The communication solution integrates smoothly with existing IT infrastructures
– Physical separation of IT and communication server (unlike virtual Intercom solution)
– Compact all-in-one package including powerful hardware and pre-installed VirtuoSIS Intercom Server software
– Provides full range of VirtuoSIS functions
– Flexible licensing scheme for VirtuoSIS Intercom Server software
– Extremely low operating costs thanks to high energy efficiency

S6

16 kHz | 7 kHz | IoIP | SIP

Intercom Server S6 Optimised for rack installation; Intercom Server Software VirtuoSIS pre-installed (incl. VirtuoSIS Starter Licence L-SIS32-PRO, Rack mounting kit).

Maximum number of subscribers

IP / SIP up to 448 Subscribers / Server

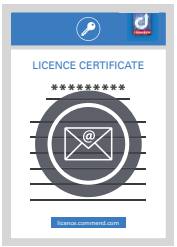
IP interfaces for programming, remote maintenance and operation

S6 Server without power cord (Country-specific power cords C13 see Accessories)

W 483 mm, H 43 mm, D 572 mm (19", 1U) 16.5 kg

Software Licenses and available Upgrade Levels

See Software Intercom Server – VirtuoSIS



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INTERCOM SERVER – S3

As an all-around Intercom Server, the S3 is designed for industrial applications and comes pre-installed with Commend's proven VirtuoSIS Intercom Server software (VirtuoSIS Professional licence). Optimised for wall-mounting, it combines high performance with low space requirements. The S3 ensures uninterrupted operation and is designed to satisfy the most demanding security and communication requirements.

Applications:

– Small and medium sized Communication Solutions – Networked Server Landscapes

Key features:

– Ultimate availability and security
– Optimised for wall-mounting (optional rack-mount kit available)
– The communication solution integrates smoothly with existing IT infrastructures
– Physical separation of IT and communication server (unlike virtual Intercom solution)
– Compact all-in-one package including powerful hardware and pre-installed VirtuoSIS Intercom Server software
– Provides full range of VirtuoSIS functions
– Flexible licensing scheme for VirtuoSIS Intercom Server software
– Extremely low operating costs thanks to high energy efficiency

S3

16 kHz | 7 kHz | IoIP | SIP

Intercom Server S3 optimised for wall-mounting; Intercom Server Software VirtuoSIS pre-installed (incl. VirtuoSIS Professional Licence).

Maximum number of subscribers

IP / SIP up to 112 Subscribers / Server

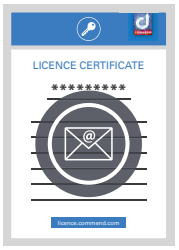
IP interfaces for programming, remote maintenance and operation

S3 Server with wallmount kit; without power cord (Country-specific power cords C7 see Accessories)

W 250 mm, H 191 mm, D 52 mm 2.0 kg

Software Licenses and available Upgrade Levels

See Software Intercom Server – VirtuoSIS



Rack mounting kit RM-S3-2RU

19" Rack mounting kit (2U) for an Intercom Server S3.

W 560 mm, H 140 mm, D 270 mm 1.8 kg

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Intercom Server – GE 800 | GE 300

Intercom Server – GE 800

XXL-Intercom Solutions
896 IP-Subscribers per Housing
19" Technology

Intercom Server – GE 300

Compact Intercom Solutions
80 IP-Subscribers
Design Housing for Wall Mounting

100% IP

eHD Voice Audio Experience

Green IT Power Management

14,280 Servers in one Network

Backwards Compatibility

99.998% Availability

100% DIGITAL, 100% IP

The IP Intercom Server GE 800 and GE 300 set new standards. With the IP and digital bus concept and the huge power reserves of the DSP-processors (400 MIPS), they are prepared for the future.

100% Flexible, 100% Compatible

The IP Intercom Servers flexibly adapt to all requirements and are compatible with all previous system generations. All IP, digital and analogue stations of Commend can be connected to the IP Intercom Servers GE 800 and GE 300.

Simple Networking

IP-technology makes it possible. Networking of IP Intercom Servers within a rack via the built-in switch as well as cross border networking of locations is easier than ever before. The system is scalable as required and grows with the requirements of the operator and users.

16 kHz Audio Experience

Enhanced HD Voice transmits voice communication, emergency calls and music with previously (literally) unheard-of clarity. At the same time the new IP Intercom Servers assume the tasks of PA-servers and allow the consolidation of PA and Intercom onto a single platform.

Green IT

The power concept of the Intercom Server according to "Green IT" means high degree of efficiency with an optimal energy balance.

Integrated speech storage

The Subscriber Cards all have built-in speech storage. This allows storing of individual messages (waiting information, info or alarm messages) which can be played back across the entire system, flexibly and at various times.

Integrated speech recording

As soon as a certain volume level is exceeded, the Audio Monitoring feature automatically initiates a call – e.g.: when somebody screams for help in a lift. Via the integrated speech recording a certain time frame before call initiation is recorded and can be played back, therefore the reason for call initiation can be determined and the required measures can be initiated.

Configuration and Remote Maintenance via IP

Configuration and maintenance of the Intercom system are a simple task within the own data network as well as over the internet (password protected). Even updates of the operating system via IP become a reality as well as the unlocking of required functions.

Licensing of Features

If additional features or subscribers are required a Licence key is enough to activate them immediately. No hardware is needed and activation can be carried out locally or via remote maintenance over IP.

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Intercom Server – GE 800

SERVER

IP Intercom Server in 19" Technology for up to 25,000 subscribers in a local network. Allows connection of IP, 2-wire, 4-wire stations. Housed in an elegant industrial design with 3 rack units for mounting in 19" racks. Integrated functions for door and gate control, alarm, video integration, control desk, etc. The manifold networking concepts allow security and communication systems with up to 14,280 networked Intercom Servers. Up to 30,000 subscribers can communicate with each other within these networks. It is also possible to forward calls to the public telephone network

GE 800

16 kHz 7 kHz

Rack housing in 19" technology with 14 free slots for cards in Euro format. Fix slots for the included G8-GEP processor card, G8-NET networking card and G8-GEN power supply card.

Maximum number of subscribers

IP	896	Subscribers per housing
Digital 2-Wire	56	Subscribers per housing
Analogue 4-Wire	56	Subscribers per housing

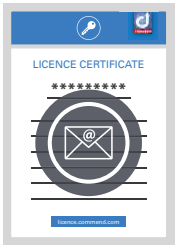
One AF-input (for music or alarm), two inputs for floating contacts, two relay outputs, RS232 and IP-interface for (remote) programming or maintenance.

