

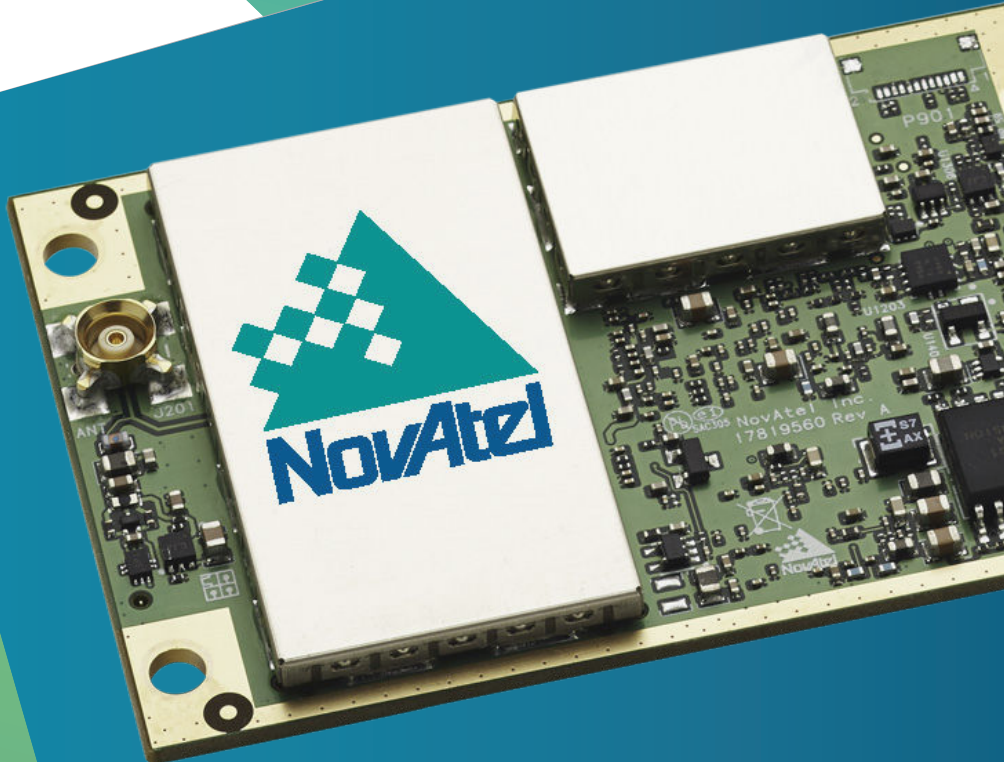


OEM7 Receivers

Setting the standard in
positioning and performance



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www.NavtechGPS.com



Hexagon | NovAtel

OEM7 GNSS Receivers

OEM7 GNSS RECEIVERS SET THE STANDARD IN POSITIONING PERFORMANCE, FEATURES AND EASE OF INTEGRATION.

Leveraging six previous generations of precise positioning know-how, the OEM7 incorporates innovative capabilities and features to enhance positioning reliability, accuracy and availability.

Cornerstones of the OEM7 family include advanced interference detection and mitigation, with L-Band and SPAN GNSS+INS functionality on every receiver.

SPAN Technology



SPAN GNSS+INS technology by NovAtel provides continuous 3D positioning, velocity and attitude determination even when satellite reception may be compromised for short periods of time.

Our SPAN technology integrates Inertial Measurement Units (IMUs) with OEM7 receivers to create a deeply coupled GNSS+INS solution at data rates up to 200 Hz.

The accuracy of our SPAN technology-enabled products can be optimized with our best-in-class Waypoint post-processing software.

To learn more about SPAN technology, please visit novatel.com/span.



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Flexible Positioning Options

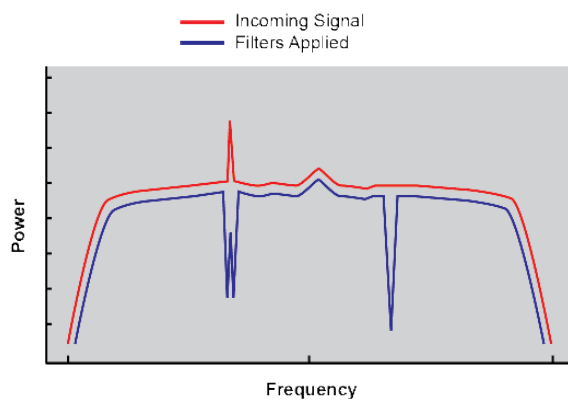


NovAtel provides state-of-the-art positioning algorithms which optimize corrections from Real Time Kinematic (RTK), Precise Point Positioning (PPP), Space-Based Augmentation Systems (SBAS) and Differential Global Navigation Satellite Systems (DGNSS).

NovAtel ensures you receive the positioning accuracy needed for your application, whether that is meter, decimeter or centimeter-level.

