

# TECHNICAL INFORMATION

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**PRODUCTS**

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**LD6 INTEGRATED MOBILE UNIT**  
**LD3 INTEGRATED MOBILE UNIT**



**PRODUCTS**





## LD6 INTEGRATED MOBILE UNIT



The LD6 is a comprehensive and powerful integrated single mobile unit that can be configured to accommodate a range of VERIPOS solutions.





## LD6 INTEGRATED MOBILE UNIT

As a fully integrated mobile unit, the LD6 can receive VERIPOS services through the L-band demodulator. The LD6 can be configured with single or dual frequency GNSS receivers, as well as optional reception modules, to receive corrections from VERIPOS HF service, MF beacon service and UHF correction sources. All information is available for output to external equipment and software for processing.

The LD6 is suitable for a wide range of applications including hydrographic/offshore surveying, dredging, offshore construction, seismic exploration and dynamic positioning.

The modular design increases flexibility and simplifies the integration of new OEM hardware, allowing the LD6 to be upgraded offshore.

A colour touch-screen interface makes set-up quick and easy, from configuration through to monitoring. The LD6 can track all signals from the GPS and GLONASS satellite constellations. It can also receive augmentation data using the latest-generation VERIPOS L-band hardware.

A powerful onboard processor has the ability to run VERIPOS positioning algorithms and applications.

A monitor can be attached to the LD6 for a more detailed graphical display of positioning QC. A solid-state hard disk provides raw data storage for post processing and support.

Fourteen galvanic isolated serial ports can be configured for either EIA232 or EIA422 output. Data is also available through dual independent ethernet ports to allow operation on a LAN.

## Technical specifications

### Physical characteristics

<b>Receiver size:</b>	2U rack mountable x 46cm depth
<b>Weight:</b>	less than 10kg
<b>Display:</b>	8.89cm colour VGA touch-screen LCD display
<b>Operating temp:</b>	-15 to +55 degrees Celsius*
<b>Storage temp:</b>	-20 to +70 degrees Celsius
<b>Input voltage:</b>	100v to 240v AC or 12v to 24v DC
<b>Power consumption:</b>	less than 65W

### Onboard ETX Express PC

1.6 GHz ATOM processor  
1GB SDRAM, upgradeable to 2GB  
32GB solid-state hard drive  
Windows Embedded XP operating system

### Data ports and interfaces

6 USB Ports – Type-A connector (USB 2.0)  
Dual independent Ethernet ports  
14 EIA 232 / 422 galvanic isolated ports with RJ45 Connection  
VGA monitor port for external monitor  
Audio line output (max 17.5dBu)  
1PPS and Event marker  
(GNSS card must be installed)

### VERIPOS L-band demodulator

Frequency input 1525 to 1559 MHz  
Data rates 600, 1200, 2400 and 4800 baud

### Regulatory and Environmental

CE Marking Directive 93/68/EEC  
FCC Part 15 [14] Class B  
Marine Equipment Directive,  
EN60945:2002 (Protected Equipment)  
EU RoHS Directive 2002/95/EC  
EU WEEE Directive 2002/96/EC

### Optional cards

#### GNSS receivers supported

Septentrio AsteRx2 family  
Topcon 112T, 160T and G3-160T

Minimum 70 channel  
L1 GPS C/A code  
L1 / L2 / L2C Carrier Phase  
GLONASS L1 / L2 Carrier Phase  
SBAS

#### HF / MF receiver

Magellan 3011 HF / MF receiver  
Dual channel receiver for reception of either VERIPOS proprietary HF service or MF Beacon services (e.g. IALA)

Hemisphere SBX-4 MF receiver  
Dual channel receiver for reception of MF Beacon services (e.g. IALA)

#### UHF receiver

Pacific Crest UHF receiver  
Frequency 390 to 430 MHz and  
430 to 470 MHz options available

\* Although the test conditions for the LD6 provide for a maximum operating temperature of 55 degrees Celsius, continuous operation of all electronic components should, if possible, take place at ambient temperatures of only 25 degrees Celsius. This is a prerequisite for long life and low service costs.



## LD3 INTEGRATED MOBILE UNIT



Advanced yet robust, and easy to install and operate, the VERIPOS LD3 is an outstandingly effective and flexible unit.





## LD3 INTEGRATED MOBILE UNIT

The LD3 is available in a number of configurations, from basic satellite demodulator to fully integrated mobile positioning unit with demodulator and multi-frequency GNSS receiver. The unit is completely modular and can easily be upgraded to different configurations.

The LD3 can be used to generate VERIPOS proprietary position solutions – from metre to decimetre accuracy – depending on the chosen service. It can also be used as a sensor to output received data and GNSS measurements to external processing or quality control software, such as VERIPOS Verify QC.

In addition to calculating position, the LD3 can output all received data in standard formats such as RTCM. Installation and set up is quick and easy – and operation is simple – with a bank of LEDs indicating overall operating status.

The LD3 can be used with both VERIPOS high and low-power satellite transmissions. With high-power services, a compact, high-gain, omni-direction antenna is required. For low-power operation, a stabilised dish antenna, such as that used for communicating via Inmarsat, is needed. In this case, a special interfacing kit is available.

VERIPOS LD3 ensures reliable reception of VERIPOS services and produces superior positioning from metre to decimetre level accuracy.

## Technical specifications

### Physical characteristics

<b>Receiver size:</b>	Aluminium housing 65mm(H) x 110mm(W) x 185mm(D)
<b>Weight:</b>	1kg
<b>Operating temp:</b>	-15 to 55 degrees Celsius
<b>Storage temp:</b>	-20 to 70 degrees Celsius
<b>Input voltage:</b>	10 to 36V DC
<b>Consumption:</b>	3W (without GPS card) / 5W (with GPS card)
<b>Environmental:</b>	IP67

### L-band Demodulator

Antenna Input:	1525 to 1559 MHz
Connector:	TNC
GNSS Options:	Ashtech DG14 and 16 L1 GPS Septentrio AsteRx2 Family L1 GPS (+GLONASS) L1 / L2 GPS (+GLONASS)
MF Options:	MF Beacon available with DG16

### Interfaces

Power & Data:	DC Input	
	NMEA out (GPS option)	RS232
	RTCM out	RS232
	Message out	RS232
	RTCM in (ext DGPS input)	RS232
Connector:	Amphenol 7-way male	
Control:	GPS in (option)	RS232
	GPS out (option)	RS232
	OEM in	RS232
	OEM out	RS232
Connector:	Amphenol 7-way female	
Antenna:	Various antenna options available depending on application	
Certifications:	Certified to IEC60945-2002	



## USEFUL INFORMATION

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All VERIPOS equipment carries International Electrotechnical Commission (IEC) Certification Type approval IEC 60945

Sales or hire of VERIPOS products and services will be in accord solely with the terms and conditions contained in the contract between VERIPOS and the client that is applicable to the sale or hire.

Information is subject to change without notice.

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