ProPak-G2*plus*

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NovAtel's ProPak®-G2*plus* is a durable, high-performance receiver with advanced capabilities, including USB communication and IMU support.

Feature-rich interface

The ProPak-G2*plus* provides an easy-to-use interface without sacrificing the capabilities needed for complex system integration. Three serial ports and USB functionality support high-speed communication with multiple devices. Available with an RS-232 or RS-422 interface, the receiver also offers an external oscillator input, a pulse per second (PPS) output, and two event mark inputs.

Protects against harsh conditions

The ProPak-G2*plus* features a durable metal enclosure to shield against harsh conditions and RF interference. Combined with one of NovAtel's rugged antennas, such as the GPS-700 series, the ProPak-G2*plus* provides unsurpassed performance and reliability in almost any environment.

Superior positioning performance

The ProPak-G2*plus* features patented Pulse Aperture Correlator™ (PAC) technology to virtually eliminate the effects of multipath. Multiple models are available to meet a variety of positioning requirements, including L1 and L1/L2 and optional support for SBAS corrections, such as those from WAAS and EGNOS systems. RT-2® technology is available for centimeter-level RTK performance.

Support for advanced technologies

The ProPak-G2*plus* also includes power output for external devices such as a radio and features NovAtel's SPAN™ Technology to support inertial capabilities. A single cable from the receiver to an inertial measurement unit (IMU) creates an enhanced system that delivers 100 Hertz position and attitude measurements and robust performance unaffected by short outages or reduced satellite coverage. In addition, the ProPak-G2*plus* provides application hosting with the Application Programming Interface (API) option.

Features	Benefits
Three high-speed serial ports and USB capability	Ensure flexible installation and quick configuration
Pulse Aperture Correlator™ (PAC) technology and RT-2® corrections	Provide centimeter-level position data virtually unaffected by multipath
Supports peripheral devices, including an inertial measurement unit (IMU)	Offers the ability to augment your GPS system with attitude data and continuous positioning, with minimal integration effort

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Performance[1]

Position Accuracy

Single Point L1	1.8 m CEP
Single Point L1/L2	1.5 m CEP
WAAS L1	1.2 m CEP
WAAS L1/L2	0.8 m CEP
DGPS (L1, C/A)	0.45 m CEP
RT-20[2]	< 20 cm CEP
RT-2	1 cm + 1 ppm

Measurement Precision

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

Data Rate

Measurements	20 Hz
Position	20 Hz

Time to First Fix

Cold Start[3]	50 s
Warm Start[4]	40 s
Hot Start[5]	30 s

Signal Reacquisition

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

Time Accuracy[6] **20 ns RMS**

Velocity Accuracy **0.03 m/s RMS**

Dynamics

Velocity[7]	514 m/s
Vibration	4 g (sustained tracking)

Altitude[7] **18,288 m**

Physical & Electrical

Size **185 x 154 x 71 mm**

Weight **1.0 kg**

Power

Input Voltage[8]	+9 to +18 VDC
Power Consumption	2.5 W (typical)

Antenna LNA Power Output

Output Voltage	+5 VDC
Maximum Current	100 mA

Communication Ports

- 2 RS-232 or RS-422 serial ports capable of 230,400 bps
- 1 RS-232 serial port capable of 230,400 bps
- 1 USB port capable of 5 Mbps

Input/Output Connectors

Power	4-pin LEMO
Antenna Input	TNC female
External Oscillator	BNC female
COM1	DB-9 male
COM2	DB-9 male
AUX (COM3)	DB-9 male
I/O	DB-9 female

Environmental

Temperature	
Operating	-40°C to +75°C
Storage	-45°C to +95°C
Humidity	95% non-condensing
Waterproof	IEC 60529 IPX7
Vibration (operating)	
Random	MIL-STD-202F 214A
Sinusoidal	SAE J1211 4.7
Shock (non-operating)	IEC 68-2-27 Ea

Regulatory **FCC Class B, CE**

1 Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric conditions, satellite geometry, baseline length, and multipath effects.
2 Expected accuracy after three minute static convergence.
3 Typical value. No almanac or ephemeris and no approximate position or time.
4 Typical value. Almanac saved and approximate position and time entered. No recent ephemeris.
5 Typical value. Almanac and recent ephemeris saved and approximate position and time entered.
6 Time accuracy does not include biases due to RF or antenna delay.
7 Export licensing restricts operation to a maximum of 18,288 meters and 514 meters per second.
8 While operating without an external IMU, the ProPak-G2*plus* can accept an input voltage between +7 and +18 VDC.

Included Accessories

- Automotive power adapter
- Mounting bracket
- Straight serial cable
- Null-modem serial cable
- I/O port interface cable
- USB cable

Optional Accessories

L1/L2 or L1 antennas, including the GPS-702 or GPS-701

RF cables, available in 5, 15, and 30 meter lengths

AC adapters, including international and North American versions

Additional Features

- Multiple software models, including L1 or L1/L2
- Auxiliary strobe signals, including a configurable PPS output and two mark inputs
- Field-upgradeable firmware
- Supports RTCM SC-104 version 2.3, CMR version 3.0, CMR+, NMEA 0183 version 3.01, and RTCA DO-217 message types
- Application Programming Interface (API) option

For more information, visit our website.

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