

M8™ Prime LiDAR Series

SUPERIOR RESOLUTION | MID TO LONG RANGE | INDUSTRIAL RATED DESIGN

The M8-Prime Series of 3D sensors is the new standard of industry-leading LiDAR technology from Quanergy. The M8-Prime Series builds upon the superior 3D scanning technology of previous models, now with additional features and performance enhancements for even greater accuracy, reliability and ease of use for industrial applications.

The high-performance LiDAR sensor features an extended range up to 200 meters and extremely fine resolution to detect and measure objects even in the most challenging of applications from port automation, automated warehouse logistics and more. The M8 Prime Series captures up to 2x more data (measurements per second) than competing solutions for greater scanning and imaging capabilities.

The M8-Prime Series, designed and manufactured under the highest quality and reliability standards, is compact and lightweight allowing for easy deployment even in the harshest of environments.



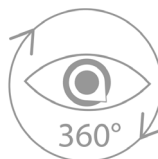
M8-Prime Core
M8-Prime Plus
M8-Prime Ultra

Key Features



Sensor API

Provides a convenient and easy way to configure M8-Prime settings from customer applications.



Field of View (FoV)

Horizontal: 360°, Vertical: 20°



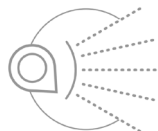
M12 Panel Mount Connector

Standardize panel mounted connector for ease of use and installation.



Day and Night Vision

Operates in any ambient lighting and weather conditions – sensor maintains high-performance day or night.



Angular Resolution

Lowest angular resolution of 0.033-0.132° to be able to detect and scan objects with pinpoint accuracy.

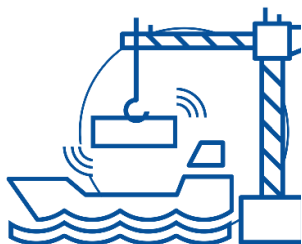


Point Cloud Density

M8-Prime generates a 3D point cloud with over 1M points per second to more accurately identify and detect objects.

Applications

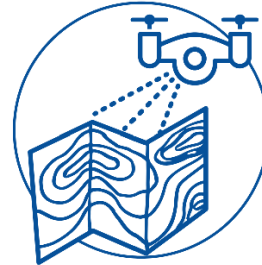
Port Automation



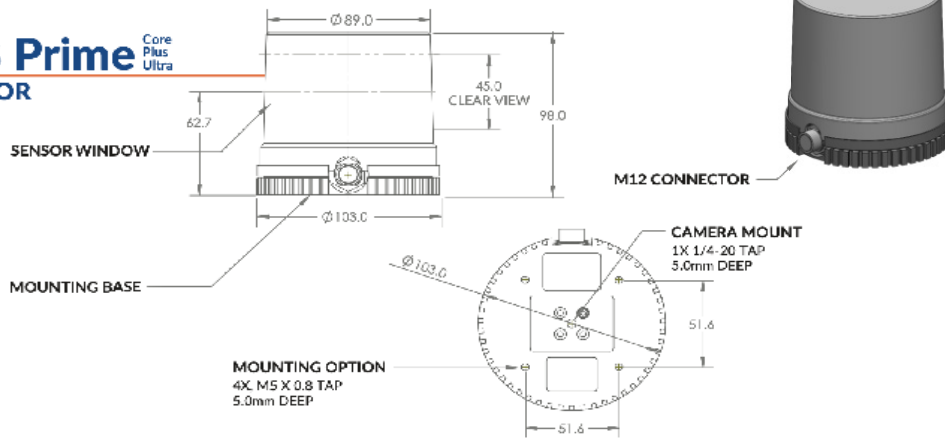
Automated Guided Vehicles



Aerial Mapping



M8 Prime SENSOR



Parameter	M8-Prime Core	M8-Prime Plus	M8-Prime Ultra
Laser Class	Class I (Eye Safe, IEC 60825-1)		
Wavelength	905nm		
Measurement Technique	Time of Flight (TOF)		
Minimum Range	0.6m (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.)
Range Accuracy (1σ 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	M12 (Power, Ethernet, NMEA/PPS)		
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	19W		
Operating Voltage	24VDC +/-1.2V		
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	850g		
Dimensions	103mm (D) x 98mm (H)		
Shock and Vibration	ETSI EN 300 019-2-5, IEC Class 5M3		
Environment Protection	IP69K		
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	1+4 years (CAPEX), duration of the subscription (OPEX)		

*Specifications are subject to change without notice