MULTI-FREQUENCY GNSS RECEIVER DELIVERS ROBUST POSITIONING AND SIMPLIFIES INTEGRATION

HIGH PRECISION GNSS
The multi-frequency OEM7700 offers future ready precise positioning for space constrained applications. Advanced interference mitigation features maintain high performance in challenging environments. With a variety of interface options to facilitate system integration, the OEM7700 provides the most efficient way to bring powerful Global Navigation Satellite System (GNSS) capable products to market quickly. With centimeter level positioning utilizing TerraStar® satellite-delivered correction services, the OEM7700 ensures globally available, high performance positioning without the need for expensive network infrastructure. Anywhere. Anytime.

BUILT-IN FLEXIBILITY
The OEM7700 uses a 555 channel architecture and can be configured in multiple ways for maximum flexibility. NovAtel®’s OEM7® firmware provides users with the ability to configure the OEM7700 for their unique application needs. The OEM7700 is scalable to offer sub-meter to centimeter level positioning, and is field upgradeable to all OEM7 family software options. These options include ALIGN® for precise heading and relative positioning, GLIDE® for decimeter level pass-to-pass accuracy and SPAN® GNSS+INS for continuous 3D position, velocity and attitude. NovAtel CORRECT® with RTK delivers centimeter level real-time positioning, or go base-free for centimeter and decimeter PPP solutions using TerraStar corrections.

To learn more about how our firmware solutions can enhance your positioning, please visit novatel.com/products/firmware-options.

DESIGNED WITH THE FUTURE IN MIND
The OEM7700 is capable of tracking all current and upcoming GNSS constellations including GPS, GLONASS, Galileo, BeiDou, QZSS and NavIC. It is software upgradeable to track upcoming signals as they become available.
## PERFORMANCE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Count</td>
<td>555 Channels</td>
</tr>
<tr>
<td>Signal Tracking</td>
<td></td>
</tr>
<tr>
<td>GPS</td>
<td>L1 C/A, L1C, L2C, L2P, L5</td>
</tr>
<tr>
<td>GLONASS</td>
<td>L1 C/A, L2 C/A, L2P, L3, L5</td>
</tr>
<tr>
<td>Galileo</td>
<td>E1, E5 AltBOC, E5a, E5b, E6</td>
</tr>
<tr>
<td>BeiDou</td>
<td>B1I, B1C, B2I, B2a, B3I</td>
</tr>
<tr>
<td>QZSS</td>
<td>L1 C/A, L2C, L5, L6</td>
</tr>
<tr>
<td>SBAS</td>
<td>L1, L5, L-Band up to 5 channels</td>
</tr>
</tbody>
</table>

### Horizontal Position Accuracy (RMS)

- **Single Point L1:** 1.5 m
- **Single Point L1/L2:** 1.2 m
- **SBAS^4:** 60 cm
- **DGPS:** 40 cm
- **TerraStar-L™^5:** 40 cm
- **TerraStar-C PRO™^5:** 2.5 cm
- **TerraStar-X™^5:** 2 cm
- **RTK:** 1 cm + 1 ppm

### Maximum Data Rate

- Measurements: up to 100 Hz
- Position: up to 100 Hz

### Time to First Fix

- Cold start^6: < 39 s (typical)
- Hot start^7: < 20 s (typical)

### Signal Reacquisition

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

### Velocity Accuracy

- < 0.03 m/s RMS

### Velocity Limit

- 515 m/s

### Power Input voltage

- GPS L1: +3.3 VDC ±5%
- GPS/GLONASS L1/L2: 1.3 W (typical)

## PHYSICAL AND ELECTRICAL

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>46 × 71 × 8 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>31 g</td>
</tr>
</tbody>
</table>

## COMPLIANCE

- FCC,ISED, CE and Global Type Approvals

## FEATURES

- Field upgradeable software
- Differential GPS positioning
- Differential correction support for RTCM 2.1, 2.3, 3.1, 3.2, 3.3, 3.4, CMR, CMR+, RTCA and NOVATELX
- Navigation output support for NMEA 0183 and detailed NovAtel ASCII and binary logs
- Receiver Autonomous Integrity Monitoring (RAIM)
- GLIDE and STEADYLINE smoothing algorithms
- Interference Toolkit
- Web GUI
- Outputs to drive external LEDs
- 4 Event inputs
- 4 Event outputs
- Pulse Per Second (PPS) output

## PHYSICAL AND ELECTRICAL

- Acceleration
  - Operating: MIL-STD 810G (CH1), Method 513.7 (16 g)

## OPTIONAL ACCESSORIES

- VEXXIS® GNSS-500 and GNSS-800 series antennas
- Compact GNSS antennas
- Mechanical mounting rails
- OEM7 Development Kit

For the most recent details of this product: novatel.com/oem7

## ENVIRONMENTAL

### Temperature

- Operating: -40°C to +85°C
- Storage: -55°C to +95°C

### Humidity

- 95% non-condensing

### Vibration

- Random^11: MIL-STD-810G (CH1)
  - Method 514.7
  - (Cat 24, 20 g RMS)
- Sinusoidal: IEC 60068-2-6

### Shock

- Operating: MIL-STD-810G (CH1)
  - Method 516.7 (40 g)
- Non-operating: MIL-STD-810G (CH1), Method 516.7 (75 g)-Survival

### COMPLIANCE

- FCC, ISDE, CE and Global Type Approvals

## FIRMWARE SOLUTIONS

- ALIGN
- SPAN
- RTK
- RTK ASSIST™
- TerraStar PPP
- API