LD900 Receiver

Quad-Band GNSS receiver delivers precise positioning for demanding marine operations.

LD900 Receiver

Maximum Performance

The LD900 is a quad-band GNSS 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.

Robust L-Band Reception

LD900 also receives L-Band signals on multiple channels providing access to the world-wide independent correction links and services provided by VERIPOS. 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. Using the independent L-Band RF input on the LD900 allows the connection of a dedicated L-Band antenna ensuring optimal reception of correction services, especially at high latitudes.

Maximum Accuracy

VERIPOS provides accurate and reliable positioning for all marine applications via their redundant positioning and multi-frequency Precise Point Positioning (PPP) Apex and Ultra services. The Apex5 correction service utilizes all GNSS constellations delivering 5cm positioning accuracy for use in the most demanding offshore applications. Real-Time Kinematic (RTK) corrections can be utilized by the LD900 for applications where this service is required.

Simple to Configure and Operate

The intuitive color display and navigation menu makes setup, configuration and system status monitoring simple. The display also helps troubleshoot issues with the LD900 allowing faults to be quickly diagnosed and resolved. The LD900 can also be configured remotely through the VERIPOS Quantum software.

Designed for Marine Operations

The receiver has been designed, manufactured and delivered by Hexagon's Autonomy & Positioning division specifically for marine operations. Marine certification allows the LD900 to be interfaced into Dynamic Positioning systems, assuring accurate and reliable positioning for critical marine operations.

Benefits

- Supports decimeter-level multi-constellation positioning with VERIPOS Apex and Ultra PPP correction services
- Compatible with VERIPOS Quantum software
- EN60945 Marine Certified
- OGP 373-19 and IMCA S015 QC compliant
- Designed for marine operation such as seismic exploration, offshore construction, survey and dynamic positioning
- Advanced signal filtering mitigates the effects of interference from other transmitters

Features

- 555 channel, all-constellation, multi-frequency positioning solution
- Simultaneously track up to 3 VERIPOS correction service satellites
- Independent L-Band RF input
- Easy-to-use, intuitive, color display for simple configuration and monitoring
- Multiple communication options for interfacing to marine systems
- Built-in WiFi support
- Optional ALIGN® GNSS heading solution
- Optional MSK Beacon receives corrections from IALA marine radio beacon network
- Automatic 72 hour rolling data log for incident support

Primary GNSS Module[1]

Channel Configuration

555 Channels

Signal Tracking

GPS	L1 C/A, L1C, L2C, L2P, L5
GLONASS[2]	L1 C/A, L2 C/A, L2P, L3, L5
BeiDou	B1I, B1C, B2I, B2a, B3I
Galileo[3]	E1, E5 AltBOC, E5a, E5b, E6
NavIC (IRNSS)	L5
SBAS	L1, L5
QZSS	L1 C/A, L1C, L2C, L5, L6

Horizontal Position Accuracy (RMS)

Single Point L1	1.5 m
Single Point L1/L2	1.2 m
SBAS[4]	1 m
VERIPOS DGNSS[5]	1 m
VERIPOS PPP[5]	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[6]	< 39 s (typical)
Hot start[7]	< 20 s (typical)

Signal Reacquisition

L1	< 0.5 s (typical)
L2	< 1.0 s (typical)

Time Accuracy[8]	20 ns RMS
Velocity Accuracy	< 0.03 m/s RMS
Velocity Limit[9]	515 m/s

Secondary GNSS Module[1]

Channel Configuration

555 Channels

Signal Tracking[10]

GPS	L1 C/A, L1C, L2C, L2P, L5
GLONASS[2]	L1 C/A, L2C, L2P, L3, L5
BeiDou	B1I, B1C, B2I, B2a
Galileo[11]	E1, E5 AltBOC, E5a, E5b
NavIC (IRNSS)	L5
SBAS	L1, L5

Time to First Fix

Cold start[6]	< 39 s (typical)
Hot start[7]	< 20 s (typical)

Signal Reacquisition

L1	< 0.5 s (typical)
L2	< 1.0 s (typical)

Time Accuracy[8]	20 ns RMS
Velocity Accuracy	< 0.03 m/s RMS
Velocity Limit[9]	515 m/s

L-Band Module

Channels	5 Channels
Frequency Range	1525 to 1560 MHz

Beacon Module (Option)

Channels	2 Channels
Frequency Range	283.5 to 325.0 kHz
Channel spacing	500 Hz
Demodulation	Minimum Shift Keying (MSK)

Communication Ports

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

Physical and Electrical

Dimensions	300 x 200 x 80 mm
with mounting plate	300 x 220 x 80 mm
Weight	3.8 kg
with mounting plate	4.8 kg
Power[12]	
Power consumption	13 W (typical)
Input voltage	+12 to 24 VDC
Antenna LNA Power Outputs	
Output voltage	12 VDC ±5%
Maximum current	300mA
Connectors	
GNSS RF	TNC
L-band RF	TNC
IALA	TNC
Serial	DB9
Serial (expansion)	DB15
USB (host)	Type A
Ethernet	RJ45
PPS	BNC
Power	M12, 4 pin
Display	
3.5” QVGA TFT Color Display	

ALIGN® GNSS Heading Accuracy

Baseline	Accuracy (RMS)
2 m	0.08 degrees
4 m	0.05 degrees

Environmental

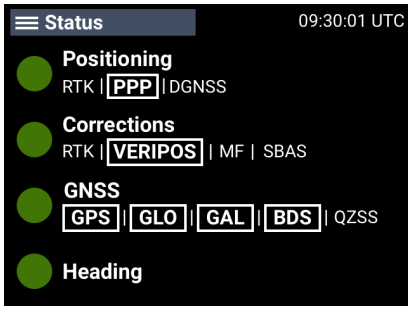
Temperature	
Operating	-15°C to +55°C
Humidity	EN60945

Compliance

FCC, CE, RoHS, WEEE, EN60945 (Protected Equipment), EN/IEC62368

Features

- NovAtel® OEM7® marine positioning engine
- Standard 32 GB internal storage
- Automatic 72 hour rolling data log for incident support
- Simultaneously track up to 3 VERIPOS correction service satellites
- Independent L-Band RF input
- ALIGN® GNSS Heading (option)
- Built in WiFi support
- Web GUI
- OGP 373-19 and IMCA S015 (July 2011) QC compliant



LD900 Receiver UI

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 Hardware ready for L3 and L5. 3 E1bc and E6bc support only. 4 GPS only. 5 Requires a subscription to a data service. 6 Typical value. No almanac or ephemerides saved and no approximate position or time. 7 Typical value. Almanac or ephemerides and no approximate position and time entered. 8 Time accuracy does not include biases due to RF or antenna delay. No almanac or ephemerides and no approximate position or time. 9 Export licensing restricts operation to a maximum of 515 meters per second, message output impacted above 500 m/s. 10 Model-configurable to track L5/E5a (all / Galileo) through L2 (GPS) or L3/E5b/B2 (GLONASS / Galileo / BeiDou) through L2 (GLONASS). 11 E1bc support only. 12 Typical value. Consult the user documentation for power supply considerations.

Contact Hexagon | VERIPOS

sales@veripos.com +44 1224 965800
For the most recent details of this product visit veripos.com

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