CE FCC IP54

Meridian



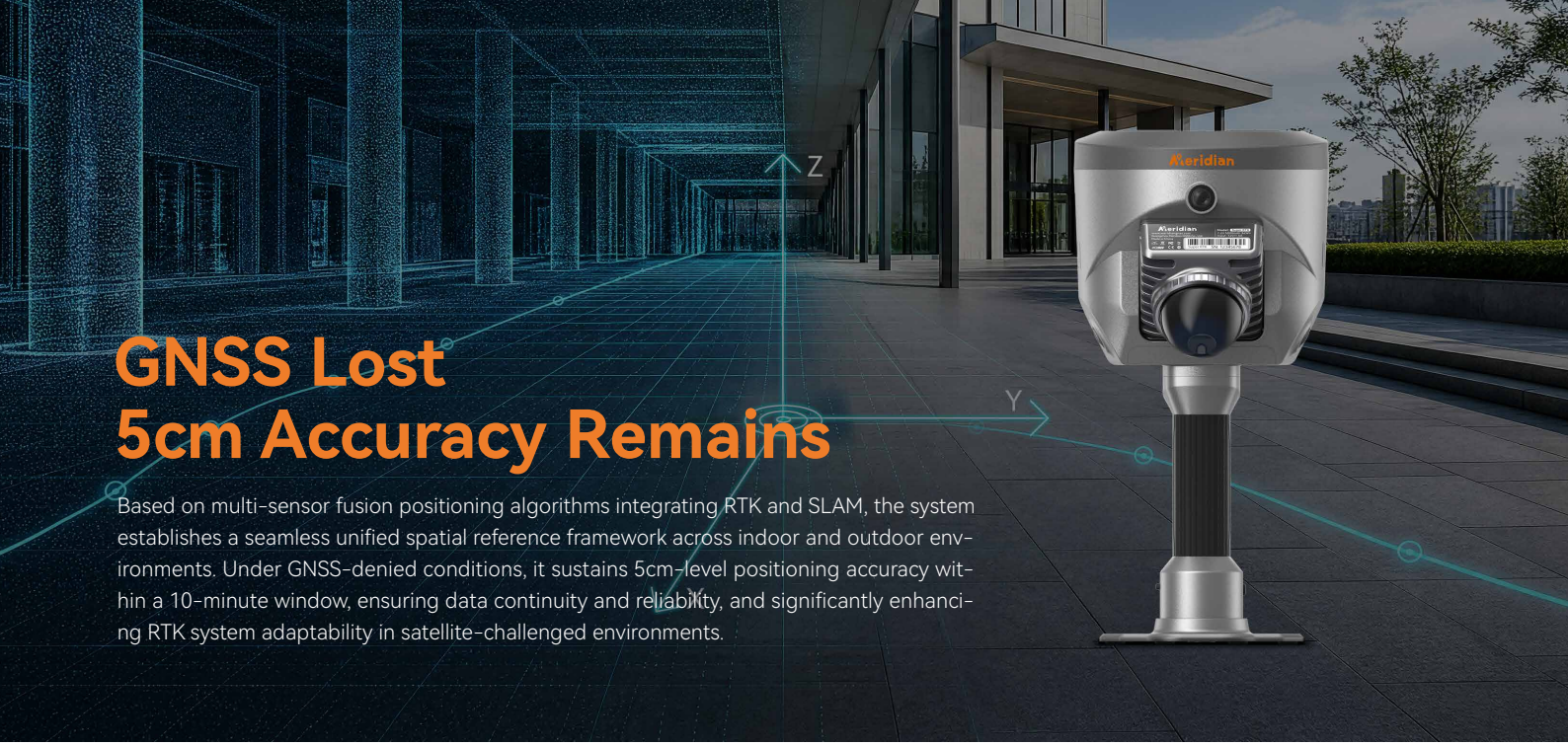
SuperRTK

Visual-LiDAR GNSS Receiver

SLAM-RTK Intelligent Surveying System

By integrating RTK high-precision positioning with SLAM-based environmental sensing, the SuperRTK delivers continuous surveying capability even in GNSS-denied environments. It maintains 5cm accuracy for up to 10 minutes after satellite signal loss, unlocking truly reliable indoor measurement for RTK systems.

Its laser is mounted at a 45° downward angle, providing superior downward scanning performance when used. Whether indoors or outdoors, in urban canyons, industrial sites, or dense woodlands, the SuperRTK empowers surveyors to overcome environmental constraints and capture accurate 3D data with remarkable efficiency.



GNSS Lost
5cm Accuracy Remains

Based on multi-sensor fusion positioning algorithms integrating RTK and SLAM, the system establishes a seamless unified spatial reference framework across indoor and outdoor environments. Under GNSS-denied conditions, it sustains 5cm-level positioning accuracy within a 10-minute window, ensuring data continuity and reliability, and significantly enhancing RTK system adaptability in satellite-challenged environments.

Scan Freely Without Loop Closure



RTK provides absolute coordinate constraints that effectively mitigate SLAM drift accumulation. There is no need to deliberately design loop-closure paths; users can freely plan scanning routes based on actual operational requirements, significantly improving efficiency in complex environments.

