Receivers OEM617D™

COMPACT, DUAL ANTENNA, DUAL-FREQUENCY GNSS RECEIVER DELIVERS ROBUST RTK FUNCTIONALITY AND ALIGN® HEADING CAPABILITY

HIGH PRECISION GNSS, COMPACT SIZE

The dual-frequency, dual antenna OEM617D is NovAtel’s latest addition to the powerful OEM6® family of receivers offering heading and precise positioning for space constrained applications. Backwards compatible with NovAtel’s popular OEM615™ form factor, the OEM617D provides the most efficient way to bring GNSS capable navigation and positioning products to market quickly. As with all NovAtel OEM6 receivers, the OEM617D is ready for existing GPS, GLONASS and BeiDou signals.

DUAL-ANTENNA INPUT

Dual-frequency, dual antenna input allows the OEM617D to harness the power of NovAtel CORRECT™ with RTK and ALIGN functionality. This makes the OEM617D ideal for ground vehicle, marine or aircraft based systems, providing industry leading GNSS multi-constellation heading and position data in static and dynamic environments.

DESIGNED FOR FLEXIBILITY

The modular nature of NovAtel’s OEM6 firmware gives users the flexibility to configure the OEM617D for their unique application needs. Scalable to offer sub-metre to centimetre level positioning and field upgradeable with selected OEM6 family software options. Options include NovAtel CORRECT with RTK for centimetre-level real-time positioning, ALIGN for precise heading and relative positioning, GLIDE™ for decimetre-level pass-to-pass accuracy and RAIM for increased GNSS pseudorange integrity.

CUSTOMIZATION WITH AN API

Application Programming Interface (API) functionality is available on the OEM617D. Using a recommended compiler with the API library, an application can be developed in a standard C/C++ environment to run directly on the receiver platform, eliminating system hardware, reducing development time and resulting in a faster time to market.

BENEFITS

+ Dual-frequency RTK with precise ALIGN heading+pitch/roll
+ Dual-frequency GPS+GLONASS BeiDou RTK and ALIGN heading solution
+ Easy to integrate
+ Compact size and low power

FEATURES

+ Increased satellite availability with BeiDou, GLONASS and Galileo* tracking
+ GLIDE smoothing algorithm
+ RT-2®, ALIGN and RAIM firmware options

*Available on selected models.

If you require more information about our receivers, visit novatel.com/products/gnss-receivers/oem-receiver-boards

Contact NavtechGPS for product details. www.NavtechGPS.com
+1-703-256-8900 • 800-628-0885 • info@navtechgps.com
## PERFORMANCE

### Channel Configuration
120 Channels

### Signal Tracking
- **Primary and Secondary RF**
  - GPS L1, L2, L2C
  - GLONASS L1, L2
  - BeiDou B1, B2
  - Galileo E1, E5b
  - SBAS
  - QZSS

### Horizontal Position Accuracy (RMS)
- **Single point L1** 1.5 m
- **Single point L1/L2** 1.2 m
- **SBAS** 0.6 m
- **DGPS** 0.4 m

### Antenna LNA Power
- **Input voltage** 6 VDC
- **Output voltage** 5.0 VDC

### Initialization accuracy
- **RT-2** 1 cm + 1 ppm
- **Initialization time** < 10 s
- **Initialization reliability** > 99.9%

### ALIGN Heading Accuracy
- **Baseline Accuracy (RMS)**
  - 2 m 0.08 deg
  - 4 m 0.05 deg
- **Maximum Data Rate**
  - Measurements up to 20 Hz
  - Position up to 20 Hz
- **Time to First Fix**
  - Cold start < 50 s
  - Hot start < 35 s

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

### COMMUNICATION PORTS
- **3 LVTTL** up to 921,600 bps
- **2 CAN Bus** 1 Mbps
- **1 USB** 12 Mbps
- **Pulse Per Second (PPS) output**

### ENVIRONMENTAL
- **Temperature**
  - Operating: -40°C to +85°C
  - Storage: -55°C to +95°C
- **Humidity** 95% non-condensing
- **Vibration**
  - Random: MIL-STD 810G (Cat 24, 7.7 g RMS)
  - Sinusoidal: IEC 60068-2-6 (Test Fc-5 g)
- **Bump**
  - ISO 9022-31-06 (25 g)
- **Shock**
  - MIL-STD-810G (40 g)
  - Survival (75 g)

### FEATURES
- Dual-frequency, dual antenna input
- Field upgradeable software
- Multipath mitigating technology
- Differential GPS positioning
- Differential correction support for RTCM 2.1, 2.3, 3.0, 3.1, CMR, CMR+ and RTCA
- Navigation output support for NMEA 0183 and detailed NovAtel ASCII and binary logs
- Auxiliary strobe signals, including a configurable output for time synchronization and mark inputs
- Outputs to drive external LEDs
- GLIDE smoothing algorithm

### NOVATEL CONNECT™
NovAtel Connect is an intuitive configuration and visualization tool suite allowing comprehensive control of the OEM617D product.
- Easy to use wizards for positioning mode configuration and raw data collection
- Detailed GUI for comprehensive status information
- Plan view and playback files allow monitoring of positioning and configuration history

## PHYSICAL AND ELECTRICAL

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>46 x 71 x 11 mm</th>
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<tbody>
<tr>
<td>Weight</td>
<td>&lt;24 g</td>
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### Power Consumption
- **Input voltage** +3.3 V +5%/-3%
- **Power Consumption**
  - GPS L1/L2 1.9 W
  - GPS+GLO L1/L2 <2.0 W
  - GPS+BDS+GLO L1/L2/B1/B2 <2.10 W

### Antenna LNA Power
- **Input voltage** 6 VDC
- **Output voltage** 5.0 VDC

### Maximum output current
- Dual antenna 100 mA
- Single primary 200 mA

### Connectors
- **Main**
  - 20-pin dual row male header
- **Primary antenna**
  - MMCX female
- **Secondary antenna**
  - MMCX female

### COMMUNICATION PORTS
- 3 LVTTL up to 921,600 bps
- 2 CAN Bus 1 Mbps
- 1 USB 12 Mbps
- Pulse Per Second (PPS) output

### Firmware Options
- **ALIGN**
- **RAIM**

### Optional Accessories
- GPS-700 series antennas
- ANT series antennas
- RF Cables—5 and 10 m lengths
- OEM6 Development Kit (additional adapters required)

For the most recent details of this product: www.novatel.com/products/gnss-receivers/oem-receiver-boards/oem6-receivers

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**Version 2** Specifications subject to change without notice.

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