

## SATELLITES TRACKING

Channels	1408
GPS	L1C/A, L1C, L2C, L2P(Y), L5
GLONASS	L1,L2,L3*
Galileo	E1, E5a, E5b, E6
BDS	B1I, B2I, B3I, B1C, B2a, B2b
QZSS	L1C/A, L1C, L2C, L5, L6
NavIC/IRNSS	L5
SBAS	L1C/A
L-Band	B2B-PPP & E6-HAS

## ACCURACY

Real time kinematics (RTK)	H: 8mm ± 1 ppm RMS V: 15mm ± 1 ppm RMS Initialization time:<5s(typical) Initialization reliability:>99.9%
Post-processing kinematics (PPK)	H: 3 mm ± 0.5 ppm RMS V: 5 mm ± 0.5 ppm RMS
Static	H:2.5 mm ± 0.5 ppm RMS V:5mm ± 0.5 ppm RMS
PPP	H: 10cm RMS V: 20cm RMS
DGPS	H: 0.4m RMS V: 0.8m RMS
Single Point	H: 1.5m RMS V: 2.5m RMS
AR stakeout	H: 8 mm ± 1 ppm RMS V: 15 mm ± 1 ppm RMS
Position Frequency	1Hz 2Hz 5Hz 10Hz 20Hz 50Hz
Time to first fix	Cold start<45s Hot start<10s Signal re-acquisition<1s
IMU tilt angle	0-120°
IMU tilt survey accuracy	≤2cm within 60° tilt angle

## LASER

Type	Class3.0 Green
Range	120m
Laser survey	±8mm + 5mm/m (Tilt angle within 30°)

## CAMERA

Number of cameras	2
Pixel	Global shutter with 5MP
Frame rate	30fps
Field of view	84°
Features	• 5MP bottom camera achieve AR stakeout • 5MP front camera auxiliary laser measure & aiming and AR stakeout

### \*Note

#### 2.4 GHz Band:

P(e.i.r.p) max: 20 dBm

Nominal channel band width: 20 MHz , Wi-Fi Standard

802.11b/g/n Operating Frequency Range: 2400 MHz – 2483.5 MHz

Number of channels: 13 channels (1 to 13)

## COMMUNICATION

UHF radio	2W Tx/Rx, 410-470 MHz Working range is 8-15km in ideal environments
Protocol	TT450, TRIMMARK3, SOUTH, LORA Link rate :9600bps to 19200bps
Wifi	2.4G* 802.11 b/g/n Hotspot/Data Link
Bluetooth	Bluetooth 5.2 classical/ BLE proprietary dual-mode
NFC	Only receive
WebUI	Accessible via Wi-Fi
4G Cellular	• Integrated full frequency multi band 4G modem • Supports LTE-TDD/LTEFDD/WCDMA/CDMA2000/UMTS/HSPA+
I/O port	• 1xUSB Type-C port (Data download / Charging) • 1xAntenna port(UHF antenna interface) • 1xSim card slot (Supports Nano-sim) • 1x5-pin Lemo port (RS-232)
Data formats	RTCM 2.X, RTCM 3.X, RINEX, NMEA 0183 output,VRS,NTRIP
Data storage	32GB high speed memory

## ELECTRICAL

Battery	Internal Li-ion Battery 7.4V 7000mAh
Charging specs	USB Type-C fast charging
Operation time	Rover mode:18 hours Base mode:7 hours Static mode:20 hours

## HARDWARE

Size	125mm(W) 88mm (H) 4.92inch(W) 3.46inch(H)
Weight	750g(1.65lb)
Front panel	0.96" OLED color screen display 2LED physical buttons (switchable mode, data link)

## ENVIRONMENTS

Working temperature	-20°C to +65°C
Storage temperature	-55°C to +85°C
Humidity	100% Non-condensing
Waterproof & Dustproof	IP68
Drop	Survive a 2-meter pole-drop
Vibration	IK08