

SPECIFICATIONS

GNSS

GPS	L1 C/A, L1C, L2P(Y), L2C, L5
GLONASS	L1, L2, L3
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GALILEO	E1, E5a, E5b, E6
QZSS	L1, L2, L5
NavIC(IRNSS)*	L5
SBAS	L1
Data format	NMEA-0183
I/O protocol	RTCM3.X
Update rate	20Hz max
Re-capture time	<1s
Cold start	<40s
RTK Initialization Time	<10s
Internal noise level	≤1mm

Positioning Accuracy

Single (RMS)	Horizontal :1.5m Vertical :2.5m
DGPS(RMS)	Horizontal :0.4m Vertical:0.8m
RTK(RMS)	Horizontal :±(8mm+1ppm) Vertical:±(15mm+1ppm)
Time accuracy (RMS)	20ns
Static(RMS)	Horizontal: ±(2.5mm+1ppm) Horizontal : ±(5mm+1ppm)
Speed accuracy (RMS)	0.03m/s
IMU tilt(60° below)	<2cm
AR Stakeout	Horizontal: ±(8mm+1ppm) Vertical: ±(15mm+1ppm)
Laser Measurement	The three-dimensional accuracy of laser tilt measurement within 5m: no more than 2.5cm range laser :100m

Communication

Bluetooth	BR+EDR+BLE
WIFI	802.11 b/g/n/ac
Network	LTE FDD:B1/2/3/4/5/7/8/12/13/ 18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8
Radio	Power: 0.5W/1.5W Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT, SATEL, LORA
Inner memory	8GB

Voice	Support
Laser Camera	Sensor size:1/3.06 inch Aperture: f/2.9 Resolution:4224*3200 Field of view: D44°H=35°V=26.5° Distortion: <1%
AR Camera	Supports AR real scene stakeout Sensor size: 1/2.8 inch Aperture: f/2.5 Resolution: 1920*1080 Field of view: 69.3°±3° Distortion: <0.38%

Electrical

BATTERY	7.4V, 6500mAh
Work time	More than 26 hours Static) More than 16 hours (Typical, Rover, GSM)
Charge	USB PD 15V/2A
Indicator light	Satellite light: Flashing indicates effective positioning Data link light: flashing when there is difference

Environment

Working	-25°C~+60°C
Storage	-40°C~+80°C
Protection	1.5 meter normal fall down/ 1 meter water immerse
Level	IP68

Physical

Material	Magnesium alloy
Size	Φ140mm*86mm
Weight	≤900g

User interface

Operation system	Linux + Qualcomm Cortex-A7
Button	Single button
WEB interface	access the internal web interface management via WiFi , users are able to monitor the receiver status and change the configurations easily
VPN function	With VPN configuration, our technician can remote to access in receiver at anywhere , to efficient improve after-sales support.

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KanQ

INSTRUMENT

KQM10L

GNSS RECEIVER

LASER

DUAL VISUAL AR

WEB UI control

Advanced RTK engine

Fast- Charge

IMU tilt

1408 channels tracking

AR VISUAL

Laser Survey

LONG ENDURANCE

TX/ RX MODULE

IP68 LEVEL

SUPPER TRACKING CAPACITY

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

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.

VPN advanced function

- ▶ To reduce the inconvenience and improve our distributor Work efficiency, this function is highly remove the anxious from surveyors, Manufacturer can still remote and access in receiver at anywhere to check receiver status after make the VPN setting.

