# ⊕-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, RTK Aid, 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.

### RTK Aid Function: Uninterrupted Work

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

### Multi-constellations and Multi-frequency

With 1408 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, SBAS and L-Band.

### 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

# E300 Pro

## FULL-FEATURED GNSS RECEIVER



### 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<br>■ V: 3.5 mm + 0.4 ppm RMS |
| Static and Fast Static | ■ H: 2.5 mm + 0.5 ppm RMS<br>■ V: 5 mm + 0.5 ppm RMS |
| RTK | ■ H: 8 mm + 1 ppm RMS<br>■ V: 15 mm + 1 ppm RMS |
| Standard point positioning | ■ H: 1.5 m RMS<br>■ V: 2.5 m RMS |
| Code differential | ■ H: 0.4 m RMS<br>■ V: 0.8 m RMS |
| SBAS | ■ H: 0.3 m RMS<br>■ 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<br>Built-in Lithium-ion battery x 1<br>7.2V ~ 6800 mAh |
| Voltage | 9 - 28V dc |
| Working time | Up to 24 hours as rover |
| Charging time | Typically 4 hours |

### Internet Modem

| | |
|---|---|
| Supported band | Global 4G<br>■ LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28<br>■ LTE TDD: B38/B39/B40/B41<br>■ WCDMA: B1/B2/B4/B5/B6/B8/B19<br>■ 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<br>Fast initialization, dynamic tilt survey up to 60° |

### Physical

| | |
|---|---|
| Dimension | Φ158 mm x H53 mm |
| Weight | 940 g |
| Operating temperature | -30℃ - +65℃ |
| Storage temperature | -40℃ - +80℃ |
| Water / dust proof | IP67 (Optional IP68) |
| Shock | ■ Withstand topple over from a 2 m survey pole onto hard surfaces<br>■ 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 [2] |
| Frequency range | 410 - 470 MHz, 902.4 - 928 MHz [4] |
| Channel spacing | 6.25 KHz [3] / 12.5 KHz / 25 KHz / 280 KHz [4] |
| Protocol | TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel_ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST_ADL, 900M Hopping [4] |

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.
4: It is only available for certain radio module.

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