

SPECIFICATIONS

GNSS

Channels	1408
GPS	L1C/A/L2P(Y)/L2C/L5
GLONASS	L1/L2
BDS	B1I/B2I/B3I/BIC/B2a/B2b
Galileo	E1/E5a/E5b/E6
QZSS	L1/L2/L5/L6
SBAS	L1
NavIC	L5
L Band	B2b PPP & HAS (Galileo)
Data format	RTCM2.X, RTCM3.X
GPS data output	NMEA 0183
Data updating rate	50Hz (MAX)
Initialization time	<5s (Typically)
Initialization Reliability	99.99%

Positioning Accuracy

Single (RMS)	Horizontal : 1.5m Vertical : 2.5m
DGPS(RMS)	Horizontal : 0.4m Vertical: 0.8m
RTK(RMS)	Horizontal : $\pm(8\text{mm}+1\text{ppm})$ Vertical: $\pm(15\text{mm}+1\text{ppm})$
Time accuracy (RMS)	20ns
Static(RMS)	Horizontal: $\pm(2.5\text{mm}+1\text{ppm})$ Vertical : $\pm(5\text{mm}+1\text{ppm})$
Speed accuracy (RMS)	0.03m/s
IMU Accuracy	within 60°less then 2cm
IMU angle	0° ~ 120°
Version survey	2-4 cm 95% (10m, normal lighting conditions)

Communication

Bluetooth	SPP3.0 +BLE 5.0
WIFI	802.11 B/g/n
Network	LTE-TDD B38/b40/b41 LTE-FDD B1/b3/b5/b7/b8/b20 UMTS/HSPA+ B1/B8 Gsm/gprs/edge 900/1800 Mhz
Radio	Power : 2w Frequency: 410-470MHZ
Protocol	Trimtalk450s, trimmarkIII, South9600, south19200, Lora
Communication Range	Typically 5km. Lora Function Reach To 10--12km
Inner Memory	32G
Camera	5MP camera support dual visual stake out

Indicator

Power	Power on/ off
LED	Satellite / corrections / Power/ Bluetooth

Power

Battery	7.4V, 7000mAh
Working time	24--26 hours working time (Rover/ static)
Charging	Support USB 15V/ 2A (Quick charge function)

Environment

Working	-45°C ~ +75°C
Storage	-55°C ~ +85°C
Protection	1.8 meter normal fall down/ 1 meter water immerse
Level	Ip68

Physical

I/O port	1* USBTypeC charge (support Power bank) 1* SMA UHF radio antenna 1* 5 pin LEMO (9V-14V)
Size	129*129*77MM
Weight	≤ 850g

