PwrPak7-E1

Compact OEM7 enclosure delivers leading SPAN GNSS+INS technology from Hexagon | NovAtel

World-leading GNSS+INS technology
SPAN GNSS+INS technology brings together two different but complementary technologies: Global Navigation Satellite System (GNSS) positioning and Inertial Navigation System (INS). The absolute accuracy of GNSS positioning with the stability of inertial measurement unit (IMU) gyro and accelerometer measurements generate a 3D navigation solution that is stable and continuously available. Deeply coupling the GNSS and inertial measurements through SPAN technology enables better bridging through GNSS interruptions and rapid reacquisition of signals.

PwrPak7-E1 advantages
The PwrPak7-E1 contains an Epson G320N MEMS IMU to deliver world-class SPAN technology in an integrated, single-box solution. This product is commercially exportable and provides an excellent price/performance/size GNSS+INS solution.

Future-proofed scalability
Capable of tracking all present and upcoming GNSS constellations and satellite signals, the PwrPak7-E1 is a robust, high-precision receiver that is software upgradeable in the field to provide the custom performance required for your application demands.

The PwrPak7-E1 has a powerful OEM7 GNSS engine, integrated MEMS IMU, built-in Wi-Fi, onboard 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
Our GNSS products are developed for efficient and rapid integration and 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. Our products are backed by a team of highly-skilled design and customer support engineers ready to answer your integration questions.

Benefits
- Small, low-power, all-in-one GNSS+INS enclosure
- Easy integration into space and weight constrained applications
- Commercially exportable system
- Rugged design ideal for challenging environments
- Enhanced connection options including serial, USB, CAN and Ethernet
- Future-proof for upcoming GNSS

Features
- Low-noise commercial grade gyros and accelerometers
- Dedicated wheel sensor input
- TerraStar Correction Services supported over multi-channel L-Band and IP connections
- Spoofing detection, interference detection and mitigation provided by GNSS Resilience and Integrity Technology (GRIT)
- SPAN GNSS+INS capability with configurable application profiles
- 16 GB of internal storage
- Built-in Wi-Fi support
### Performance

#### Signal tracking
- GPS: L1 C/A, L1C, L2C, L2P, L5
- GLONASS: L1 C/A, L1C, L2A, L2P, L1, L5
- Galileo: E1, E5a, E5b, E6
- QZSS: L1 C/A, L1S, L2C, L5, L6
- NavIC: L5
- SBAS: L1, L5
- L-Band: up to 5 channels

#### Horizontal position accuracy (RMS)
- Single point: 1.5 m
- Single point L1/L2: 1.2 m

#### IMU performance
- Gyroscope performance
  - Rate bias: ±150 deg/s
  - Rate random walk: 3.5 deg/hr
- Accelerometer performance
  - Bias stability: ±5 g
  - Velocity random walk: 0.05 m/s/√hr

#### Communication ports
- 1RS-232: up to 460,800 bps
- 2 RS-232/RS-422: selectable
- 1 USB 2.0 (device)
- 1 USB 2.0 (host)
- 1 Ethernet: 10/100 Mbps
- 1 CAN Bus: 1 Mbps
- 1 Wi-Fi

#### Physical and electrical
- Dimensions: 147 x 125 x 55 mm
- Weight: 510 g

#### Power
- Input voltage: ±9 to 36 VDC
- Input current: 200 mA
- Output voltage: 5 VDC ±5%
- Power consumption: 3.4 W

### Shock (operating)
- MIL-STD-810H, Method 516.8, Procedure 1, 40 g, 11 ms terminal sawtooth

### Compliance
- FCC, ICES, CE and Global Type Approvals

### Optional accessories
- Power cable
- USB cable
- DSUB HD26 to DB9 RS-232 cable

### Contact Hexagon | NovAtel

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For the most recent details of this product: novatel.com

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