



High Definition LiDAR™ HDL-32E

Stylishly small and ruggedly built with an unrivaled field of view, Velodyne's HDL-32E LiDAR sensor was designed to exceed the demands of the most challenging, real-world industrial applications including autonomous vehicle control, mobile mapping, aerial mapping, security, and surveillance.

The HDL-32E measures only 5.7" high by 3.4" in diameter and weighs one kilogram (plus 0.3kg for cabling). Its compact size and weight make it ideal for all LiDAR applications, in particular those with constrained form-factors and pricing requirements.

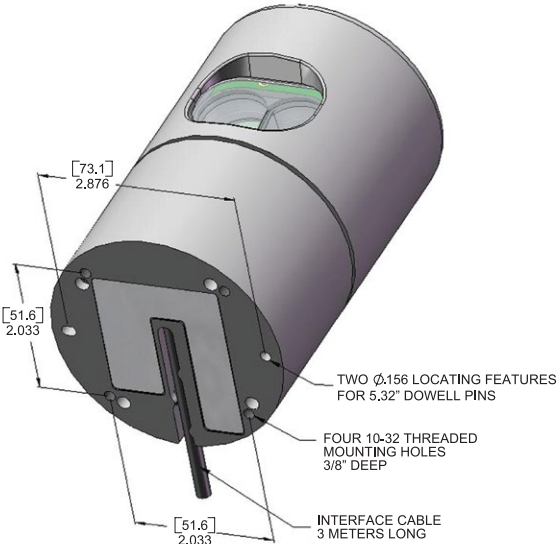
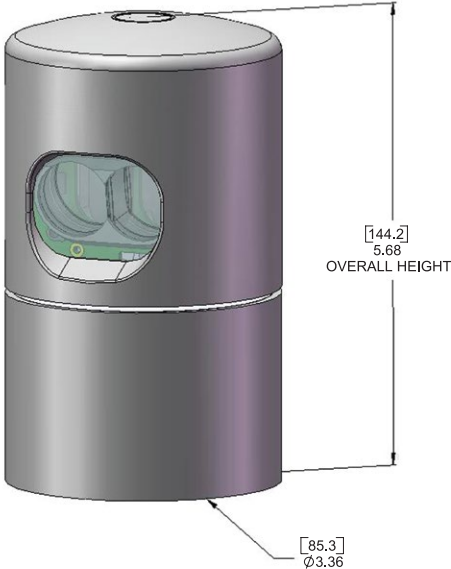
Unprecedented Field of View and Point Density

The HDL-32E's innovative laser array enables navigation and mapping systems to observe more of their environment than any other LiDAR sensor. The HDL-32E utilizes 32 lasers aligned from +10° to -30° to provide an unmatched vertical field of view, and its patented rotating head design delivers a real-time, 360° horizontal field of view. The HDL-32E generates a point cloud of up to 700,000 points per second with a range of 100 meters and typical accuracy of +/- 2cm at 10 Hz. The resulting comprehensive point cloud coverage within a single data stream makes the HDL-32E an indispensable part of any sensor suite.

The HDL-32E's operating temperature range spans from -10° C to +60° C and has an ingress protection (IP) rating of 67—the highest possible. Its hardened structure makes it perfect for vehicles that operate in the most unforgiving environments.



HDL-32E



High Definition LiDAR

The HDL-32E provides high definition 3-dimensional information about the surrounding environment.

Specifications	
Laser:	<ul style="list-style-type: none">• Class 1 - eye safety• 905 nm wavelength• Time of flight distance measurement with Calibrated Reflectivities• Measurement range 1m to typically 80–100m
Sensor:	<ul style="list-style-type: none">• 32 laser/detector pairs• +10.67 to -30.67 degrees field of view (vertical)• 360° field of view (horizontal)• 10 Hz frame rate (user selectable, 5-20Hz)• Operating temperature -10° to +60° C• Storage temperature -40° to 105° C• Accuracy: <2 cm (one sigma at 25 m)• Angular resolution (vertical) 1.33°• Integrated web server for easy configuration
Mechanical:	<ul style="list-style-type: none">• Power: 12V @ 1 Amps• Operating voltage: 9-32 VDC• Weight: HDL-32E = 1kg (2.2lbs) ; Cables = 0.3kg (0.62lbs)• Dimensions: 5.9" height x 3.4" diameter• Shock: 500 m/sec² amplitude, 11 msec duration• Vibration: 5 Hz to 2000 Hz, 3G rms• Environmental Protection: IP67
Output:	<ul style="list-style-type: none">• Up to 700,000 points/second• 100 Mbps Ethernet connection• UDP packets containing<ul style="list-style-type: none">- distances- calibrated reflectivities- rotation angles• Orientation - internal MEMS accelerometers and gyros for six-axis motion correction• GPS time-synchronized with included GPS Receiver

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97-0038 Rev-D



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HIGH DEFINITION LIDAR

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