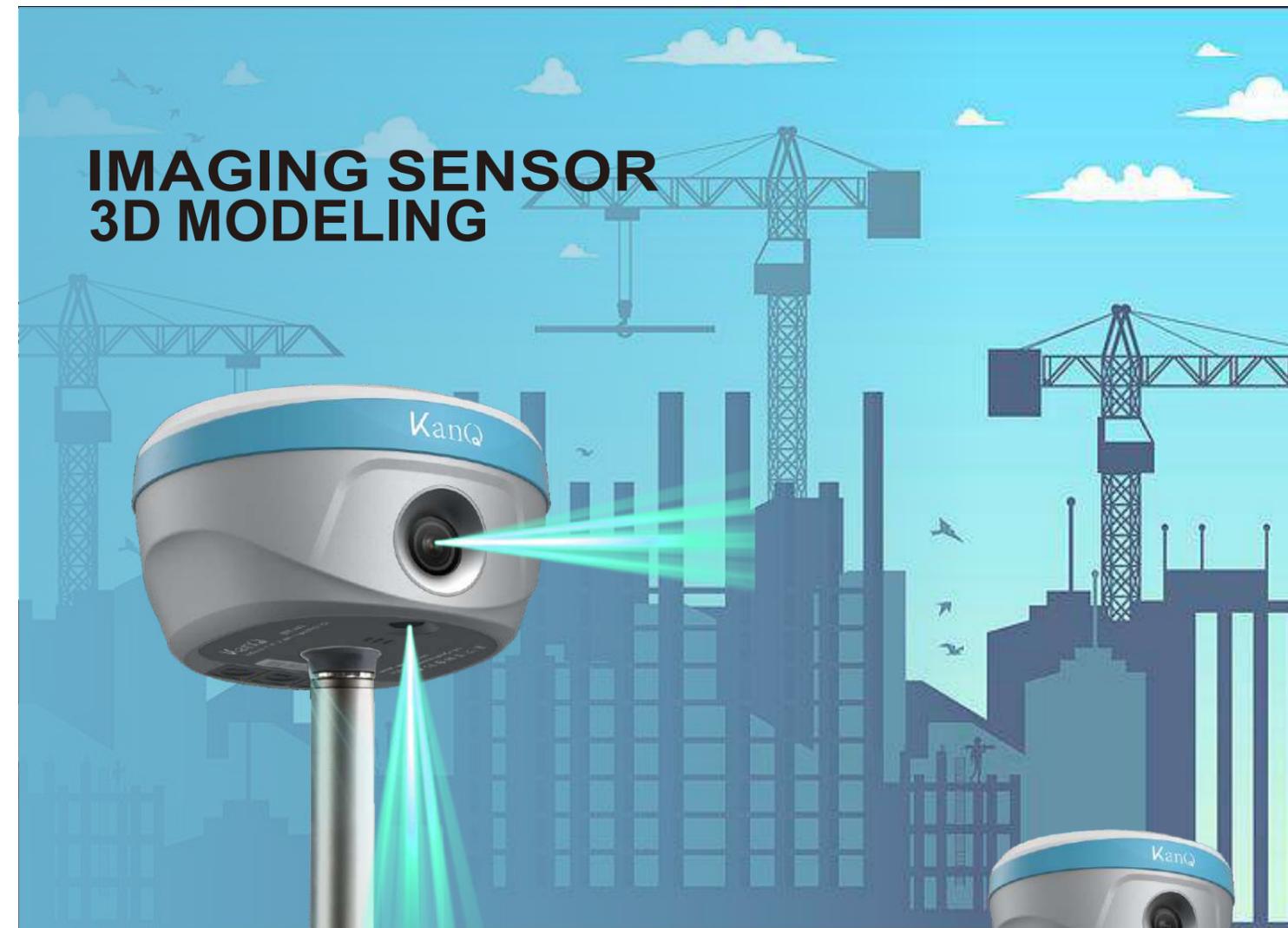
Remark

- *M12 has 3 options in provide. M12 Basic , M12 LA, M12 IS.
 - * M12 is basic version with amazing dealer offer, M12 LA is Laser +dual camera version
 - *M12 IS is imaging sensor and 3D modeling version.
- Please make the choice base on your needs

Website: www.kqgeo-gps.com
Address: 8FBD Building, No.980 High-tech DevZone of East Lake, Wuhan, Hubei, China
Mobile/ Whatsapp: +86 18162794086

KanQ

KQ M12 GNSS RECEIVER



M12IS

- ▶ 5MP HD CAMERA (AR)
- ▶ IMU TILT 120 DEGREE
- ▶ 1408 CHANNELS
- ▶ 3D MODELING

- ▶ VISION TECHNOLOGY
- ▶ WEB UI CONFIGURE
- ▶ UPDATE RATE 50HZ
- ▶ TYPE C FAST CHARGE



M12IS is an innovative GNSS receiver that integrates the latest GNSS IMU and Vision technology, with the integration of dual cameras, in hard to reach , signal obstructed and dangerous fields , the advanced vision system allows surveyors to effortlessly overcome all those challenging. it equipped with 4G/ 2W radio/ Bluetooth / WIFI for communication, WEB UI and IMU tilt 120 degree support. High specifications , stable performance but with very good budget. Lora function make the working distance reach to 12KM without external radio. Up to 50HZ update rating give a quick speed tool for surveyors for complete field project.

▶ **Supper tracking capacity**

1408 channels and full -frequency RTK engine and full star RTK technology. Can against most of the complex conditions

▶ **Vision survey**

The combination of the Vision +camera function, M12IS enables surveyors to measure points remotely, reaching distances of up to 10 meters or more (under ideal conditions) , thereby eliminating the necessity to physically approach each point, this approach decrease the physical effort required during fieldwork

▶ **AR stakeout**

Immersive AR visual stakeout to vividly display ground stakeout points in the software, obviously improve the working efficiency

▶ **Robustness & Durability**

IP68 protection level, with over 30 times 2 meter fall down testing and water immerse inspection, it's Seamless design to protect in cruel field working.

▶ **4th generation IMU sensor**

The newest IMU sensor makes the Tilt working more convenient, it eliminates the loss of Inertial-Measurement-Usable Status in most scenarios, no need frequency to shake the carbon pole and 120 degree tilt

▶ **Powerful battery and charger**

With 7.4V 7000mAh capacity and quick charge technology, also power bank support , help you in full day working and continuous field working to improve your efficiency.

▶ **Reliable Precision**

Support the full-frequency film RTK positioning solution
The embedded multi-frequency point anti-interference technology. Significantly improved the initialization speed, measurement accuracy and reliability in complex environment