Enclosures

ProPak-V3

Durable, High-Performance GNSS Enclosure Delivers Advanced Positioning Capabilities

Benefits

Easy access to serial and USB ports simplifies integration

Sub-metre accuracy without need for extra hardware

Reliable, proven OEMV technology

Enhanced performance and accuracy with GLONASS and SPAN

Features

Robust, reliable AdVance™ RTK performance

Supports peripheral devices [such as IMUs]

3 high-speed serial ports and USB 1.1

Integrated OmniSTAR and CDGPS capability

GPS+GLONASS Capabilities

The ProPak-V3 enclosure offers L1 and L2 GPS-only or GPS+GLONASS positions and measurements in real time. The ability to track the satellites of the GLONASS constellation grants greater precision in the positioning solution, and provides industries that rely on GNSS technology increased productivity.

NovAtel's World-Class OEMV® Performance

NovAtel's OEMV-3 receiver drives the ProPak-V3's performance. The ProPak-V3 features integrated L-band corrections from geostationary satellite systems such as OmniSTAR and CDGPS. With a simple firmware upgrade, it will be able to track the upcoming GPS L5 signal. Made of durable materials, the ProPak® enclosure delivers accurate and precise positions even in harsh environments with extreme EMI conditions.

Advanced Capabilities

The ProPak-V3 offers 72 channels, L1 and L2 GPS+GLONASS, a USB interface and SPAN™ capabilities. A NovAtel SPAN system links the ProPak-V3 via cable to an IMU, creating a powerful 3D position, velocity and attitude solution that is stable and continuously available, even during periods when satellite signals are completely blocked.

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

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ProPak-V3

Performance[1]

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

Horizontal Position Accuracy (RMS)

Single Point L1	1.8 m
Single Point L1/L2	1.5 m
SBAS[2]	0.6 m
CDGPS[2]	0.6 m
DGPS	0.45 m
OmniSTAR[2]	
VBS	0.7 m
XP	0.15 m
HP	0.1 m
RT-20™[3]	0.2 m
RT-2™	1 cm+1 ppm

Measurement Precision

L1 C/A Code	4 cm RMS
L1 Carrier Phase	0.50 mm RMS (differential channel)
L2 P(Y) Code	8 cm RMS
L2 Carrier Phase	1 mm RMS (differential channel)

Data Rate[4]

Measurements	50 Hz
Position	50 Hz
OmniSTAR HP/XP	20 Hz

Time to First Fix

Cold Start[5]	60 s
Hot Start[6]	35 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[8]	515 m/s
Vibration	4 G (sustained tracking)

Physical and Electrical

Dimensions **185 x 160 x 71 mm**

Weight **1.0 kg**

Power

Input Voltage[9]	+9 to +18 VDC
Power Consumption	2.8 W (typical)[10]

Antenna Port Power Output

Output Voltage	+5 VDC
Maximum Current	100 mA

Communication Ports

- 1 RS-232 or RS-422 serial port capable of 921,600 bps
- 1 RS-232 or RS-422 serial port capable of 230,400 bps
- 1 RS-232 serial port capable of 230,400 bps
- 1 USB 1.1 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
Dust	IEC 60529 IP6X
Vibration (operating)	
Random	MIL-STD-810F, 514.5
Sinusoidal	SAE J1211 4.7
Shock (non-operating)	IEC 68-2-27 Ea

Compliance **FCC, CE**

Included Accessories

- Automotive 12 VDC power adapter with 3A slow-blow fuse
- Mounting bracket
- Straight serial cable
- Null-modem cable
- I/O interface cable
- USB cable

Optional Accessories

- GPS-700 series antennas
- Antcom antennas
- RF Cables—5, 10 and 30 m lengths
- AC adapters—International and North American

Additional Features

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

NovAtel

Version 4 -Specifications subject to change without notice.

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For the most recent details of this product:
novatel.com/Documents/Papers/ProPakV3.pdf

[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] Expected accuracy after static convergence.
[4] Slower data rates are expected for API customers. The maximum data rate is dependent on the size of the application.
[5] Typical value. No almanac or ephemerides and no approximate position or time.
[6] Typical value. Almanac and recent ephemerides saved and approximate position and time entered.
[7] Time accuracy does not include biases due to RF or antenna delay.
[8] Export licensing restricts operation to a maximum of 18,288 meters and 515 meters per second.
[9] While operating without an external IMU, the ProPak-V3 can accept an input voltage between +6 and +18 VDC.
[10] When running a GPS-only model.

RoHS COMPLIANT