NAV-960

Guidance Controller

The all-new NAV-960[™] guidance controller from PTx Trimble is our most advanced GNSS receiver and positioning engine to date, delivering excellent uptime and accuracy for every field operation. Building off the broad platform support and compatibility of the NAV-900 guidance controller, the NAV-960 with improved performance is the perfect foundation for fieldwork today and ready to handle exciting developments in the future.



Key Features

- Full range of correction signals including GPS, GLONASS, Galileo, Beidou, and QZSS constellations
- 16x more powerful processor keeps you ready for future technology innovations
- Up to 50% better on-ground line following performance
- Over 10,000 supported vehicle platforms
- Easy upgrade for existing NAV-900 installations
- Compatible with all GFX-series displays

Built with a focus on accuracy and attention to minute detail, every aspect of this receiver is tuned to drive savings for growers. The IP66-rated assembly with powder-coated aluminum base delivers years of worry-free operation and the enhanced GNSS engine tracks more satellites than ever before. The upgraded steering inertial sensor and orientation engine improves vehicle positioning and line following performance by up to 50% while improved GNSS filtering algorithms from embedded Trimble® IonoGuard™ technology provide optimal performance during solar events, increasing uptime even in challenging conditions.

Capable of utilizing every major GNSS constellation in orbit, and offering support for future correction services such as HAS in Europe and CLAS in Japan, the NAV-960 can access the most satellites in the industry ensuring fast convergence and high accuracy for every operation by the time you get to the field.

Paired with Trimble's scintillation-mitigating lonoGuard technology, this receiver will ensure you operate seamlessly all day long with the greatest precision and least error possible.

Ruggedly designed to withstand every farming environment, the NAV-960 guidance controller's modern processor enhances data delivery speeds to ensure high accuracy and smooth operation during complex workflows such as remote output, water management work, blade height control and every variation of vehicle steering application.

Onboard Wi-Fi® and Bluetooth® will make the NAV-960 easier to support for service teams and ready to embrace future enhancements across the PTx Trimble solution portfolio. The receiver is compatible across the entire GFX display lineup with a range of accuracy options for retrofit and OEM installations.





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Guidance		
Electric	EZ-Steer®, EZ-Pilot® Pro, and Autopilot™ Motor Drive	
Guidance Ready	CANBus J1939	
Hydraulic	External VDM-912	
Housing & Mechanical		
Housing Material	(Upper) Low-profile, chemical resistant polymer casing with UV-resistant paint (Lower) Aluminum casing with powder coat paint	
Size	254 mm × 228 mm × 64 mm (W×L×H)	
Weight	1.41 kgs	
Mounts	Trimble custom, OEM compatible*, Spar*	
Connectors		
Connectors To GFX display	M12 4-pin connector	
	M12 4-pin connector M12 5-pin connector	
To GFX display	·	
To GFX display To External Radio	M12 5-pin connector Deutsch 12-pin connector	
To GFX display To External Radio For I/O	M12 5-pin connector Deutsch 12-pin connector	
To GFX display To External Radio For I/O Communication	M12 5-pin connector Deutsch 12-pin connector and I/O Integrated 802.11b/g/n/a	
To GFX display To External Radio For I/O Communication Wi-Fi	M12 5-pin connector Deutsch 12-pin connector and I/O Integrated 802.11b/g/n/a (2.4 & 5 GHz)**	
To GFX display To External Radio For I/O Communication Wi-Fi Bluetooth	M12 5-pin connector Deutsch 12-pin connector and I/O Integrated 802.11b/g/n/a (2.4 & 5 GHz)** Bluetooth 5.1	
To GFX display To External Radio For I/O Communication Wi-Fi Bluetooth Serial Ports	M12 5-pin connector Deutsch 12-pin connector and I/O Integrated 802.11b/g/n/a (2.4 & 5 GHz)** Bluetooth 5.1 2 Tx/Rx,1 Tx only 2 (NMEA 2000 /	
To GFX display To External Radio For I/O Communication Wi-Fi Bluetooth Serial Ports CAN Ports	M12 5-pin connector Deutsch 12-pin connector and I/O Integrated 802.11b/g/n/a (2.4 & 5 GHz)** Bluetooth 5.1 2 Tx/Rx,1 Tx only 2 (NMEA 2000 / ISO 11783)	

Optional accessory
*Future release

GNSS Receiver Specifications		
Constellations	GPS: L1 C/A, L1C, L2C, L2P, L5	
	GLONASS: L1 C/A, L2 C/A, L2P, L3	
	Galileo: E1, E5 AltBOC, E5a, E5b, E6	
	BeiDou: B1I, B1C, B2I, B2a, B2b, B3I	
	OZSS: L1 C/A, L1C, L1S, L2C, L5, L6	
	SBAS: L1, L5	
Satellite Corrections	CenterPoint® RTX Fast	
	CenterPoint RTX	
	RangePoint® RTX	
	SBAS (WAAS,EGNOS,MSAS)	
	OZSS CLAS	
	xFill®	
	xFill Premium	
Land-Based Corrections	RTK	
	CenterPoint VRS	
Correction Formats	CMR+, sCMR+, sCMR+ with SecureRTK, CMRx, CMRxe (RTX corrections), RTCM 3.0, RTCM 3.1, RTCM 3.2, RTCM 3.3	
Inertial Measure	ement Unit (IMU)	
Gyroscope	Yes: 3-axis, 200 Hz	
Accelerometer	Yes: 3-axis, 200 Hz	

Technical		
Input Power	9 - 16 VDC, 17.5 W maximum (9 - 16 VDC, consumes 5.5 W with no accessories connected, 17.5 W with external accessories connected)	
Output Power	Same as input, 1A max	
Processor (CPU)	Quad-Core/AM62Ax 4x Cortex A53@1.4GHz 2x Cortex R5F@800MHz	
RAM	2 GB	
Storage	4 GB / eMMC 64 MB / QSPI	
Operating System	Linux	
Operational Range		
Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)	
Storage Temperature	-40 °C to +85 °C (-40 °F to +185 °F)	
Humidity	100% condensing	
Ingress Protection	IP66, dustproof, waterproof, IPx9K	



Contact your PTx Trimble Authorized Dealer today



10368 Westmoor Drive Westminster, CO 80021 USA

+1-720-887-6100 Phone

+1-720-887-6101 Fax

