FlexPak-G2™

Compact Enclosure Supports a Range of NovAtel GNSS Receivers Offering Flexible Performance for Any Application

Benefits

Proven NovAtel GNSS technology

Easy to integrate

Ideal for low-payload UAV and robotics applications

Field upgradable to support all OEMStar, OEMV-1, OEMV-1G and OEMV-2 functionality

Features

Metre to centimetre-level accuracy

Auxiliary strobe signals with configurable PPS output

Shock and dust resistant; waterproof to IPX7

Rugged DB-9 connectors with power in/out support

Active antenna support

If you require more information about our enclosures, visit novatel.com/products/enclosures.htm

Scalable Functionality

The FlexPak-G2 is available in four variants, all which are software upgradable in the field to provide the custom performance required for your application demands.

FlexPak-G2-V2: Offers dual frequency GPS+GLONASS tracking, modernized to support GPS L2C, allowing stronger signal tracking. Available with NovAtel's AdVance® RTK for centimetre-level accuracy with fast initialization over extended baselines.

FlexPak-G2-V1G: Provides GPS+GLONASS L1 tracking for reliable positioning even in obstructed sky conditions. NovAtel's RT-2 L1TE L1-only RTK algorithm allows reliable centimetre level accuracy for high precision applications.

FlexPak-G2-V1: Delivers GPS-only L1 tracking, and supports OmniSTAR® VBS, CDGPS and SBAS corrections for accurate and reliable DGPS positioning. NovAtel's RT-20® L1 carrier-phase positioning is available for increased accuracy with a 20 Hz data rate.

FlexPak-G2 with OEMStar™: Offers L1 GPS+GLONASS positioning and measurements in combination with GPS data to provide increased satellite availability for positioning in challenging environments.

Base Station or Rover

All FlexPak-G2 models are capable of base station or rover operation. Using standardized RTCM 2.3, RTCMV3 and CMR+ message types, the FlexPak-G2 is compatible with all NovAtel and third party GNSS receivers.

Enhanced Connectivity

Two standard DB-9 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.

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FlexPak-G2

FlexPak-G2 with OEMStar

Dimensions 147 x 113 x 45 mm

Weight 313 g

Power Consumption 1.1 W[1]

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

Horizontal Position Accuracy (RMS)[2]

Single Point L1	1.5 m
SBAS[3]	0.7 m
DGPS	0.5m

Communication Ports
- 1 RS-232 serial port (230,400 bps)
- 1 RS-232 or RS-422 (230,400 bps) serial port with power in/out
- 1 input/output port (PPS and Event 1)
- 1 USB port

Environmental

Temperature	
Operating	-40°C to +75°C
Storage	-40°C to +85°C
Immersion	To IEC65029 IPX7
Humidity	95% non-condensing
Vibration	MIL-STD-810F Method 514.5, Procedure 1
Altitude[4]	18 288 m

Optional Accessories
- GPS-700 series antennas
- ANT series antennas

FlexPak-G2-V1

Dimensions 147 x 113 x 45 mm

Weight 314 g

Power Consumption 1.4 W[1]

Channel Configuration
14 GPS L1
1 L-band
2 SBAS

Horizontal Position Accuracy (RMS)[2]

Single Point L1	1.8 m
SBAS[3]	0.6 m
CDGPS	0.6 m
OmniSTAR VBS	0.7 m
DGPS	0.45 m
RT-20[5]	0.2 m

Communication Ports
- 1 RS-232 serial port (230,400 bps)
- 1 RS-232 or RS-422 (230,400 bps) serial port with power in/out
- 1 input/output port (PPS, Event 1, Event 2)
- 1 USB port

Environmental

Temperature	
Operating	-40°C to +75°C
Storage	-40°C to +85°C
Immersion	To IEC65029 IPX7
Humidity	95% non-condensing
Vibration	MIL-STD-810F Method 514.5, Procedure 1
Altitude[4]	18 288 m

Included Accessories
- Serial cable
- I/O cable
- USB cable
- Automotive 12 VDC power adapter with 6A slow-blow fuse

FlexPak-G2-V1G

Dimensions 147 x 113 x 45 mm

Weight 331 g

Power Consumption 1.4 W[1]

Channel Configuration
14 GPS L1
12 GLONASS L1
2 SBAS

Horizontal Position Accuracy (RMS)[2]

Single Point L1	1.8 m
SBAS[3]	0.6 m
DGPS	0.45 m
RT-20[5]	0.2 m
RT-2L1TE	2 cm+1 ppm

Communication Ports
- 1 RS-232 serial port (230,400 bps)
- 1 RS-232 or RS-422 (230,400 bps) serial port with power in/out
- 1 input/output port (PPS, Event 1, Event 2)
- 1 USB port

Environmental

Temperature	
Operating	-40°C to +75°C
Storage	-40°C to +85°C
Immersion	To IEC65029 IPX7
Humidity	95% non-condensing
Vibration	MIL-STD-810F Method 514.5, Procedure 1
Altitude[4]	18 288 m

Additional Features
- Common, field-upgradeable software for all OEMV family receivers
- Auxiliary strobe signals, including a configurable PPS output for time synchronization and event inputs

FlexPak-G2-V2

Dimensions 147 x 113 x 45 mm

Weight 338 g

Power Consumption 1.4 W[1]

Channel Configuration
14 GPS L1, 14 GPS L2
12 GLONASS L1, 12 GLONASS L2
2 SBAS

Horizontal Position Accuracy (RMS)

Single Point L1	1.5 m
Single Point L1/L2	1.2 m
SBAS[2]	0.6 m
DGPS	0.4 m
RT-20[3]	0.2 m
RT-2™	1 cm+1 ppm

Communication Ports
- 1 RS-232 serial port (230,400 bps)
- 1 RS-232 or RS-422 (230,400 bps) serial port with power in/out
- 1 input/output port (PPS, Event 1, Event 2)
- 1 USB port

Environmental

Temperature	
Operating	-40°C to +75°C
Storage	-40°C to +85°C
Immersion	To IEC65029 IPX7
Humidity	95% non-condensing
Vibration	MIL-STD-810F Method 514.5, Procedure 1
Altitude[4]	18 288 m

Additional Firmware Features
- RT-20
- RT-2 L1TE (Only on FlexPak-G2-V1G)
- AdVance RTK (Only on FlexPak-G2-V2)
- ALIGN®
- GL1DE®
- OmniSTAR VBS (only on FlexPak-G2-V1)
- Pseudo Range/Delta-Phase (PDP Positioning (only on FlexPak-G2-V2)

Version 1b -Specifications subject to change without notice.

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For the most recent details of this product:
novatel.com/Documents/Papers/FlexPak-G2.pdf

[1] Typical GPS.
[2] 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.
[3] GPS-only.
[4] Export licensing restricts operation to a maximum of 18,288 meters and 515 meters per second.
[5] Expected accuracy after static convergence.

RoHS COMPLIANT