e-survey

E500

PORTABLE TILT-FEATURED GNSS RECEIVER

The eSurvey E500 is manufactured for improved performance in complex GNSS conditions. The durable structural design makes it adapt to various working environments. A maximum 60° incline angle ensures a tilt-to-go survey without stopping your workflow.

GNSS Receiver

iF Design Award Product

A global symbol of excellent design - especially with hosting. One of the most prestigious design awards worldwide.

Battery Indicator: An Intelligent Hint of Working Time

Quickly check the remaining battery power in real-time and figure out the working time without data loss.

Integrated Tx/Rx UHF Modem

The built-in transceiver radio modem, which is compatible with major radio protocols, allows the E500 to work as either a base or 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.

Rugged Design: Better Resistance to Shock and Fall

Use it for many years, for it is strongly made and capable of withstanding rough handling.

RTK Aid Function: Uninterrupted Work

Work without interruption even when RTK corrections fail, powered by our RTK aid function.

Website

Social media

Product Specification

E500

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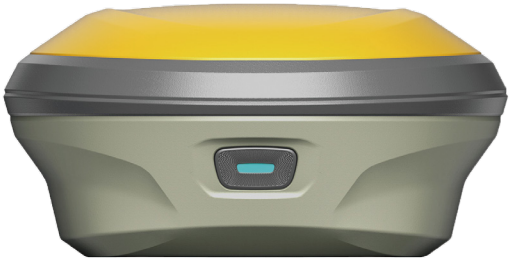

GNSS Performance		
Satellites tracking	GPS	L1 C/A, L1C, L2P(Y), L2C, L5
	BDS	B1I, B2I, B3I, B1C, B2a, B2b
	GLONASS	L1, L2, L3
	GALILEO	E1, E5a, E5b, E6
	QZSS	L1, L2, L5
	NavIC	L5
	SBAS	WAAS, GAGAN, MSAS, EGNOS, SDCM, BDS
	L-Band	B2b PPP (Only for the Asian-Pacific region), HAS [1]
Channels		1408
Signal reacquisition		< 1 second
Cold start		< 30 seconds
Warm start		< 20 seconds
Hot start		< 5 seconds
RTK signal initialization		< 5 seconds
Initialization reliability		> 99.9%
Update rate		20 Hz
High precision static		■ H: 2.5 mm + 0.1 ppm RMS ■ V: 3.5 mm + 0.4 ppm RMS
Static and Fast Static		■ H: 2.5 mm + 0.5 ppm RMS ■ V: 5 mm + 0.5 ppm RMS
RTK		■ H: 8 mm + 1 ppm RMS ■ V: 15 mm + 1 ppm RMS
Standard point positioning		■ H: 1.5 m RMS ■ V: 2.5 m RMS
Code differential		■ H: 0.4 m RMS ■ V: 0.8 m RMS
SBAS		■ H: 0.3 m RMS ■ V: 0.6 m RMS
Correction data		RTCM V3.X, RTCM2.X, CMR
Data output		GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary

Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x 2 3.6 V ~ 6800 mAh×2
Voltage	9 - 28V dc
Working time	Up to 25 hours as rover
Charging time	Typically 4 hours

Internet Modem	
Supported band	Global 4G ■ LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/ B13/B18/B19/B20/B25/B26/B28 ■ LTE TDD: B38/B39/B40/B41 ■ WCDMA: B1/B2/B4/B5/B6/B8/B19 ■ GSM: 850/900/1800/1900 MHz

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	MEMS Fast initialization, dynamic tilt survey up to 60°

Physical	
Dimension	Φ148 mm x H74.5 mm
Weight	1000 g
Operating temperature	-30°C - +65°C
Storage temperature	-40°C - +80°C
Water / dust proof	IP68
Shock	■ 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	Battery
Button	Power button, short press to voice broadcast working mode and status
Certificate	CE, FCC, NGS, IGS

Internal Radio	
Type	TX and RX
Emitting Power	1 W
Operation Range	3 - 5 km typically
Frequency range	410 - 470 MHz, 902.4 - 928 MHz [3]
Channel spacing	6.25 KHz [2] / 12.5 KHz / 25 KHz / 280 KHz [3]
Protocol	TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel_ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST_ADL, 900M Hopping [3]

1: It will be supported through future firmware update.

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

3: It is only available for certain radio module

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