GE 800	Server without transformer
GE 800AU	Server, complete with Transformer power supply for Australia
GE 800EU	Server, complete with Transformer power supply for Europe
GE 800UK	Server, complete with Transformer power supply for UK
GE 800UL	Server with UL-Certification without power supply

W 483 mm, H 133 mm, D 229 mm (19", 3U) 5,800 g

Server Licences GE 800

L8-PRO6U	Upgrade to PRO 800 Version 6.x (existing installations)
L8-ICX	Licence for 1 ICX Interface
L8-NETLAN4	Networking Licence G8-NET with 4 additional LAN-connections
L8-NETLAN8	Networking Licence G8-NET upgrade to 8 LAN-Connections
L8-NETWAN4	Networking Licence G8-NET with 4 additional WAN-Connections
L8-NETWAN8	Networking Licence G8-NET upgrade to 8 WAN-Connections



PLUG-IN SERVER G8-IP-32

Key features:

- Connection of up to 64 IP subscribers per Plug-In Server
- Up to 14 Plug-In Servers per IP Intercom Server GE 800 for connection of a maximum total of 896 fully functional IP subscribers
- Video support and keyboard functionality for all 896 subscribers
- 16 kHz eHD Voice speech quality
- Up to 6,796 inputs and outputs per GE 800
- Plug-In Servers run autarkically (i.e. self-sufficiently)
- Enhanced fail safety and reduced Single Points of Failure (SPOF) thanks to de-centralised intelligence
- Ideally suited for redundancy concepts
- Green IT design for low standby energy consumption

Technical data: Power supply via Intercom Server; IoIP® protocol based on UDP/IP, Ethernet IEEE 802.3, 802.1q, IP (RFC 791), ICMP (RFC 792), UDP (RFC 768), TCP (RFC 793), QoS / Diffserv (RFC 2474); 8 MB data memory for pre-recorded audio messages (up to 128 message files per Plug-In Server G8-IP-32)

G8-IP-32

16 kHz 7 kHz IoIP

IP Plug-In Server for connection of up to 64 IP subscribers via Ethernet (LAN/WAN).

Connection via the Ethernet port of the IP Intercom Server.

G8-IP-32	Basic Server card for 32 subscribers – 30 with Feature Level B and 2 with Feature Level D
L8-IP-32-32B	Licence for upgrade to 64 subscribers – 62 with Feature Level B and 2 with Feature Level D
L8-IP-32-2D	Subscriber Licence for upgrade to 4 subscribers on Feature Level D
L8-IP-32PRO6U	Licence for upgrade to PRO 800 Version 6.x (existing installations)

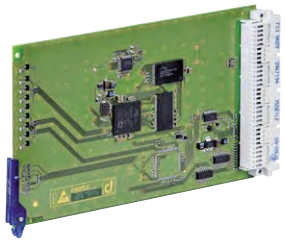
W 167 mm, H 100 mm, D 20 mm 170 g

SUBSCRIBER CARDS

Subscriber cards are used to process speech communication and subscriber specific controls on an Intercom Server. For connection of IP, digital and analogue subscribers, various cards in 4 feature levels (B, D and P) are available. The cards of the higher levels contain all the features of the lower ones plus more. With feature level P individual levels can be allocated to each subscriber.

G8-IP

16 kHz | 7 kHz | IoIP



IP DSP Subscriber card for connection of up to 8 IP-Subscribers via Ethernet (LAN/WAN).
A maximum of 14 G8-IP cards can be used in a GE 800 IP Intercom Server.

Connection via the Ethernet port of the IP Intercom Server.

G8-IP-4B	Basic card for 4 subscribers, Feature Level B
L8-IP-4D	Licence for feature level D
L8-IP-4P	Licence for feature level P
L8-IP-8B	Licence for 8 subscribers, Feature Level B
L8-IP-8D	Licence for 8 subscribers, Feature Level D
L8-IP-8P	Licence for 8 subscribers, Feature Level P
L-IP-REC-1	Licence for one IP/RTP Recording Channel

W 167 mm, H 100 mm, D 20 mm 180 g

G8-GED

16 kHz | 7 kHz | Digital

DSP Subscriber card for connection of up to 4 digital subscribers via 2-wire lines. A maximum of 14 G8-GED cards can be used in a GE 800 IP Intercom Server. One conversation per subscriber is possible simultaneously (non-blocking).

Connection can be carried out via various installation boards – see section: Installation Boards.

G8-GED-4B	Basic card for 4 subscribers, Feature Level B
L8-GED-4D	Licence for Feature Level D
L8-GED-4P	Licence for Feature Level P

W 167 mm, H 100 mm, D 20 mm 220 g

G8-GET

16 kHz | 7 kHz | Analogue

DSP Subscriber card for connection of up to 4 analogue subscribers via 4-wire lines. A maximum of 14 G8-GET cards can be used in a GE 800 IP Intercom Server. Per subscriber one conversation is possible simultaneously (non-blocking). With the Licence L8-GET-DSP DSP-Features (see datasheet) can also be used with analogue stations.

Connection can be carried out via various installation boards – see section: Installation Boards.

G8-GET-4B	Basic card for 4 subscribers, Feature Level B
L8-GET-4D	Licence for Feature Level D
L8-GET-4P	Licence for Feature Level P
L8-GET-DSP	Licence for DSP features on G8-GET subscriber cards

W 167 mm, H 100 mm, D 20 mm 220 g

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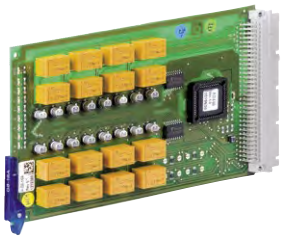
INPUT/OUTPUT CARDS

Input/output cards are used for reading in of floating contacts and/or operating of controls such as door openings or barriers via floating relay contacts (depending on type).

G8-16A



Plug-in card with 16 relay outputs (10 make contacts, 6 as make contacts with common ground).

Connection via installation board G8A-I with 37-way D-Submin plug or G8A-K with screw terminals (neither are included in extent of supply).

W 167 mm, H 100 mm, D 20 mm 208 g

G8-16E

Plug-in card with 16 inputs for floating contacts, with or without line monitoring. Read in of 5 line conditions (Idle, Active 1, Active 2, Short, Line break).

Connection via installation board G8A-I with 37-way D-Submin plug or G8A-K with screw terminals (neither are included in extent of supply).

W 167 mm, H 100 mm, D 20 mm 161 g

G8-8E8A

Plug-in card with 8 inputs for floating contacts and 8 relay outputs (4 of which are make contacts, 4 as make, open or switch over contacts). Read in of 5 line conditions with inputs (Idle, Active 1, Active 2, Short, Line break).

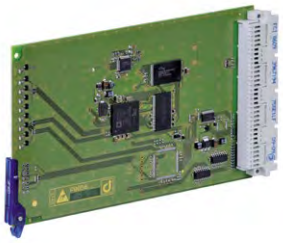
Connection via installation board G8A-I with 37-way D-Submin plug or G8A-K with screw terminals (neither are included in extent of supply).

W 167 mm, H 100 mm, D 20 mm 190 g

INTERFACE CARDS

Data interfaces for integration and connection to external systems, such as telephones, PCs, mobile radios, etc.

G8-IF



Powerful IP Interface Card with up to 4 virtual TCP/IP interfaces for using the ICX protocol via IP networks; equipped with two 9-pin D-Submin connectors for output via RS 232 interface port. This allows for integrating third party systems (e.g. video switcher, access control systems or host computers) to IP Intercom Servers via IP networks or RS 232 using the Commend Standard Protocol.

Connection via the Ethernet port of the IP Intercom Server and Installation Board G8A-V24 with two 9-pin D-Submin connectors for output via RS 232 (included).

