COMPACT, DUAL-FREQUENCY GNSS RECEIVER DELIVERS ROBUST POSITIONING

HIGH PRECISION GNSS, COMPACT SIZE
The dual-frequency OEM7600 offers future ready, precise positioning for space constrained applications with an extremely small form factor. Advanced interference mitigation features are available for performance in challenging environments. With a variety of interface options to facilitate system integration, the OEM7600 provides the most efficient way to bring powerful Global Navigation Satellite System (GNSS) capable products to market quickly. With centimetre level positioning utilizing TerraStar L-Band satellite-delivered correction services, the OEM7600 ensures globally available, high performance positioning without the need for expensive network infrastructure. Anywhere. Anytime.

BUILT-IN FLEXIBILITY
NovAtel’s OEM7™ firmware gives users the flexibility to configure the OEM7600 for their unique application needs. The OEM7600 is scalable to offer sub-metre to centimetre level positioning, and is field upgradable to all OEM7 family software options. These options include ALIGN® for precise heading and relative positioning, GLIDE™ for decimetre level pass-to-pass accuracy and SPAN® GNSS+INS for continuous 3D position, velocity and attitude. NovAtel CORRECT™ with RTK delivers centimetre level real-time positioning, or go base-free for centimetre and decimetre 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 OEM7600 features configurable channels to optimize satellite availability in any condition, no matter how challenging. It tracks current and upcoming GNSS constellations and satellite signals including GPS, GLONASS, Galileo, BeiDou and QZSS. The OEM7600 is software upgradable to track future signals as they become available.
PERFORMANCE

Channel Count
555 Channels

Signal Tracking
- GPS L1 C/A, L1C, L2C, L2P
- GLONASS L1 C/A, L1C, L2C, L2P
- BeiDou B1, B2
- Galileo E1, E5b
- SBA S L1
- QZSS L1 C/A, L1C, L2C

L-Band up to 5 channels

Horizontal Position Accuracy (RMS)
- Single Point L1 1.5 m
- Single Point L1/L2 1.2 m
- NovAtel CORRECT > 60 cm

Power Consumption
- GPS L1 0.9 W (typical)
- GPS/GLONASS L1/L2 1.3 W (typical)
- All frequencies/All constellations with L-Band 1.6 W (typical)

Antenna Port Power Output
- Output voltage 3.3 VDC ±5%
- Maximum current 200 mA

Connectors
- Main 60-pin dual row female socket
- Antenna Input MMCX female

COMMUNICATION PORTS
- 5 LVCMOS up to 460,800 bps
- 2 CAN Bus 1 Mbps
- 1 USB 2.0 (device) H5
- 1 USB 2.0 (host)¹¹ H5
- 1 Ethernet 10/100 Mbps

ENVIRONMENTAL
- Temperature
  - Operating -40°C to +85°C
  - Storage -55°C to +95°C
- Humidity 95% non-condensing
- Vibration
  - Random MIL-STD 810G Method 514.7
  - Sinusoidal IEC 60068-2-6
- Bump ISO 9022-31-06 (25 g)
- Shock Operating MIL-STD-810G (40 g)
- Non-operating MIL-STD-810G, Method 516.7 (75 g) Survival

FEATURES
- Field upgradeable software
- Differential GPS positioning
- Differential correction support for RTCM 2.1, 2.3, 3.0, 3.1, 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

FIRMWARE SOLUTIONS
- ALIGN
- SPAN
- RTK
- RTK ASSIST™
- TerraStar PPP
- API¹²

OPTIONAL ACCESSORIES
- VEXXIS™ GNSS-500 and GNSS-800 series antennas
- ANT series antennas
- OEM7 Development Kit

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

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Version 1 Specifications subject to change without notice
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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. Designed for BeiDou Phase 2, B1 and B2 compatibility.
3. 1 Hz support only.
4. GPS only.
5. Requires subscription to TerraStar data service. Subscriptions available from NovAtel.
6. Typical value. No almanac or ephemerides and no approximate position or time.
7. Typical value. Almanac and recent ephemerides saved and approximate position and time entered.
8. Time accuracy does not include biases due to RF or antenna delay.
9. Export licensing restricts operation to a maximum of 515 metres per second, message output impacted above 500 m/s.
10. Typical values using serial port communication without interference mitigation and Ethernet disabled. Consult the OEM7 User Documentation for power supply considerations.