

E200

Septentrio Mosaic X5 Board

DESIGNED FOR ROVER STATION

Gain a competitive edge with the eSurvey E200 GNSS Receiver. The E200 is equipped with advanced technology to make sure you have maximum productivity in the field. The durable IP67 design makes it possible to work in tough environments. Combining 4G GSM modem, internal radio (Rx only), and 60° inclination IMU function, the E200 is the best choice for a rover station receiver.



GNSS Receiver

Lightweight Design: Easy to Carry

Easily carry it in various complex environments and use it in any rover station scenarios, benefitting from its lightweight and compact design.

Web UI

It allows users to view position status, set up working mode, download data, and update firmware from the Web user interface with any smartphone, tablet, or PC.

Integrated RX Radio

The built-in Global 4G Network and RX radio module allows the E200 to work perfectly as a rover station.

Max 60° Tilt Survey: A Different Way of Working

- Quickly measure accurate points while standing or walking without leveling the pole.
- Concentrate on where the pole tip needs to go, which is especially useful during a stakeout.
- Easily start a survey in environments that are hard to reach, such as building corners and slopes.
- No longer worry about the movement of the pole when measuring, provided that the pole tip is stationary.

Detailed SBF data recorded: Advanced analysis for the receiver

Support SBF data output. This data should be your first choice if you wish to receive complete and detailed information from the receiver for advanced analysis.

Multi-constellations and Multi-frequency

With 448 channels of GNSS tracking, the E200 provides stable and reliable accuracy. All GNSS signals can be tracked, including GPS, BDS, GLONASS, GALILEO, QZSS, SBAS, L-Band and NAVIC.



Website



Social media

Product Specification

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GNSS Performance		
Satellites tracking	GPS	L1C/A, L1P1Y, L2C, L2P, L5
	BDS	B1I, B1C, B2a, B2I, B3
	GLONASS	L1CA, L2CA, L2P, L3 CDMA
	GALILEO	E1, E5a, E5b, E5 AltBoc
	QZSS	L1C/A, L2C, L5
	SBAS	WAAS, GAGAN, MSAS, EGNOS, SDCM(L1 L5)
	Navic	L5 ¹
Channels	448	
Signal reacquisition	< 1 second	
Cold start	< 45 seconds	
Warm start	< 20 seconds	
Hot start	< 20 seconds	
RTK signal initialization	< 7 seconds	
Initialization reliability	> 99.9%	
Update rate	20Hz	
RTK	<ul style="list-style-type: none"> H: 6 mm + 0.5 ppm (RMS) V: 10 mm + 1 ppm (RMS) 	
Standard point positioning	<ul style="list-style-type: none"> H: 1.2 m RMS V: 1.9 m RMS 	
Code differential	<ul style="list-style-type: none"> H: 0.4 m RMS V: 0.7 m RMS 	
SBAS	<ul style="list-style-type: none"> H: 0.6 m RMS V: 0.8 m RMS 	
Correction data	CMR, CMR+ (input only), RTCM v2.x, RTCM v3.x	
Data output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary	

Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x1 7.2V ~ 6900 mAh
Voltage	9 - 28V dc
Working time	Up to 9 hours
Charging time	Typically 4 hours

Internet Modem	
Supported band	Global 4G <ul style="list-style-type: none"> LTE FDD: B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28 LTE TDD: B38, B39, B40, B41 UMTS: B1, B2, B4, B5, B6, B8, B19 GSM: B2, B3, B5, B8

1: It is not supported for now. It will be supported after firmware update in the future.

2: It is only available for radio protocol "Satel", and the radio firmware is later than G001.02.27.

System	
Operation system	Linux
Internal memory	8 GB
Bluetooth	BT5.0+EDR, BLE
Wi-Fi	802.11 a/b/g/n/ac
SIM card	✓
TNC	Connect internal radio with antenna
5-pin port	Connect to external radio and external power; NMEA output
Type-C port	Charge and data transmission
Web UI	View status, update firmware, set up working mode, download data, etc.
Intelligent voice	Broadcast working mode and status
MEMS	Fast initialization, dynamic tilt survey up to 60°

Physical	
Dimension	Φ152 mm x H92 mm
Weight	945 g
Operating temperature	-30°C - +65°C
Storage temperature	-40°C - +80°C
Water / dust proof	IP67
Shock	<ul style="list-style-type: none"> Withstand topple over from a 2 m survey pole onto hard surfaces Survive a 1.2 m free drop
Vibration	Vibration resistant
Humidity	Up to 100%
Indicators	Satellites, datalink, battery, Bluetooth
Button	Power button, short press to voice broadcast working mode and status
Certificate	CE, FCC, NGS, IGS

Internal Radio	
Type	RX
Frequency range	410 - 470 MHz
Channel spacing	6.25 KHz ² / 12.5 KHz / 25 KHz
Protocol	Satel, PCC, TrimTalk, TrimMark III, TRANSEOT (PCC-GMSK), South, HiTarget, GEOTALK, GEOMK3, HZSZ