G8-IF	Basic card with 4 virtual TCP/IP interface ports and 2 RS 232 interface ports
L8-IF-ICX	Licence for one additional ICX Interface (maximum is 6)

W 167 mm, H 100 mm, D 20 mm 250 g

G8-AUD

16 kHz 7 kHz

Digital connection card for Intercom Servers with 4 channels for Plug-&-Play connection to various PA or radio systems. All audio inputs and outputs have a galvanic separation, electronic level adaptation as well as a graphic equalizer for correction of the sound quality. Besides the ideal coupling capability, the card offers 4 floating contacts for control tasks and a 8 MB flash memory for speech recordings.

Connection via own installation boards (not included in extent of supply).

G8-AUD-4B	Basic card with 4 channels, Feature Level B
L8-AUD-4D	Licence for upgrade of G8-AUD-4B to Feature Level D

W 167 mm, H 100 mm, D 20 mm 243 g (G8-AUD-2), 257 g (G8-AUD-4)

G8-TEL

Telephone DSP Interface for connection of the Intercom system to an analogue subscriber of a telephone system or directly to a standard telephone line. Telephone mode for direct dialling of desired telephone number from an Intercom station; Auto Dialler mode with automatic dialling of freely programmable dialling sequences initiated by calls or call requests. Freely configurable speech storage for acoustic identification and messages (e.g. waiting information) in dialler mode. DTMF-telephones can operate functions in the Intercom system (e.g. after dialling for door opening, etc.).

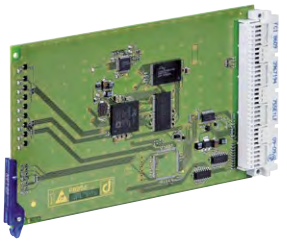
Connection via installation board G8A TEL (included in extent of supply).

W 167 mm, H 100 mm, D 20 mm 272 g

NETWORK CARDS

Plug-in cards for networking Intercom Servers via LAN/WAN (TCP/IP) or multiplexers/media converters.

G8-LAN



IP Network card G8-LAN supports direct addressing of up to 16 Intercom Servers. Up to 32 conversations, music programmes or radio channels are supported simultaneously. For more details see datasheet or manual.

Connection via the Ethernet port of the Intercom Server.

G8-LAN-8	Basic card for 8 LAN Connections
L8-LAN-16	Licence for 16 LAN Connections
L8-WAN-8	Licence for 8 WAN Connections

W 167 mm, H 100 mm, D 20 mm 180 g

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INSTALLATION BOARDS

G8A-C

Installation board for subscriber cards G8-GED or G8-GET, interface card G8-AUD with 4 shielded RJ 45 sockets.

60 g

G8A-CP

Installation Board for Subscriber Card G8-GED-4 with 4 shielded RJ 45 ports, including option for connecting an additional power supply via the subscriber line.

67 g

G8A-I

Installation board for subscriber cards G8-GED, G8-GET and G8-TEL, input / output cards G8-16A, G8-16E, G8-8E8A as well as interface card G8-AUD with 37-way D-Submin plug.

55 g

G8A-K

Installation board with screw terminals for flexible mounting, for subscriber cards G8-GED and G8-GET interface card G8-AUD as well as input / output cards G8-16A, G8-16E and G8-8E8A.

60 g

G8A-T

Installation board for two subscriber cards G8-GED or G8-GET as well as G8-AUD with 37-way D-Submin-plug.

84 g

G8A-GEN2

Installation board with 2 low voltage inputs for two independent power adapters (PA7 power adapter or 24 VDC) for redundant power supply to the Intercom Server.

80 g

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Intercom Server – GE 300

SERVER

IP Intercom Server GE 300 is ideally suited as a stand-alone server for small and medium-sized Intercom applications or as network node in large Intercom networks. Allows for connecting IP, 2-wire, 4-wire stations. The compact housing is suitable for wall mounting. Built-in functions for door and gate control, alarms, CCTV integration, control desks, etc. The diverse networking concepts enable security and communication systems with up to 14,280 networked Intercom Servers. Up to 30,000 subscribers can communicate within these networks.

GE 300

16 kHz | 7 kHz

Basic housing with five plug-in slots.

Maximum number of subscribers

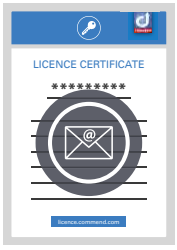
IP	40 Subscribers per housing 80 Subscribers with expansion housing GEZ 300
2-Wire Digital	20 Subscribers per basic housing 40 Subscribers with expansion housing GEZ 300
4-Wire Analogue	20 Subscribers per basic housing 40 Subscribers with expansion housing GEZ 300

One AF-input (for music or alarm), two inputs for floating contacts, two relay outputs, RS 232 and IP interface for (remote) programming or maintenance.

GE 300	Server without power supply
GE 300EU	Server, complete with power supply for Europe (excl. UK)
GE 300CA	Server, complete with power supply for the UK / USA / Australia
GE 300WR	Server without power supply, wide range input 20 – 36 V DC

W 310 mm, H 210 mm, D 77.5 mm 2,300 g

Server Licences



L3-PRO6U	Upgrade to PRO 800, Version 6.x (existing installations)
L3-ICX	Licence for 1 ICX Interface (on-board)
L3-LAN-4	Networking Licence for 4 LAN connections (on-board)

GEZ 300

Expansion housing including Power supply with five plug-in slots for subscriber cards and/or interface cards. Connection to the IP Intercom Server via ribbon cable.

GEZ 300	Expansion housing without power supply
GEZ 300EU	Extension housing, complete with 230V power supply for Europe (excl. UK)
GEZ 300UK	Extension housing, complete with 240V power supply for the UK
GEZ 300US	Extension housing, complete with 120V power supply for the USA
GEZ 300AU	Extension housing, complete with 230V power supply for Australia

W 310 mm, H 210 mm, D 77.5 mm 2,300 g

GEI 300

Interface housing with two slots for G8-interface cards (application in GEI 300 interface housing is shown on the respective cards – see datasheet). Connection to the IP Intercom Server GE 300 or the expansion housing GEZ 300 via ribbon cable.

W 310 mm, H 210 mm, D 77.5 mm 1,200 g

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SUBSCRIBER CARDS

Subscriber cards handle speech communication as well as subscriber specific functions. For connection of IP, digital and analogue subscribers various cards in 4 feature level (B, D and P) are available. The cards of the higher levels contain additional features to the lower ones. With feature level P individual feature levels can be allocated to each subscriber. The number of subscribers and the individual feature levels can be unlocked using the Licence key.

G3-IP

16 kHz | 7 kHz | IoIP

IP DSP subscriber card for connection of up to 8 IP subscribers via Ethernet (LAN/WAN). Up to five G3-IP cards can be used with a GE 300 IP Intercom Server, as well as five additional ones in Expansion Central GEZ 300.

Connection via the Ethernet port of the IP Intercom Server.

G3-IP-4B	Basic card for 4 subscribers, Feature Level B
L3-IP-4D	Licence for Feature Level D
L3-IP-4P	Licence for Feature Level P
L3-IP-8B	Licence for 8 subscribers, Feature Level B
L3-IP-8D	Licence for 8 subscribers, Feature Level D
L3-IP-8P	Licence for 8 subscribers, Feature Level P
L-IP-REC-1	Licence for one IP/RTP Recording Channel

W 60 mm, H 160 mm, D 20 mm 140 g

G3-GED

16 kHz | 7 kHz | Digital

DSP subscriber card for connection of up to four 2-wire digital subscribers. Up to five G3-GED cards can be used with a GE 300 IP Intercom Server, as well as five additional ones in Expansion Central GEZ 300. One call per subscriber is possible at the same time (non-blocking).

