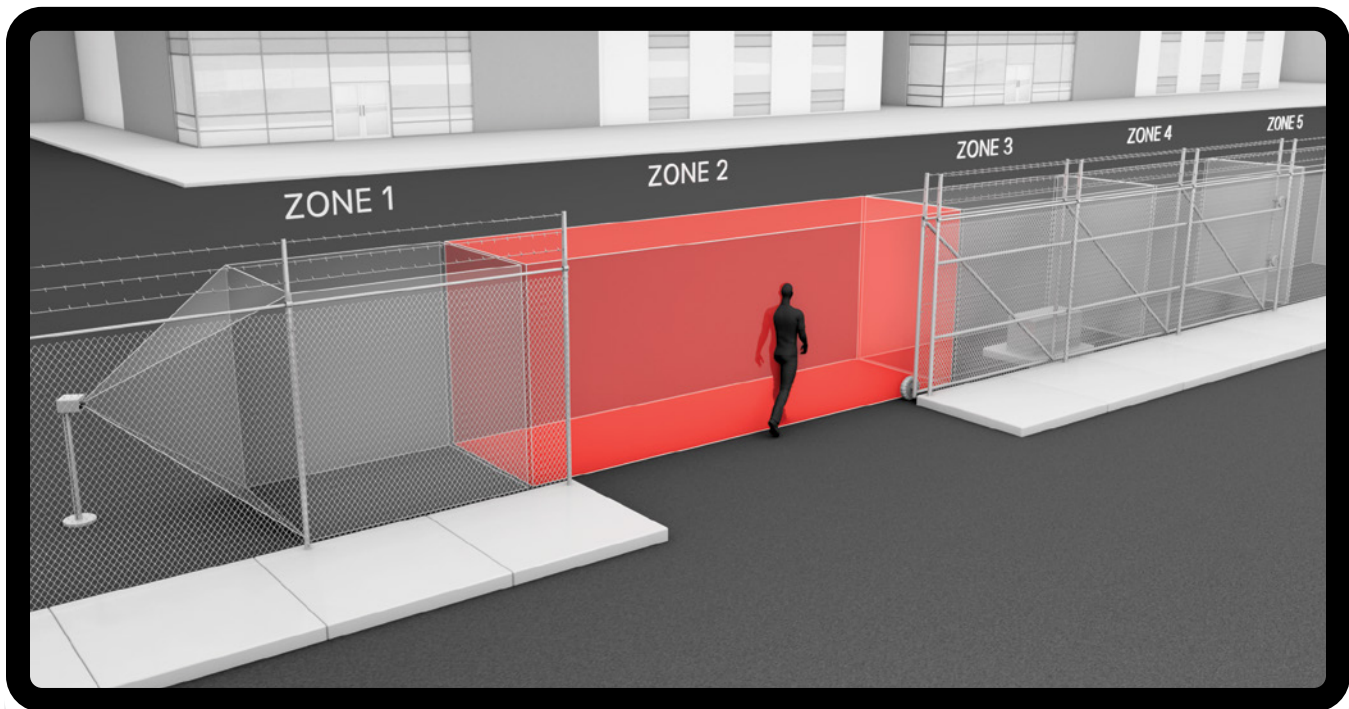


INTREPID™ LiDAR

POE SOLID-STATE LiDAR SENSORS



INTREPID™
LiDAR Apex
Up to 100m

INTREPID™
LiDAR Vector
Up to 150m

INTREPID™
LiDAR Horizon
Up to 300m

The **INTREPID™ LiDAR** Series elevates perimeter security by delivering continuous visibility, intelligent monitoring, and high-performance detection through advanced solid-state LiDAR technology. By capturing movement in three dimensions, the system enables accurate intrusion detection and real-time threat assessment. Its semiconductor-based design, with no moving parts, supports maintenance-free 24/7 operation while executing detection, tracking, and alarm functions directly at the sensor to reduce vulnerabilities, minimize false alarms, and enhance operational readiness. With exceptional precision, reliability, and scalability, **INTREPID™ LiDAR** sensors support critical infrastructure and security-sensitive locations, as well as industrial and urban environments, providing a flexible, future-ready solution that protects assets, strengthens security operations, and adapts as site needs evolve.

- **Solid-State Reliability:** No moving parts enable continuous 24/7 operation with minimal maintenance.
- **PoE Simplified Installation:** Single Ethernet cable handles power and data; optional connector supports traditional setups.
- **Scalable & Modular:** Flexible FOVs⁴ and angular resolutions allow customization for diverse applications.
- **Advanced Micro Flash Technology (MFT):** Point-by-point scanning across the full FOV at 1000 Hz maximizes signal-to-noise ratio and detection probability.
- **High-Resolution 4D Detection:** Accurately maps the environment, including low-reflectivity targets at longer distances.
- **Optimized Signal Processing:** Individually controlled VCSEL² and SPAD³ cells provide precise, high-speed measurements.
- **Seamless System Integration:** Easily integrates with existing security and automation systems for unified perimeter protection.
- **Cost-Efficient Deployment:** Modular design and simplified installation reduce overall system costs.

INTREPID™ LiDAR

SPECIFICATIONS

	Apex	Vector	Horizon
Field of View	80° x 22°	45° x 13°	22.5° x 6.5°
Typical Range ⁴ 10% (reflective Lambertian target, 90klux)	55m	100m	200m
Typical Range ⁴ 70% (reflective Lambertian target, 90klux)	100m	150m	300m
Horizontal Angular Resolution	0.4°	0.2°	0.1°
Vertical Angular Resolution	0.4°	0.2°	0.1°
Point Density (10° x 10°)	625	2,500	10,000
Number of Returns per Pixel	Up to 3	Up to 3	Up to 3
Frame Rate	Up to 25Hz	Up to 25Hz	Up to 25Hz
Wavelength	905nm, 940nm	905nm, 940nm	905nm, 940nm
MTBF	160,000 Hours	160,000 Hours	160,000 Hours
Operating Temperature	-30°C to 65°C	-30°C to 65°C	-30°C TO 65°C
Supply Voltage, DC	9-20 V, 9 W	9-20 V, 9 W	9-20 V, 9 W
Power Consumption	9.5-10.5 W	9.5-10.5 W	9.5-10.5 W
Dimensions	109 x 68 x 100mm	109 x 68 x 100mm	109 x 68 x 100mm
Weight	750g	750g	750g
Ingress Protection	IP67	IP67	IP67
Network Interface	1000BASE-T	1000BASE-T	1000BASE-T
Laser Safety	CLASS 1 EYE-SAFE PER IEC/ EN 60825-1: 2014	CLASS 1 EYE-SAFE PER IEC/ EN 60825-1: 2014	CLASS 1 EYE-SAFE PER IEC/ EN 60825-1: 2014

⁽¹⁾ Field of View (FOV)

⁽²⁾ Vertical-Cavity Surface-Emitting Laser (VCSEL)

⁽³⁾ Single-Photon Avalanche Diode (SPAD)

⁽⁴⁾ Sensor range dependent upon target size, zone setup, and detection requirements

INTREPID™ is a trademark of Southwest Microwave, Inc. Specifications subject to change without notice.



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