

# IntelLAS™ POD Mobile LiDAR Sensor

- Velodyne VLP-16 LiDAR Sensor
- 300,000 points per second
- ± 1 cm accuracy
- 100 m laser range
- Integrated GPS receiver
- Time synchronised data output
- Multi-sensor networking
- Rugged all-weather construction

The IntelLAS™ POD is a custom designed and engineered marine grade mobile LiDAR sensor which will integrate effortlessly with the existing hardware and software found on almost all marine survey vessels.

## PROVEN RELIABILITY

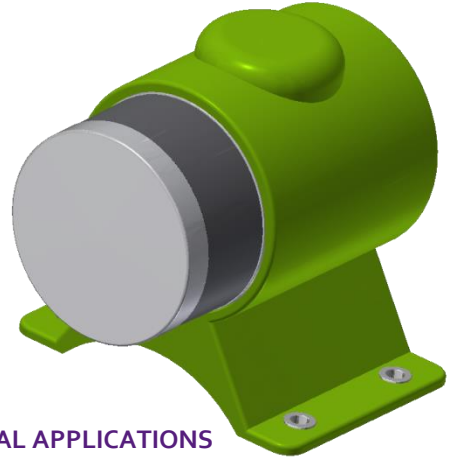
The IntelLAS™ POD combines the proven performance and reliability of the Velodyne LiDAR sensor with the latest GPS receiver technology to produce high definition time-synchronised geospatial data at user defined rates of up to 300,000 points per second in a 30° x 360° field of view. The time-stamped LiDAR data is passed to the onboard data acquisition computer over a standard Ethernet connection.

## SCALABLE PERFORMANCE

For applications which require higher data density or more coverage, two or more IntelLAS™ POD systems can be connected to the onboard data acquisition computer via the Ethernet network connection. Data from all IntelLAS™ POD systems in the network is automatically synchronised to the onboard systems.

## COST EFFECTIVE LiDAR SOLUTION

Most multibeam capable survey vessels, both large and small, already have exactly the same high quality GNSS positioning and motion reference systems as those used by nearly all of the mobile LiDAR systems available today, so why purchase something you already have! Connecting the IntelLAS™ POD to your existing survey computer will allow you to share your existing positioning and motion systems with your IntelLAS™ POD and enable combined multibeam and LiDAR data acquisition for a fraction of the cost of a conventional mobile LiDAR system.



## TYPICAL APPLICATIONS

The demand for simultaneous multibeam and LiDAR data acquisition is on the increase, particularly in the rapidly developing engineering market sector. The IntelLAS™ POD provides an ideal LiDAR solution for your existing survey vessel for;

- Port and harbour surveys
- River and canal surveys
- Lock inspections
- Bridge and dam inspections
- Beach and coastal erosion surveys
- Planning and inspection surveys
- Flood risk management
- Decommissioning surveys

## BUSINESS BENEFITS

The addition of a dedicated marine LiDAR system to your existing survey vessel equipment will allow you to complete complex projects more efficiently, keeping you ahead of the competition in what is the fastest growing market sector in our industry today.

## SOFTWARE COMPATIBILITY

The IntelLAS™ POD is compatible with most industry leading hydrographic survey data acquisition and processing software packages including HYPACK and HYSWEEP 2016 and the latest versions of QINSy.



# IntelLAS™ POD Specifications

## LiDAR SENSOR

Class 1 - eye safe laser (903 nm wavelength)

16 laser Tx/Rx channels - Time of flight distance measurement with calibrated reflectivity

Measurement range up to 100 meters - Dual returns available

Accuracy: +/- 3 cm (typical)

Field of view (vertical): 30° (+15° to -15°)

Angular resolution (vertical): 2°

Field of view (horizontal/azimuth): 360°

Angular resolution (horizontal/azimuth): 0.1° - 0.4°

Rotation rate: 5 - 20 Hz

Integrated web server for easy monitoring and configuration

## GPS RECEIVER

Fully integrated WAAS DGPS enabled multi-channel GPS Receiver

High sensitivity to -185 dBW

Programmable for all standard NMEA output messages

1 PPS timing signal output

## MECHANICAL / ELECTRICAL/OPERATIONAL

Power consumption: 8 W (typical)

Operating voltage: 9 - 32 VDC (with interface box and regulated power supply)

Weight: 2,000 grams (without cabling)

Dimensions: 222 mm long x 162 mm base width x 155 mm height

Shock: 500 m/sec<sup>2</sup> amplitude, 11 msec duration : Vibration: 5 Hz to 2000 Hz, 3G RMS

