

PERFORMANCE SPECIFICATIONS

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

|               |                              |
|---------------|------------------------------|
| Channels..... | 1760                         |
| GPS.....      | L1C/A, L2C, L2P, L5          |
| BDS.....      | B1I, B1C, B2a, B2b, B2I, B3I |
| GLONASS.....  | L1CA, L2CA, L2P, L3          |
| Galileo ..... | E1, E5a, E5b, E5 AltBoc      |
| QZSS.....     | L1C/A, L1S, L2C, L5          |
| NavIC.....    | L5                           |
| SBAS*.....    | L1, L2, L5                   |
| PPP.....      | B2b-PPP                      |

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.....                 | 3mm+1ppm RMS                                  |
| Vertical.....                   | 5mm+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)

|              |                  |
|--------------|------------------|
| B2b-PPP..... | 10cm(H), 20cm(V) |
|--------------|------------------|

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..... | -40°C~-75°C (-40°F~-167°F)                                                       |
| Storage temperature.....   | -55°C~+85°C (-67°F~+185°F)                                                       |
| 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

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/Cellular): up to 15 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 (4G, LTE, WCDMA, EDGE, GPRS, GSM) |
| WiFi.....          | Frequency 2.4GHz, Supports 802.11 b/g/n                                         |
| Bluetooth.....     | BT 4.2/2.1+EDR, 2.4GHz                                                          |
| NFC.....           | Near Field Communication for device touch pairing                               |

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 stroage               |
| Output format.....             | ASCII: NMEA-0183                      |
| Output rate.....               | 1Hz~20Hz                              |
| Static data format.....        | GNS, Rinex                            |
| Real Time Kinematic (RTK)..... | RTCM3.X                               |
| Network Mode.....              | VRS, FKP, MAC, Support NTRIP protocol |

Note:

[1]SBAS service can be provided by firmware upgrade, PPP service is not available in all regions, check with your local sales representative for more information.

[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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Vision RTK

VENI, VIDI, VICI

