



MQ-8™ Family of LiDAR Sensors

HIGH ACCURACY | FINE RESOLUTION | LONG RANGE | HIGH PERFORMANCE

The MQ-8™ family is the next generation of 3D LiDAR sensors from Quanergy, redesigned from our popular M8 family to meet the unique challenges of physical security, smart city and smart spaces applications. The MQ-8 LiDAR sensor features optimized beam angles for 360° scanning with flat mounting to maximize coverage and minimize installation time. Its narrower beam spacing than previous models provides broader coverage with fewer sensors required. The high performance LiDAR sensor provides superior 3D perception using multiple eye-safe laser beams and time-of-flight (TOF) measurement technology.

In addition, the MQ-8 is capable of long-range continuous tracking up to 140m (up to 70m radius range). Powered by QORTEX™, Quanergy's advanced perception software, the MQ-8 LiDAR sensor can trigger actions based on real-time scenario analysis. It is available with a standard M12 connector and 9-30VDC input or PoE+ interface. The MQ-8 is designed and manufactured under the highest quality and reliability standards and comes with a 2-year warranty.

MQ-8-Plus



MQ-8-PoE-Plus
MQ-8-PoE-Ultra

Key Features



Wide Field of View (FOV)

MQ-8 LiDAR sensors feature a 360° horizontal field of view and 12.4° vertical field of view for rapid and reliable scanning of large areas.
Horizontal: 360°, Vertical: 12.4° (-1.6°/-14°)



Day and Night Vision

The MQ-8 LiDAR sensor is immune to ambient lighting conditions, maintaining high performance even in extremely bright and low light applications.



Angular Resolution

The MQ-8 features an angular resolution of 0.03-0.13° depending on the frame rate to reliably detect objects with pinpoint accuracy.



Range Accuracy

The MQ-8 LiDAR sensor provides accurate and reliable results even at the far end of the sensor's range. The MQ-8 provides continuous tracking up to 140 meters (up to 70m radius range) with QORTEX DTC™ Software.



2 Year Warranty

Applications



- Perimeter security
- Critical infrastructure



- Retail
- Smart Space
- Commercial buildings



- Traffic intersections & pedestrian crosswalks
- Airports

MQ-8^{Plus} SENSOR



MQ-8-PoE SENSOR

Plus
Ultra

Parameter	MQ-8-Plus	MQ-8-PoE-Plus	MQ-8-PoE-Ultra
Laser Class	Class I Laser Product (Eye Safe, IEC 60825-1)		
Wavelength	905nm		
Measurement Technique	Time of Flight (TOF)		
Minimum Sensor Range	2m		
Maximum Sensor Range	150m (80% reflectivity) 50m (10% reflectivity)		200m (80% reflectivity) 70m (10% reflectivity)
Range Accuracy (1σ at 50m)	<3cm		
Frame Rate	5–20Hz		
Angular Resolution	0.03°–0.13° dependent on frame rate		
Detection Layers	8		
Field of View (FOV)	Horizontal: 360°, Vertical: 12.4° (–1.6°/–14°)		
Output Connection	M12 Connector: 100/1000Mbps Ethernet, NMEA/PPS, Power RJ45 802.3at (PoE+)		
Data Outputs	Angle, Distance, Intensity, Time Stamps (synchronized to GPS when available)		
Returns	Up to 3		
Output Rate	430,000 points per second (1 return), 1.3M points per second (3 returns)		
Nominal Power	16W		18W
Operating Voltage	9-30VDC		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		1375g
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		
Warranty	2 Years		

*Specifications are subject to change without notice