Empower Digital Twin Applications



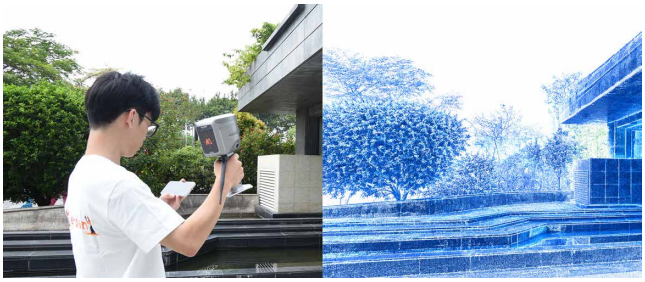
RTK handles outdoor surveying with precision, while SLAM takes over indoor scanning with flexibility. The two seamlessly integrate to merge point cloud data across indoor and outdoor environments, rapidly and accurately transforming the physical world into georeferenced digital models—ready for any digital twin application.

Multiple Survey Modes, One Solution



SuperRTK supports both handheld scanning and pole-mounted operation, adapting effortlessly to complex environments such as woodlands, factory floors, and narrow alleyways. This dual-mode design accommodates diverse user preferences and operational requirements, delivering an all-in-one solution that excels across every scenario.

Real-Time Color Point Cloud



Data acquisition and real-time visualization occur simultaneously, enabling on-site instant assessment of scanning quality. Quick validation of data integrity minimizes the need for re-scanning.

All-in-One RTK Functionality

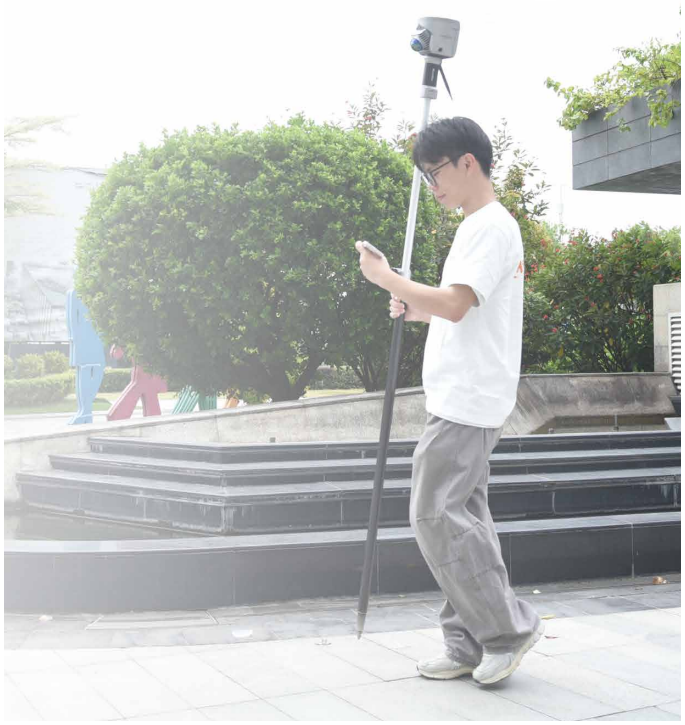
Fully integrated RTK core capabilities support a wide range of operating modes — including surveying, stakeout, and data collection. One device delivers complete coverage for the entire engineering surveying workflow.



Live AR navigation provides real-time guidance on stakeout paths and precisely locates target positions, enabling accurate and efficient stakeout with a 50% productivity gain.



Supports multiple operating modes including radio, CORS, and PPP, flexibly adapting to urban, mountainous, and remote areas, ensuring reliable high-precision performance under all conditions.



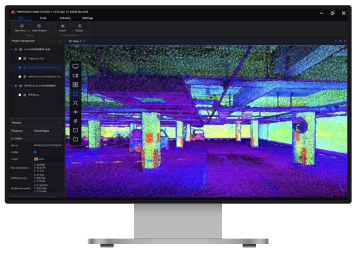
Meridian Lidar GO

Meridian Lidar Go is a scanner acquisition control software specially developed for Meridian's new generation SLAM scanner. It can accurately reflect the quality of point cloud scans during acquisition and give the point cloud absolute coordinates, providing stable and reliable raw point cloud data for subsequent processing.



Meridian Lidar Studio

Meridian Lidar Studio is a professional 3D point cloud processing software developed by Meridian, primarily designed for MS80 and SuperRTK system. Specifically engineered to handle point cloud files from Meridian products, it accurately analyzes data information, fully unlocks data value, and lays a solid foundation for subsequent data processing workflows.



Application Scenarios



Meridian SuperRTK Specification

GNSS Signal	Channel	1408
	BDS	B1I, B2I, B3I, B1C, B2a, B2b
	GPS	L1C/A, L1C, L2P(Y).L2C, L5
	GLONASS	L1, L2
	GALILEO	E1, E5a, E5b, E6
	QZSS	L1C/A, L1C, L2C, L5, L6
	SBAS	L1
	NaviC(IRNSS)	L5
	L-band	B2b PPP (Only for the Asian-Pacific Region) & HAS*
	Output frequency	Up to 50Hz
	Initialization time	<5s(classic value)
	Initial reliability	99.99%
System Configuration	Operation system	Linux
	Storage	Internet SSD 256GB
	Processing	Real-time processing, PPK
Accuracy and Reliability	Real Time Kinematic (RTK)	0.8 cm + 1 ppm (H) | 1.5 cm + 1 ppm (V)
	Tilt Survey Performance	Within 60°, accuracy < 2 cm, up to 120°
	Point Cloud Thickness	≤1cm
	Accuracy(SLAM)	Absolute Accuracy ≤ 5cm
		Average Accuracy: 3 cm
		Relative Accuracy ