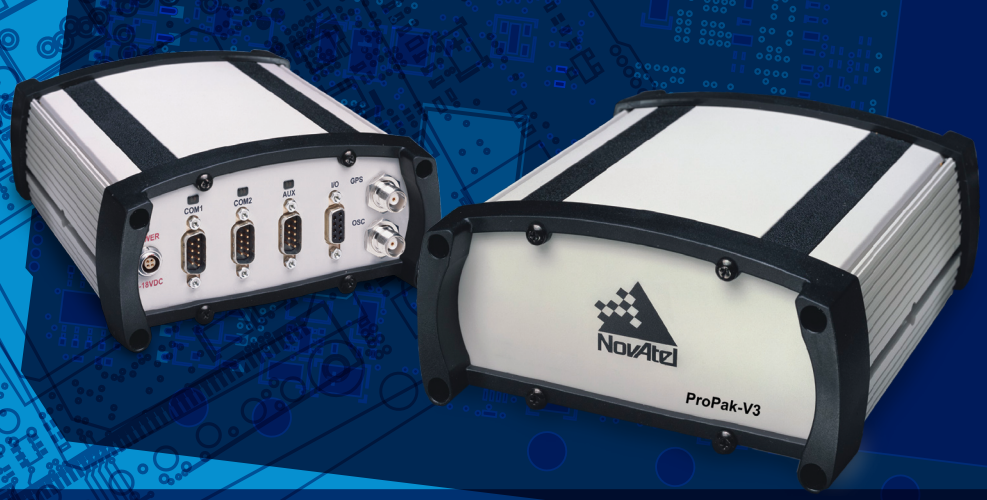
ProPak®-V3



NovAtel®'s ProPak-V3 is a durable, high-performance receiver with advanced capabilities, including 72 available channels, L1 and L2 GLONASS, USB communication and SPAN™ support.

Features

Three high-speed serial ports and USB 1.1 capability

Integrated OmniSTAR and CDGPS

GPS modernized signals and L1 and L2 GLONASS

Supports peripheral devices, including an Inertial Measurement Unit (IMU)

AdVance™ RTK

Benefits

Ensures flexible installation and quick configuration

Sub-metre accuracy without the need for additional hardware

Improved position availability in challenging or limited visibility environments

Combined GPS and inertial navigation, including attitude data and continuous positioning

Robust and reliable RTK performance

Flexibility and Ease of Integration

The ProPak-V3 provides the same easy-to-use interface as the ProPak-G2+, while adding the ability to provide L1 and L2 GPS+GLONASS positioning. The ProPak-V3 also features integrated L-band corrections from geostationary satellite systems such as OmniSTAR and CDGPS. Additionally, with firmware upgrades, your investment will continue to work into the future, tracking L5 signals as soon as they are available.

Protects against harsh conditions

The ProPak-V3 features a durable metal enclosure to ensure that your receiver delivers accurate positions even in harsh environments and EMI conditions. Combined with one of NovAtel's rugged GPS-700 series antennas, the ProPak-V3 provides superior tracking performance, positioning accuracy and reliability.

GLONASS

The OEMV® Family of GNSS receivers offers GPS+GLONASS positions and measurements in real-time. The GLONASS measurements are used in combination with GPS to provide more satellites for positioning in challenging environments. The OEMV-1G, OEMV-2 and OEMV-3 receivers and their enclosures are all configurable as either GPS only or GPS+GLONASS. The addition of GLONASS satellites to the positioning solution enables users to work more often and increases availability of a position in obstructed sky conditions.

Support for systems integrators

The ProPak-V3 can power external peripherals such as a UHF radio or an Inertial Measurement Unit (IMU). A single cable from the receiver to an IMU creates an enhanced system that delivers 100 Hz position and attitude measurements and robust performance. Supported by NovAtel's SPAN technology, it is unaffected by short outages or reduced satellite coverage. In addition, the ProPak-V3 supports an Application Programming Interface (API) for user-specific software routines.

NovAtel

Precise thinking

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	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 & Electrical

Size	185 x 160 x 71 mm
Weight	1.0 kg

Power	
Input Voltage[9]	+9 to +18 VDC
Power Consumption	2.5 W (typical)[10]

Antenna LNA 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
Vibration (operating)	
Random	MIL-STD-202G 214A
Sinusoidal	SAE J1211 4.7
Shock (non-operating)	IEC 68-2-27 Ea

Regulatory	
Emissions	
FCC Part 15	Class B
EN 55022	Class B
Immunity	EN61000-6-2
Safety	EN60950

Included Accessories

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

Optional Accessories

- GPS-700 series antennas
- ANT-500 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 GPS+GLONASS, L1/L2 GPS or 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)

1 Typical values. Performance specifications subject to GPS system characteristics, USDOD 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 514 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.

Precise thinking

1-800-NOVATEL (U.S. & Canada) or 403-295-4900
Europe +44 (0) 1993 852-436
SE Asia & Australia +61 (0) 400 833-601
sales@novatel.com
novatel.com

RoHS COMPLIANT

ISO 9001:2000 FM 92323