A TOOLIZED GNSS RECEIVER

R2

Empowered by Advanced 120° IMU sensor

Full frequency UHF modem Add-on

Intuitive User interface

40% efficiency improvement on site

3-year warranty

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	1-20Hz
Initialization Time	<10s
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: 7 mm + 1 ppm RMS Vertical: 14 mm + 1 ppm RMS
RTK(NTRIP)	Horizontal: 7 mm + 0.5 ppm RMS Vertical: 14 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	62mm Radius x 75mm Height
Weight	800g incl. battery
Material	ABS + Magnesium Alloy
Operating Temperature	-48℃ ~ +75℃
Storage Temperature	-55℃ ~ + 85℃
Humidity	100%, condensing
Waterproof /Dustproof	IP67, tested and protected from
Shock/Vibration	Survive at 2.25m pole drop down to hard groud MIL-STD-810G
Power Supply	9-15c DC external power input with 5-pin LEMO
Battery	Built-in 7500mAh Lithium battery
Battery life	Rover mode 15hours Base mode 12hours Static mode 20hours

Sensors	
IMU	Calibration-free 60° 120°at any angle
Temperature Control	Ensure the machine work in good condition as always
Electronic Bubble	Helping to calibrate IMU at real-time

User Interface	
Operating System	Industrial level Linux OS
Buttons	Power key
Indicators	4 indicators, SAT, BLU, POW, DAT
WebUI	Complete configuration platform (CCP)
Voice Guidance	Multilingual voice for statues/configuration
MSD	Support developing kit for 3rd party software
Service on Cloud	Online update/register. Data management

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	1-2watts switchable TX/RX 8-10km working radius in Lora mode
Frequency Range	410-472Mhz digital radio modem
Communication Protocol	TrimTalk450s, SOUTH, SATEL, PCC-EOT
Communication Range	5-7km max as usual 7-10km 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
Celluar 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.

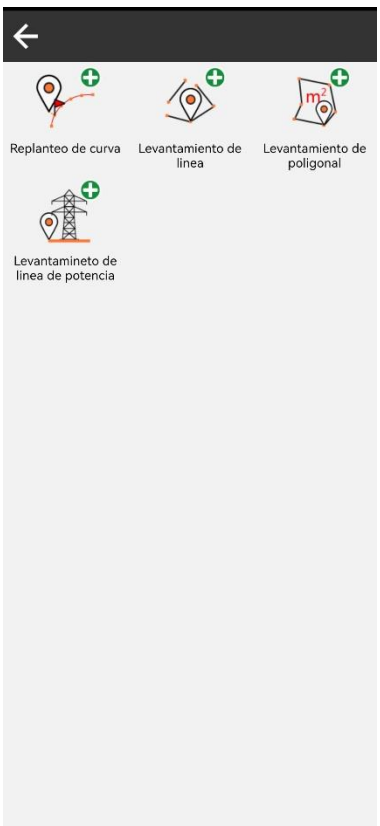
	UHF	Network	IMU	WiFi	Antenna direct	Built-in Power	Battery rod available
eBase R5	5w Tx/Rx	4G global	Advanced	✓	↑	13500mAh	✓
R2	1/2w Tx/Rx	4G global	Advanced	✓	↓	7500mAh	✓
Flex42	1/2w Tx/Rx	4G global	Advanced	✓	↓	7500mAh	✓

Camera	Laser	Screen
✗	✗	✓
✗	✗	✗
Dual Camera	✓	✗

RiGS

Working In Every Condition

All in One Control Software



Versatile Functions.

Multi-language Available.

Control Your RIGS in One software.

Codes for Cadastral Survey.

Point/Line/Polygon works.

Roads/Mining projects.