

E800



2020.12.11 by eSurvey GNSS

E800

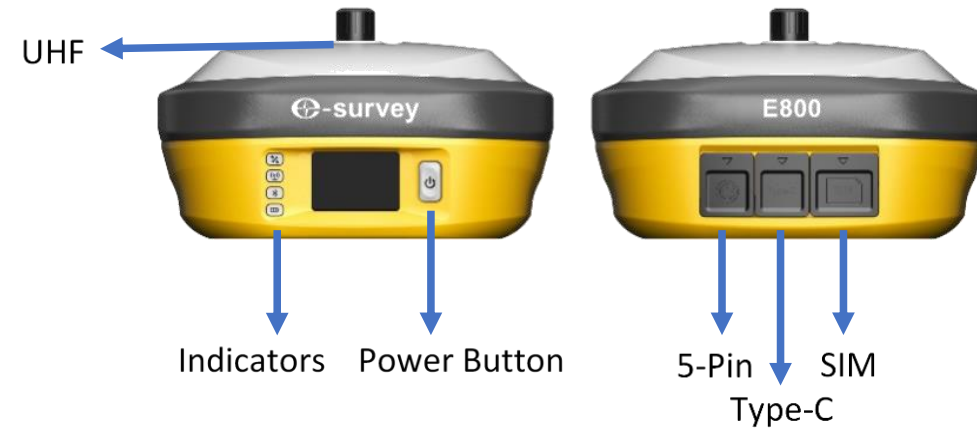
SUMMARY

- Overview
- Key Features
- Specifications
- Configurations
- Software



Overview

- 154mm * 154mm * 76mm
- 1.5Kg
- 5W Radio
- Internal 4G
- Type-C Charge
- Build-in Battery



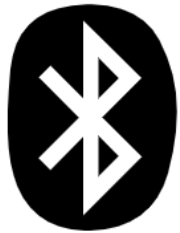
Key Features

- All GNSS Signals: 336/800 channels



Key Features

- Communication



Bluetooth



WIFI



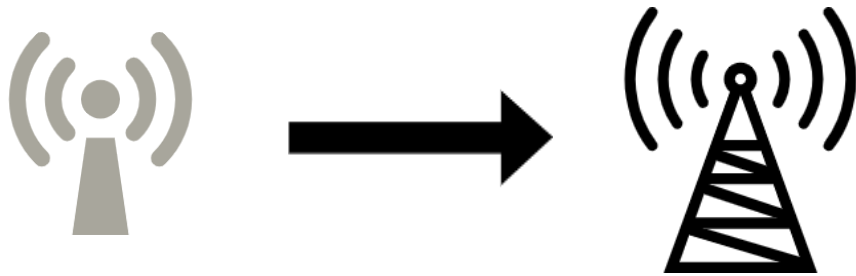
4G Network



Radio

Key Features

- Internal 5w Radio



Powerful Internal Radio Modem:

- 2W/5W adjustable
- Up to 10Km Typically
- Support common used protocols

Key Features

- Colorful Touch Screen



Colorful Touch Screen:

- 1.45-inch LCD screen
- Colorful display
- Touchable
- Support working mode configuration

Key Features

- IMU Tilt Survey

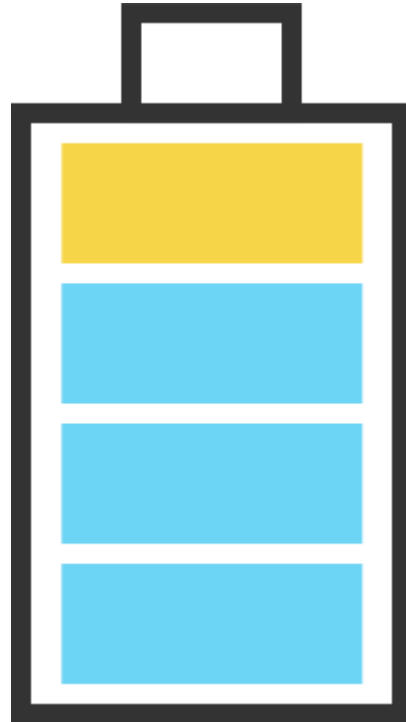


E800 is equipped with IMU sensor.

