e-survey


# 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 336 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 warry 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.

## 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.

## 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

E800 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

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 | |
|---|---|
| Satellites Tracking | GPS: L1CA/L2E/L2C/L5<br>BDS: B1/B2/B3<br>GLONASS: L1CA/L2CA/L3 CDMA<br>GALILEO: E1/E5a/E5b/E6/ALTBOC<br>QZSS: L1CA/L1 SAIF/L1C/L2C/LEX<br>NAVIC: L5<br>SBAS[1]: L1/L5<br>L-Band: RTX |
| Channels | 336 |
| Signal Reacquisition | < 1 sec |
| Cold Start | < 10 sec |
| Warm Start | < 10 sec |
| Hot Start | < 10 sec |
| RTK Signal Initialization | < 8 sec |
| Initialization Reliability | > 99.9% |
| Update Rate | 50 Hz standard, up to 50 Hz |
| Operation System | Linux |
| Internal Memory | 32 GB |

| Performance | |
|---|---|
| High Precision Static | H: 2mm + 0.1 ppm<br>V: 3mm + 0.4 ppm |
| Static/Fast Static | H: 2.5mm + 0.1 ppm<br>V: 3.5mm + 0.4 ppm |
| RTK | H: 8mm + 1.0 ppm<br>V: 15mm + 1 ppm |
| Code Differential | H: 0.25 m<br>V: 0.45 m |
| SBAS | H: 0.3 m<br>V: 0.6 m |

| Power Supply | |
|---|---|
| Battery | Rechargeable and built-in Lithium-ion battery, 7.2 V ~ 13.6 Ah |
| Voltage | 9~28 V DC<br>with over-voltage protection |
| Working Time | Up to 15 hours |
| Charging Time | Typically 5 hours |

| Internal Radio | |
|---|---|
| Type | TX and RX |
| Frequency Range | 410 ~ 470 MHz |
| Channel Spacing | 12.5 KHz / 25 KHz |
| Emitting Power | 5 W |
| Operation Range | 8 ~ 10 Km typically<br>15Km with optimal conditions[2] |
| Protocol | Satel, PCC, TrimTalk, TrimMark III, South, HiTarget |

| Internet Modem | |
|---|---|
| Support Band | Global GSM /WCDMA/LTE |

| Communication | |
|---|---|
| Bluetooth | BT 5.0, BLE |
| WIFI | 802.11 ac/n(HT20)/a/b/g |
| SIM Card | Micro SIM card |
| 5-pin Port | Connect to external radio and power, NMEA output |
| Type-C Port | Charge and internal storage access |
| TNC Port | Connect to internal radio antenna |
| Web UI | View status, update firmware, set up working mode, download data |
| Intelligent Voice | Broadcast working status |
| NMEA Output | GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary |
| Correction Data | CMR, CMR+, RTCM2, RTCM3, RTCM32 |
| MEMS | Fast initialization, dynamic tilt survey up to 60° |

| Physical | |
|---|---|
| Dimension | 154 mm x 154 mm x H76 mm |
| Weight | 1.5 kg |
| Screen | 1.45'' colorful touchable screen |
| Operating Temperature | -40℃ ~ +65℃ |
| Storage Temperature | -45℃ ~ +80℃ |
| Water/Dust Proof | IP67 |
| Shock | Survive a 2 m drop on concrete floor |
| Vibration | Vibration resistant |
| 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.

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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
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