

Velodyne Lidar®

Puck Hi-Res™

HIGH RESOLUTION REAL-TIME LIDAR SENSOR



Puck Hi-Res



Velodyne Lidar's Puck Hi-Res is a higher resolution version of the popular Puck and is used in applications that require increased resolution in the point cloud. The Puck Hi-Res has similar performance to the Puck with the key difference being a higher vertical resolution of 1.33°, with an accompanying 20° vertical field of view. The higher resolution enables detection of objects at longer distances at comparable frame sizes. As a result, the Puck Hi-Res provides more detailed views for applications such as autonomous vehicles, surveillance and 3D mapping/imaging, generating up to ~600,000 points/second.

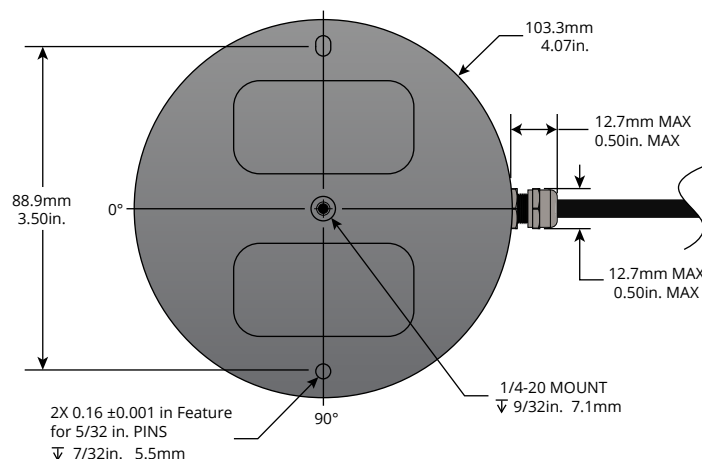
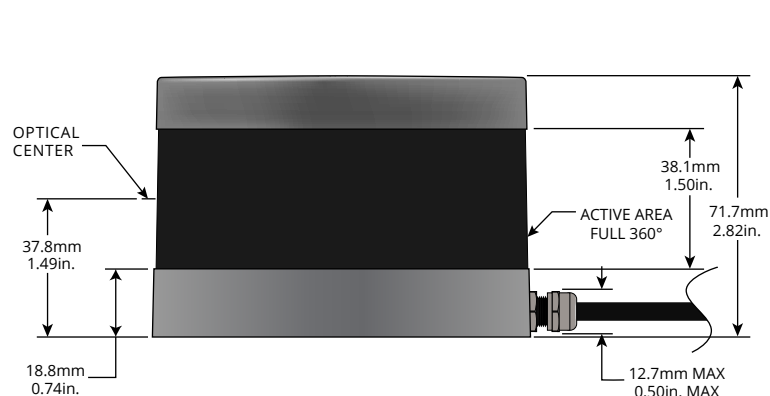
Like the Puck, the Puck Hi-Res has best-in-class power, which enables operation over a wide temperature range. It's use of off-the-shelf components enables enhanced scalability and attractive volume pricing. Like other Velodyne sensors, the Puck Hi-Res has world-class technical support available across North America, Europe & Asia from the world's leading lidar company.



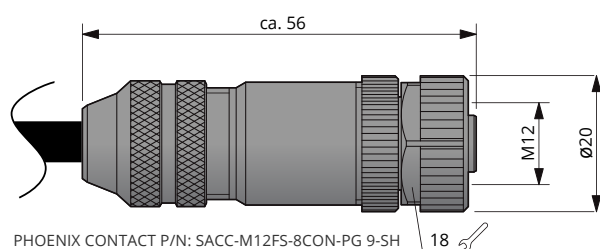
Puck Hi-Res at a glance

- 100 m range with compact form factor
- Higher resolution option in the Puck family
- Proven, Class 1 eye-safe 905 nm technology
- Best-in-class accuracy and calibrated intensity
- Best-in-class power & temperature range
- Sensor-to-sensor interference mitigation feature
- Versatile, with attractive volume pricing

DIMENSIONS *(Subject to change)*



M12 CONNECTOR OPTION



PHOENIX CONTACT P/N: SACC-M12FS-8CON-PG 9-SH

For other connector options contact
Velodyne Sales (sales@velodyne.com)



High Resolution Real-Time Lidar Sensor

The Puck Hi-Res provides high definition 3-dimensional information about the surrounding environment.

Specifications:

Sensor:

- 16 Channels
- Measurement Range: 100 m
- Range Accuracy (Typical): Up to ± 3 cm*
- Field of View (Vertical): $+10.0^\circ$ to -10.0° (20°)
- Angular Resolution (Vertical): 1.33°
- Field of View (Horizontal): 360°
- Angular Resolution (Horizontal/Azimuth): $0.1^\circ - 0.4^\circ$
- Rotation Rate: 5 Hz – 20 Hz
- Integrated Web Server for Easy Monitoring and Configuration

Laser:

- Laser Product Classification: Class 1 Eye-safe per IEC 60825-1:2007 & 2014
- Wavelength: 905 nm typical

Mechanical/ Electrical/ Operational

- Power Consumption (Typical): 8W **
- Operating Voltage: 9 V – 18 V (with Interface Box and Regulated Power Supply)
- Weight: ~750 g (without Cabling and Interface Box)
- Dimensions: See diagram on previous page
- Environmental Protection: IP67
- Operating Temperature: 0°C to $+60^\circ\text{C}$ ***
- Storage Temperature: -40°C to $+105^\circ\text{C}$

Output:

- 3D Lidar Data Points Generated:
 - Single Return Mode: ~300,000 points per second
 - Dual Return Mode: ~600,000 points per second
- Ethernet Connection: 100BASE-TX (802.3u)
- UDP Packets Contain:
 - Time of Flight Distance Measurement
 - Calibrated Reflectivity Measurement
 - Rotation Angles
 - Synchronized Time Stamps (μs resolution)
- GPS: \$GPRMC and \$GPGGA NMEA Sentences from GPS Receiver (GPS not included)

63-9318 Rev-H VLP-16-HI-RES

For more details and ordering information, contact Velodyne Sales (sales@velodyne.com)

* Typical accuracy refers to ambient wall test performance across most channels and may vary based on factors including but not limited to range, temperature and target reflectivity.

** Operating power may be affected by factors including but not limited to range, reflectivity and environmental conditions.

*** Operating temperature may be affected by factors including but not limited to air flow and sun load.