

E300 Pro



2020.12.11 by eSurvey GNSS

E300 Pro

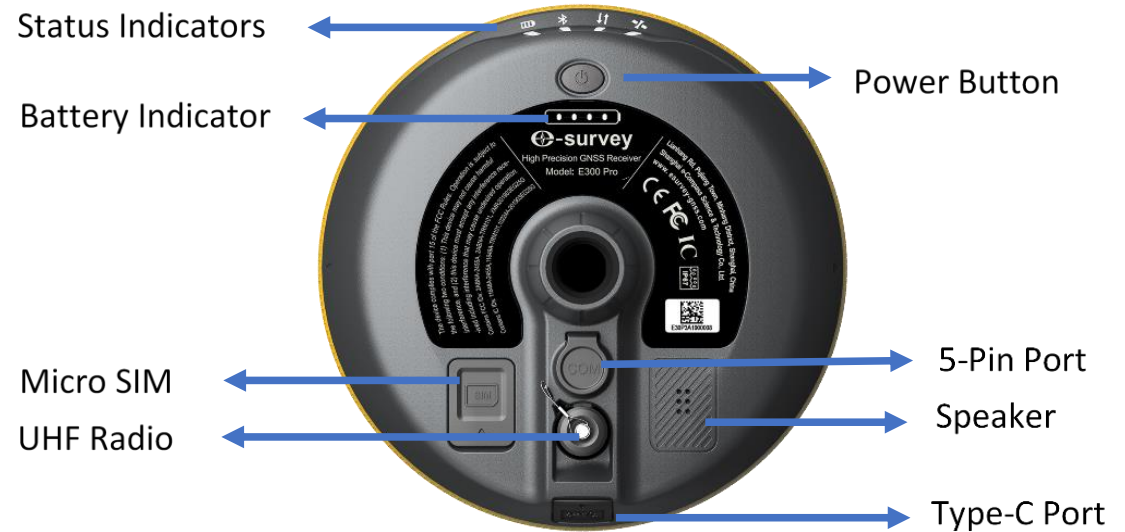
SUMMARY

- Overview
- Key Features
- Specifications
- Configurations
- Software



Overview

- $\Phi 158\text{mm} * 53\text{mm}$
- 940g
- Internal Radio
- Internal 4G
- Type-C Charge
- Build-in Battery



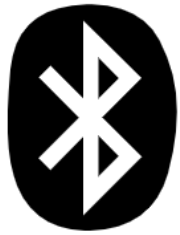
Key Features

- All GNSS Signals: 800 channels



Key Features

- Communication



Bluetooth



WIFI



4G Network



Radio

Key Features

- IMU Tilt Survey



E300 Pro is equipped with IMU sensor.

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

Key Features

- ATLAS: GNSS Global Correction Service



<i>Service Level</i>	<i>Position Accuracy</i>
Atlas Basic	50 cm 95% (30 cm ^{RMS})*
H30	30 cm 95% (15 cm ^{RMS})*
H10	8 cm 95% (4 cm ^{RMS})*

Provide both Land Service and Offshore Service

Key Features

- ATLAS: GNSS Global Correction Service



Key Features

- aRTK: Free L-Band service



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.

Key Features

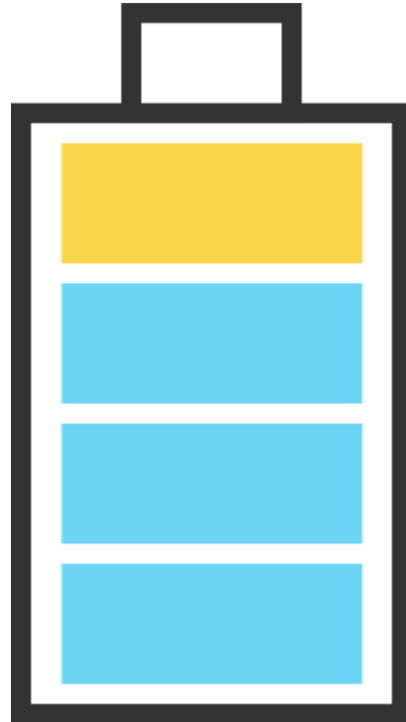
- Smart Battery Indicator



Press power button to check battery level without power on device.

