

R5

LONG-LASTING BATTERY
for Your Project



60 hrs

Your trustful eBase R5

LESS LEADS TO PROFESSIONAL

GNSS System Features	
Channels	1408, the very most powerful chip in global Integrated dual-core processor&high-precision algorithm
GPS	L1C,L1C/A,L2C,L2P/Y,L5
GLONASS	G1/G2/G3
BDS	B1I,B2I,B3I,B1C,B2A,B2B
GALILEO	E1,E5A,E5B,E6,AltBOC
SBAS	L1
IRNSS	L5
QZSS	L1,L2C,L5
MSS L-BAND	Reserve
Positioning output rate	1-50Hz
Initialization Time	<5s
Initialization Reliability	>99.9%

Precision Positioning	
Code differential GNSS positioning	Horizontal: 0.25 m + 1 ppm RMS Vertical: 0.50 m + 1 ppm RMS
GNSS Static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 3.5 mm + 0.5 ppm RMS
Static (Long Baseline)	Horizontal: 2.5 mm + 0.1 ppm RMS Vertical: 3 mm + 0.4 ppm RMS
Rapid Static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
PPK	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
RTK(UHF)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS
RTK(NTRIP)	Horizontal: 8 mm + 0.5 ppm RMS Vertical: 15 mm + 0.5 ppm RMS
SBAS Positioning	Typically<5m 3DRMS
RTK Initialization Time	2~8s
IMU Accuracy	8mm+0.7 mm/° tilt
IMU Tilt Angle	Optimal accuracy within 60° 120° at any angle

Physical Performance	
Dimension	75mm Radius x 75mm Height
Weight	950g incl. battery
Material	ABS + Magnesium Alloy
Operating Temperature	-48°C ~ +75°C
Storage Temperature	-55°C ~ + 85°C
Humidity	100%, condensing
Waterproof /Dustproof	IP67, tested and protected from
Shock/Vibration	Survive at 2.25m pole drop down to hard ground MIL-STD-810G
Power Supply	9-15c DC external power input with 5-pin LEMO
Battery	Built-in 13500mAh Lithium battery
Battery life	Rover mode 35hours Base mode 15hours Static mode 40hours

Sensors	
IMU	Calibration-free 60° 120°at any angle,accuracy < 2cm
Laser	1-10m, 1-2cm accuracy on H and V 10-30m, 3-5cm accuracy on H and V
Electronic Bubble	Helping to calibrate IMU at real-time

User Interface	
Operating System	Industrial level Linux OS
Indicators	Statuses in real-time
WebUI	Complete configuration platform (CCP)
Voice Guidance	Multilingual voice for statuses/configuration
MSD	Support developing kit for 3rd party software
Service on Cloud	Online update/register. Data management
Color Screen	1.39inch clear and sunlight visible

Data Storage/Transfer	
Storage	62GB SSD internal memory Refresh old collection with new
Data Transfer	By USB transfer, FTP server and WebUI
Data Format	Static data Rinex2.01/3.02 RTCM2.1/2.3/3.0/3.1/3.2 GPS output NMEA0183 CMR/CMR+/sCMRx Support different version Differential correction data

Comm. Compatibility	
I/O Port	Type-C power input 5 pin serial port control External radio connection Sim card slot Antenna port
Internal UHF	5-7watts switchable TX/RX 15-18km working radius in Lora mode
Frequency Range	LORA radio, 410-472Mhz digital radio modem
Communication Protocol	TrimTalk450s, SOUTH, SATEL, PCC-EOT
Communication Range	8-12km max as usual 15-18km in Lora mode
Bluetooth	BT5.0 dual direction module Double-direction mode
WIFI	802.11 b/g standard, accessed to client/server mode.
NFC Comm	Touch to connect
Cellular Comm	Full Frequency and multi band 4G network modem WCDMA/CDMA2000/LTE

1. Specification according to the latest navigation chip. It enhances the signal of BDS and GPS together.
2. Optimal accuracy performance can be achieved by good operation and experience. Using proper RiGS accessories to improve it in the field.
3. L-band and HAS function reserved.

RiGS
ALL ABOUT TOOLS

