

# LOCUS GNSS



## The LOCUS family

The LOCUS GNSS is a receiver specially engineered for maritime-, survey- and near shore positioning and navigation applications.

The heart of the LOCUS GNSS is a NovAtel 72 channel, triple frequency receiver that is capable of using the positioning signals from both GPS and GLONASS constellations for maximum flexibility and enhanced positioning in challenging environments. The LOCUS GNSS supports GPS L2C. With future firmware upgrades the engine will be able to track the upcoming GPS L5 signal as soon as it is available, so your investment will be long-lasting.

The LOCUS comes in a 19" housing and features colored LEDs which indicate receiver status at a glance. (satellite-, communication- and modem status)

The receiver works with SBAS DGPS- and OmniSTAR L-band correction signals. Depending on the application, the LOCUS GNSS can be configured with UHF-, GPRS and/or GSM modems in order to receive RTK correction signals.

## Benefits:

- User-friendly, with a simple user interface.
- Windows©-based configuration software.
- Improved positioning in challenging and limited visibility environments.
- Offers superior multipath detection to eliminate close-in multipath and to flag poor signal quality.
- Robust and reliable RTK performance.





## LOCUS GNSS system specifications

### Position Accuracy (RMS)<sup>1</sup>

- Single Point L1	1.8 m
- Single Point L1/L2	1.5 m
- SBAS	0.6 m
- CDGPS	0.6 m
- DGPS	0.45 m
- OmniSTAR VBS	0.7 m
- OmniSTAR XP	0.15 m
- OmniSTAR HP	0.1 m
- RT-20 <sup>2</sup>	0.2 m
- RT-2 <sup>®</sup>	1 cm+1ppm

### Measurement Precision

- L1 C/A Code	6 cm RMS
- L1 Carrier Phase	0.75 mm RMS (differential channel)
- L2 P(Y) Code	25 cm RMS
- L2 Carrier Phase	2 mm RMS (differential channel)

### Channel Configuration

- 14 L1, 14 L2, 6 L5 GPS
- 12 L1, 12 L2 GLONASS
- 2 SBAS
- 1 L-band

### Data Rate

- Measurements 20 Hz
- Position 20 Hz
- OmniSTAR HP 20 Hz

### Time to First Fix

- Cold Start<sup>3</sup> 60 s
- Hot Start<sup>4</sup> 35 s

### Tracking

20 Channel Dual Constellation (DC) GPS/GLONASS L1/L2	
Cold start:	< 60 seconds
Warm start:	< 10 seconds
Reacquisition:	< 1 second

### Signal Reacquisition

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

<b>Time Accuracy<sup>5</sup></b>	20 ns RMS
<b>Velocity Accuracy</b>	0.03 m/s RMS

### Dynamics

- Velocity 515 m/s
- Vibration 4G (sustained tracking)
- Altitude 18,288 m

### Physical & Electrical

- Housing: Size: 19", 2U

### Power:

- Input Voltage 12-24VDC or 230VAC
- Power consumption: 8W (typical)

### Input/output connectors

- Power 12-24Vdc: 4pin LEMO
- Power 230VAC: IEC 320
- Antenna Input TNC female
- External Oscillator (PPS) BNC female
- COM1 DB-9 male
- COM2 DB-9 male
- AUX (COM3) DB-9 male ( PPS LVTTL )
- I/O DB-9 female

### Antenne Port Power Output:

- Output Voltage : +5V
- Maximum current: 100mA

### Interfaces front:

- On/Off Button
- Satellite status
- Memory status (optional)
- Modem status
- Status: Com1, Com 2, AUX

### GNSS engine:

- NovAtel OEMV-3-RT2-G:
- GPS + GLONASS

### GNSS antenna:

- NovAtel GPS-702-GG L1/L2:
- GPS + GLONASS, kinematic, zero-offset antenna

### GSM/GPRS communication:

- Voice
- Data

### UHF engine:

- Satellite -3ASd (optional)
- Frequency Range 380...470 MHz
- Channel Spacing 12,5 kHz / 25 kHz
- Number of Channels 160 / 80
- Frequency Stability <1.5 kHz

### Optional Accessories

- RF Cables
- Automotive 12 VDC power cable
- Serial cable
- Null-modem cable
- I/O interface cable
- AC adapters - International and North American

1 Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.

2 Expected accuracy after static convergence.

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

4 Typical value. Almanac and recent ephemerides saved and approximate position and time entered.

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

**All specifications are subject to change without prior notification.**

## Contact us

For more information please call +31(0)206368443  
or visit our website, [www.seabed.eu](http://www.seabed.eu)

