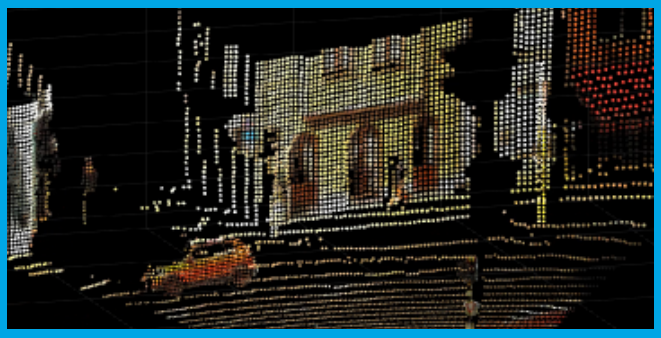
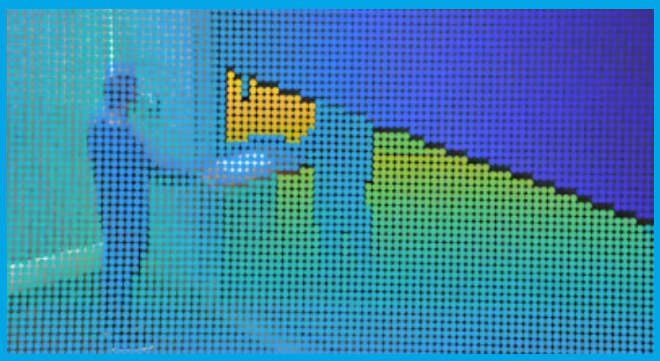
XenomatiX

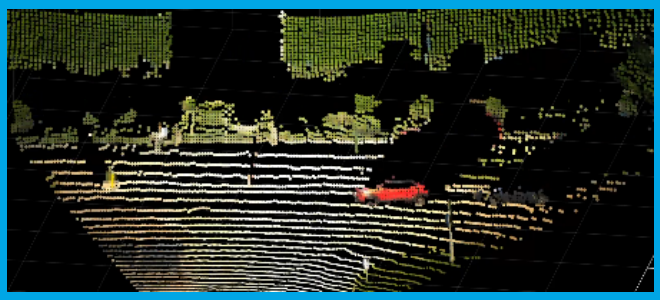
True solid state lidar

Technical Data Sheet









Xavia

She Sees Everything



Xavia 6D



Xavia 3D

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XenoLidar - Xavia

Optical Performance Lidar

Best range*	140 m
Range on 10% target*	50 m (at 100 klux, 90% TPR, 10^{-4} FPR)
Minimal range	0 m
Dynamical range	114 dB (only with Advanced Reflector Handling)
Typical accuracy**	2.9 cm
Typical precision (1σ)**	0.07% of the distance
Field-of-view	57.6° x 16.8° (horizontal x vertical)
Angular resolution	0.3° x 0.3° (horizontal x vertical)
Laser wavelength	940 nm
Laser class	Class 1 (IEC 60825-1:2014)
Lidar technology	True solid state

Output Lidar

Data connection	1000 BASE-T GigE
Highest frame rate*	20 Hz
Raw data output format	Rich point cloud
Data rate*	5 MB/sec
Points per second*	215 040 pts/sec
Data per point	Range, XYZ, reflectivity, ambient, confidence level
Working mode	Free running
SDK supported platforms	Windows (x86-64), Linux (x86-64, ARM)
SDK language	C++

Operating Conditions Lidar

Operating Voltage	12 - 24 V
Power consumption***	15 - 23 W
Operating temperature	0°C to +45°C (ambient)
Storage temperature	-20°C to +75°C
Ingress protection	IP65

**Value depends on LiDAR configuration: 10 m or 140 m detection range, 10 Hz or 20 Hz frame rate. Values noted here correspond to a 140 m, 20 Hz LiDAR.*

***Value from factory test on 50% Lambertian target at 25°C moved from 5 to 75 m*

****Value depends on LiDAR configuration. Power consumption averages 15 W for a 10 Hz LiDAR without Advanced Reflector Handling, while it averages 23 W for a 20 Hz LiDAR with Advanced Reflector Handling.*