Connection via pluggable screw terminals.

G3-GED-4B	Basic card for 4 subscribers, Feature Level B
L3-GED-4D	Licence for Feature Level D
L3-GED-4P	Licence for Feature Level P

W 60 mm, H 160 mm, D 20 mm 188 g

G3-GET

16 kHz | 7 kHz | Analogue

DSP subscriber card for connection of up to four 4-wire analogue subscribers. Up to five G3-GET cards can be used with a GE 300 IP Intercom Server, as well as five additional ones in Expansion Central GEZ 300.
The L3-GET-DSP Licence allows use of the DSP features (see datasheet) also with analogue Intercom stations.

Connection via pluggable screw terminals.

G3-GET-4B	Basic card for 4 subscribers, Feature Level B
L3-GET-4D	Licence for Feature Level D
L3-GET-4P	Licence for Feature Level P
L3-GET-DSP	Licence for DSP features on G3-GET subscriber cards

W 60 mm, H 160 mm, D 20 mm 198 g

INPUT/OUTPUT CARDS

Input/output cards are used for reading in of floating contacts and/or operating of controls such as door openers or barriers via floating relay contacts (depending on type).

G3-16A

Plug-in card with 16 relay outputs (4 of which are make, open or switch over contacts, 12 only as make contacts).

Connection via plugable screw terminals.

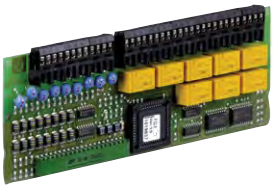
W 167 mm, H 100 mm, D 20 mm 209 g

G3-16E

Plug-in card with 16 inputs for floating contacts, with or without line monitoring. Read in of 5 operation states (Idle, Active 1, Active 2, Short, Line break).

Connection via plugable screw terminals.

W 167 mm, H 100 mm, D 20 mm 150 g



G3-8E8A

Plug-in card with 8 inputs for floating contacts and 8 relay outputs (make, open or switch over). Read in of 5 operation states with inputs (Idle, Active 1, Active 2, Short, Line break).

Connection via plugable screw terminals.

W 167 mm, H 100 mm, D 20 mm 185 g

NETWORK CARDS

Plug-in cards for networking Intercom Servers via LAN/WAN (TCP/IP) or media converters.

G3-LAN

The IP network card supports central management of up to 16 Intercom servers. Up to 8 conversations, music programmes or radio channels are supported simultaneously. For more details see datasheet or manual.

Connection is via the network connection port of the IP Intercom Server.

G3-LAN-8	Basic card for 8 LAN Connections
L3-LAN-16	Licence for 16 LAN Connections
L3-WAN-4	Licence for 4 WAN Connections
L3-WAN-8	Licence for 8 WAN Connections

W 167 mm, H 100 mm, D 20 mm 140 g

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INTERFACE CARDS

Data interfaces for integration and connection to external systems.

G3-IF

Powerful IP Interface Card with up to 4 virtual TCP/IP interfaces for using the ICX protocol via IP networks; equipped with two 9-pin D-Submin connectors for output via RS 232 interface port. This allows for integrating third party systems (e.g. video switcher, access control systems or host computers) to IP Intercom Servers via IP networks or RS 232 using the Commend Standard Protocol.

Connection is via the network link of the IP Intercom Server or via two 9-pin D-Submin connectors for RS 232.

G3-IF	Basic card with 4 virtual TCP/IP interface ports and 2 RS 232 interface ports
L3-IF-ICX	Licence for one additional ICX Interface (maximum is 6)

W 60 mm, H 160 mm, D 20 mm 150 g

G3-TEL

Multi-functional telephone interface for connection of the Intercom system to an analogue subscriber of a telephone system or directly to a standard telephone line. Telephone mode for direct dialling of the desired telephone number from an Intercom station, Auto Dialler mode with automatic dialling of freely programmable dialling sequences initiated by calls or call requests. Freely configurable speech storage for acoustic identification and messages (e.g. waiting information) in dialler mode. DTMF-telephones can operate functions in the Intercom system (e.g. once call has been received on a remote telephone all after dialling functions are available).

Connection via RJ11 telephone socket.

W 60 mm, H 160 mm, D 20 mm 350 g

G8-AUD

16 kHz 7 kHz

Digital connection card for Intercom Servers with 4 channels for Plug-&-Play connection to various PA or radio systems. All audio inputs and outputs have a galvanic separation, electronic level adaptation as well as a graphic equalizer for correction of the sound quality. Besides the ideal coupling capability, the card offers 4 floating contacts for control tasks and a 8 MB flash memory for speech recordings.

Connection via own installation boards (not included in extent of supply).

G8-AUD-4B	Basic card with 4 channels, Feature Level B
L8-AUD-4D	Licence for upgrade of G8-AUD-4B to Feature Level D

W 167 mm, H 100 mm, D 20 mm 190 g (G8-AUD-2), 200 g (G8-AUD-4)

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Concentrated Power – IS 300

Server IS 300

State of the art compact IP Intercom Server for up to 64 IP based subscribers. Non-blocking for up to 32 conversations (Server internal). Ultimate fail safety under all conditions, thanks to vibration resistance in accordance with IEC Standard 61373. Housed in a stylish, space saving and maintenance free design with 1 rack unit (1U). Three easy installation options: rack, desk, wallmount. Green IT with extra low power consumption (2.2 W). Fully backward compatible to digital (2-wire) and analogue (4-wire) stations via IP converter ET 901. Expandable to a 30,000 subscriber Intercom Server network.

Powerful

IS 300 unites the performance of a fully featured Intercom 2.0 Server with the benefits of a smart, size optimised product design. Whether as a desktop unit, a wallmount device or installed in a 19" rack – IS 300 delivers proven Commend Intercom performance wherever it is needed.

Reliable

Availability and security are non-negotiable when personal wellbeing and lives are at stake. This is why IS 300 is in a wholly new design that eliminates movable and wearing parts as possible failure sources. The result is a significantly higher performance and availability profile of the overall system.

Vibration-proof

Heavy traffic environments or industrial locations: when things get shaking, the vibration proof solid state design of IS 300 in accordance with IEC Standard 61373 ensures unshakable functionality even under the roughest of ambient conditions.

Environmentally friendly

Ecologically focussed engineering on Commend's high quality level was a key driving force in the development of IS 300. The result is a powerful multi-purpose Intercom Server with resource optimised technology that has one of the industry's lowest power consumption profiles. IS 300 is proof of Commend's commitment to the motto that high Intercom performance and sustainability are no contradiction in terms.

Flexible

With the power of Intercom over IP (IoIP®) inside, IS 300 enables implementations from 2-subscriber installations to 30,000 multi-server networks. Combined with support for any Intercom technology and a scalable licensing model, IS 300 provides a solution package for any Intercom need.

