### Receivers

#### OEMV-2

**Compact, Dual Frequency GNSS Receiver Delivers Robust RTK Functionality**

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Designed for Efficiency</th>
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</thead>
<tbody>
<tr>
<td>Proven OEMV® technology</td>
<td>The OEMV-2 sports low power consumption and a small form factor for ease and efficiency in integration. The modular nature of OEMV-2 firmware allows the user the flexibility to configure the receiver from a basic GPS L1-only to a dual frequency receiver with RTK functionality.</td>
</tr>
<tr>
<td>Lowest power consumption in the market for a dual frequency receiver</td>
<td>Greater Performance with GNSS Functionality</td>
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<tr>
<td>Application Programming Interface (API) reduces hardware requirements and system complexity</td>
<td>The OEMV-2 is configurable with GPS or GPS+GLONASS real-time capabilities. The GPS+GLONASS option increases available positions in obstructed sky conditions and allows users to work more often.</td>
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<tr>
<td>Easy to integrate</td>
<td>Enhanced, Flexible Firmware Features</td>
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<tr>
<td><strong>Features</strong></td>
<td>With L2C tracking capabilities, the OEMV-2 is ideal for low signal strength applications, providing stronger signal tracking and better cross correlation protection. The OEMV-2 provides decimetre-level pass-to-pass accuracy with NovAtel’s GL1DE® technology. NovAtel’s optional Advance® RTK technology is available for centimetre-level real-time position accuracy. ALIGN® technology is available for heading and position outputs.</td>
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</tbody>
</table>

- **Features**
  - L1, L2 and L2C signal tracking
  - Increased satellite availability with GLONASS tracking
  - RT-2™, RT-20®, ALIGN and GL1DE firmware options

If you require more information about our receivers, visit novatel.com/products/receivers.htm

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**novatel.com**

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1-800-NOVATEL (U.S. and Canada)
or 403-295-4900

Europe 44-1993-85-24-36

SE Asia and Australia 61-400-833-601

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### Performance

<table>
<thead>
<tr>
<th>Channel Configuration</th>
<th>14 GPS L1, 14 GPS L2</th>
<th>12 GLONASS L1, 12 GLONASS L2</th>
<th>2 SBAS</th>
</tr>
</thead>
</table>

#### 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
- RT-2: 0.2 m
- RT-2: 1 cm + 1 ppm

#### Measurement Precision (RMS)
- GPS L1 C/A Code: 4 cm
- GPS L1 Carrier Phase: 0.5 mm
- GPS L2 P(Y) Code: 8 cm
- GPS L2 Carrier Phase: 1 mm
- GL O L2 C/A Code: 15 cm
- GL O L1 Carrier Phase: 1.5 mm

#### Data Rate
- Measurements: 20 Hz
- Position: 20 Hz

#### Time to First Fix
- Cold Start: 460 s
- Hot Start: 35 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
- 515 m/s

### Physical and Electrical

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>60 x 100 x 13 mm</th>
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<tbody>
<tr>
<td>Weight</td>
<td>96 g</td>
</tr>
</tbody>
</table>

#### Power
- Input Voltage: +3.3 to +5.0 VDC
- Power Consumption: 1.2 W (GPS only), 1.6 W (GPS & GLONASS)

#### Antenna LNA Power Output
- Output Voltage: +5.1 VDC
- Maximum Current: 100 mA

#### Communication Ports
- 1 RS-232 capable of 300 to 921,600 bps
- 2 LV-TTL serial port capable of 300 to 230,400 bps
- 1 CAN Bus® serial port capable of 1 Mbps
- 1 USB port capable of 5 Mbps

### Options and Accessories
- GPS-700 series antennas
- ANT series antennas
- RF Cables—5, 10 and 30 m lengths
- 50 Hz output rate
- Right angle RF connector

### Additional Firmware Features
- RT-20
- RT-2
- ALIGN
- GL1DE
- Pseudo Range/Delta-Phase (PDP) Positioning

### Additional Features
- Common, field-upgradeable software for all OEMV family receivers
- Auxiliary strobe signals, including a configurable PPS output for time synchronization and mark inputs
- Outputs to drive external LEDs
- External oscillator input

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1. 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.
2. GPS only.
3. Expected accuracy after static convergence.
4. Typical value. No almanac or ephemerides and no approximate position or time.
5. Typical value. Almanac and recent ephemerides saved and approximate position and time entered.
6. Time accuracy does not include biases due to RF or antenna delay.
7. Export licensing restricts operation to a maximum of 515 metres per second.
8. External CAN transceiver and user application software required. Replaces one LV-TTL serial port.
9. GLONASS is not supported at 50Hz.