



E500

Portable Tilt-featured RTK Receiver

E500 is a light-weight tilt-fea tured product by eSurvey GNSS. The durable IP67 design makes it possible to work in various of environ ments. Multi constellation and frequency tracking always gives a Fixed solution for your job. Thanks for the small-size design, E500 is suitable for different applications such as car and machine control.

Multi-constellation and multi-frequency

With 800 channels of GNSS tracking, E500 provides stable and reliable accuracy. All GNSS signals are coming with standard including GPS, BDS, GLONASS, GALILEO, QZSS, IRNSS and SBAS.

Intelligent Battery LED Indicators

Without powering on device, it is able to check the battery level on the battery LED indicators by simply clicking the power button.

MEMS Dynamic Tilt Survey

eSurvey's innovation tilt survey solution provides a surprising experience. The sensor is adapted to various of working environments and can be ready within 10 sec. Maximum 60 ° incline angle ensures a tilt-to-go survey without stopping your work.

L-band Atlas

Atlas is a service to provide global precision correction service over L-band satellites. With ATLAS subscription, E500 is able to achieve centi meter accuracy without any base station.

aRTK

Powered by Atlas, the innovative aRTK technology operates on any Atlas-capable device by enabling it to maintain RTK-level accuracy, avail ability, and reliability when RTK corrections fail without additional cost.

Web UI

It is able to view position status, set up working mode, download data and update firmware from Web user interface with any phone, tablet or PC $\,$

Intelligent Voice

E500 will broadcast voice automatically to remind user the solution status is changed. It is also able to manually broadcast current working mode and solution status by short pressing power button.

Rugged Design

E500 main body is using magnesium materials to provide strong shock and vibration resistant characteristics. IP67 certification ensures operation in various of tough environments.

Product Specification

GNSS		Internal Radio	
	GPS: L1CA/L1P/L1C/L2P/L2C/L5	Туре	TX and RX
Satellites Tracking	BDS: B1I/B2I/B3I/B1C/B2a/B2b/	Frequency Range	410 ~ 470 MHz, 902.4 ~ 928 MHz
	ACEBOC	Channel Spacing	12.5 KHz / 25 KHz
	GLONASS: G1/G2/G3, P1/P2	Emitting Power	1 W
	GALILEO: E1/E5a/E5b/E6/ALTBOC QZSS: L1CA/L1C/L2C/L5/LEX	Operation Range	3 ~ 5 Km typically 10 Km with optimal conditions ²
	IRNSS: L5 SBAS ¹ : L1, L5 L-Band: Atlas H10/H30/Basic	Protocol	Satel, PCC, TrimTalk, TrimMark III, South, HiTarget
Channels	800	-	
Signal Reacquisition	< 1 sec	Internet Modem	
Cold Start	< 60 sec	Support Band	Global GSM /WCDMA/LTE
Warm Start	< 30 sec	-	
Hot Start	< 10 sec	Communication	
RTK Signal Initialization	< 8 sec	Bluetooth	BT 5.0 + EDR, BLE
Initialization Reliability	> 99.9%	WIFI	802.11 b/g/n
Update Rate	10 Hz standard, up to 50 Hz	SIM Card	SIM card
Operation System	Linux		Connect to external radio and power,
Internal Memory	8 GB	- 5-pin Port	NMEA output
		Type-C Port	Charge and internal storage access
Performance		TNC Port	Connect to internal radio antenna
High Precision Static	H: 2 mm + 0.1 ppm V: 3 mm + 0.4 ppm	Web UI	View status, update firmware, set up working mode, download data
	H: 2.5 mm + 0.1 ppm	Intelligent Voice	Broadcast working status
Static/Fast Static	V: 3.5 mm + 0.4 ppm H: 8 mm + 1 ppm	- NMEA Output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary
RTK	V: 15 mm + 1 ppm	Correction Data	CMR, CMR+, RTCM2, RTCM3, RTCM32
Code Differential	H: 0.25 m V: 0.45 m	MEMS	Fast initialization, dynamic tilt survey up to 60°
	H: 0.3 m	_	
SBAS	V: 0.6 m	Physical	
L-Band	Atlas H10: 4 cm RMS	Dimension	Ф148 mm x H74.5 mm
	Atlas H30: 15 cm RMS	Weight	1.06 kg
	Atlas Basic: 30 cm RMS	Operating Temperature	-40°C ~ +65°C
Power Supply		Storage Temperature	-45°C ~ +80°C
		- Water/Dust Proof	IP67
Battery	Rechargeable and built-in Lithium-ion	Shock	
	battery, 7.2 V ~ 6800 mAh	- Vibration	Survive a 2 m drop on concrete floor Vibration resistant
Voltage	9~28 VDC		
	with over-voltage protection	Humidity - Indicators	Up to 100%
Working Time	Up to 12 hours	- <u>Indicators</u> - Button	Battery Power button

^{1.} SBAS supports WAAS, EGNOS, GAGAN, SDCM, MSAS.





^{2.} Depend on the environment and electromagnetic interference.