



Dual-antenna Multi-frequency GNSS receiver for Heading Application Model No. XT-400+

With dual-antenna input, XT-400+ provides precise and reliable heading combined with centimeter level RTK positioning. Dual antenna heading capabilities in such a small form factor opens the door to advanced automation and navigation performance in both static and dynamic states, with reduced power consumption. Dual antenna GNSS delivers heading & pitch or heading & roll angles, which are available immediately at start-up, helping initialize inertial sensors which rel

KEY FEATURES

- Flexibility of use and easy-to- integrate**
- Best-in-class SWaP (Size, Weight and Power)**
- AIM+ industry-leading anti-jamming, anti-spoofing technology**
- OSNMA Support**
- Full-constellation, multi-frequency satellite tracking**
- Sub-degree GNSS heading & pitch or heading & roll**
- High update rate with low latency**

BENEFITS

State of the art with flexibility of use

The XT-400+ is a state-of-the-art GNSS receiver using multi constellation GNSS technology for maximal positioning availability and reliability in challenging conditions. It can be used as a base station or a rover receiver in single or dual antenna configuration. In dual antenna mode GNSS heading provides unmatched performance in both static and dynamic conditions removing the reliance on vehicle dynamics or magnetic sensors. Such a versatile receiver allows integrators to keep a single item in stock which can be used in a multitude of applications Like GNSS based North Alignment and Headi

Ultra-low power design

The XT-400+ provides RTK positioning at the lowest power consumption of any comparable device on the market. This means longer operation on a single battery charge, smaller batteries and greater usability.

Easy-to-integrate

The XT-400+ comes with fully documented interfaces, commands and data messages. The included RxTools software allows receiver configuration and monitoring as well as data logging and analysis. An SDK is provided, which allows integrators to create professional custom post-processing applications. XT-400+ is compatible with its SDK library for PPK (Post-processed kinematic) offline processing.

FEATURES			PERFORMANCE			PHYSICAL AND ENVIRONMENTAL		
GNSS signals			RTK performance			Input voltage		
448 Hardware channels for simultaneous tracking of most visible signals ¹ :			Horizontal accuracy 0.6 cm + 0.5 ppm			5 VDC or 4.5–30 VDC (Adapter will be provided for 230V AC Supply)		
<ul style="list-style-type: none"> GPS: L1, L2 GLONASS: L1, L2 BeiDou: B1, B2, B3 Galileo: E1, E5b QZSS: L1 C/A, L1 C/B, L2 S BAS: EGNOS, WAAS, GAGAN, MSAS, SDCM (L1) 			Vertical accuracy 1 cm + 1 ppm					
			Initialisation 7s					
GNSS+ technologies			GNSS attitude accuracy			Weight		
<ul style="list-style-type: none"> AIM+ industry leading anti-jamming, anti-spoofing interference monitoring & mitigation technology IONO+ advanced scintillation mitigation APME+ a posteriori multipath estimator for code and phase multipath mitigation LOCK+ superior tracking robustness under heavy mechanical shocks or vibrations RAIM+ (Receiver Autonomous Integrity Monitoring) 			Antenna separation Heading Pitch/Roll			< 900g (excluding antenna and mounting structure)		
OSNMA Support RTK GNSS Heading			1 m 0.15° 0.25°					
			5 m 0.03° 0.05°					
Formats			Position accuracy			Size		
NMEA 0183, v3.01, v4.0 Septentrio Binary Format (SBF) RINEX v2.x, v3.x RTCM v2.x, v3.x (MSM messages included) CMR v2.0 (out/in), CMR+ (input only)			Horizontal Vertical			147 x 125 x 55 mm		
			Standalone 1.2 m 1.9 m					
			SBAS 0.6 m 0.7 m			Cooling		
			DGNSS 0.4 m 0.7 m			Passive cooling		
			Velocity accuracy 0.03m/s			Chassis		
Connectivity to meet MIL-STD			Maximum update rate			Aluminuim AISI 12		
1 High Speed USB device port Inbuilt Bluetooth 5.2V 1 Hi-speed RS232 port 1x 3V PPS output, max 100Hz (5V Optional) NTP & PTP support General purpose output NTRIP (server, client, caster) FTP server, FTP push, SFTP On-board logging on micro-SD card (max 32 GB)			Standalone, SBAS, DGPS+attitude 50Hz			Antenna		
			Measurements 100 Hz			Connectors 2 x TNC		
			RTK + attitude 20 Hz			Antenna supply voltage 3–5.5 VDC		
			Latency <10 ms			Maximum antenna current 150 mA		
Time to first fix			Antenna gain range 15–35 dB			Environment		
			Cold start < 45 s			Operating temperature -40° C to +85° C		
			Warm start < 20 s			Storage temperature -55° C to +85° C		
			Re-acquisition avg. 1 s			Humidity 5% to 95% (non-condensing)		
			Tracking sensitivity -154 dBm			Vibration MIL-STD-810G		
Tracking performance (C/N0 threshold)			Ingress Protection IP65			Certification		
			Tracking 20dB-Hz			RoHS compliant, CE certified, EMC MIL-STD-461E/F compliant		
			Acquisition 33dB-Hz			OPTIONAL ACCESSORIES		
Optional Interfaces			2 GNSS Antenna (XT-GNSS-3024-01-00) 5m, LMR200 Cables For Each Antenna Antenna Mounting Structure (Metallic) Cable breakout					
			Plug compatible with Pixhawk and ArduPilot			SUPPORTING COMPONENTS		
			RS422 port with converter			Web UI with full control and monitoring functionality. RxTools, a complete and intuitive GUI tool set for receiver control, monitoring, data analysis and conversion. GNSS receiver communication SDK. Available for both Windows and Linux.		
			2 Event markers for camera shutter synchronisation					
			Ready to integrate push-button start/stop logging on the SD-card					

