

M8™ LiDAR Sensor

HIGH ACCURACY | FINE RESOLUTION | LONG RANGE | HIGH PERFORMANCE

The M8 high-performance LiDAR sensor provides superior 3D perception using multiple eye-safe laser beams and time-of-flight (TOF) measurement technology. The robust LiDAR sensor features a wide field of view, long measurement range, high accuracy, and fine resolution to reliably solve the most challenging real-world applications—even in harsh environments. In addition, the M8 LiDAR sensor can trigger actions based on real-time scenario analysis powered by QORTEX™, Quanergy's advanced perception software. The M8 is designed and manufactured under the highest quality and reliability standards and comes with a 2-year warranty.



Key Features



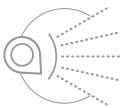
Wide Field of View (FOV)

M8 LiDAR sensors feature a 360° horizontal field of view and 20° (+3°/-17°) vertical field of view for rapid and reliable scanning of large areas.



Day and Night Vision

The M8 LiDAR sensor is immune to ambient lighting conditions, maintaining high performance even in extremely bright and low light applications.



Angular Resolution

The M8 features an angular resolution of 0.03-0.13° depending on the frame rate to reliably detect objects with pinpoint accuracy.



Range Accuracy

The M8 LiDAR sensor provides accurate and reliable results (< 3 cm range accuracy) even at the far end of the sensor's range—up to 200 m depending on the model.



2 Year Warranty

Applications

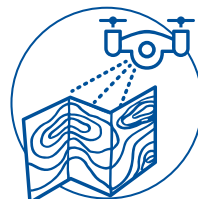
Security



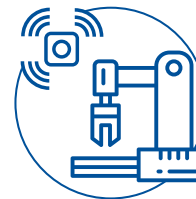
Smart City



Mapping



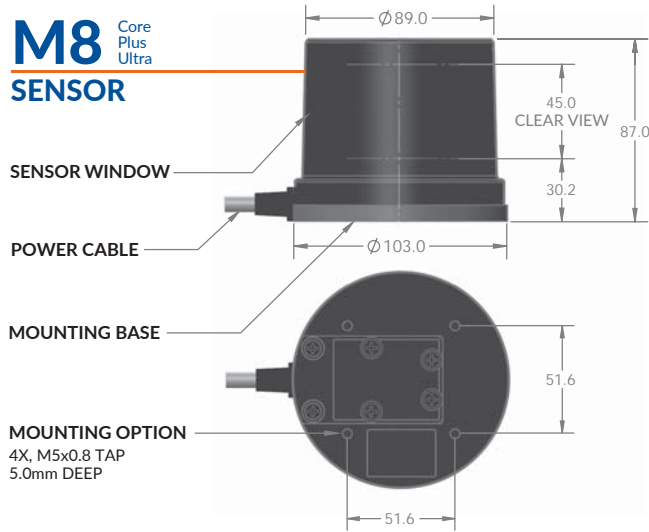
Industrial



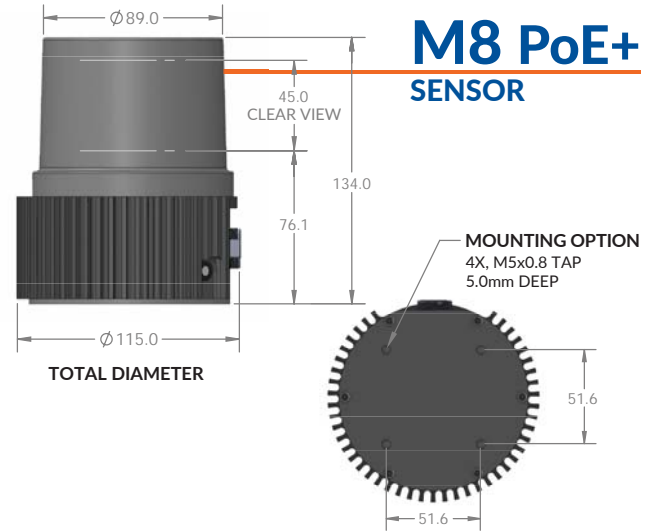
Transportation



M8 Core Plus Ultra SENSOR



M8 PoE+ SENSOR



Parameter	M8-Core	M8-Plus	M8-Ultra	M8-PoE+
Laser Class	Class I (Eye Safe, IEC 60825-1)			
Wavelength	905nm			
Measurement Technique	Time of Flight (TOF)			
Minimum Range	0.5m (80% reflectivity)			
Maximum Range	100m (80% reflectivity) 35m (10% reflectivity)	150m (80% ref.) 53m (10% ref.)	Up to 200m (80% ref.) Up to 70m (10% ref.)	150m (80% ref.) 53m (10% ref.)
Range Accuracy (1 σ at 50m)	<3cm			
Frame Rate (Update Frequency)	5–20Hz			
Angular Resolution	0.033°–0.132° dependent on frame rate			
Detection Layers	8			
Field of View (FOV)	Horizontal: 360°, Vertical: 20° (+3°/–17°)			
Output Connection	M19 Connector – 100/1000Mbps Ethernet			RJ45 802.3at (PoE+)
Data Outputs	Angle, Distance, Intensity, Time Stamps (synchronized to GPS when available)			
Returns	3			
Output Rate	430,000 points per second (1 return), 1.3M points per second (3 returns)			
Nominal Power	16W			18W
Operating Voltage	24VDC +/-1.2V			42.5–57VDC
Operating Temperature	–20°C to +60°C (–4°F to +140°F)			
Storage Temperature	–40°C to +105°C (–40°F to +220°F)			
Nominal Weight	900g			1360g
Dimensions	103mm (D) x 87mm (H)			115mm (D) x 134mm (H)
Shock & Vibration	ETSI EN 300 019-2-5, IEC Class 5M3			
Environmental Protection	IP69K			IP67
Certifications and Compliance	FDA, FCC, CE, RoHS, WEEE, IEC-60079-15, ASTM G154-12A, EN-61326, IEC-61010, ISO 9001:2015, REACH SVHC, Conflict Mineral Rules			
Warranty	2 Years			

*Specifications are subject to change without notice