



# E800

## GNSS Receiver

E800 is an integrated intelligent receiver of a new generation of surveying products. It is a high-end of RTK receiver, that has a magnesium alloy structural frame. It has a highly integrated structure that provides it with excellent heat dissipation and anti-interference characteristics, high precision, increased stability, strong compatibility and environmental applicability.

### Built-in 5W radio

Up to 10km transmission distance, 410-470MHz full-band, compatible with major transmission protocols.

### Superior anti-interference

Stronger signal acquisition capability in harsh environments.

### Built-in battery (13600mAh)

For longer lasting operation.

### Magnesium-aluminum alloy design

Excellent heat dissipation.

### Built-in 4G network module

Global 4G network module, support NTRIP mode.

### LCD Display

Sunlight viewable screen, touchscreen enabled.

### Built-in Bluetooth, WiFi communication module

With smart WebUI, it will be more convenient to view device status and configure the working mode.

### Tilt survey

The E800 receiver integrates MEMS sensor, combined with a new tilt survey algorithm and SurPad4.0 software operation, the accuracy of coordinate data can be easily achieved within 60° tilt angle.

# Product Specification

GNSS Performance		Internal Radio	
Channel	336	Frequency Range	410 - 470 MHz
Satellite Tracking	GPS: L1CA / L2E/L2C/L5	Channel Spacing	12.5 KHz / 25 KHz
	GLONASS: L1CA / L2CA / L3 CDMA	Emitting Power	2 W / 5 W
	BeiDou: B1 / B2 / B3	Operating Range	5-10km typically
	GALILEO: E1 / E5A / E5B / E5AltBOC / E6	<b>Communication</b>	
	SBAS: L1CA / L5	Memory	Internal 32G
	QZSS: L1CA / L1SAIF / L1C / L2C / L5	5-pin	External radio and external power, RS232
	NAVIC: L5	Type-C	Charge and access internal storage
Update rate	50Hz	SIM Card	Micro SIM card
<b>Performance (RMS)<sup>1</sup></b>		Cellular	Global Version
Signal Reacquisition	< 1 sec		GSM/UMTS/LTE
Hot Start	< 10 sec	Bluetooth	BT 5.0, BLE
Initialization Reliability	> 99.9%	WIFI	802.11ac/n(HT20)/a/b/g
Static Accuracy	Horizontal: 2.5 mm + 0.5 ppm	WebUI	To manage settings, status, update firmware and download data
	Vertical: 5 mm + 0.5 ppm	Voice	Support smart voice broadcast
RTK Accuracy	Horizontal: 8 mm + 1 ppm	MEMS	Support, up to 60°
	Vertical: 15 mm + 1 ppm	NMEA Output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL
Code Differential	Horizontal: 0.25 m	<b>Physical Specifications</b>	
SBAS Accuracy	Horizontal: 0.3 m	Dimension	154 * 154 * 76mm (L * W * H)
<b>Power Supply</b>		Weight	1.5KG
Battery	Built-in rechargeable battery 7.2V/13.6Ah	Screen	1.46" colorful, touchable screen
Voltage	9~28 V DC, with over-voltage protection	Operating Temperature	-30 °C ~ +65 °C
Operating period	Typically 12 hours - 2W, base radio	Storage Temperature	-40 °C ~ +80 °C
	Typically 8 hours - 5W, base radio	Water/ Dust Proof	IP67
	Typically 15 hours - base network mode	Shock	Survive a 2 m (6.6 ft) pole drop, 1.2 m (3.9 ft) free fall
	Typically 15 hours - rover radio	Vibration	Vibration resistant
	Typically 15 hours - rover network	Humidity	Up to 100%
Charge Time	PD quick charge, typically 5 hours	Indicator	4 indicators, GNSS/BT/UHF/PWR
		Certificate	CE, FCC, IP67

Illustrations and technical specifications are subject to change without notice.

1. The accuracy claimed is based on the optimal environment.



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

Tel: +86 21 54467215  
Email: info@esurvey-gnss.com  
Web: www.esurvey-gnss.com  
Edition: 20200701