

PERFORMANCE SPECIFICATIONS

Satellite Signals Tracked Simultaneously¹

Channels.....	1408
GPS.....	L1C/A, L1C, L2P(Y), L2C, L5
BeiDou.....	B1I, B2I, B3I, B1C, B2a, B2b*
GLONASS.....	L1, L2, L3
Galileo.....	E1, E5A, E5, AltBOC, E5B, E6
IRNSS.....	L5
SBAS.....	L1C/A, L5(QZSS, WAAS, MSAS, GAGAN)
QZSS.....	L1, L2, L5, L6*
PPP.....	B2b-PPP

POSITIONING PERFORMANCE²

High-Precision Static

Horizontal.....	2.5 mm + 0.1 ppm RMS
Vertical.....	3.5 mm + 0.4 ppm RMS

Static and Fast Static:

Horizontal.....	2.5 mm + 0.5 ppm RMS
Vertical.....	5 mm + 0.5 ppm RMS

Post Processing Kinematic (PPK / Stop & Go)

Horizontal.....	8mm+1ppm RMS
Vertical.....	15mm+1ppm RMS

Initialization time..... Typically 10 min for base and 5 min for rover
 Initialization reliability..... Typically > 99.9%

Code Differential GNSS Positioning

Horizontal.....	25cm+1ppm RMS
Vertical.....	50cm+1ppm RMS
SBAS.....	0.5m
PPP.....	V: 10cm H: 20cm

Real Time Kinematic (RTK)

Single Baseline

Horizontal.....	8mm+1ppm RMS
Vertical.....	15mm+1ppm RMS

Network RTK(VRS,FKP,MAC)

Horizontal.....	8mm+0.5ppm RMS
Vertical.....	15mm+0.5ppm RMS
Initialization time.....	Typically 2-10s
Initialization reliability.....	Typically > 99.99%

Provides RTK measurements even during differential signal interruptions

Hi-Fix⁵

Horizontal.....	RTK+10mm / minute RMS
Vertical.....	RTK+20mm / minute RMS

Time to first Fix

Cold start.....	< 45 s
Hot start.....	< 30 s
Signal re-acquisition.....	< 2 s

Image Accuracy

Stakeout.....	Typically 2cm
Image Measurement.....	2cm~4cm

Tilt Survey Performance³

Additional horizontal pole-tilt uncertainty typically less than 8mm+0.7mm/°tilt(2.5cm accuracy in the inclination of 60°)

HARDWARE

Physical

Dimensions (W x H).....	130mm×79mm
Weight.....	lighter than 0.97kg (2.14lb) within internal battery
Operation temperature.....	-40°C~+75°C (-40°F~+167°F)
Storage temperature.....	-55°C~+85°C (-67°F~+185°F)
Temperature control.....	Auto-adjust the working power to maintain the temperature
Humidity.....	100%, non-condensing
Water/dustproof.....	IP68 dustproof, protected from temporary immersion to depth of 1.0m (3.28ft)
Shock and vibration.....	MIL-STD-810G, 514.6
Anti-salt spray.....	MIL-STD-810G, 509.4, 96h
Free fall.....	MIL-STD-810G, 516.6, designed to survive a 2m(6.56ft) natural fall onto concrete

Charging

Charging:using standard smartphone chargers or external power banks
 (Support 5V 2.8A Type-C USB external charging)

Control Panel

Physical button.....	1
LED Lights.....	Satellite lights, signal lights, power lights

Camera

Pixel.....	2MP & 5MP
Support real scene stakeout, image measurement, working distance 2~15m	

Internal Battery⁴

7.2V, 6900mAh Built-in lithium-ion battery.
 RTK rover(UHF/Cellular) for 15 hours.
 Power indicator embedded.
 Quick charge within 3.5 hours.

I/O Interface

Bluetooth 4.0/2.1+ EDR, 2.4 GHz. USB type C interface; SMA interface;
 Nano SIM card slot
 Near Field Communication(NFC)

Communication

Network Communication

Full band support for cellular mobile network(LTE, WCDMA, EDGE, GPRS, GSM).
 2.4GHz Wi-Fi, supports the standard protocol 802.11 b/g/n. Network RTK(in CORS)
 range is 20-50km.

Internal UHF Transceiver Radio

Frequency.....	410~470MHz
Transmitting power.....	0.5W / 1W / 2W adjustable Hi-Target Advanced Radio
Supports protocols: HI-TARGET, TRIMTALK450S, TRIMMARK III, SATEL-3AS, TRANSEOT, etc.	
Working Range.....	Typically 3~5km, optimal 5~8km
Channels.....	116

SYSTEM CONFIGURATION

System

Data storage.....	Circulating 8GB Internal storage
	Record GNS and RINEX format simultaneously

Data Formats

1Hz positioning output, up to 20Hz. RTCM2.X, RTCM3.X.
 Navigation outputs ASCII: NMEA-0183

[1]BDS B2b, GALILEO E6, QZSS L6, IRNSS L5 can be provided by firmware upgrade. BDS B2b is optional for 1408 channels.

[2]The measurement accuracy, precision, reliability and initialization time depend on various factors, including tilt angle, number of satellites, geometric distribution, observation time, atmospheric conditions and multi-path validation, etc. The data are derived under normal conditions.

[3]Irregular operations such as rapid rotation and high-intensity vibration may affect the inertial navigation accuracy.

[4]The battery operating time is related to the operating environment, operating temperature and battery life

[5]Accuracies are dependent on GNSS satellite availability. Hi-Fix Positioning ends after 5 minutes without differential data.Hi-Fix is not available in all regions, check with your local sales representative for more information.

Descriptions and Specifications are subject to change without notice



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Vision RTK

VENI, VIDI, VICI