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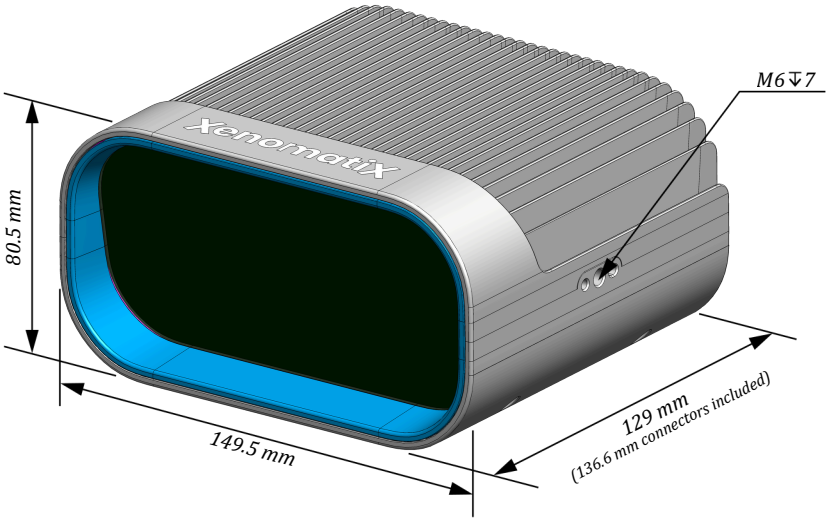
Interfaces Lidar

	High-speed trigger out****	SMA, female
	High-speed trigger in****	SMA, female
	Ethernet connector	M12 X-coded 8 pin, female
	Power connector	M12 A-coded 5 pin, female
I/O	GPIO connector	M12 A-coded 12 pin, female

Mechanical Characteristics Lidar

Dimensions (W x D x H)	149.5 mm x 136.6 mm x 80.5 mm
Weight	1.3 kg
Mounting	Bottom: 3x M6. Left/Right: 1x M6





****Not supported in current product release.

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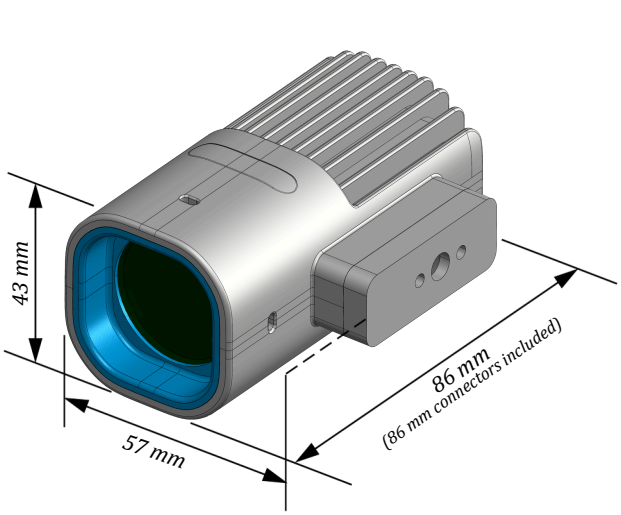
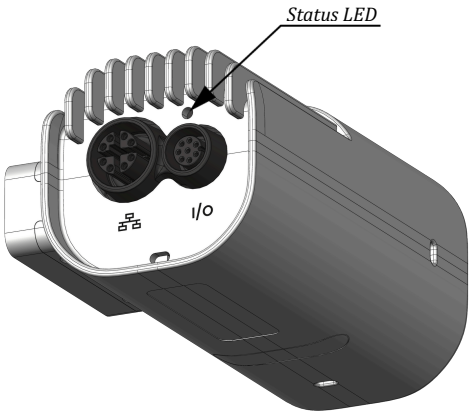
2D Camera

Field-of-view	65° x 51° (horizontal x vertical)
Camera resolution	1440 x 1080 pixels, 12bit
Data Connection	1000 BASE-T GigE
Time synchronization protocol	PTP
Synchronization to LiDAR	Triggered by Lidar
Supply voltage	12 - 24 V, provided by Lidar
Power consumption	2.5W
Operating temperature	-20°C to 55°C (ambient)
Storage temperature	-30°C to +60°C
Ingress protection	IP67
Dimensions (W x D x H)	57 mm x 86 mm x 43 mm
Weight	230 g
Mounting	Mounted on right side of Lidar by manufacturer, by default
Ethernet connector	M12 X-coded 8 pin, female
I/O GPIO connector	M8 A-coded 8 pin, female





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