COMPACT, MULTI-FREQUENCY GNSS RECEIVER DELIVERS ROBUST POSITIONING

HIGH PRECISION GNSS, COMPACT SIZE
The multi-frequency OEM7600 offers future ready precise positioning for space constrained applications with an extremely small form factor. Advanced interference mitigation features maintain high 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 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, NaviC and QZSS. The OEM7600 is software upgradable to track future signals as they become available.

FEATURES
+ 555 channel all-constellation, multi-frequency positioning solution
+ Multi-channel L-Band supports TerraStar correction services
+ Serial, USB, CAN and Ethernet connectivity with Web interface
+ Advanced interference detection and mitigation features
+ RTK, GLIDE and STEADYLINE® firmware options
+ Simple to integrate, compact form factor with 20 g vibration performance rating
+ SPAN GNSS+INS functionality

If you require more information about our receivers, visit novatel.com/oem7
PERFORMANCE

Channel Count
555 Channels

Signal Tracking
- GPS L1 C/A, L1C, L2C, L2P, L5
- GLONASS L1 C/A, L2 C/A, L2P, L1, L5
- BeiDou B1, B2
- Galileo E1, E5 AltBOC, E5a, E5b
- NavIC (IRNSS) L5
- SBAS L1, L5
- QZSS L1 C/A, L1C, L2C, L5
- L-Band up to 5 channels

Horizontal Position Accuracy (RMS)
- Single Point L1: 1.5 m
- Single Point L1/L2: 1.2 m

Power Consumption
- GPS L1: 0.9 W (typical)
- GPS/GLONASS L1/L2: 1.3 W (typical)
- Output voltage: 3.3 VDC ± 5%
- Maximum current: 100 mA

Connectors
- Main: 60-pin dual row female socket
- Antenna Input: MMBX female
- TerraStar-L: 40 cm
- TerraStar-C: 4 cm
- RTK: 1 cm + 1 ppm
- Initialization time: < 10 s
- Initialization reliability: > 99.9%

Maximum Data Rate
- Measurements: up to 100 Hz
- Position: up to 100 Hz

Time to First Fix
- Cold start: < 40 s (typical)
- Hot start: < 19 s (typical)

Antenna Port Power Output
- Output voltage: 3.3 VDC ± 5%
- Maximum current: 100 mA

Power
- Input voltage: +3.3 VDC ± 5%

COMUNICATION PORTS
- 5 LVCMOS up to 460,800 bps
- 2 CAN Bus: 1 Mbps
- 1 USB 2.0 (device): HS
- 1 USB 2.0 (host): HS
- 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: S14.7 (Cat 24, 20 g RMS)
- Bump
  - ISO 9022-31-06 (25 g)
- Shock
  - Operating: MIL-STD-810G (40 g)
- Non-operating: MIL-STD-810G
- Method: S16.7 (75 g) Survival
- Acceleration
  - Operating: MIL-STD-810G
  - Method: S137 (16 g)

FIELD AND ELECTRICAL

Dimensions
- 35 x 55 x 13 mm

Weight
- 31 g

Power
- Input voltage: +3.3 VDC ± 5%

Features
- Field upgradeable software
- Differential GNS positioning
- Differential correction support for RTCM 2.1, 2.3, 3.0, 3.1, 3.2, 3.3, CMR, CMR+, RTCM 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

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

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 3 Specifications subject to change without notice
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1 Typical values. Performance specifications subject to GNSS system characteristics, Signal-In-Space (SIS) operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.
2 Model-configurable to track L5/E5a (all / Galileo) through L2 (GPS) or L3/E5b/2 (GLONASS / Galileo / BeiDou) through L2 (GLONASS). See manual for details.
3 Hardware ready for L3 and L5.
4 Designed for BeiDou Phase 2 and 3, B1and B2 compatibility (where applicable).
5 E1bc support only.
6 GPS only.
7 Requires subscription to TerraStar data service. Subscriptions available from NovAtel.
8 Typical value. No almanac or ephemerides and no approximate position or time.
9 Typical value. Almanac and recent ephemerides saved and approximate position and time entered.
10 Typical values. Performance specifications subject to GNSS system characteristics, Signal-In-Space (SIS) operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.
11 Export licensing restricts operation to a maximum of 515 metres per second, message output impacted above 500 m/s.
12 Typical values using serial port communication without interference mitigation and Ethernet disabled. Consult the OEM7 User Documentation for power supply considerations.
13 Available in Q4 2018.