To learn more about NovAtel positioning, please visit novatel.com/solutions/about-positioning.

Interference Toolkit

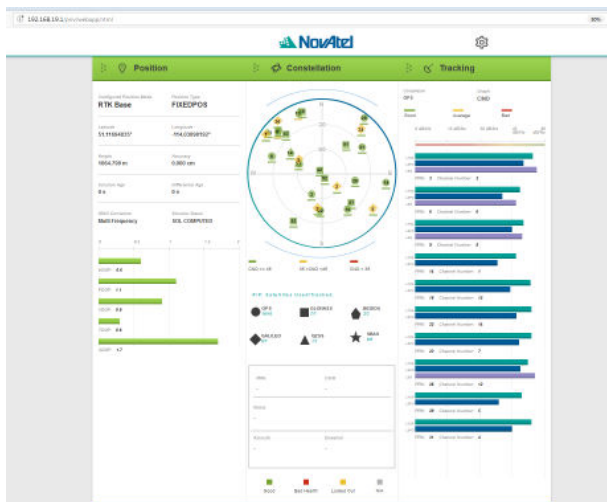


In today's crowded frequency spectrum, potential for interference is high.

The Interference Toolkit provides any operator on-demand actionable intelligence by measuring the radio frequency spectrum levels, simplifying visualization, monitoring, quantifying and even mitigating interference sources.

To learn more about the Interference Toolkit, please visit novatel.com/solutions/interference-mitigation/

NovAtel Application Suite and Setup & Monitor (Web)



NovAtel provides two user interface tools to ease your receiver configuration and monitoring tasks. NovAtel Application Suite is a computer-based application that manages OEM7 receivers connected to the computer using either a serial, USB or Ethernet connection. Setup & Monitor (Web) is a browser-based interface that operates on any device connected to the receiver using Wi-Fi or Ethernet. These tools have a common look and feel and provide the following main features:

- Position configurations and display status
- Logging control
- Storage management
- Mobile platform support
- Upgrade receiver firmware

OEM7 GNSS Series Cards



OEM7600

Multi-frequency GNSS receiver delivers precise positioning in an extremely compact form factor

Size: 35 × 55 × 13 mm
Weight: 31 g



OEM7700

Multi-frequency GNSS receiver delivers precise positioning and simplifies integration

Size: 46 × 71 × 8 mm
Weight: 31 g



OEM7720

Dual-antenna, multi-frequency GNSS receiver delivers robust heading and positioning

Size: 46 × 71 × 8 mm
Weight: 29 g



OEM719

Multi-frequency GNSS receiver includes all modern signals and is backward compatible with the OEM615/OEM617 receiver

Size: 46 × 71 × 11 mm
Weight: 31 g



OEM729

Multi-frequency GNSS receiver includes all modern signals and is backward compatible with the OEM628 receiver

Size: 60 × 100 × 9 mm
Weight: 48 g

POSITIONING ACCURACY (LEVEL)

Meter (RMS/95%)		Sub Meter (RMS/95%)		Centimeter (RMS/95%)			
Single Point L1	Single Point L1/L2	SBAS	DGPS	TerraStar-L ^a	TerraStar-C PRO ^a	TerraStar-X ^a	RTK
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm

a. Requires subscription to TerraStar® data service. Subscriptions available from NovAtel.
b. Typical value, GPS L1 only.

SOLUTIONS

+	+	+	+	+	+	ALIGN Heading and Relative Positioning
						Integrated ALIGN Heading
+	+	+	+	+	+	GLIDE
+	+	+	+	+	+	RAIM
+	+	+	+	+	+	SPAN
+	+	+	+	+	+	Interference Toolkit

SIGNAL TRACKING

L1 C/A, L1C, L2C, L2P, L5	L1 C/A, L1C, L2C, L2P, L5	L1 C/A, L1C, L2C, L2P, L5	L1 C/A, L1C, L2C, L2P, L5	L1 C/A, L1C, L2C, L2P, L5	L1 C/A, L1C, L2C, L2P, L5	GPS
L1 C/A, L2 C/A, L2P, L3, L5	L1 C/A, L2 C/A, L2P, L3, L5	L1 C/A, L2 C/A, L2P, L3, L5	L1 C/A, L2 C/A, L2P, L3, L5	L1 C/A, L2 C/A, L2P, L3, L5	L1 C/A, L2 C/A, L2P, L3, L5	GLONASS
E1, E5 AltBOC, E5a, E5b, E6	E1, E5 AltBOC, E5a, E5b, E6	E1, E5 AltBOC, E5a, E5b	E1, E5 AltBOC, E5a, E5b, E6	E1, E5 AltBOC, E5a, E5b, E6	E1, E5 AltBOC, E5a, E5b	Galileo
B1I, B1C, B2I, B2a, B2b, B3I	B1I, B1C, B2I, B2a, B2b, B3I	B1I, B1C, B2I, B2a, B2b	B1I, B1C, B2I, B2a, B2b, B3I	B1I, B1C, B2I, B2a, B2b, B3I	B1I, B1C, B2I, B2a, B2b	BeiDou
L1 C/A, L1C, L2C, L5, L6	L1 C/A, L1C, L2C, L5, L6	L1 C/A, L1C, L2C, L5	L1 C/A, L1C, L2C, L5, L6	L1 C/A, L1C, L2C, L5, L6	L1 C/A, L1C, L2C, L5	QZSS
L5	L5	L5	L5	L5	L5	NavIC (IRNSS)
L1, L5	L1, L5	L1, L5	L1, L5	L1, L5	L1, L5	SBAS
Up to 5 channels	Up to 5 channels	Up to 5 channels	Up to 5 channels	Up to 5 channels	Up to 5 channels	L-Band