- Fast initialization
- Tilt to go
- Tilt stakeout
- Up to 60°
- Accuracy <3cm
- Free from magnetic interference

Key Features

- Build-in Battery

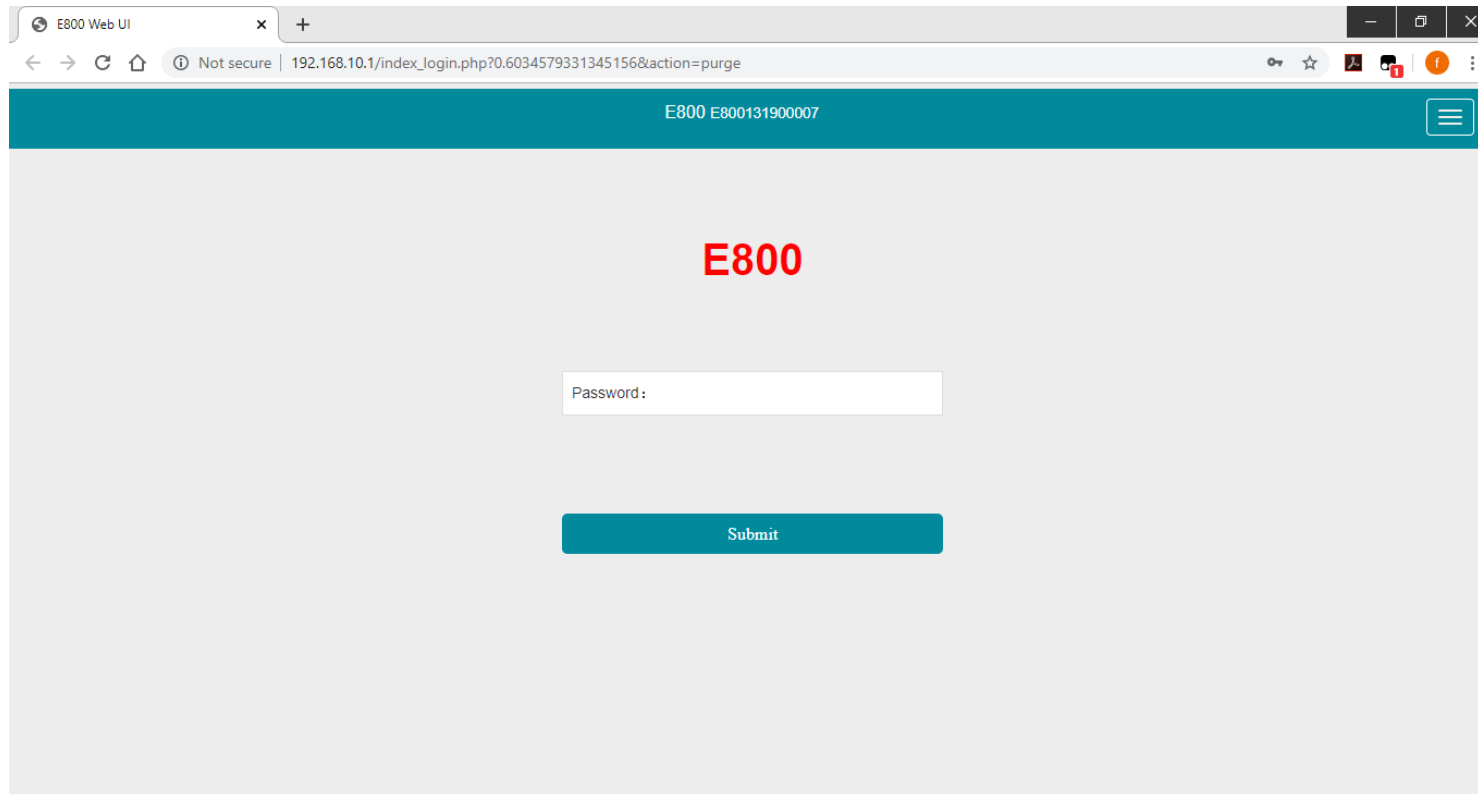


Build-in Li-on Battery

- 7.2V, 13600mAh
- Up to 15 hours
- Full charge within 5 hours
- Support power bank

