

VBase Survey GNSS Receiver

Data Specifications

GNSS

Satellite Tracking	Support HM 505 motherboard, all satellite all frequency GPS (L1 C/A, L2 C, L2 P, L5) GLONASS (L1 CA, L2 CA, L3) BeiDou (B1 I, B2 I, B1 C, B2 a, B3 I, B2 b) Galileo (E1, E5 a, E5 b, E5 AltBOC) QZSS (L1 CA, L2 C, L1 S, L5)
Output Format	NMEA-0183, Raw observation data, RTCM 3.X
Positioning Data Frequency	1 Hz
Data Format	GNS, RTCM, NMEA
Differential Format	RTCM 3.0, RTCM 3.2, RTCM 3.3

System

Operating System	Linux operating system
Data Storage	Internal 8 GB ROM

Precision^[1]

Single Point Positioning	Horizontal accuracy: ± 1.5 m(RMS) Vertical accuracy: ± 2.5 m(RMS)
Static Measurement	Flat: $\pm(2.5+0.5 \times 10^{-6} D)$ mm Elevation: $\pm(5+0.5 \times 10^{-6} D)$ mm (D is the distance between the measured points)

Data Communication

Network	FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 TDD: B34/38/39/40/41 GSM: 850/900/1800/1900 MHz
Wi-Fi	Built-in 2.4G WIFI, open and visible environment, transmission distance ≥ 30 meters
Wired Network	Support 10 M/100 Mbps network

User Interface

LED Light	Four LED lights, namely satellite light, wired network light, 4G light and work ready light
WEB Page	Built-in WEB page to realize receiver setting, status checking and upgrade management

External Interface

15-core Interface	1, with 4 features: POE power supply; Serial port debugging, (open configuration on demand); USB burning (open on demand); Network port data transmission
SIM Card Interface	1, Nano SIM card interface

Physical Features

Size	185 mm*123 mm (Diameter*Height)
Weight	≤ 1.4 kg
Power Consumption	3W (Base Station Mode)

Environmental Characteristics

Waterproof and Dustproof	IP66
Salt Spray	Alternating salt spray for 96 hours
Operating Temperature	-40 $^{\circ}$ C ~ +65 $^{\circ}$ C
Storage Temperature	-50 $^{\circ}$ C ~ +85 $^{\circ}$ C

Note

¹The accuracy depends on various factors, including the number of satellites, geometric distribution, observation time, atmospheric conditions and multipath effects, etc. The data is obtained under normal conditions.

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