



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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Performance¹**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

SBAS² 0.6 mCDGPS² 0.6 m

DGPS 0.45 m

OmniSTAR²

VBS 0.7 m

XP 0.15 m

HP 0.1 m

RT-20³ 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 Rate⁴**

Measurements 50 Hz

Position 50 Hz

OmniSTAR HP/XP 20 Hz

Time to First FixCold Start⁵ 60 sHot Start⁶ 35 s**Signal Reacquisition**

L1 0.5 s (typical)

L2 1.0 s (typical)

Time Accuracy⁶ 20 ns RMS**Velocity Accuracy 0.03 m/s RMS****Dynamics**Velocity⁸ 515 m/s

Vibration 4 G (sustained tracking)

Physical and Electrical**Dimensions 185 x 160 x 71 mm****Weight 1.0 kg****Power**Input Voltage⁹ +9 to +18 VDCPower 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
- ANT series 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 message types
- Application Programming Interface (API)

Additional Firmware Features

- RT-20
- ALIGN™
- GL1DE™
- OmniSTAR HP, XP, VBS, G2
- L5 signal tracking
- Pseudo Range/Delta-Phase (PDP) Positioning



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.