Key Features

- Web User Interface

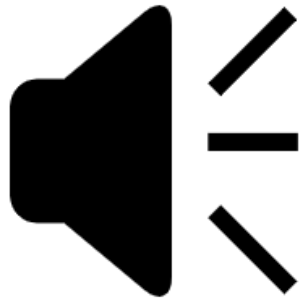


Smart Web User Interface:

- Connect PC, phone and tablet
- View device status
- Setup working mode
- Download raw data
- Update firmware

Key Features

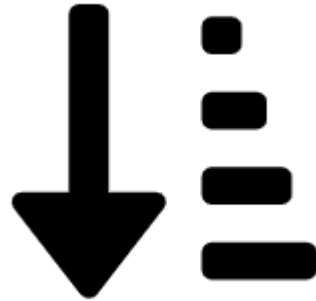
- Additional Features



Smart Voice



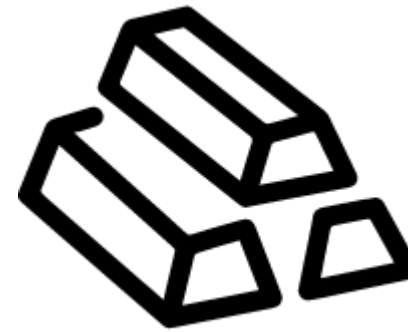
IP67



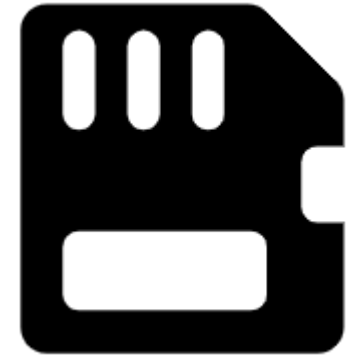
1.2m Drop



-30°C ~ +65°C



Magnesium Alloy



32GB Memory

Specifications

E800-H

GNSS		Type	TX and RX
Satellites Tracking	GPS: L1CA/L1P/L1C/L2P/L2C/L5 BDS: B1/B2/B3/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
		Emmiting Power	5 W
		Operation Range	8 ~ 10 Km typically 15Km with optimal conditions ²
		Protocol	Satel, PCC, TrimTalk, TrimMark III, South, HiTarget
			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%
Type	TX and RX	Indicators	Satellites, datalink, battery, Bluetooth
Frequency Range	410 ~ 470 MHz	Button	Power button, short press to voice broadcast status
		Certificate	CE, FCC, NGS Calibration











1. SBAS supports WAAS, EGNOS, GAGAN, SDGM, MSAS.
2. Depend on the environment and electromagnetic interference.

E800-T










GNSS		Channel Spacing	12.5 KHz / 25 KHz
Satellites Tracking	GPS: L1CA/L2E/L2C/L5 BDS: B1/B2/B3 GLONASS: L1CA/L2CA/L3 CDMA GALILEO: E1/E5a/E5b/E6/ALTB QZSS: L1CA/L1 SAIF/L1C/L2C/LEX NAVIC: L5 SBAS ¹ : L1/L5 L-Band: RTX	Emmiting Power	5 W
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		Protocol	Satel, PCC, TrimTalk, TrimMark III, South, HiTarget
		Internet Modem	
		Support Band	Global GSM /WCDMA/LTE
			Communication
Channels	336	Bluetooth	BT 5.0, BLE
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Cold Start	< 10 sec	SIM Card	Micro SIM card
Warm Start	< 10 sec	5-pin Port	Connect to external radio and power, NMEA output
Hot Start	< 10 sec	Type-C Port	Charge and internal storage access
RTK Signal Initialization	< 8 sec	TNC Port	Connect to internal radio antenna
Initialization Reliability	> 99.9%	Web UI	View status, update firmware, set up working mode, download data
Update Rate	50 Hz standard, up to 50 Hz	Intelligent Voice	Broadcast working status
Operation System	Linux	NMEA Output	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary
Internal Memory	32 GB	Correction Data	CMR, CMR+, RTCM2, RTCM3, RTCM32
Performance		MEMS	Fast initialization, dynamic tilt survey up to 60°
High Precision Static	H: 2mm + 0.1 ppm V: 3mm + 0.4 ppm	Physical	
Static/Fast Static	H: 2.5mm + 0.1 ppm V: 3.5mm + 0.4 ppm	Dimension	154 mm x 154 mm x H76 mm
RTK	H: 8mm + 1.0 ppm V: 15mm + 1 ppm	Weight	1.5 kg
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SBAS	H: 0.3 m V: 0.6 m	Operating Temperature	-40°C ~ +65°C
Power Supply		Storage Temperature	-45°C ~ +80°C
Battery	Rechargeable and built-in Lithium-ion battery, 7.2 V ~ 13.6 Ah	Water/Dust Proof	IP67
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Type	TX and RX	Button	Power button, short press to voice broadcast status
Frequency Range	410 ~ 470 MHz	Certificate	CE, FCC, NGS Calibration