INTERFACES

2 LVCMOS, 1 RS-232/RS-422	3 LVCMOS	5 LVCMOS	5 LVCMOS	5 LVCMOS	5 LVCMOS	Serial Ports
1 Device	1 Device	1 Device, 1 Host	1 Device, 1 Host	1 Device, 1 Host	1 Device, 1 Host	USB Ports
2	2	2	2	2	2	CAN Ports
1		1	1	1	1	Ethernet

100 Hz	100 Hz	100 Hz	100 Hz	100 Hz	100 Hz	Maximum Data Rate
+3.3 VDC [$\pm 5\%$]	+3.3 VDC [$\pm 5\%$]	+3.0 to 5.0 VDC	+3.3 VDC [$\pm 5\%$]	+3.3 VDC [$\pm 5\%$]	+3.3 VDC [$\pm 5\%$]	Input Voltage
0.9 W	0.9 W	1.6 W	0.9 W	0.9 W	0.9 W	Power Consumption ^b

OEM7 GNSS Series Enclosures



PwrPak7

Rugged, compact enclosure delivers scalable GNSS solutions with internal storage and GNSS+INS options

Size: 147 × 125 × 55 mm
Weight: 500 g



PwrPak7D

Rugged, compact, dual antenna enclosure delivers scalable GNSS solutions with internal storage and GNSS+INS options

Size: 147 × 125 × 55 mm
Weight: 500 g

POSITIONING ACCURACY (LEVEL)

Meter (RMS/95%)		Sub Meter (RMS/95%)		Centimeter (RMS/95%)			
Single Point L1	Single Point L1/L2	SBAS	DGPS	TerraStar-L ^a	TerraStar-C PRO ^a	TerraStar-X ^a	RTK
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm
1.5 m 2.5 m	1.2 m 2.4 m	60 cm 120 cm	40 cm 80 cm	40 cm 50 cm	2.5 cm 3 cm	2 cm 2.5 cm	1 cm + 1 ppm 2.5 cm + 1 ppm



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a. Requires subscription to TerraStar® data service. Subscriptions available from NovAtel.
b. Typical value, GPS L1 only.

SOLUTIONS

+	ALIGN Heading and Relative Positioning	+
+	Integrated ALIGN Heading	
+	GLIDE	+
+	RAIM	+
+	SPAN	+
+	Interference Toolkit	+

SIGNAL TRACKING

L1 C/A, L1C, L2C, L2P, L5	GPS	L1 C/A, L1C, L2C, L2P, L5
L1 C/A, L2 C/A, L2P, L3, L5	GLONASS	L1 C/A, L2 C/A, L2P, L3, L5
E1, E5 AltBOC, E5a, E5b	Galileo	E1, E5 AltBOC, E5a, E5b, E6
B1I, B1C, B2I, B2a, B2b	BeiDou	B1I, B1C, B2I, B2a, B2b, B3I
L1 C/A, L1C, L2C, L5	QZSS	L1 C/A, L1C, L2C, L5, L6
L5	NavIC (IRNSS)	L5
L1, L5	SBAS	L1, L5
Up to 5 channels	L-Band	Up to 5 channels

INTERFACES

1 RS-232, 2 RS-232/RS-422 1 Device, 1 Host	Serial Ports	1 RS-232, 2 RS-232/RS-422 1 Device, 1 Host
1	USB Ports	1
1	CAN Ports	1
+	Ethernet	+
	Wi-Fi	

16 GB	Memory	16 GB
100 Hz	Maximum Data Rate	100 Hz
+9 to +36 VDC	Input Voltage	+9 to +36 VDC
3.95 W	Power Consumption ^b	3.25 W



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About Hexagon | NovAtel

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications. Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

NovAtel, part of Hexagon, is a global technology leader, pioneering end-to-end solutions for assured positioning for land, sea, and air. NovAtel designs, manufactures and sells high precision positioning technology developed for efficient and rapid integration. Its solutions are empowering intelligent positioning ecosystems in vital industries that depend on the ability to tackle the most complex challenges in the most demanding environments. Learn more at novatel.com.

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