e-survey

E800

HIGH-PERFORMANCE GNSS RECEIVER

The E800 is a high-performance GNSS receiver that provides an easy-to-use solution for survey professionals who need to collect highly accurate data in a wide range of applications. The durable IP67 design makes it possible to work in extreme environments. The colorful touchscreen is convenient for quick configurations.

GNSS Receiver

5-Watt Internal Radio: Longer Working Distance

No longer need to carry external radio, for its internal radio's working distance can reach 10 - 15 km.

1.45-inch Display: Colorful and Touchable

View the primary status and basic information, set the work mode, and operate the device, facilitating more convenient and direct human-computer interaction.

32GB Internal Memory

The built-in 32GB internal memory can store more data, no need to worry about a long-time span project.

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.

Impressive Battery Life: Longer Working Time

No longer worry about a day's work with its 13600 mAh battery, which makes your data save safely.

RTK Aid Function: Uninterrupted Work

Work without interruption even when RTK corrections fail, powered by our RTK aid function.

Website

Social media

Product Specification

E800

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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 7.2V ~ 13600 mAh
Voltage	9 - 28V dc
Working time	Up to 40 hours as rover
Charging time	Typically 5 hours

Internet Modem	
Support 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	32 GB
Bluetooth	BT 5.0 + 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; NMEA output
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
Tilt sensor	MEMS Fast initialization, dynamic tilt survey up to 60°

Physical	
Dimension	Φ154 mm x H76 mm
Weight	1500 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	Satellites, datalink, battery, Bluetooth
Button	Power button, short press to voice broadcast working mode and status
Screen	1.45" colorful touchable screen
Certificate	CE, FCC, NGS, IGS

Internal Radio	
Type	TX and RX
Emitting Power	5 W
Operation Range	■ 8 - 10 km typically ■ 15km with optimal conditions[2]
Frequency range	410 - 470 MHz
Channel spacing	6.25 KHz[3] / 12.5 KHz / 25 KHz
Protocol	TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel_ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST_ADL

1: It will be supported through future firmware update.
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.

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