

# NAV-960 MCX Tech

## 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 up time 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 IonoGuard 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 x 228 mm x 64 mm (WxLxH)
Weight	1.41 kgs
Mounts	Trimble custom, OEM compatible*, Spar

### Connectors

To GFX display	M12 4-pin connector
To External Radio	M12 5-pin connector
For I/O	Deutsch 12-pin connector

### Communication and I/O

Wi-Fi	Integrated 802.11b/g/n/a (2.4 & 5 GHz)**
Bluetooth	Bluetooth 5.1
Serial Ports	2 Tx/Rx, 1 Tx only
CAN Ports	2 (NMEA 2000 / ISO 11783)
Digital Out	Sonalert
Analog In	Remote Engage
NMEA Output	1, 5, 10 Hz

\*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
	QZSS: L1 C/A, L1C, L1S, L2C, L5, L6
	SBAS: L1, L5

### Satellite Corrections

Satellite Corrections	CenterPoint® RTX Fast
	CenterPoint RTX
	RangePoint® RTX
	SBAS (WAAS, EGNOS, MSAS)
	QZSS CLAS
	xFill®
	xFill® Premium

### Land-Based Corrections

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 Measurement 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



Elite Global Full Line PTx Dealer

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