



E500

PORTABLE TILT-FEATURED GNSS RECEIVER

■ iF Design Award Product

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

■ Rugged Design: Better Resistance to Shock and Fall

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

■ 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.

■ RTK Assistant Technology: Uninterrupted Work

Work without interruption even when RTK corrections fail, powered by our RTK assistant technology.

■ 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.

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.

Specification

GNSS Performance		
Satellites tracking	GPS	L1CA, L2P(Y), L2C, L5
	BDS	B1I, B2I, B3I, B1C, B2a, B2b ¹
	GLONASS	L1, L2
	GALILEO	E1, E5a, E5b, E6 ¹
	QZSS	L1, L2, L5, L6 ¹
	L-Band	B2b PPP (Only for the Asian-Pacific region)
Channels	1408	
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	<ul style="list-style-type: none"> H: 3 mm + 1 ppm RMS V: 5 mm + 1 ppm RMS 	
RTK	<ul style="list-style-type: none"> H: 8 mm + 1 ppm RMS V: 15 mm + 1 ppm RMS 	
Standard point positioning	<ul style="list-style-type: none"> H: 1.5 m RMS V: 2.5 m RMS 	
Code differential	<ul style="list-style-type: none"> H: 0.4 m RMS V: 0.8 m RMS 	
Correction data	RTCM V3.X, RTCM2, CMR	
Data output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary	

Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x 2 4.2 V ~ 6800 mAh
Voltage	9 - 28V dc
Working time	12 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

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
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	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	<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	Battery
Button	Power button, short press to voice broadcast working mode and status
Certificate	CE, FCC, NGS

Internal Radio	
Type	TX and RX
Emitting Power	1 W
Operation Range	<ul style="list-style-type: none"> 3 - 5 km typically 10 km with optimal conditions²
Frequency range	410 - 470 MHz, 902.4 - 928 MHz ⁴
Channel spacing	6.25 KHz ³ / 12.5 KHz / 25 KHz / 280 KHz ⁴
Protocol	Satel, PCC, TrimTalk, TrimMark III, TRANSEOT(PCC-GMSK), South, HiTarget, GEOTALK, GEOMK3, HZSZ, 900M Hopping ⁴

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

2: It varies with the obstacle and terrain.

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

4: It is only available for certain radio module.



Shanghai eSurvey GNSS Co., Ltd.

Building 4, No. 651 Wanfang Rd, Minhang District, Shanghai 201112, China

Tel: +86 400-999-8088

Email: info@esurvey-gnss.com

Web: www.esurvey-gnss.com

Edition: 20220929