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SERVER

Key features:

- Up to 64 fully-featured IP-based subscribers (each with video support and standard keypad) per IS 300 Intercom Server
- "Non-Blocking" feature for up to 32 call lines (within Server)
- Ultimate fail safety under all conditions, thanks to vibration resistant standard Solid-State Design
- 16 kHz eHD Voice audio quality and P2P Audio for maximum speech intelligibility (suitable, e.g. for PA systems)
- Speech Memory: e.g. group calls with anti-feedback protection
- No batteries or moving fans = no need for regular maintenance
- Easy to install in any of three ways: in Server rack, on desktop or wall-mounted
- Green IT for extra-low power consumption
- Interfaces: OPC, TETRA, ComWIN, Intercom Client, ComSCHEDULE, ComREPORT, ComVIDEO, ICX Data Interface, e.g. for integrating third-party systems

Technical data: External power supply: 12–24 V DC; Power consumption: 2.2 W; Speech storage memory: 8 MB; 450 seconds in 16 kHz quality; 900 seconds in 7 kHz quality; up to 128 individual audio files per IS 300.

IS 300

16 kHz | 7 kHz | IoIP

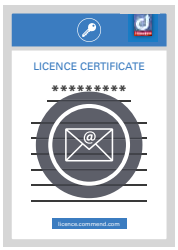
IP Intercom Server IS 300 for up to 64 IP based subscribers. Ultimate scalability for up to 64 subscribers (maximum of four subscribers with Feature Level D). Includes four subscriber Licences (2B/2D) and power supply unit PA20W15V for Europe, UK, USA and Australia

W 201 mm, H 44 mm, D 255 mm (1U) 1,560 g

IS 300 Server Licences

Licences are for PRO 2.0 and higher.

L-IS3-PRO6U	Upgrade to PRO 800 Version 6.x (existing installations)
L-IS3-2B	Licence for 2 subscribers, Feature Level B
L-IS3-4B	Licence for 4 subscribers, Feature Level B
L-IS3-8B	Licence for 8 subscribers, Feature Level B
L-IS3-2D	Licence for 2 subscribers, Feature Level D (up to 4 Level D subscribers)
L-IS3-ICX	Single Licence for ICX Interface (on board)
L-IS3-LAN-2	Network Licence for 2 LAN connections (one of them for redundancy purposes)
L-IP-REC-1	Licence for one IP/RTP recording channel



Wallmount and desktop mounting kit PF-WM

Wallmount and desktop mounting kit for Intercom Server IS 300 or amplifier AF 50.

Rackmounting kit PF-RM-1HE

19" rack mounting kit (1U) for one or two Intercom Server IS 300 side by side.

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Intercom Server for Small-Sized Solutions – GE 150

SERVER

Intercom Server power in a compact format – ideal as a stand-alone solution for small sized applications, including full support of analogue 4-wire Intercom stations and modules. In a design that is compact enough for wall-mounting, the GE150 Server offers proven Commend Intercom functionality, including integrated door/gate control and alarm functions, call forwarding to a telephone network, etc. Both the Server and expansion cards can easily be upgraded to a fully-featured GE 300 Server via Licences. Have a growing business? Your GE 150 will grow with it.

GE 150

16 kHz | 7 kHz | Analogue

Basic housing with five plug-in slots.

Maximum number of subscribers
4-Wire Analogue 20 Subscribers per basic housing

One AF-input (for music or alarm), two inputs for floating contacts, two relay outputs, RS 232 and IP interface for (remote) programming or maintenance.

GE 150	Server without power supply
GE 150EU	Server, complete with power supply for Europe (excl. UK)
GE 150CA	Server, complete with power supply for the UK / USA / Australia
L15-LOG	Licence to activate logging of up to 500 ICX messages

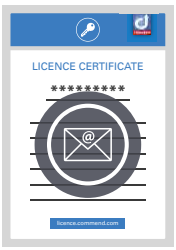
W 310 mm, H 210 mm, D 77.5 mm 2,300 g

UPGRADE LICENCES

GE 150 offers exactly what you need, either via plug-in expansion cards or by a simple Licence upgrade. This way, you can customise your GE 150 up to the full feature range of a Commend GE 300 Server.

Upgrade Licences

L15-GE300	Upgrade from GE 150 to GE 300
L15-G3-GET	Upgrade from G15-GET-4B to G3-GET-4B
L15-G3-TEL	Upgrade from G15-TEL to G3-TEL
L15-G3-8E8A	Upgrade from G15-8E8A to G3-8E8A
L15-G3-16E	Upgrade from G15-16E to G3-16E



SUBSCRIBER CARDS

Individually configurable voice communication and control for each connected subscriber couldn't be easier, thanks to the flexible G15-GET subscriber card.

G15-GET

16 kHz | 7 kHz | Analogue

DSP subscriber card for connection of up to four 4-wire analogue subscribers. Up to five G15-GET cards can be used with a GE 150 Server.

Connection via pluggable screw terminals.

G15-GET-4B	Basic card for 4 subscribers, Feature Level B
L15-GET-4D	Licence for Feature Level D

W 60 mm, H 160 mm, D 20 mm 198 g

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INTERFACE CARDS

The easy-to-install G15-TEL interface card offers an efficient way to integrate third-party telephone systems into the Intercom Server environment. Equipped with this plug-in card, the GE150 Server integrates seamlessly with analogue subscribers on existing telephone systems and even allows for the direct connection of trunk lines. This way, an Intercom station can easily be turned into a telephone ("Telephone Mode") with the Intercom keypad as a dialling pad – all at the simple touch of a button. In "Dial Mode" incoming calls can be set to trigger individual auto-dialling sequences. The card also provides a configurable voice sound memory, which enables the automatic playback of identification messages and automated announcements (e. g., waiting loops, etc.). For extra convenience, users can access to a range of Intercom functions (e. g., for opening doors or gates) simply by dialling a control code.

G15-TEL

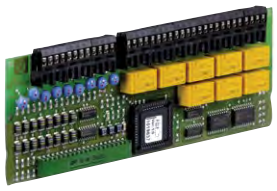
Multi-functional telephone interface for connection of the Intercom system to an analogue subscriber of a telephone system or directly to a standard telephone line.

Connection via RJ11 telephone socket.

W 60 mm, H 160 mm, D 20 mm 350 g

INPUT/OUTPUT CARDS

This I/O card expands the GE 150 Server's range of functions with the ability to read floating contacts and (depending on the card model) control doors and gates via floating relays. It provides eight additional inputs for floating contacts as well as eight additional relay outputs (make contact, open contact, transfer switch). What is more, it can also read up to five input states: Idle, Active 1, Active 2, Short, and Line Break.



G15-8E8A

Plug-in card with 8 inputs for floating contacts and 8 relay outputs (make, open or switch over).
Read in of 5 operation states with inputs (Idle, Active 1, Active 2, Short, Line break).

Connection via plugable screw terminals.

W 167 mm, H 100 mm, D 20 mm 185 g

G15-16E

Plug-in card with 16 inputs for floating contacts, with or without line monitoring. Read in of 5 operation states (Idle, Active 1, Active 2, Short, Line break).

Connection via plugable screw terminals.

W 167 mm, H 100 mm, D 20 mm 150 g

Server Accessories

POWER SUPPLIES

Power Supply PA7

Power supply in country-specific versions 24 VAC/80 VA for supply of servers, amplifiers and industrial stations, includes mounting kit for 19" DIN-rail.