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Configurations

E800 Base					
NO.	Items	Quantity	Model	Description	Picture
1	Base Carrying Case	1	---	Carry case for E800	
2	E800 GNSS Receiver	1	---	---	
3	Charger	1	KSA-45P-45W D5	Type-C port	
4	Power Cable	1	---	Type-C to Type-C	
5	Charger Plug	4	---	---	
6	Measure Tape	1	---	3m/10ft-16mm	
7	UHF Antenna	1	QT440A	Internal UHF Antenna, 430-450MHz, 4dBi, TNCJ	
8	Screw Connector	1	---	---	
9	Tray	1	---	---	
10	Warranty Card	1	---	---	

Configurations

E800 Rover					
NO.	Items	Quantity	Model	Description	Picture
1	Rover Carrying Case	1	---	Carry case for E800	
2	E800 GNSS Receiver	1	---	---	
3	Charger	1	KSA-45P-45W D5	Type-C port	
4	Power Cable	1	---	Type-C to Type-C	
5	Charger Plug	4	---	---	
6	Measure Tape	1	---	3m/10ft-16mm	
7	UHF Antenna	1	QT440A	Internal UHF Antenna, 430-450MHz, 4dBi, TNCJ	
8	Screw Connector	1	---	---	
9	Warranty Card	1	---	---	

Data Collection Software-SurPad4.0

Positioning Informations

GPS
BD
GLN
GAL
SBAS

FIXED H:0.006
Age2 V:0.009

Point name: H:58.006
N:3439887.756 E:359820.049
Ant. H:1.8m+0.072m Base distance:0.0

E-survey

EASY TO SURVEY

CAD

FIXED H:0.005
Age2 V:0.007

4
Slope:?
e:66739.347

Fill:1468.728
Dist to Bottom:?
Offset:(Left)48.545

Post Process Software-GEOSolution

The screenshot displays the GEOSolution software interface. The main window shows a network of GNSS baselines in green, connecting several stations: Ahungalla base, Alpitiya, mnnana, 128B, 127B, 128C, 127A, 135A, 135C, 126C, and 126a. The map includes a coordinate grid and a scale bar indicating 2.42 km. The left sidebar contains a Project Manager and various processing options like Static Settings, Dynamic Settings, Baseline Process, and Adjustment process. The bottom status bar shows coordinates: B: 006d 18m 46.99003464s L: 080d 04m 04.15648191s.

Log of Processing Results:

Time	Message
2019-07-24 11:42:13	(48/51)72491660-60501660[128B-128C]Baseline processed...
2019-07-24 11:42:14	(48/51)72491660-60501660[128B-128C]Baseline processed finished!!
2019-07-24 11:42:14	(49/51)72491661-60501661[127B-127A]Baseline processed...
2019-07-24 11:42:15	(49/51)72491661-60501661[127B-127A]Baseline processed finished!!
2019-07-24 11:42:15	(50/51)72491662-60501662[135A-135C]Baseline processed...
2019-07-24 11:42:16	(50/51)72491662-60501662[135A-135C]Baseline processed finished!!
2019-07-24 11:42:16	(51/51)72491663-60501664[126C-126a]Baseline processed...
2019-07-24 11:42:17	(51/51)72491663-60501664[126C-126a]Baseline processed finished!!

THANK YOU

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