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 and Status Indicator

The battery indicator provides real-time information about the remaining battery power. The status indicator on the button changes colors to show various working conditions.

Integrated Tx/Rx UHF Modem

Upgrade the built-in transceiver radio modem for both the base and rover which is compatible with major radio protocols, allows E500 to provide more reliable and long range communication.

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

PORTABLE TILT-FEATURED GNSS RECEIVER



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 1 3.6 V ~ 12000 mAh
Voltage	Type-C PD 12V/1.5A
Working time	Up to 11 hours as UHF base
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 b/g/n
SIM card	✓
TNC	Connect internal radio with antenna
Type-C port	Charge, data transmission and connect to external radio.
Web UI	View status, update firmware, set up working mode, download data, etc.
Intelligent voice	Broadcast working mode and status
Tilt sensor	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	IP67
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, working status
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	2 W
Operation Range	■ 3 ~ 5 km typically ■ up to 13 km with optimal conditions [2]
Frequency range	410 ~ 470 MHz
Channel spacing	12.5 KHz / 25 KHz
Protocol	Satel, Satel_ADL, HiTarget, TrimTalk, South, TrimMark III, TRANSEOT, GEOTALK, GEOMK3, PCCFST, PCCFST_ADL, PCCEOT, PCCEOT_SATEL, HZSZ

1: It will be supported through future firmware update.

2: It varies with the obstacle and terrain.

+86 400-999-8088

e-survey

esurvey-gnss.com