PA7-230VEU	Version for Europe
PA7-240VUK	Version for UK

L 107.5 mm, W 71.3 mm, D 63 mm 1,940 g

Switched-Mode Power Supply PA60W24V

60 W primary switched-mode power supply adapter with high efficiency output.
Primary: 100 – 240 V AC; Secondary: 24 V DC; 0 °C to +40 °C; Colour: black.
C13 Power cord must be ordered separately.

W 61 mm, H 157 mm, D 43 mm 410 g

Switched-Mode Power Supply PA1-S3

65 W primary switched-mode power supply adapter with high efficiency output.
Primary: 100 – 240 V AC; Secondary: 19 V DC, 3.42 A; Colour: black.
C7 Power cord must be ordered separately.

W 45 mm, H 105 mm, D 30 mm 230 g

CABLES

Connection Cable

Prefabricated 32-way connection cable with D-Submin plug for G8A-I, G8A-T, GEAI, GEAI 700R and GEAT 700R. Twisted pair cable with a lead diameter of 0.5 mm.

ASK 32-5	Length: 5 m
ASK 32-10	Length: 10 m
ASK 32-20	Length: 20 m

Length: 5 m 640 g / Length: 10 m 1,240 g / Length: 20 m 2,500 g

Power Cord C13

KAB-C13-EU	Version for Europe
KAB-C13-UK	Version for UK
KAB-C13-US	Version for USA
KAB-C13-AU	Version for Australia

1.5 m

Power Cord C7

KAB-C7-EU	Version for Europe
KAB-C7-UK	Version for UK
KAB-C7-US	Version for USA
KAB-C7-AU	Version for Australia

2.0 m

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INTERFACES & INTEGRATION

SMART SYSTEMS WORK TOGETHER

Interfaces and Technology Partners

Complete systems from one source.

The current trend in security and communication requires comprehensive and compact system solutions that integrate all elements of communication. Commend offers a large number of features that facilitate the creation of purpose made communication and security solutions for each application area.

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Open for any Interface

Where security and communication systems are concerned, it is essential for the many different components to work together smoothly. A constant exchange of data, video and audio streams allows these systems to utilise their full potential and enable perfectly integrated solutions for the benefit of the customer. Commend Intercom systems support standards such as OPC, SIP and TETRA, DMR, Modbus, KNX, SNMP and others, offering a variety of existing, well tested interfaces to third-party systems.

Integrate
Connect different systems via interfaces or open standards.

Automate
Systems automatically exchange data and define triggers and actions across systems.

Profit
Create automated processes to improve efficiency and the safety of people.

"Our Team Players"

Intercom Servers are not just 'audio professionals', they also function as interface managers that integrate seamlessly into security applications.

Customised interfaces

Audio, data and video interfaces can be implemented easily to suit individual requirements. Options range from the use of simple signal contacts for control and messaging purposes to the full-scale integration of third-party systems.

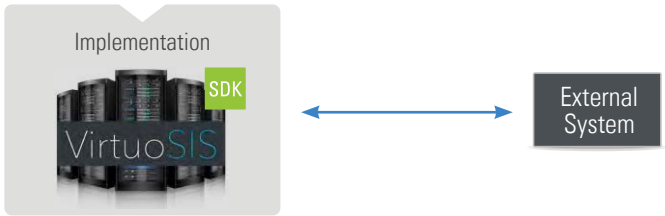
ICX Protocol

The Intercom eXchange protocol (ICX) is an open protocol for integrating interfaces. Using ICX, third-party systems can communicate with Commend components to exchange data, messages and control commands. What is more, the ICX protocol also enables the control of audio and video equipment to support a wide variety of solutions.

Options for future interfaces

The ICX protocol can be implemented conveniently with an SDK (Software Developer's Kit) for the required external system. This enables both systems to 'talk the same language' and establish data exchange connections.

Communication protocols of external (third-party) systems are implemented directly on the Intercom Server, where they are converted to Commend's ICX protocol.



CERTIFIED AND WELL-SUPPORTED

Commend's Technology Partner Programme

Let's join forces to provide solutions and mutually complementary systems.

→ **Satisfied customers** – Smart systems that complement each other can now join forces to provide customers with the tailored overall solutions they want.

→ **A partnership with many benefits** – Joint marketing of our interfaces and solutions allows us to open up bigger markets. Take advantage of our worldwide distribution network.

→ **Quality and reliability** – Our laboratories perform trials and run tests on new versions to maintain high compatibility and quality standards. Results are documented and certified – see our "Certified" programme for details.

→ **Certification** provides reassurance for customers and facilitates the sales process.

→ **Support and Contact** – Our Technology Partners benefit from constantly available contact and support services. Together we can develop new ideas, solutions and innovations.

→ **There is a lot for us to achieve together!**

	COMMEND SUPPORTED	COMMEND CERTIFIED
Inspection and System Testing		
Project-specific tests	✓	✓
Customer-specific trial systems at Commend (to be provided by technology partners)		✓
Comprehensive testing and quality control provided by Commend		✓
Documentation and Certification		
Basic documentation and system descriptions	✓	✓
Commend Extranet access (software and documentation)	✓	✓
Instant notification when new updates are available	✓	✓
Commend documentation and manuals		✓
Certification and confirmation		✓
Contact and Support		
Personal contact	✓	✓
Access to trainings and workshops		✓
Technical project support		✓
Marketing		
Use of technology partners' logos	✓	✓
Inclusion on the List of Commend Technology Partners on Commend web sites	✓	✓
Inclusion on the List of Technology Partners and presentation of the interface in the Commend Product Catalogue		✓
Worldwide support of marketing activities (newsletters, fairs/exhibitions, case studies, etc.)		✓

The complete list of Supported and Certified Interfaces is available online.

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Commend Certified Interfaces

