FORA GNSS
ADVANTAGES OF A LEADER

e-survey

eBase 20

PORTABLE GNSS BASE RECEIVER



The eSurvey eBase 20 is a professional and portable GNSS base receiver. With a high-precision GNSS module and tracking multiple frequencies, eBase 20 is specifically designed to work as a GNSS base station. Combining a 4G modem and internal radio, eBase 20 is a perfect choice for a base station. The eSurvey eBase 20 is ideal for applications such as UAV, USV, agriculture, intelligent driving, surveying and mapping, etc.



GNSS Receiver

Multi-constellation and Multi-frequency

With 1408 channels of GNSS tracking, it provides stable and reliable accuracy. All GNSS signals come with the standard, including GPS, BDS, GLONASS, Galileo, QZSS, and SBAS.

UHF and 4G modem

The built-in Global 4G Network and radio module allow eBase 20 to work perfectly as a base station to transmit GNSS corrections.

High Performance and Cost-effective

Embedded with a high-precision GNSS module, eBase 20 provides high performance as a GNSS base station at a low cost. Easy to carry and simple setup process improves work efficiency.

Instant Base Station Moved Alarm

When the base station is displaced, eBase 20 will respectively give a warning in real-time to prevent error data to be collected. In addition, there is also a buzzer alarm when the battery is low and the receiver is not activated.

Smart Base Station Service

The smart base station service works while connected to the CORS and gets an accurate position as a known point.

Web UI

It allows users to view position status, download data, and update firmware from the Web user interface with any smartphone, tablet, or PC.

Product Specification

eBase 20

PORTABLE GNSS BASE RECEIVER



GNSS Performance		
Satellites tracking	GPS	L1C/A, L2P(Y), L5
	BDS	B1I, B2I, B3I, B1C, B2a
	GLONASS	L1, L2
	Galileo	E1, E5b, E5a
	QZSS	L1, L2, L5
	SBAS	WAAS, MSAS, EGNOS, SDCM, BDS
Channels		1408
Cold start		< 30 seconds
Initialization reliability		> 99.9%
Update rate		20 Hz
Static and fast static		■ H: 2.5 mm + 0.5 ppm RMS ■ V: 5 mm + 0.5 ppm RMS
Correction data		RTCM V3.X, RTCM2.X, CMR
Data output		GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL, Binary

Power Supply	
Battery	Rechargeable Built-in Lithium-ion battery x 1 3.6 V - 10200 mAh
Voltage	9 - 28V dc
Working time	Up to 7 hours as base w/ UHF transmitting
Charging time	Typically 6 hours

Internal Radio	
Type	TX
Emitting Power	1W/2W
Operation Range	3-5 km typically up to 13 km with optimal condition [1]
Frequency range	410 - 470 MHz
Channel spacing	6.25 kHz [2] / 12.5 kHz / 25 kHz
Protocol	TrimTalk 450s, PCC-GMSK, PCC-4FSK, Satel, Satel_ADL, HITARGET, TrimTalk, HZSZ, South, TrimMark III, GEOTALK, GEOMARK, PCCFST, PCCFST_ADL

1: It varies with the obstacle and terrain.
2: It is only available for radio protocol "Satel".

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	802.11a/b/g/n/ac
SIM card	✓
TNC	Connect internal radio with antenna
5-pin port	Connect to external radio and external power
Type-C port	Charge and data transmission
Web UI	View status, update firmware, download data, etc.
Buzzer	Alarm buzzer
Tilt sensor	e-bubble

Physical	
Dimension	Φ152 mm × H92 mm
Weight	850 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 99%
Indicators	Satellites, datalink, battery, Bluetooth
Button	Power button
Certificate	CE, FCC, NGS, IGS