Enclosures  PwrPak7D™

COMPACT DUAL ANTENNA 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 PwrPak7D is a robust, high precision receiver that is software upgradeable in the field to provide the custom performance required for your application.

DUAL ANTENNA INPUT
Multi-frequency, dual antenna input allows the PwrPak7D to harness the power of NovAtel CORRECT® with RTK and ALIGN functionality. This makes the PwrPak7D ideal for ground, marine or aircraft based systems, providing industry leading GNSS multi-constellation heading and position data in static and dynamic environments.

BASE STATION OR ROVER
Compact and lightweight, the PwrPak7D 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.

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

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

**Channel Configuration**
- 55S Channels

**Signal Tracking**
- **Primary RF**
  - GPS: L1 C/A, L1C, L2, L2P, L5
  - Galileo: E1, E5 AltBOC, E5a, E5b
  - BeiDou: B1I, B1C, B2I, B2a
  - QZSS: L1 C/A, L1C, L2C, L5
  - NavIC (IRNSS): L5
- **Secondary RF**
  - GPS: L1 C/A, L1C, L2C, L2P, L5
  - Galileo: E1, E5 AltBOC, E5a, E5b
  - BeiDou: B1I, B1C, B2I, B2a
  - QZSS: L1 C/A, L1C, L2C, L5
  - NavIC (IRNSS): L5

**Horizontal Position Accuracy (RMS)**
- Single point L1: 1.5 m
- Single point L1/L2: 1.2 m
- SBAS: 60 cm
- DGPS: 40 cm
- TerraStar-L™: 40 cm
- TerraStar-C PRO™: 2.5 cm
- TerraStar-X™: 2 cm
- RTK: 1 cm + 1 ppm
- Initialization time: <10 s
- Initialization reliability: >99.9%

**ALIGN Heading Accuracy**
- Baseline: 0.08 deg
- Accuracy (RMS): 2 m
- Position: 0.05 deg
- Maximum Data Rate: up to 100 Hz

**Time to First Fix**
- Cold start: <39 s
- Hot start: <20 s

**Signal Reacquisition**
- L1: <0.5 s (typical)
- L2: <1.0 s (typical)

**Time Accuracy**
- 20 ns RMS

**Velocity Accuracy**
- 0.03 m/s RMS

**Velocity Limit**
- 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
- 1 Wi-Fi
- 3 Event inputs
- 3 Event outputs
- 1 Pulse Per Second output
- 1 Quadrature Wheel Sensor input

**ENVIRONMENTAL**
- **Temperature**
  - Operating: -40°C to +75°C
  - Storage: -40°C to +85°C
- **Humidity**
  - 95% non-condensing
- **Ingress Protection Rating**
  - IP67

**Vibration (operating)**
- Random: MIL-STD-810G(CH1) Method 514.7 Category 24, 20g RMS
- Sinusoidal: IEC 60068-2-6

**Acceleration (operating)**
- MIL-STD-810G(CH1), Method 516.7, Procedure II (16g)

**Bump (operating)**
- IEC 60068-2-27 (25g)

**Shock (operating)**
- MIL-STD-810G(CH1), Method 516.7, Procedure 1, 40 g 11 ms terminal sawtooth

**FIRMWARE SOLUTIONS**
- **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 IMU
- Web GUI

**INCLUDED ACCESSORIES**
- Power cable
- USB cable
- DSUB HD26 to DB9 RS-232 cable

**OPTIONAL ACCESSORIES**
- Full breakout cable for DSUB HD26 connector
- DSUB HD26 to M12 IMU cable
- RJ45 Ethernet cable
- VEXXIS® GNSS-500 and GNSS-800 series antennas
- Compact GNSS antennas
- GrafNav/GrafNet®
- Inertial Explorer®
- NovAtel Connect

**HARDWARE OPTIONS**
- **PwrPak7DM**
  - no Wi-Fi
  - no 16 GB internal storage

For the most recent details of this product:
www.novatel.com/products/gnss-receivers/enclosures/pwrpak7d/

**CONTACT**
- novatel.com
- 1-800—NOVATEL (U.S. and Canada) or 403-295-4900
- China 0086-21-68882300
- Europe 44-1993-848-736
- SE Asia and Australia 61-400-883-601

**FIRMWARE**
- Align®
- Span®
- RTK
- RTK ASSIST™
- TerraStar PPP
- API

**FEATURES**
- Global Type Approvals
- FCC, ISED, CE and Global Type Approvals

**COMPLIANCE**
- MIL-STD-810G(CH1), Shock (operating)
- IEC 60068-2-27 (25g)
- MIL-STD-810G(CH1), Vibration (operating)
- IP67

**ENVIRONMENTAL**
- MIL-STD-810G(CH1), Bump (operating)
- Random MIL-STD-810G(CH1)
- Sinusoidal IEC 60068-2-6

**POWER**
- Input voltage: +9 to +36 VDC
- Power consumption: 3.95 W

**POWER OUTPUTS**
- Maximum current: 200 mA
- Output voltage: 5 VDC ±5%

**DIMENSIONS**
- 147 x 125 x 55 mm

**WEIGHT**
- 500 g

**PERFORMANCE**
- PwrPak7D
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  - no 16 GB internal storage

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**Version 5**
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