Laser Measurement

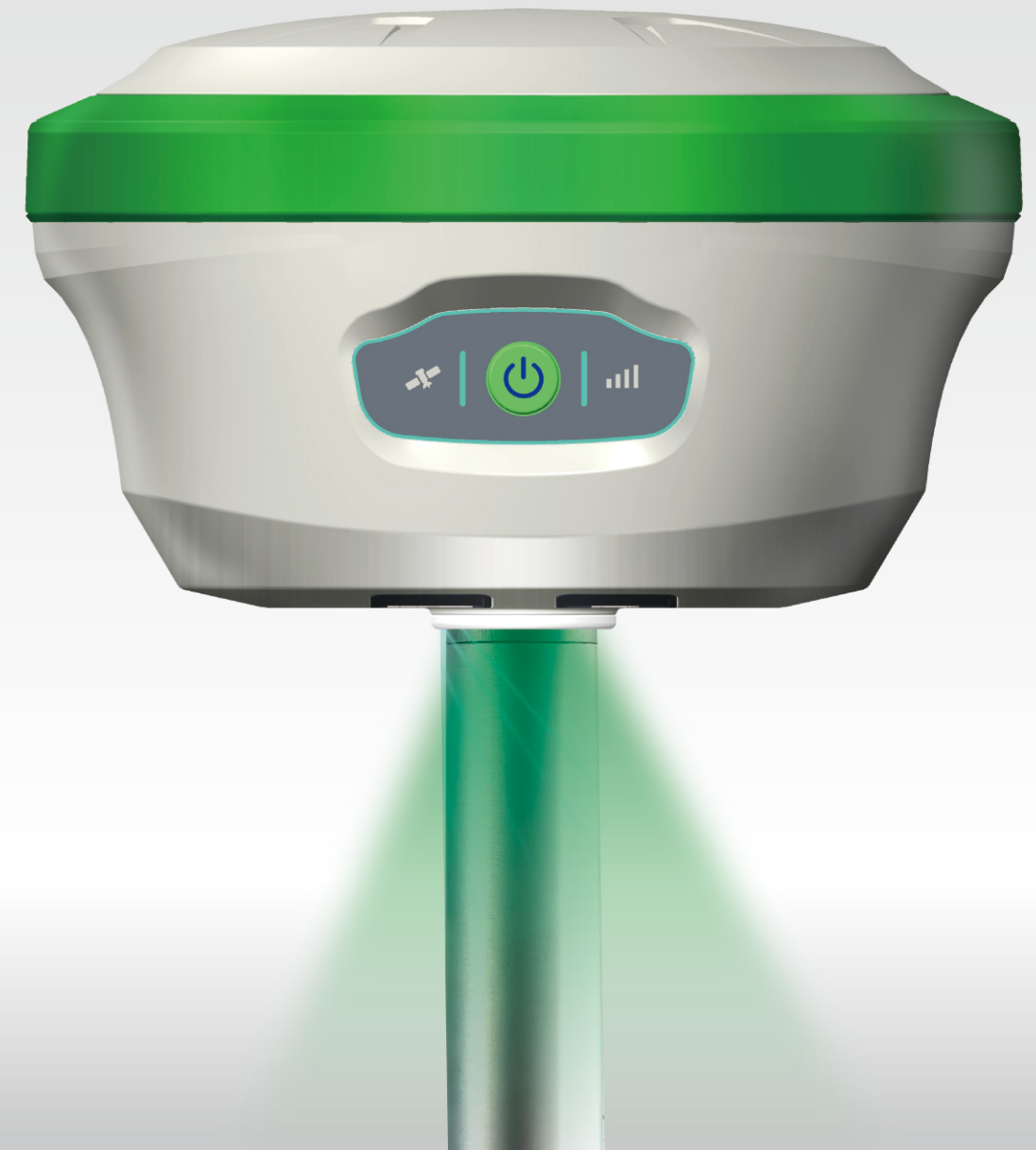
- ▶ Equipped with a high-precision millimeter-level laser ranging module, combined with high-precision inertial navigation for accurate laser targeting in complex environments and long distance 100 meters .

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.

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.



M10L is a portable multi-functional GNSS. It has a built-in high-precision positioning module that supports tracking satellite signals from all systems and frequency bands. It is equipped with 4G full network access, Bluetooth, WIFI and built-in data transmission radio. The high-precision IMU integrates AR and Laser to achieve tilt measurement, Laser measurement and AR real-Time Stakeout, making the measurement work more convenient and efficient.