

Enclosures FlexPak-G2™ OEMStar



RUGGED, ROBUST AND ECONOMICAL L1 GPS+GLONASS RECEIVER



MULTI-CONSTELLATION PERFORMANCE

The FlexPak-G2 OEMStar features up to 14 channels of L1 GPS only, GLONASS only or combined GPS and GLONASS code and carrier phase tracking for increased positioning accuracy and availability. The position, velocity and time information is available at up to 10 Hz, with a 1 PPS accuracy of 20 ns for GPS and 40 ns for GLONASS. The multi-constellation timing feature lets you select a primary and secondary constellation for the timing source.

LIGHTWEIGHT, COMPACT AND RUGGED

At only 147 × 113 × 45 millimetres in size, and weighing just 313 grams, the FlexPak-G2 is ideal for applications that face space and weight restraints. Furthermore, it is shock resistant, waterproof to IPX7 and comes with locking connectors and mounting system to ensure secure installation.

ENHANCED CONNECTIVITY

Two standard DB9 communication ports support power in and out; one port may be dedicated to powering and communicating with a radio, while the other may be dedicated to your host application. Independent input/output and USB ports may be used simultaneously for time synchronization and direct connection to your laptop for field operation.

BENEFITS

- + Proven NovAtel GNSS technology
- + Easy to integrate into size and/or weight constrained applications
- + Cost effective precision L1 GPS+GLONASS

FEATURES

- + Auxiliary strobe signals with configurable PPS output
- + Shock resistant
- + Waterproof to IPX7
- + Rugged DB9 connectors with power in/out support
- + Active antenna support

If you require more information about our enclosures, visit www.novatel.com/products/gnss-receivers/enclosures

FlexPak-G2™ OEMStar

PERFORMANCE¹

Channel Configuration

14 GPS L1
12 GPS L1 + 2 SBAS
10 GPS L1 + 4 GLO L1
8 GPS L1 + 6 GLO L1
8 GPS L1 + 4 GLO L1 + 2 SBAS
10 GPS L1 + 2 GLO L1 + 2 SBAS
7 GPS L1 + 7 GLO L1
14 GLO L1

Signal Tracking

GPS	L1
GLONASS	L1
SBAS	

Horizontal Position Accuracy (RMS)

Single Point L1	1.5 m
SBAS ²	0.7 m
DGPS	0.5 m

Measurement Precision (RMS)

	GPS	GLO
L1 C/A code	5 cm	35 cm
L1 Carrier phase	0.6 mm	1.5 mm

Maximum Data Rate

Measurements	10 Hz
Position	10 Hz

Time to First Fix

Cold start ³	65 s
Hot start ⁴	35 s

Signal Reacquisition

L1	< 1.0 s (typical)
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Time Accuracy

GPS ^{2, 5}	20 ns RMS
GLONASS ^{5, 6}	40 ns RMS

Velocity Accuracy	< 0.05 m/s RMS
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Velocity ⁷	515 m/s
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PHYSICAL AND ELECTRICAL

Dimensions	147 × 113 × 45 mm
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Weight	313 g
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Power

Input voltage	+6 to +18 VDC
Power consumption ⁸	0.6 W

Antenna LNA Power Output

Output voltage	5 V nominal
Maximum current	100 mA

Connectors

Power	4-pin LEMO
Antenna	TNC-female
USB	Mini-B
Serial Port	DB9 male
Input/Output port	DB9 female

COMMUNICATION PORTS

1 RS-232	230,400 bps
1 RS-232 or RS-422	230,400 bps
1 USB port	12 Mbps
1 I/O port (PPS, Event 1, Position Valid, VARF)	

ENVIRONMENTAL

Temperature

Operating	-40°C to +75°C
Storage	-40°C to +85°C

Humidity	95% non-condensing
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Immersion	IEC 60529 IPX7
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Vibration	MIL-STD-810F
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Compliance	FCC, CE Industry Canada
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NOVATEL CONNECT™

NovAtel Connect is an intuitive configuration and visualization tool suite allowing comprehensive control of the FlexPak-G2 OEMStar product.

- Easy to use wizards for positioning mode configuration and raw data collection
- Detailed GUI for comprehensive status information
- Plan view and playback files allow to monitor positioning and configuration history
- Windows XP and Windows 7 platforms

FEATURES

- Field upgradable software
- Auxiliary strobe signals including a configurable PPS output for time synchronization and event inputs

INCLUDED ACCESSORIES

- Serial cable (null)
- I/O cable
- USB cable
- Automotive 12 VDC power adapter with 6 A slow-blow fuse

OPTIONAL ACCESSORIES

- GPS-700 series antennas
- ANT series antennas
- Serial cable (straight)
- FlexPak Heading Kit

FIRMWARE OPTIONS

- GLIDE™
- RAIM
- API

For the most recent details of this product: www.novatel.com/products/gnss-receivers/enclosures/flexpak-g2/flexpak-g2-with-oemstar/

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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. GPS only.
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.
6. GLONASS only. Clock aligned to GLONASS system time.
7. Export licensing restrictions limit operation to a maximum of 515 metres per second.
8. Typical GPS at 12 VDC.

