



M20L High Precision Laser GNSS RTK

Meridian M20L Green Laser GNSS RTK is an innovative solution that combines advanced laser technology 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 M20L green laser receiver provides a new way to work in challenging & impossible & dangerous scenarios with high accuracy, including riverine stake-out, bridge pile surveying, elevation surveying, municipal surveying, and outdoor & indoor combination surveying, power station surveying, etc.



Latest Green Laser Technology

Laser technology offers unparalleled advantages in precision positioning and makes surveying work rodless and Easier. Combining cutting-edge 100m range laser technology with full constellation GNSS, IMU, and 4G integration, delivers calibration-free accuracy, significantly enhancing work efficiency and reducing potential risks.



Calibration-Free Solution

Equipped with laser & 120° calibration-free IMU technology in a small body, it complements the laser's outstanding performance, extending the M20L's application range to locations that traditional RTK systems cannot reach, opening up new horizons for product applications, enhancing customer satisfaction and boosting operational efficiency.



Palm Size

The palm-sized RTK (Real-Time Kinematic) system combines elegance with precision, offering a compact solution for accurate positioning on-the-go.



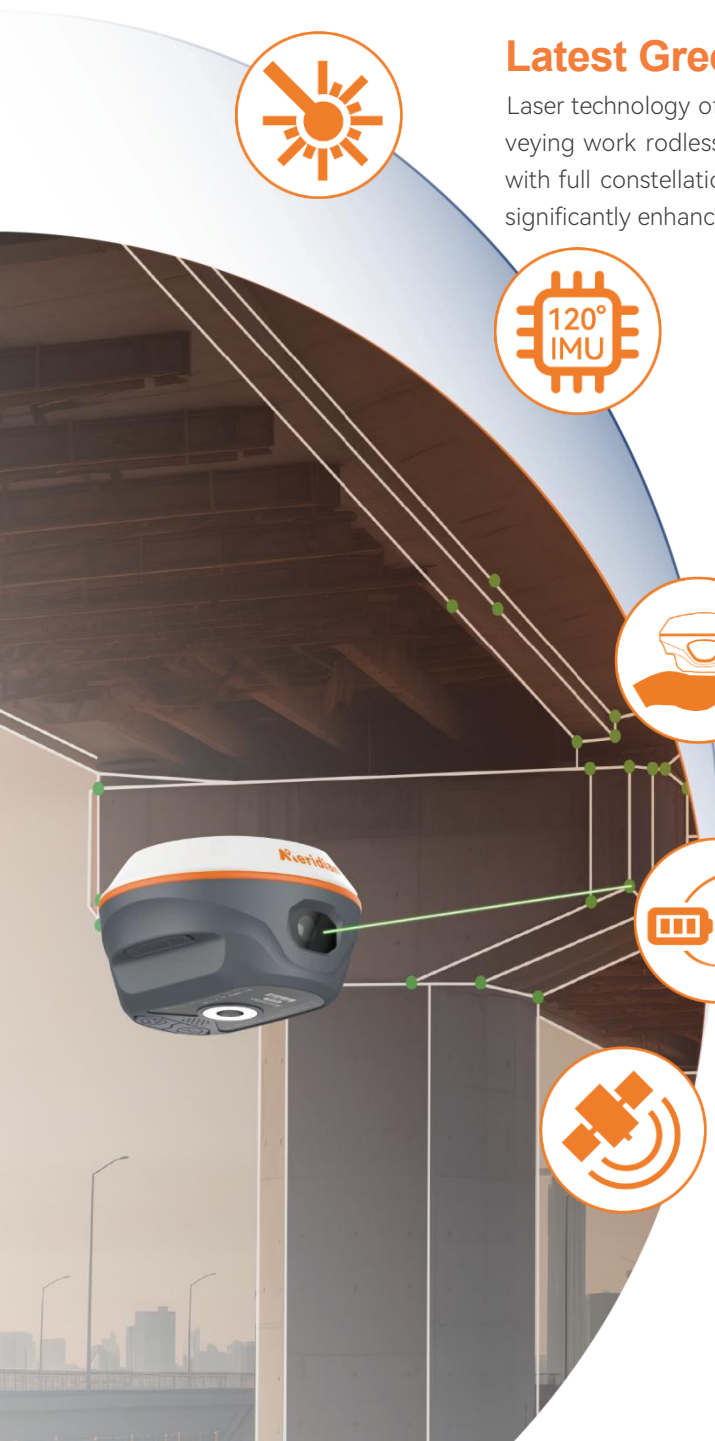
Powerful Battery

With 7.4V 7000mah and the quick-charge capability, supports you in working more than 26hours and greatly saves your time.



Full Constellations

Supports BDS, GPS, GLONASS, Galileo, QZSS, SBAS, L-Band. Its 1760 channels offer comprehensive GNSS signal tracking capability.



Meridian M20L Specification

GNSS Signal ②	Channel	1760 (1980 option)
	BDS	B1I, B2I, B3I, B1C, B2a, B2b*
	GPS	L1 C/A, L1C, L2P(Y), L2C, L5
	GLONASS	L1, L2, L3*
	GALILEO	E1, E5a, E5b, E6*
	QZSS	L1C/A, L1,L2, 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, DAT
	Data Updating Rate	Up to 20Hz
	Time to Recapture	<1s
Positioning Performance	Cold Start	<40s
	Single Point Positioning (RMS)	Horizontal: 1.5m Vertical: 3.0m
	DGPS (RMS)	Horizontal: 0.4m Vertical: 0.8m
	Real-Time Kinematic (RMS)	Horizontal: ±(8mm+1ppm) Vertical: ±(15mm+1ppm)
	Speed Accuracy (RMS)	0.03m/s
	Static Accuracy (RMS)	Horizontal: ± (2.5mm+0.5ppm) Vertical: ± (5mm+0.5ppm)
	Time Accuracy (RMS)	20ns
	Speed Accuracy	≥0.03m/s
	Tilt Compensation Accuracy	≤2cm(Tilt Angles≤60°, Up to 120°)
	IMU Update Frequency	200Hz
Communication	Laser Accuracy (RMS)	Horizontal: ±(8mm+3mm/m) Vertical: ±(15mm+3mm/m) Laser range: 100m
	Bluetooth	SPP3 0+BLE5 0 Dual Mode, 2.4 GHz @ +6 dBm
	WiFi (option)	802.11 a/b/g/n/ac
	Cellular	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
	Storage	GSM: B2/3/5/8
		32GB
		Transmitting power: 2W(37±1dBm) 1W(30±1dBm)
Battery	Internal Radio	Frequency: 410~470MHz Channel Spacing:12.5kHz Protocol: SOUTH19200, SOUTH9600,TRIMTALK9600, TRANSEOT, SATEL Air Baud Rate: 9600, 11000, 19200
	Specifications	7.2V, 7000mAh Lithium-ion Rechargeable Battery
	Operating Times	RTK base/rover mode: up to 20 hours, RTK laser/AR: up to 15 hours, Static: Up to 40 hours (Typical Power Consumption)
	Charging	Support USB PD 12V/1.5A (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	I/O Interface	1× USB type-C port; 1 × TNC antenna port; 1× SIM cardslot; 1 × 5 pin LEMO port
	AR Camera	12MP large viewing angle, for live view stakeout
	Laser Assisted Camera	12 MegaPixel ,supports laser aiming display
	Dimensions	125mm×125mm×79mm
	Weight	≤699g

*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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