



E800

High-performance RTK Receiver

E800 is a high-performance product by eSurvey GNSS. The durable IP67 design makes it possible to work in various of environments. Multi constellation and frequency tracking always gives a Fixed solution for your job. The colorful touch screen is convenient for quick configurations.

Multi-constellation and multi-frequency

With 800 channels of GNSS tracking, E800 provides stable and reliable accuracy. All GNSS signals are coming with standard including GPS, BDS, GLONASS, GALILEO, QZSS, IRNSS and SBAS.

Batteries for Long Time Operation

E800 is equipped with 13600 mAh Li-ion battery. There is no worry for long time field operation up to 15 hours. The USB type-c quick charge promise a full charge within 5 hours.

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, E800 is able to achieve centimeter 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, availability, and reliability when RTK corrections fail without additional cost.

5-watt Internal Radio

The 5-watt internal radio modem extremely extend the working range up to 15Km. User can adjust the radio power between 2w and 5w depending on the demand.

Colorful Touch Screen

The 1.45" colorful touch screen is viewable in sunlight. The position status is under control with a glimpse. Working mode is settle down by simply sliding the screen.

Rugged Design

E800 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		Type	TX and RX		
Satellites Tracking	GPS: L1CA/L1P/L1C/L2P/L2C/L5 BDS: B1/B2/B3I/B1C/B2a/B2b/ ACEBOC GLONASS: G1/G2/G3, P1/P2 GALILEO: E1/E5a/E5b/E6/ALTB QZSS: L1CA/L1C/L2C/L5/LEX IRNSS: L5 SBAS1: L1/L5 L-Band: Atlas H10/H30/Basic	Frequency Range	410 ~ 470 MHz		
		Channel Spacing	12.5 KHz / 25 KHz		
		Emitting Power	5 W		
		Operation Range	8 ~ 10 Km typically 15Km with optimal conditions ²		
		Protocol	Satel, PCC, TrimTalk, TrimMark III, South, HiTarget		
		Channels		Internet Modem	
		Channels	800	Support Band	Global GSM /WCDMA/LTE
Signal Reacquisition	< 1 sec	Communication			
Cold Start	< 10 sec	Bluetooth	BT 5.0, BLE		
Warm Start	< 10 sec	WIFI	802.11 ac/n(HT20)/a/b/g		
Hot Start	< 10 sec	SIM Card	Micro SIM card		
RTK Signal Initialization	< 8 sec	5-pin Port	Connect to external radio and power, NMEA output		
Initialization Reliability	> 99.9%	Type-C Port	Charge and internal storage access		
Update Rate	10 Hz standard, up to 50 Hz	TNC Port	Connect to internal radio antenna		
Operation System	Linux	Web UI	View status, update firmware, set up working mode, download data		
Internal Memory	32 GB	Intelligent Voice	Broadcast working status		
Performance		NMEA Output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary		
High Precision Static	H: 2mm + 0.1 ppm V: 3mm + 0.4 ppm	Correction Data	CMR, CMR+, RTCM2, RTCM3, RTCM32		
Static/Fast Static	H: 2.5mm + 0.1 ppm V: 3.5mm + 0.4 ppm	MEMS	Fast initialization, dynamic tilt survey up to 60°		
RTK	H: 8mm + 1.0 ppm V: 15mm + 1 ppm	Physical			
Code Differential	H: 0.25 m V: 0.45 m	Dimension	154 mm x 154 mm x 76 mm		
SBAS	H: 0.3 m V: 0.6 m	Weight	1.5 kg		
L-Band	Atlas H10: 4 cm RMS Atlas H30: 15 cm RMS Atlas Basic: 30 cm RMS	Screen	1.45" colorful touchable screen		
Power Supply		Operating Temperature	-40°C ~ +65°C		
Battery	Rechargeable and built-in Lithium-ion battery, 7.2 V ~ 13.6 Ah	Storage Temperature	-45°C ~ +80°C		
Voltage	9~28 V DC with over-voltage protection	Water/Dust Proof	IP67		
Working Time	Up to 15 hours	Shock	Survive a 2 m drop on concrete floor		
Charging Time	Typically 5 hours	Vibration	Vibration resistant		
Internal Radio		Humidity	Up to 100%		
		Indicators	Satellites, datalink, battery, Bluetooth		
		Button	Power button, short press to voice broadcast status		
		Certificate	CE, FCC, NGS Calibration		

1. SBAS supports WAAS, EGNOS, GAGAN, SDCM, MSAS.

2. Depend on the environment and electromagnetic interference.



Shanghai e-Compass Science & Technology Co., Ltd
Building 4, No. 651 Wanfang Rd, Minhang District, Shanghai 201112, China

Tel: +86 21 54467213

Email: info@esurvey-gnss.com

Web: www.esurvey-gnss.com

Edition: 20201111