Meridian

M 25

GNSS Receiver

To be the Best
GNSS Solution Provider

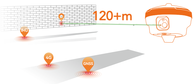
CE FCC IP68

M25 High Precision Laser GNSS RTK

Meridian M25 GNSS RTK is an innovative solution that combines advanced laser technology with Camera, IMU, and 4G integration. It is calibration-free, significantly boosting operational efficiency and laser measuring makes the rodless survey improve efficiency and reduce risk factors. The M25 receiver provides a new way to work in challenging & impossible scenarios with high accuracy, including riverine stake-out, bridge pile surveying, elevation surveying, municipal surveying, and outdoor & indoor combination surveying.

Latest Laser Technology

Laser technology offers unparalleled advantages in precision positioning and makes surveying work rodless and easier. Combining cutting-edge 120m ultra-bright laser technology with full constellation GNSS, IMU, and 4G integration delivers calibration-free accuracy, significantly enhancing work efficiency and reducing potential risks.



AR Stakeout

Visual positioning eases point finding by overlaying design files onto real scenes, enhancing stakeout efficiency. A high-performance HD camera achieves high accuracy with precise signal tracking. The 360-degree AR stakeout seamlessly switches between the handheld controller and rover, ensuring fast and accurate stakeout experiences.

Calibration-Free Solution

Equipped with laser & 120° calibration-free IMU technology in a small body, it complements the laser's outstanding performance, extending the M25 application range to locations that traditional RTK systems cannot reach, opening up new horizons for product applications, enhancing customer satisfaction and boosting operational efficiency.

Longer Working Distance

Equipped the MeridianLink protocol internal radio offers 15km working range and increases flexibility. By eliminating the need for an external radio, the M25 becomes more lightweight, less complex, and more portable, which can lead to increased efficiency and convenience in the field.

Full Constellations

Supports BDS, GPS, GLONASS, Galileo, QZSS, and SBAS. Its 1408 channels offer comprehensive GNSS signal tracking capabilities.

Meridian M25 Specification

GNSS Signal	Channel	1408
	BDS	B1I, B2I, B3I, B1C, B2a, B2b*
	GPS	L1C/A, L1C, L2P(Y), L2C, L5
	GLONASS	L1, L2, L3*
	GALILEO	E1, E5a, E5b, E6*
	QZSS	L1C/A, L1C, L2C, L5, L6*
	SBAS	L1, L5*
	NavIC(IRNSS)*	L5
	L-band	B2b PPP (Only for the Asian-Pacific Region) & HAS*
	Data Format	CMR, CMR+, RTCM2.X, RTCM3.X
	Data Output	NMEA-0183, RINEX, TXT
	Data Updating Rate	Up to 20Hz
	Time to Recapture	<1s
	Cold Start	<40s
Positioning Performance	Single Point Positioning (RMS)	**Horizontal:** 1.5m **Vertical:** 3.0m
	DGPS (RMS)	**Horizontal:** 0.4m **Vertical:** 0.8m
	Real-Time Kinematic (RMS)	**Horizontal:** ±(8mm+1×10^-6D) **Vertical:** ±(15mm+1×10^-6D)
	Speed Accuracy (RMS)	0.03m/s
	Static Accuracy (RMS)	**Horizontal:** ±(2.5mm+0.5×D) **Vertical:** ±(5mm+0.5×D)
	Time Accuracy (RMS)	20ns
	Speed Accuracy	**≥0.03m/s**
	Tilt Compensation Accuracy	**≤2cm(Tilt Angle≤60°, Up to 120°)**
	IMU Update Frequency	**200Hz**
	Laser Accuracy (RMS)	**Horizontal:** ±(8mm+3mm/m) **Vertical:** ±(15mm+3mm/m)
Communication	Bluetooth	Supports **120-meter** laser range with high-brightness laser technology
	WiFi	V5.2 Dual Mode, 2.4GHz@+5dBm
	Cellular	IEEE 802.11b/g/n **LTE FDD:** B1/3/5/7/8/20 **LTE TDD:** B38/40/41 **UMTS/HSPA+:** B1/8 **GSM/GPRS/EDGE:** 900/1800 MHz
	Storage	32GB
	Internal Radio	**Transmitting Power:** TW (27 dBm ±1.5 dB) or 2 W (32 dBm ±1.5 dB) **Frequency:** 410–470MHz Protocol: SOUTH, TRIMTALK 450S, TRIMMK III, TRANSEOT, SATEL, MERIDIANLINK
Battery	Specifications	**Air Baud Rate:** 9600, 19200, 115000
	Operating Time	7.2V、6600mAh lithium-ion Rechargeable Battery **Laser RTK Rover:** Up to 22 hours (Typical Power Consumption) **Static:** Up to 35 hours (Typical Power Consumption)
	Charging	Support USB PD 15V/2A (Supports Quick Charging Adapter)
Environment	Operating Temperature	-40°C~+85°C
	Storage Temperature	-55°C~+85°C
	Anti-seismic	2m Pole Drop Onto Concrete
	Dust & Waterproof	IP68
Physical	AR Camera	5 MegaPixel, large viewing angle, supports live view stakeout
	Laser Assisted Camera	5 MegaPixel , supports laser aiming display
	I/O Interface	1× USB type-C port; 1 × TNC antenna port; 1× SIM cardslot; 1 × 5 pin LEMO port
	Dimensions	133mm*133mm*84.5mm
	Weight	≈ 900g

*All specifications are subject to change without notice.
(1) Compliant, GLONASS L3, Galileo E6, Galileo E6 High Accuracy Service (HAS), BDS B2b and SBAS L5 will be provided through future firmware upgrade.
(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. PPP accuracy is subject to the region, environment, and convergence time. High precision static requires a minimum of 24 hours of long-term observation and precise ephemeris.

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