



## Rugged, Robust and Economical L1 GPS + GLONASS Receiver

### Benefits

Proven NovAtel GNSS technology

Easy to integrate into size and/or weight constrained applications

Cost-effective precision L1 GPS plus 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

### Multi-Constellation Performance

The FLEX-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 x 113 x 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.

If you require more information about our enclosures, visit [novatel.com/products/gnss-receivers/enclosures](http://novatel.com/products/gnss-receivers/enclosures)



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**Performance<sup>1</sup>****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 <sup>2</sup>	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 <sup>3</sup>	65 s
Hot start <sup>4</sup>	35 s

**Signal Reacquisition**

L1	< 1.0 s (typical)
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**Time Accuracy**

GPS <sup>2,5</sup>	20 ns RMS
GLONASS <sup>5,6</sup>	40 ns RMS

**Velocity Accuracy** < 0.05 m/s RMS

**Velocity<sup>7</sup>** < 515 m/s

**Physical and Electrical**

**Dimensions** 147 x 113 x 45 mm

**Weight** 313 g

**Power**

Input voltage + 6 to +18 VDC  
 Power Consumption<sup>8</sup> 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, VARS)	

**Environmental**

Temperature	
Operating	-40°C to +75°C
Storage	-40°C to +85°C
Humidity	95% non-condensing
Immersion	IEC 60529 IPX7
Vibration	MIL-STD-810F
Compliance	FCC, CE Industry Canada

**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 6A slow-blow fuse

**Optional Accessories**

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

**Firmware Options**

- ALIGN
- GL1DE
- RAIM
- API



Version 4 - Specifications subject to change without notice.

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For the most recent details of this product:

[novatel.com/assets/Documents/Papers/FlexPak-G2.pdf](http://novatel.com/assets/Documents/Papers/FlexPak-G2.pdf)

<sup>1</sup> 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.

<sup>2</sup> GPS only.

<sup>3</sup> Typical value. No almanac or ephemerides and no approximate position or time.

<sup>4</sup> Typical value. Almanac and recent ephemerides saved and approximate position and time entered.

<sup>5</sup> Time accuracy does not include biases due to RF or antenna delay.

<sup>6</sup> GLONASS only. Clock aligned to GLONASS system time.

<sup>7</sup> Export licensing restrictions limit operation to a maximum of 515 metres per second.

<sup>8</sup> Typical GPS at 12VDC.