Key Features

- Build-in Battery

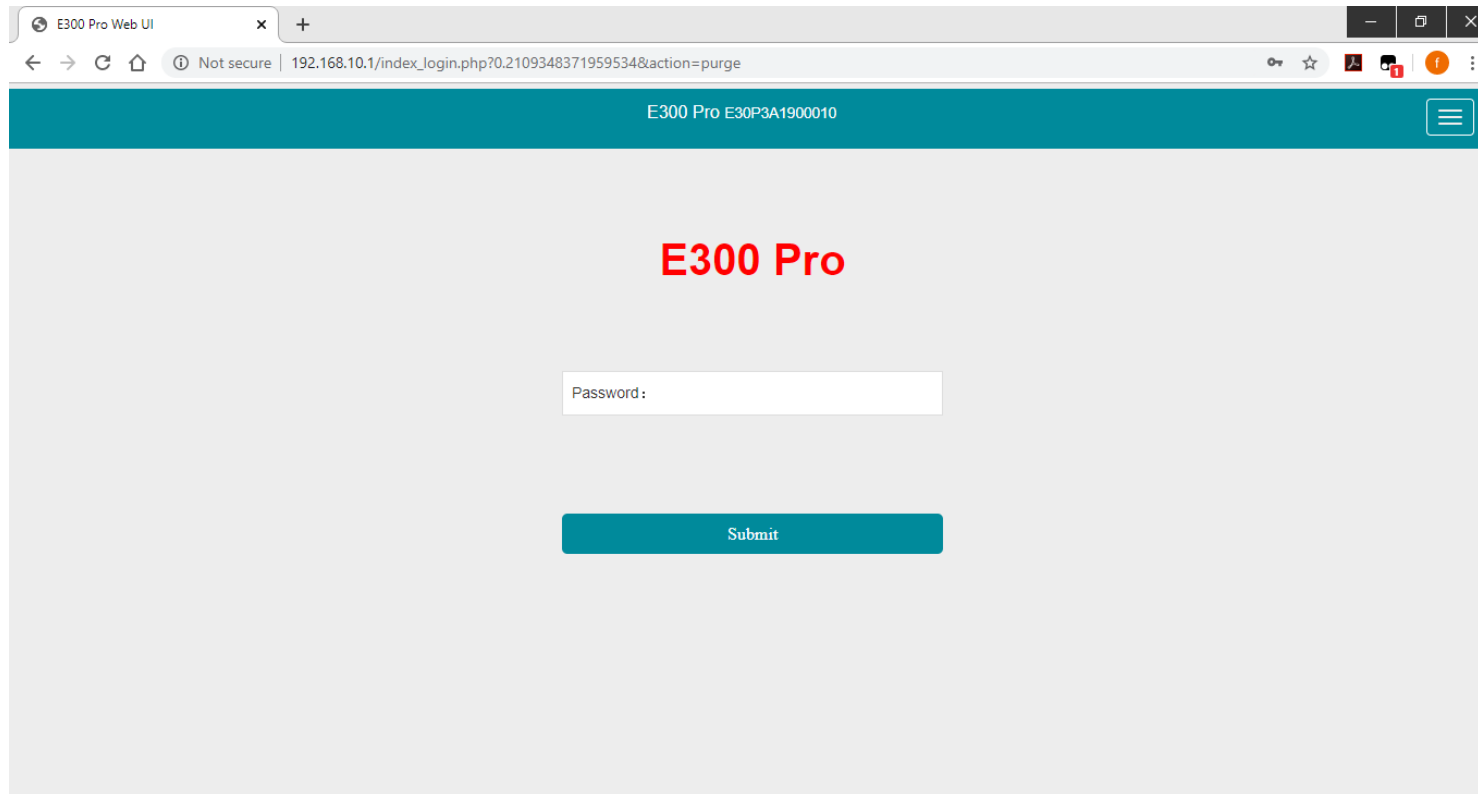


Build-in Li-on Battery

- 7.2V, 6800mAh
- Up to 12 hours
- Full charge within 4 hours
- Support power bank

