



## Real-Time Lidar Sensor

The Puck 32MR™ provides high definition 3-dimensional information about the surrounding environment.



# Puck 32MR™

### Specifications <sup>1</sup>

(Subject to change)

<b>Sensor</b>	<ul style="list-style-type: none"> <li>• Channels: 32</li> <li>• Measurement Range: 120 m @ 10% reflectivity</li> <li>• Range Accuracy: Up to ±3 cm (Typical)<sup>2</sup></li> <li>• Horizontal Field of View: 360°</li> <li>• Vertical Field of View: 40° (-25° to +15°)</li> <li>• Minimum Angular Resolution (Vertical): 0.33° (non-linear distribution)</li> <li>• Angular Resolution (Horizontal/Azimuth): 0.1° to 0.4°</li> <li>• Frame Rate: 5 Hz to 20 Hz</li> <li>• Integrated Web Server for Easy Monitoring and Configuration</li> </ul>
<b>Laser</b>	<ul style="list-style-type: none"> <li>• Laser Product Classification: Class 1 – Eye-safe per IEC60825-1:2014</li> <li>• Wavelength: ~903 nm</li> </ul>
<b>Mechanical/ Electrical/ Operational</b>	<ul style="list-style-type: none"> <li>• Power Consumption: 10 W (Typical)<sup>3</sup></li> <li>• Operating Voltage: 10.5 V – 18 V (with interface box and regulated power supply)</li> <li>• Weight: ~925 g (typical, without cabling and interface box)</li> <li>• Dimensions: See diagram on previous page</li> <li>• Environmental Protection: IP67</li> <li>• Operating Temperature: -20°C to +60°C<sup>4</sup></li> <li>• Storage Temperature: -40°C to +85°C</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• 3D Lidar Data Points Generated:                         <ul style="list-style-type: none"> <li>- Single Return Mode: ~600,000 points per second</li> <li>- Dual Return Mode: ~1,200,000 points per second</li> </ul> </li> <li>• 100 Mbps Ethernet Connection</li> <li>• UDP Packets Contain:                         <ul style="list-style-type: none"> <li>- Time of Flight Distance Measurement</li> <li>- Calibrated Reflectivity Measurement</li> <li>- Rotation Angles</li> <li>- Synchronized Time Stamps (µs resolution)</li> </ul> </li> <li>• GPS: \$GPRMC and \$GPGGA NMEA Sentences from GPS Receiver (GPS not included)</li> </ul>

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1. These are projected specifications for final production parts. The specifications for any sample, prototype, or other non-final or pre-production parts may be different from the specifications in this document. For more information, please contact Velodyne Sales.  
 2. 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.  
 3. Operating power may be affected by factors including but not limited to range, reflectivity and environmental conditions.  
 4. Operating temperature may be affected by factors including but not limited to air flow and sun load.



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