Enclosures PwrPak7™



COMPACT ENCLOSURE DELIVERS SCALABLE POSITIONING PERFORMANCE WITH INTERNAL STORAGE



FUTURE PROOFED SCALABILITY

Capable of tracking all present and upcoming Global Navigation Satellite System (GNSS) constellations and satellite signals, the PwrPak7 is a robust, high precision receiver that is software upgradable in the field to provide the custom performance required for your application.

BASE STATION OR ROVER

Compact and lightweight, the PwrPak7 is well suited for base or rover applications. It has a powerful OEM7® GNSS engine inside and offers built in Wi-Fi, on board NTRIP client and server support and 16 GB of internal storage. It also has enhanced connection options including serial, USB, CAN and Ethernet.

PRECISE THINKING MAKES IT POSSIBLE

Developed for efficient and rapid integration, our GNSS products have set the standard in quality and performance for over 20 years. State-of-the-art, lean manufacturing facilities in our North American headquarters produce the industry's most extensive line of OEM receivers, antennas and subsystems. All of our products are backed by a team of highly skilled design and customer support engineers, ready to answer your integration questions. To learn more about our products, please visit www.novatel.com/oem7.

FEATURES

- + 555 channel, all-constellation, multi-frequency positioning solution
- + Multi-channel L-Band supports
 TerraStar correction services
- + Multiple communication interfaces for easy integration and installation
- + Built-in Wi-Fi support
- + 16 GB of internal storage
- + SPAN® INS functionality

If you require more information about our enclosures, visit www.novatel.com/products/qnss-receivers/enclosures/



PwrPak7™



PERFORMANCE1

Channel Configuration

555 Channels

Signal Tracking

GPS L1 C/A, L1C, L2C, L2P, L5 GLONASS² L1 C/A, L2C, L2P, L3, L5 BeiDou³ B1, B2, B3

Galileo⁴ E1, E5 AltBOC E5a, E5b, E6

NavIC (IRNSS) L5 **SBAS** L1, L5 L1 C/A, L1C, L2C, L5, L6 QZSS up to 5 channels

Horizontal Position Accuracy (RMS)

Single point L1 1.5 m Single point L1/L2 1.2 m NovAtel CORRECT™

» SBAS⁵ 60 cm » DGPS 40 cm

» PPP⁶

TerraStar-L 40 cm TerraStar-C 4 cm » RTK 1 cm + 1 ppmInitial time <10 s>99.9% Initial reliability

Maximum Data Rate

Measurements up to 100 Hz Position up to 100 Hz

Time to First Fix

Cold start7, 12 <40 s Hot start^{8, 12} < 19 s

Signal Reacquisition

<0.5 s (typical) L2 <1.0 s (typical)

Time Accuracy⁹ 20 ns RMS

Velocity Accuracy

0.03 m/s RMS

Velocity Limit¹⁰ 515 m/s

COMMUNICATION PORTS

1 RS-232 up to 460,800 bps 2 RS-232/RS-422 selectable

up to 460.800 bps 1 USB 2.0 (device) HS

1 USB 2.0 (host) HS

1 Ethernet 10/100 Mbps 1 CAN Bus 1 Mbps

3 Event inputs

3 Event outputs

1 Pulse Per Second output

1 Quadrature Wheel Sensor

PHYSICAL AND ELECTRICAL

Dimensions 147 x 145 x 53 mm Weight 500 q

Power

Input voltage +9 to +36 VDC Power consumption¹¹

Antenna LNA Power Output

Output voltage 5 VDC ±5% Maximum current 200 mA

Connectors

TNC Antenna USB device Micro A/B Micro A/B USB host Serial, CAN, Event I/O

DSUB HD26 **RJ45**

Data Logging Push button Power SAL M12, 5 pin, male

Status LEDs

Ethernet

Power **GNSS** INS

Data Logging **USB**

ENVIRONMENTAL

Temperature

Operating -40°C to +75°C Storage -40°C to +85°C

Humidity 95% non-condensing IEC 60529 IPX7 Waterproof

Dust IEC 60529 IP6X

Vibration (operating)

MIL-STD-810 514.6 Random Category 24, 20 q RMS IEC 60068-2-6 Sinusoidal

Acceleration (operating)

MIL-STD 810G, Method 513.6 Procedure II (16 q)

Bump IEC 60068-2-27 (25 q)

Shock (non-operating)

MIL-STD-810G, 516.6, Procedure 1,

40 q 11 ms terminal sawtooth

Compliance FCC, IC, CE Industry Canada, RoHS, WEEE

FEATURES

- NovAtel OEM7 positioning engine
- Standard 16 GB internal storage
- Support for logging to external USB storage device
- Built-in Wi-Fi support
- Optional integrated Epson G320N MEMs IMU
- · Web GUI

FIRMWARE SOLUTIONS

- · ALIGN®
- · SPAN®
- · RTK
- RTK ASSIST™
- · TerraStar PPP
- API¹²

INCLUDED ACCESSORIES

- · Power cable
- · USB cable

OPTIONAL ACCESSORIES

- DSUB HD26 to DB9 RS-232 cable
- · Full breakout cable for DSUB HD26 connector
- · DBUS HD26 to M12 IMU cable
- · RJ45 Ethernet cable
- VEXXIS™ GNSS-500 and GNSS-800 series antennas
- · ANT series antennas
- · GrafNav/GravNet®
- Inertial Explorer®
- · NovAtel Connect

For the most recent details of this product:

www.novatel.com/products/ gnss-receivers/enclosures/ pwrpak7

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Europe 44-1993-848-736

SE Asia and Australia 61-400-883-601

Version 1 Specifications subject to change without notice

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- 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.
- Hardware ready for L3 and L5.
- Designed for BeiDou Phase 2 and 3, B1, B2 and B3 compatibility. E1bc and E6bc support only.
- GPS only.
- Requires a subscription to a TerraStar data service. Subscriptions available from NovAtel.
- Typical value. No almanac or ephemerides and no approximate position or time. Typical value. Almanac and recent ephemerides saved and approximate position and time entered.

 Time accuracy does not include biases due to RF or antenna delay.
- Interacturacy odes not include biases due to Kr or antenna delay.
 10. Export licensing restricts operation to a maximum of 515 metres per second, message output impacted above 500 m/s.
 11. Typical value. Consult the OEM7 Family Installation & Operation User Manual for power supply considerations.
 12. Available in Q1 2018.