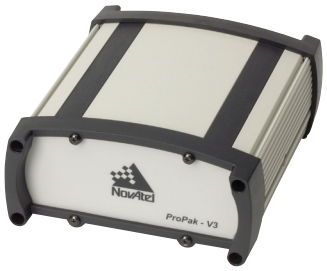
# ProPak-V3™




## 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® 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 position availability 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 is capable of tracking the 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/gnss-receivers/enclosures

**novatel.com**
**sales@novatel.com**
1-800-NOVATEL (U.S. and Canada)
or 403-295-4900
China 0086-21-54452990-8011
Europe 44-1993-848-736
SE Asia and Australia 61-400-833-601

# ProPak-V3

## Performance[1]

**Channel Configuration**
72 Channels
Signal Tracking

| | |
|---|---|
| GPS | 14 L1, 14 L2, 6 L5 |
| GLONASS | 12 L1, 12 L2 |
| SBAS | 12 L1, 12 L2 |
| L-band | 1 |

**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 |
| OmniSTAR[2] | |
| VBS | 0.6 m |
| XP | 0.15 m |
| HP | 0.1 m |
| RT-20®[3] | 0.2 m |
| RT-2™ | 1 cm+1 ppm |

**Measurement Precision**

| | GPS | GLO |
|---|---|---|
| L1 C/A Code | 4 cm | 15 cm |
| L1 Carrier Phase | 0.5 mm | 1.5 mm |
| L2 P(Y) Code | 8 cm | 8 cm |
| L2 Carrier Phase | 1.0 mm | 1.5 mm |

**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[7]** 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 |

**Connectors**

| | |
|---|---|
| Power | 4-pin LEMO |
| Antenna Input | TNC female |
| External Oscillator | BNC female |
| COM1 | DB9 male |
| COM2 | DB9 male |
| AUX (COM3) | DB9 male |
| I/O | DB9 female |

## Communication Ports

2 RS-232 or RS-422
1 RS-232 serial port
1 USB 1.1 port

## 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

## Features

- Multiple software models, including L1 GPS or GLONASS, L1/L2 GPS + 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)

## Firmware Options

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

NovAtel

Version 5 -Specifications subject to change without notice.



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For the most recent details of this product:
novatel.com/assets/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 515 metres 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
ISO 9001:2000 FM 92323