COMMEND CERTIFIED	Manufacturer Licence	Details	Category
AVIGILON a Motorola Solutions Company	**Avigilon** ComPLC Interface –	With this ComPLC 4.0 bidirectional data interface, it is possible to exchange alarms between the Avigilon Control Center and Commend.	VIDEO
Dallmeier	**Dallmeier** Leo Interface –	Integrating Dallmeier equipment into the Commend Studio environment adds the ability to display video streams from cameras connected to a Dallmeier Leo video system.	VIDEO
DESIGNA	**Designa** System Interface E-WIN-DES-SPD	With the integration of a Designa system into the Commend Studio environment, it is possible to display and directly control the status of access systems and ticket vending machines.	DATA
GEUTEBRÜCK Competence in Video Security	**Geutebrück** GeViScope Interface –	The integration of Geutebrück into the Commend Studio environment enables the display of video streams from cameras connected to a Geutebrück Series Geviscope or G-Core video server.	VIDEO
LENEL	**Lenel** OnGuard Interface L-IF-LENEL1	Integration support for OnGuard enhances the security system with additional Intercom functions. Especially where Audio functions are concerned, the interface is a perfect extension that benefits the overall system.	DATA AUDIO SECURITY MANAGEMENT
milestone	**Milestone Systems** XProtect Interface E-VID-MST-SPD	The ability to integrate Milestone equipment into the Commend Studio environment makes it possible to display video streams from cameras connected to a Milestone Series XProtect video server.	VIDEO
milestone	**Milestone Systems** Server Interface L-IF-MILEST	The Milestone XProtect Server Interface analyses the TCP data packets coming from the Commend Server to automatically trigger pre-defined actions.	AUDIO DATA
MOTOROLA TETRA SYSTEM APPLICATION partner MAKING SOLUTIONS WORK FOR YOU	**Motorola / Sepura / Hytera** Digital Radio Interface L-TETRA L-DMR	This interface enables the seamless integration of TETRA and DMR radio equipment into Commend Intercom systems. This way, it is possible to join radio conversations via Commend Intercom stations. Authorised Intercom terminals within the IP network are also able to access digital mobile radio functions, such as group switching.	MOBILE RADIO AUDIO DATA
NUUO Trusted Video Management	**NUUO** Titan NVR Server E-VID-NUUO-SPD	Integrating NUUO equipment into the Commend Studio environment adds the ability to display video streams from cameras connected to a NUUO Titan NVR video system.	VIDEO
PELCO by Schneider Electric	**Pelco** Pelco Endura Server Interface L-IF-PELCO	This interface provides a communication link between the Intercom system and the Pelco Endura platform. The main purpose of this TCP-based interface is to make Softvideo functions available and to add the ability to trigger video alarms on Pelco systems.	VIDEO AUDIO DATA
Hanwha Techwin	**Hanwha Techwin** Wisenet Samsung SRD Video Recorder E-VID-SAMS-SPD	The integration of Wisenet Samsung into the Commend Studio environment enables the display of video streams from cameras connected to a Series SRD video recorder.	VIDEO
Hanwha Techwin	**Hanwha Techwin** ComPLC Webhook Connection –	Bidirectional data connection via ComPLC. Generic events can trigger individual actions in Hanwha Wave. Video Interface and recording via ONVIF Profile S or MJPEG.	DATA

COMMEND CERTIFIED	Manufacturer Licence	Details	Category
SCHEIDT&BACHMANN	**Scheidt & Bachmann** System Interface E-WIN-SBA-SPD	With the integration of an S&B system into the Commend Studio environment it is possible to display and directly control the status of access systems and ticket vending machines.	
SHOOTER DETECTION SYSTEMS	**SDS** System Interface L-CS-C	Commend provides an interface to the SDS shooter detection system via the Commend ComPLC program. This allows the system to detect shots and automatically initiate incident response measures such as pre-recorded evacuation announcements.	
SeeTec	**SeeTec** Seetec Cayuga Interface E-VID-SEE-SPD	With the integration of Seetec into the Commend Studio environment it is possible to display video streams from cameras connected to a Seetec Series Cayuga video server.	VIDEO
SIEMENS	**Siemens Siveillance** Server Interface L-IF-MILEST	The Siemens Siveillance interface analyses the TCP data packets coming from the Commend Server to automatically trigger pre-defined actions.	AUDIO DATA
SKIDATA KUDELSKI GROUP	**Skidata** System Interface E-WIN-SKI-SPD	With the integration of a Skidata system into the Commend Studio environment, it is possible to display and directly control the status of access systems and ticket vending machines.	DATA
SpeeQ	**TKH Security** SpeeQ EVAQ Interface –	Commend provides an interface to Speeq's EN54 certified voice alarm evacuation system EvaQ via the Commend ComPLC program. This enables the execution of various PA functions (so-called "EVAC functions").	AUDIO
iProtect	**TKH Security** iProtect Interface –	The Security Management System iProtect provides an interface to the Commend Intercom System via the ICX protocol. The interface enables iProtect to switch outputs within the Intercom system and to visualize Intercom events on their GUI.	DATA
VDG	**TKH Security** Server Interface L-IP-REC-1	This interface enables the lip-synchronous recording of calls by integrating the VDG system with the Commend system via the ICX protocol.	VIDEO AUDIO DATA
VDG	**TKH Security** VDG Sense Interface E-VID-VDG-SPD	Integrating VDG equipment into the Commend Studio environment adds the ability to display video streams from cameras connected to a VDG Sense video system.	VIDEO

30+

Currently more than 30 listed technology partners

Become a Commend Technology Partner

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Connections between the Building Management System and Intercom System

In building automation, equipment such as fire detection systems, intruder alarms, ventilation controls and many others are connected to a building management system via an interface based on the OPC UA (Open Platform Communications Unified Architecture) standard. Almost every building management system on the market today supports OPC. The Commend ComOPC Server provides the central connection point between the Intercom system and the OPC clients and manages the controlling communication between them. The ComOPC Server interprets ICX messages of the Intercom system and translates them into data points for the OPC clients.
The ComOPC UA Server is also listed on the official website of the OPC foundation at **www.opcfoundation.org.**

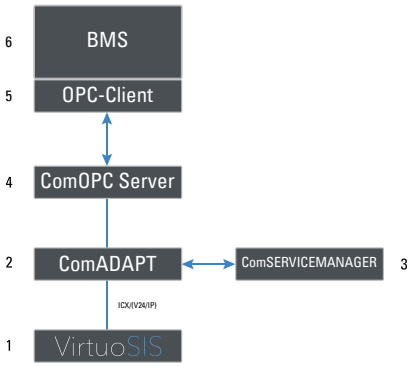
ComOPC Licences

ComOPC licences are required in order to licence Intercom objects (e.g. subscribers, inputs or outputs) for communication. The following ComOPC licences are available:

E-OPC-100-SPD	100 Intercom Objects
E-OPC-1000-SPD	1,000 Intercom Objects

System Architecture

1. **Intercom Server** VirtuoSIS / S6 / S3 / GE 800 / GE 300 / IS 300 / GE 700 / GE 200.
2. **ComADAPT** is the central communication tool between Intercom Server and the ComOPC Server.
3. **ComSERVICEMANAGER** is an application for the configuration and management of ComADAPT and the ComOPC Server.
4. **ComOPC Server** processes the message coming from the Intercom system and forwards the OPC client's commands to the Intercom system.
5. **OPC-Client** (may be multiple clients) active within BMS.
6. **BMS** – Building Management Systems, such as Bosch, OnGuard, SiPass, Siemens, etc.

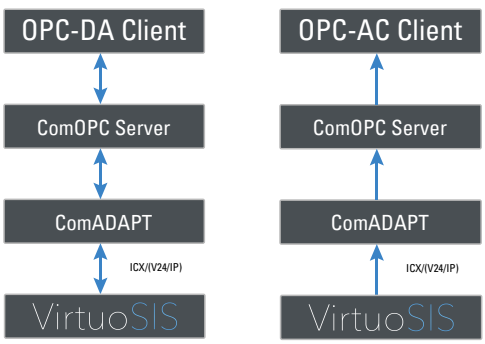


Event Procedure OPC-DA

OPC-DA allows a Building Management Systems (BMS) e.g. to display and control the status of an Intercom system.

Event Procedure OPC-AC

OPC-AC is designed for the reception of alarms and event signals in order to enable e.g. event-driven workflows, operation and logging.