Key Features

- Web User Interface

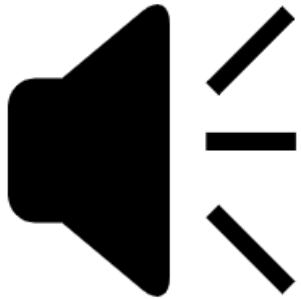


Smart Web User Interface:

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

Key Features

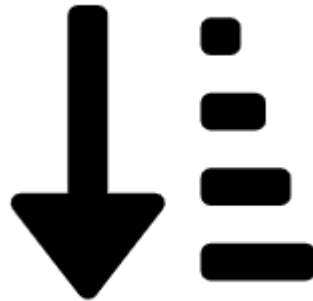
- Additional Features



Smart Voice



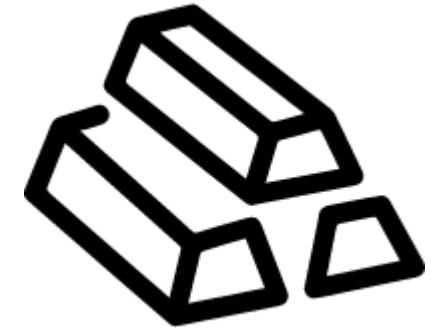
IP67



1.2m Drop



-30°C ~ +65°C














Magnesium Alloy

Specifications










GNSS	
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/ALTB0C 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
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 VDC with over-voltage protection
Working Time	Up to 12 hours
Charging Time	Typically 4 hours
Internal Radio	
Type	TX and RX
Frequency Range	410 ~ 470 MHz
Channel Spacing	12.5 KHz / 25 KHz
Emitting Power	1 W
Operation Range	3 ~ 5 Km typically 10 Km 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	NANO 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	Φ158 mm x H53 mm
Weight	940 g
Operating Temperature	-40°C ~ +65°C
Storage Temperature	-45°C ~ +80°C
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.

Configurations

E300 Pro Base					
NO.	Items	Quantity	Model	Description	Picture
1	Base Carrying Case	1	---	Carry case for base station External radio and cable can be put inside	
2	E300 Pro 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	Extension Pole	1	---	25cm	
9	Screw Connector	1	---	---	
10	Tray	1	---	---	
11	Warranty Card	1	---	---	

Configurations

E300 Pro Rover					
NO.	Items	Quantity	Model	Description	Picture
1	Rover Carrying Case	1	---	Carry case for rover station Controller and bracket can be put inside	
2	E300 Pro 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

Slope:? Dist to Bottom:?
:66739.347 Offset:(Left)48.545

Post Process Software-GEOSolution

The screenshot displays the GEOSolution software interface. The main window shows a network diagram of GNSS baselines. The network consists of several points connected by dashed green lines. The points are labeled: 'Ahuwagalla base' (top left), 'alpititiya' (top right), '127B' (middle right), '128C' (middle right), '127A' (middle right), '135B' (middle left), '135C' (middle left), and 'mnnana' (bottom center). The diagram is overlaid on a grid with latitude and longitude coordinates. A scale bar in the bottom right corner indicates 2.42 km.

The left sidebar contains the 'Project Manager' and 'Baseline Process' sections. The 'Baseline Process' section is active, showing icons for 'Static Settings', 'Dynamic Settings', 'Baseline Process', and 'Baseline reorganization'. The 'Adjustment process' section is also visible.

The bottom of the window shows a log of processing results. The log entries are as follows:

- 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!!

The status bar at the bottom left shows: B: 006d 18m 46.99003464s L: 080d 04m 04.15648191s

THANK YOU

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