e-survey



E100

Network RTK Receiver

E100 is a network receiver 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. Thanks for the small-size design, E100 is suitable for different applications such as car and machine control.

Multi-constellation and multi-frequency

With 800 channels of GNSS tracking, E100 provides stable and reliable accuracy. All GNSS signals are coming with standard including GPS, BDS, GLONASS, GALILEO, QZSS and SBAS.

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, E100 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.

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

E100 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.

Lightweight and Small-size

E100 is only 900g and is good for hand carrying. The small size design makes it possible for various of applications such as car and machine control.

Rugged Design

E100 main body is using magnesium materials to provide strong shock and vibration resistant characteristics. IP67 certification ensures operation in various of tough environments.

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Product Specification

GNSS	
Satellites Tracking	GPS: L1CA/L1P/L1C/L2P/L2C/L5 BDS: B1I/B2I/B3I/B1C/B2a/B2b/ACEBOC GLONASS: G1/G2/G3, P1/P2 GALILEO: E1/E5a/E5b/E6/ALTBOC QZSS: L1CA/L1C/L2C/L5/LEX IRNSS: L5 SBAS[1]: L1, L5 L-Band: Atlas H10/H30/Basic
Channels	800
Signal Reacquisition	< 1 sec
Cold Start	< 60 sec
Warm Start	< 30 sec
Hot Start	< 10 sec
RTK Signal Initialization	< 8 sec
Initialization Reliability	> 99.9%
Update Rate	10 Hz standard, up to 50 Hz
Operation System	Linux
Internal Memory	8 GB (32GB Customizable)

Performance	
High Precision Static	H: 2 mm + 0.1 ppm V: 3 mm + 0.4 ppm
Static/Fast Static	H: 2.5 mm + 0.1 ppm V: 3.5 mm + 0.4 ppm
RTK	H: 8 mm + 1 ppm V: 15 mm + 1 ppm
Code Differential	H: 0.25 m V: 0.45 m
SBAS	H: 0.3 m V: 0.6 m
L-Band	Atlas H10: 4 cm RMS Atlas H30: 15 cm RMS Atlas Basic: 30 cm RMS

Power Supply	
Battery	Rechargeable and built-in Lithium-ion battery, 7.2 V ~ 6800 mAh
Voltage	9~28 VD, with over-voltage protection
Working Time	RTK: 10 hours Static: 14 hours
Charging Time	Typically 4 hours

Internet Modem	
Support Band	Global 4G

Communication	
Bluetooth	BT 5.0, BLE
WIFI	802.11 b/g/n(HT20)/ac
SIM Card	Support
5-pin Port	Connect to external radio and power NMEA data output
Type-C Port	Charge and data transmission
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	Φ148 mm x H60 mm
Weight	900±5 g
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.

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