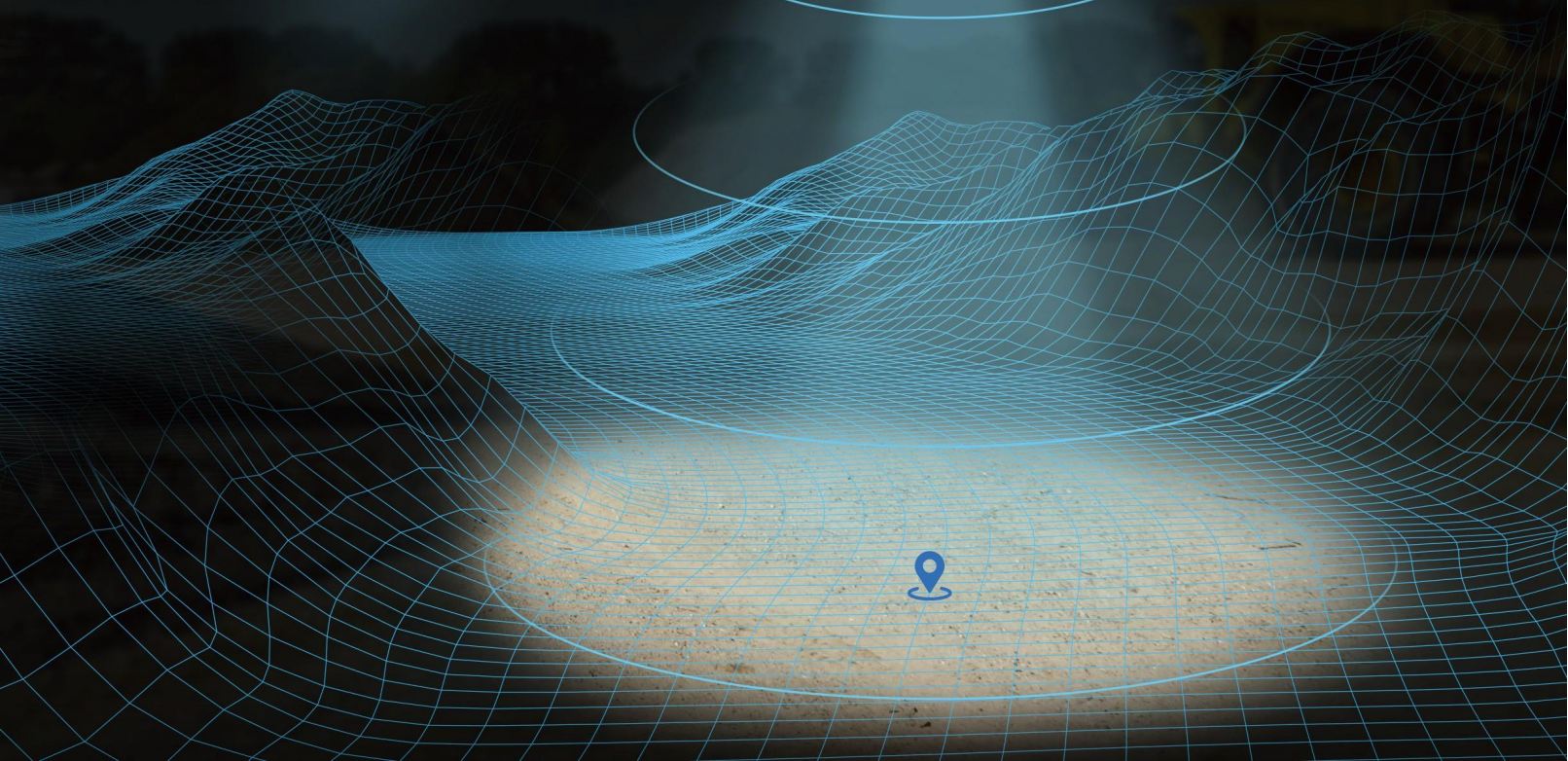


# *Vision RTK*

VENI, VIDI, VICI



# PERFORMANCE SPECIFICATIONS

## Satellite Signals Tracked Simultaneously<sup>1</sup>

Channels.....	1408
GPS.....	L1C/A, L1C, L2P(Y), L2C, L5
BDS.....	B1I, B2I, B3I, B1C, B2a, B2b
GLONASS.....	L1, L2, L3
Galileo.....	E1, E5a, E5b, E6
QZSS.....	L1, L2, L5, L6*
NavIC.....	L5
SBAS.....	L1, L2, L5
PPP.....	B2b-PPP, Galileo E6-HAS

## POSITIONING PERFORMANCE<sup>2</sup>

### 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.....	H: 0.5m V: 0.85m

### Precise Point Positioning (PPP)

Horizontal.....	10cm
Vertical.....	20cm

### Real Time Kinematic (RTK) Single Baseline

Horizontal.....	8mm+1ppm RMS
Vertical.....	15mm+1ppm RMS
Initialization time.....	Typically < 10s
Initialization reliability.....	Typically > 99.99%
Positioning rate.....	1 Hz, 5 Hz and 10 Hz

### Hi-Fix<sup>3</sup>

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 1cm
Image Measurement.....	2cm~4cm(range 2~15 m)

### Tilt Survey Performance<sup>4</sup>

Additional horizontal pole-tilt uncertainty typically less than  
8mm+0.7mm/°tilt(0°~60°)

## HARDWARE

### Physical

Dimensions (W x H).....	130mm×79mm
Weight.....	lighter than 0.97kg (2.14lb) within internal battery
Operation temperature.....	-10°C~+55°C
Storage temperature.....	-10°C~+55°C
Storage temperature.....	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 ELECTRICAL

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

## ELECTRICAL

### Internal Battery<sup>5</sup>

Internal 7.2V / 6900mAh Built-in lithium-ion rechargeable battery.  
RTK rover (UHF): up to 24 hours.

### External power

Using standard smartphone chargers or external power banks.  
(Support 5V 2.8A Type-C USB external charging)

## COMMUNICATION

I/O Interface.....	1 × USB type C port, 1 × SMA antenna port, 1×Nano SIM card slot
Network Mode.....	Full band support for cellular mobile network (LTE, WCDMA, EDGE, GPRS, GSM)
WiFi.....	Frequency 2.4GHz, Supports 802.11 b/g/n
P(e.i.r.p) max: 20 dBm	
Bluetooth.....	BT 4.0/2.1+EDR, 2.4GHz
NFC.....	receive only

### Internal UHF Radio

Power.....	0.5W / 1W / 2W Adjustable
Frequency.....	410~470MHz
Protocols: HI-TARGET, TRIMTALK450S, TRIMMARK III, SATEL-3AS, TRANSEOT, etc.	
Working Range.....	Typically 3~5km, optimal 8~15km
Channels.....	116 (16 scalable)

## CAMERA

Pixel.....	Dual-camera, 2MP & 5MP
Function.....	Real scene stakeout, image measurement, working distance 2~15m

## CONTROL PANEL

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

## SYSTEM CONFIGURATION

Storage.....	8G ROM internal storage
Output format.....	ASCII: NMEA-0183
Output rate.....	1Hz~20Hz
Static data format.....	GNS, Rinex
Real Time Kinematic (RTK).....	RTCM2.X, RTCM3.X, CMR
Network Mode.....	VRS, FKP, MAC, Support NTRIP protocol

### Note:

[1] QZSS L6 can be provided by firmware upgrade.

[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] 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.

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

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

Descriptions and Specifications are subject to change without notice



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