e-survey

E300 Pro

FULL-FEATURED GNSS RECEIVER

The eSurvey E300 Pro is a fully functional GNSS receiver with an extremely compact design by eSurvey GNSS. With its high-performance GNSS board, it can track all present constellations and satellites. The GNSS, Wi-Fi, Bluetooth, and GSM four-in-one antenna, stable data transmission and IMU function, make it suitable for all surveying applications.

GNSS Receiver

Power Indicator: An Intelligent Hint of Working Time

Quickly check the remaining battery power in real time and figure out the working time without data loss.

Integrated Tx/Rx UHF Modem in a Compact Design

The built-in transceiver radio modem in the compact design of the E300 Pro makes it a full-featured and portable GNSS receiver that works as either base or rover station.

Rugged Design: Better Resistance to Shock and Fall

Use it for many years, for it is strongly made and capable of withstanding rough handling.

Detailed SBF Data Recorded: Advanced Analysis for The Receiver

Support SBF data output. This data should be your first choice if you wish to receive complete and detailed information from the receiver for advanced analysis.

Multi-constellations and Multi-frequency

With 448 channels of GNSS tracking, the E300 Pro provides stable and reliable centimeter-level positioning accuracy in real-time to suit any field data collection applications. All GNSS signals are supported, including GPS, BDS, GLONASS, Galileo, QZSS, NavIC and SBAS.

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.

Website

Social media

Product Specification

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GNSS Performance		
Satellites tracking	GPS	L1 C/A, L1PY, L2C, L2P, L5
	BDS	B1I, B1C, B2a, B2b, B2I, B3
	GLONASS	L1 C/A, L2 C/A, L2P, L3 CDMA
	Galileo	E1, E5a, E5b, E5 AltBoc, E6
	QZSS	L1 C/A, L1 C/B, L2C, L5
	NavIC	L5
	SBAS	WAAS, GAGAN, MSAS, EGNOS, SDCM(L1 L5)
Channels		448
Signal reacquisition		< 1 second
Cold start		< 45 seconds
Warm start		< 20 seconds
Hot start		< 20 seconds
RTK signal initialization		< 7 seconds
Initialization reliability		> 99.9%
Update rate		20 Hz
RTK		■ H: 6 mm + 0.5 ppm RMS ■ V: 10 mm + 1 ppm RMS
Standard point positioning		■ H: 1.2 m RMS ■ V: 1.9 m RMS
Code differential		■ H: 0.4 m RMS ■ V: 0.7 m RMS
SBAS		■ H: 0.6 m RMS ■ V: 0.8 m RMS
Correction data		CMR, CMR+(input only), RTCM v2.x, RTCM v3.x
Data output		GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary, SBF

Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x 1 7.2V ~ 6800 mAh
Voltage	9 - 28V dc
Working time	Up to 17 hours as rover
Charging time	Typically 4 hours

Internet Modem	
Supported 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	8 GB
Bluetooth	BT5.0+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	Φ158 mm x H53 mm
Weight	940 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
Certificate	CE, FCC, NGS, IGS

Internal Radio	
Type	TX and RX
Emitting Power	1 W
Operation Range	3 - 5 km typically
Frequency range	410 - 470 MHz, 902.4 - 928 MHz [2]
Channel spacing	6.25 KHz [1] / 12.5 KHz / 25 KHz / 280 KHz [2]
Protocol	TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel_ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST_ADL, 900M Hopping [2]

1: It is only available for radio protocol "Satel", and the radio firmware is later than G001.02.27.
2: It is only available for certain radio module.

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