Environmental Protection: IP67

Operating temperature -10° to +60° C : Storage temperature - 40° to +105° C

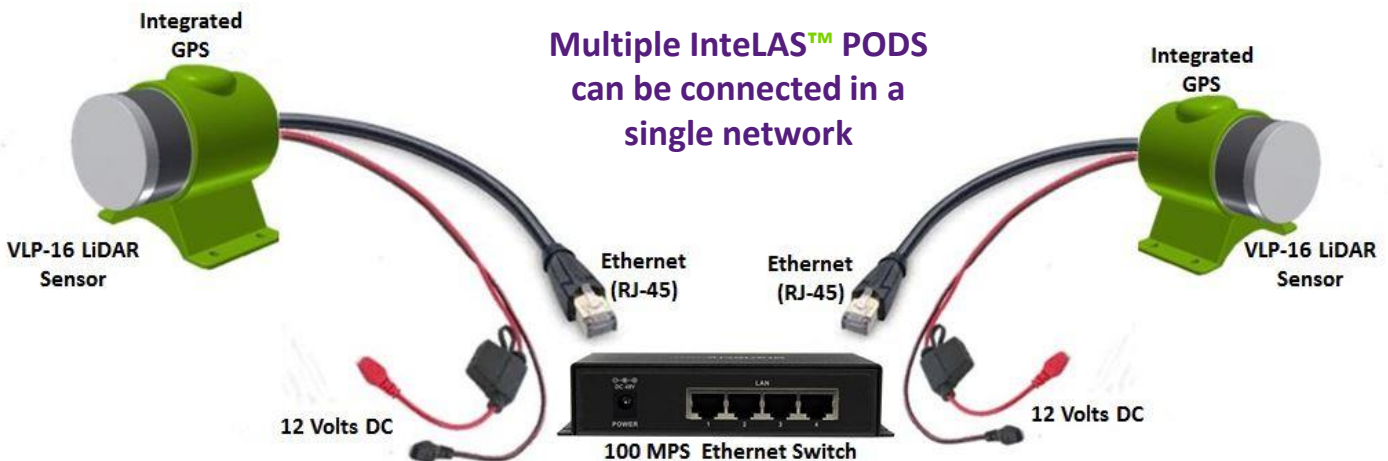
## OUTPUT

Up to 300,000 points/second

100 Mbps Ethernet connection

UDP packets containing (Distances, - Calibrated reflectivity, - Rotation angles, - Synchronized time stamps)

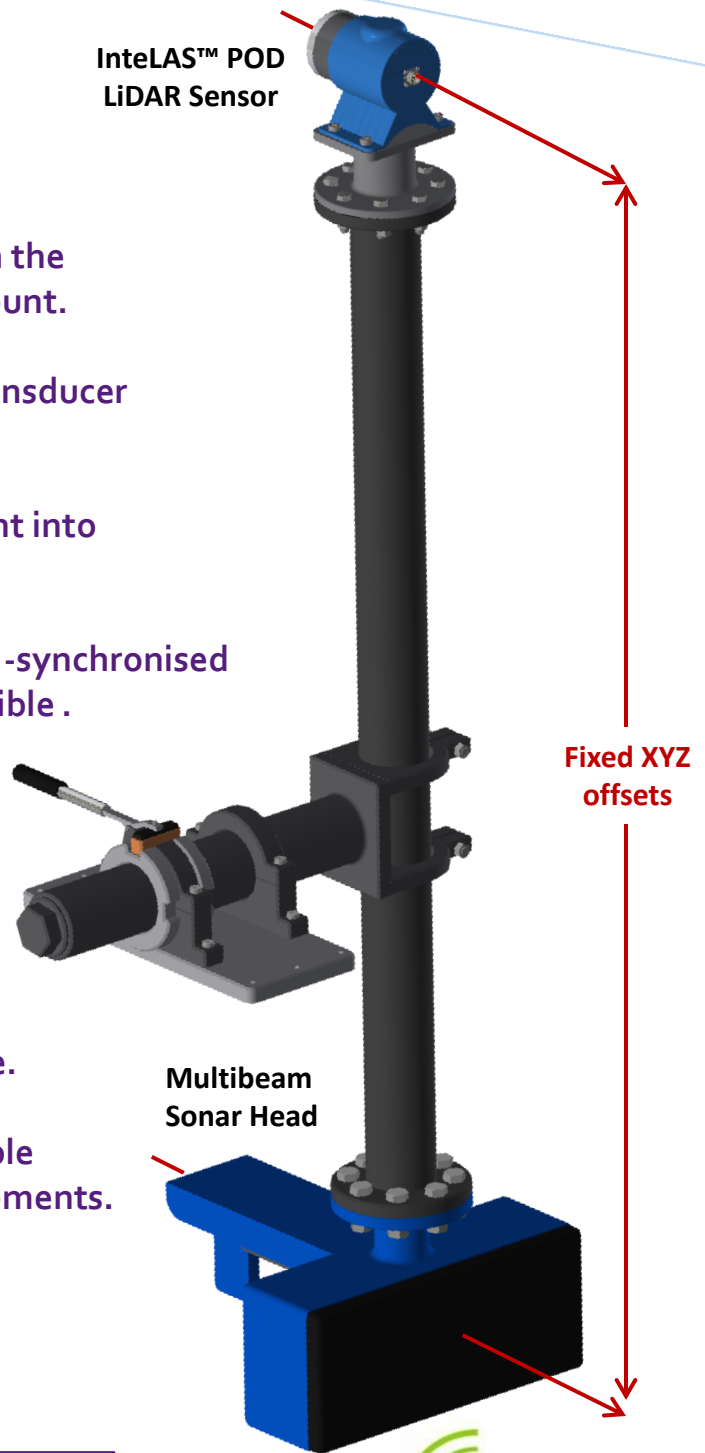
\$GPRMC NMEA sentence from GPS receiver



# INTELAS™ POD

## Application Example

- IntelLAS™ POD is installed easily on the existing Multibeam over the side mount.
- The XYZ offsets to the Multibeam transducer can be precisely measured.
- The Ethernet connection plugs straight into existing data acquisition computer.
- The LiDAR data is automatically time-synchronised to make interfacing as simple as possible.
- The system is fully compatible with HYPACK / HYSWEEP 2016, QINSy, EIVA and PDS1000 software.
- The LiDAR system can be used to accurately calibrate the Multibeam when no seabed features are available.
- A variety of LiDAR sensors are available to cater for most operational requirements.
- Full warranty and support included.



For more specific information or to arrange a system demonstration, please call +1 281 665 3954 or e-mail us at [info@ilinks.us](mailto:info@ilinks.us)

