



## COMPACT DUAL ANTENNA MULTI-CONSTELLATION GNSS RECEIVER DELIVERS ROBUST POSITIONING AND HEADING

### MAXIMUM PERFORMANCE

The LD8 is a high-precision receiver, capable of tracking GPS, GLONASS, BeiDou, Galileo and QZSS constellations to provide reliable and accurate positioning. Access to multiple GNSS signals allow for better satellite availability and reduce the impact of satellite masking or blockage, which can affect positioning. It also receives L-Band signals on multiple channels providing access to the world-wide correction services offered by VERIPOS®.

### GNSS HEADING

This is a compact and lightweight receiver offering industry-leading GNSS multi-constellation heading and positioning data for dynamic environments. The LD8 is ideal for marine applications removing the requirements for an external gyro.

### RELIABLE ACCURACY

VERIPOS provides accurate and reliable positioning for all marine applications via their redundant positioning and multi-frequency Precise Point Positioning (PPP) services. With correction data available simultaneously from up to three correction satellites, the impact of satellite masking can be minimized to ensure reliable reception of correction data. The LD8 can also utilize Real-Time Kinematic (RTK) corrections for applications where this service is required.

### SIMPLE TO CONFIGURE

Users can connect to the receiver using the on-board WiFi to use the Web UI to configure the LD8 receiver. In addition, the LD8 is compatible with the VERIPOS Quantum visualization software allowing the user to set up the receiver and then monitor the position solution to check the quality and troubleshoot any issues.



### BENEFITS

- Supports decimeter-level multi-constellation positioning with VERIPOS Apex and Ultra PPP correction services
- Compatible with VERIPOS Quantum software
- EN60945 Marine Certified
- For use in oil and gas seismic exploration, hydrographic survey and offshore construction

### FEATURES

- 555 channel, all-constellation, multi-frequency positioning solution
- Simultaneously track up to 3 VERIPOS correction service satellites
- ALIGN® GNSS heading solution
- 16 GB of internal storage
- Multiple communication interfaces for easy installation
- Built-in WiFi support

**PERFORMANCE<sup>1</sup>**

Channel Configuration	
555 Channels	
Signal Tracking	
Primary RF <sup>2</sup>	
GPS	L1 C/A, L1C, L2C, L2P, L5
GLONASS <sup>3</sup>	L1 C/A, L2 C/A, L2P, L3, L5
Galileo	E1, E5 AltBOC, E5a, E5b
BeiDou <sup>4</sup>	B1I, B1C, B2I, B2a
QZSS	L1 C/A, L1C, L2C, L5
NavIC (IRNSS)	L5
SBAS	L1, L5
L-Band	up to 5 channels
Secondary RF <sup>2</sup>	
GPS	L1 C/A, L1C, L2C, L2P, L5
GLONASS <sup>3</sup>	L1 C/A, L2 C/A, L2P, L3, L5
Galileo	E1, E5 AltBOC, E5a, E5b
BeiDou <sup>4</sup>	B1I, B1C, B2I, B2a
QZSS	L1 C/A, L1C, L2C, L5
NavIC (IRNSS)	L5
Horizontal Position Accuracy (RMS)	
Single Point L1	1.5 m
Single Point L1/L2	1.2 m
SBAS <sup>5</sup>	1 m
VERIPOS DGNSS	1 m
VERIPOS PPP <sup>6</sup>	5 cm
RTK	1 cm + 1 ppm
Initialization time	< 10 s
Initialization reliability	> 99.9%
Maximum Data Rate	
Measurements	up to 20 Hz
Position	up to 20 Hz
Time to First Fix	
Cold start <sup>7</sup>	< 40 s
Hot start <sup>8</sup>	< 19 s
Signal Reacquisition	
L1	< 0.5 s (typical)
L2/L5	< 1.0 s (typical)
Time Accuracy <sup>9</sup>	20 ns RMS
Velocity Accuracy	0.03 m/s RMS
Velocity Limit <sup>10</sup>	515 m/s

**COMMUNICATION PORTS**

1 RS-232	up to 460,800 bps
2 RS-232/RS-422 selectable	up to 460,800 bps
1 USB 2.0 (device)	HS
1 USB 2.0 (host)	HS
1 Ethernet	10/100 Mbps
1 Pulse Per Second output	

**PHYSICAL AND ELECTRICAL**

Dimensions	147 x 125 x 55 mm
Weight	500 g
Power	
Input voltage	+12 to +28 VDC
Power consumption <sup>11</sup>	6 W
2 Antenna LNA Power Outputs	
Output voltage	5 VDC ±5%
Maximum current	200 mA
Connectors	
2 Antenna	SMA
USB device	Micro A/B
USB Host	Micro A/B
VERIPOS Serial Cable	
Ethernet	RJ45
Data Logging	Push button
Power	SAL M12, 5 pin, male
Status LEDs	
Power	
GNSS	
INS	
Data Logging	
USB	

**ALIGN GNSS HEADING**

Precise heading and pitch	
Heading Accuracy	
0.5 m Baseline:	0.40 degrees
1 m Baseline:	0.20 degrees
2 m Baseline:	0.10 degrees

**ENVIRONMENTAL**

Temperature	
Operating	-40°C to +75°C
Storage	-40°C to +85°C
Humidity	95% non-condensing
Waterproof	IEC 60529 IPX7
Dust	IEC 60529 IP6X
Vibration (operating)	
Random	MIL-STD-810 514.6 Category 24, 20 g RMS
Sinusoidal	IEC 60068-2-6
Acceleration (operating)	
MIL-STD-810G, Method 513.6 Procedure II (16g)	
Bump	ISO 9022-31-06 (25g)
Shock (non-operating)	MIL-STD-810G, 516.6, Procedure 1, 40 g 11 ms terminal sawtooth
Compliance Industry Canada, FCC, CE, RoHS, WEEE, EN60945 (Protected Equipment), EN60950, EN62368, EN62479	

**FEATURES**

- NovAtel® OEM7<sup>™</sup> marine positioning engine
- Standard 16 GB internal storage
- Support for logging to external USB storage device
- Built in WiFi support
- Web GUI
- OGP 373-19 and IMCA S015 (July 2011) QC compliant

1 Typical values. Performance specifications subject to GNSS system characteristics, Signal-in-Space (SIS) operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.

2 Model-configurable to track L5/E5a (all / Galileo) through L2 (GPS) or L3 / E5b / B2 (GLONASS / Galileo / BeiDou) through L2 (GLONASS). See manual for details.

3 Hardware ready for L3 and L5.

4 Designed for BeiDou Phase 2 and 3, B1 and, B2 compatibility.

5 GPS only.

6 Requires a subscription to a data service.

7 Typical value. No almanac or ephemerides saved and no approximate position or time.

8 Typical value. Almanac or ephemerides and no approximate position and time entered.

9 Time accuracy does not include biases due to RF or antenna delay.

10 Export licensing restricts operation to a maximum of 515 meters per second, message output impacted above 500 m/s.

11 Typical value. Consult the user documentation for power supply considerations.

For the most recent details of this product visit [veripos.com/products/LD8](http://veripos.com/products/LD8)

VERIPOS is a global technology leader, pioneering end-to-end solutions for assured positioning for the offshore marine oil and gas industry. VERIPOS is part of Hexagon's Positioning Intelligence division.

Learn more at [veripos.com](http://veripos.com)

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