Dynamic Interface Designer – ComPLC

Smart boost for logic control

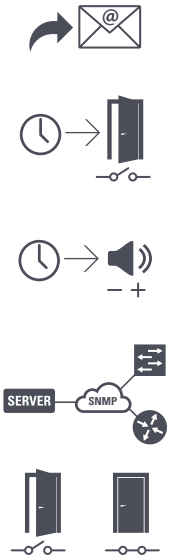
Mit dem ComPLC Softwarepaket bietet Commend eine umfangreiche Lösung, die die Steuerung von Fremdsystemen in einem Intercom System einfach, effektiv und flexibel macht.
Die Software kann in Kombination mit den in den Intercom Servern integrierten I/O-Steuerfunktionen genutzt werden und eröffnet die Möglichkeit, direkt mit Fremdsystemen durch die Standardprotokolle wie Modbus/TCP (für Industrieanlagen), KNX (für Gebäudesysteme) und Commend's eigenes ICX-Protokoll (für Intercom Equipment) zu kommunizieren. So ist es möglich, ganz nach Kundenwunsch eine Vielzahl von Abläufen und Steuerfunktionen inkl. Abhängigkeiten innerhalb der verwendeten Systeme zu konfigurieren.

Functions

- Windows-based graphical design application
- Stand-alone execution of the designed sequences on VirtuoSIS
- The virtual application card of VirtuoSIS is configured automatically by ComPLC designer
- Use of ICX messages
- Support of webhook commands via HTTP and HTTPS
- Configuration of individual functional components
- Ready for KNX interface to connect up to 50 KNX NET/IP gateway devices
- Ready for Modbus interface to connect up to 50 slave devices
- Bidirectional data interface to the Avigilon Control Center to receive and send alarms
- Integrated online mode for tracing operations in real-time

Applications

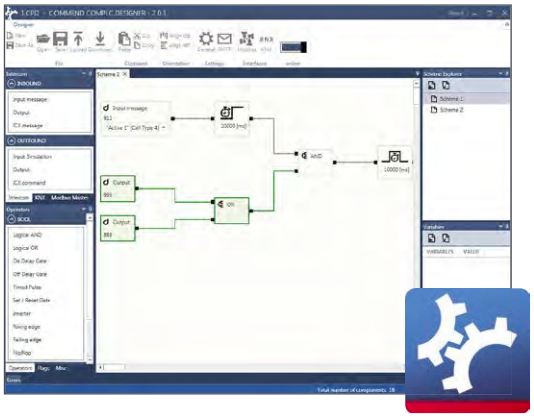
- **Automatic sending of e-mails** in case of specific Intercom system events (e.g. if a device or connection fails).
- **Time-controlled event sequences** involving any combination of devices (e.g. door opens in the morning and closes in the evening; a building alarm is armed automatically one minute after locking the main entrance door)
- **Automatic time-scheduled volume adjustment** for Intercom stations and loudspeakers (e.g. high volume during the day, low volume overnight)
- **Monitoring of third-party equipment via SNMP** (e.g. automatically texting IT staff or showing a message at the control desk in case of a router failure)
- **Configuring airlocks for access controlled doors,** as used in banks or high-security areas (see example below)
- **And many more possibilities ...**



Licence for ComPLC (v.X)

ComPLC can be installed on the Software Intercom Server VirtuoSIS.

L-PLC-50	Licence for 50 licence-based input/output components (stacking of several licences is possible).
L-PLC-200	Licence for 200 licence-based input/output components (stacking of several licences is possible).
L-PLC-KNX	Licence for use of configuration of one KNX connection in ComPLC (stacking of several licences is possible)
L-PLC-MODBUS	Licence for use of configuration of one Modbus connection in ComPLC (stacking of several licences is possible)
L-PLC-SNMP	Licence for use of the SNMP function in ComPLC
L-PLC-MAIL	Licence for use of the e-mail function in ComPLC
L-PLC-WEBCOM	Licence for use of webhooks in ComPLC
L-PLC-AVIGIL	Licence to send and receive alarms between ComPLC and the Avigilon Control Center



VirtuoSIS Licence for ComPLC

One base licence is required per Software Intercom Server VirtuoSIS when ComPLC is carried out via a virtual application card:

L-SIS-PRO(v.X)	Base licence PRO 800 version (v.X)
L-SIS32-PRO(v.X)	Base licence PRO 800 version (v.X)

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8 KEY BENEFITS OF CLOUD SERVICES

First off, it's useful to bear in mind that the "Cloud" is not a single physical entity but an extensive worldwide network of remote servers, each dedicated to specific functions. Thanks to this architecture, IT services that were traditionally hosted in-house can be made available anywhere in the world over an Internet connection - no need for locally installed software.

CENTRAL MANAGEMENT OF GLOBAL INFRASTRUCTURES

BENEFIT #1

Thanks to cloud-native door communication, operators of residential and office buildings are no longer limited to in-house IT equipment when it comes to building communication and security. Instead, they can easily manage the networked door communication components across multiple sites for potentially many thousands of tenants in locations all over the globe - instantaneously, with just a few gestures on their mobile device.

EASY DEPLOYMENT OF SECURITY UPDATES AND NEW FUNCTIONS

BENEFIT #2

Cloud support also takes the hassle out of deploying security updates and adding new functions to door communication terminals. Newly deployed software releases and firmware updates by Commend instantly raise the security or functionality of every connected device to the next level - without any interruption for users.

FULL-SCALE PLATFORM UPDATES IN THE BACKGROUND

BENEFIT #3

Even updates of the entire Symphony platform itself are a breeze. Gone are the days of system update downtimes that had to be scheduled carefully to minimise interruptions for users. Cloud natives like Symphony perform their updates in the background, with new functions (instead of interruptions) as the only clue that an update has taken place.

UNLIMITED SCALABILITY

BENEFIT #4

Cloud services come with the crucial advantage of being easily and instantly scalable to virtually any size. For customers, this means that they only have to pay for what they actually use. Door communication easily and instantly scales up or down to anything between single-tenant arrangements to global multi-site complexes with 100,000 tenants. In terms of consumer costs, these are good weather clouds indeed.

INSTANT UNIVERSAL ACCESSIBILITY

BENEFIT #5

Characteristically, cloud services like Symphony door communication can be accessed anywhere, everywhere. Where you install your door communication panels doesn't matter – whether it's here or on the other side of the globe. You can always rely on them running the latest software. And since that software is maintenance-free, there is no need to bother with user rights management either. So in terms of administration, the clouds are lifting as well, thanks to cloud services.

NO NEED FOR IN-HOUSE IT MANAGEMENT

BENEFIT #6

This is another cost-saving factor to take into account. Symphony's IT is all managed and maintained by Commend and its infrastructure partners. After all, you wouldn't expect to drive a hired chauffeur-driven car yourself, would you?

FULL COMPLIANCE WITH ISO 27001

BENEFIT #7

Symphony cloud services are natively designed to conform fully with ISO/IEC 27001 information security standards on security risk management and security controls. We will take a detailed look into various IT security aspects in upcoming posts.

COMPLIANCE WITH DATA PRIVACY REGULATIONS

BENEFIT #8

Data privacy is a hot issue - and a top priority in the design of Symphony cloud services, from the concept stage through to development and implementation. "Privacy and security by design" (and not as a half-hearted add-on) is crucial when it comes to meeting data protection legislation (e.g., the EU's General Data Protection Regulation).

It's also essential for fortifying cloud services against cyber threats of various kinds.

EXPERT | SECURITY | ADVICE

Convergence

IT & Security Working Together
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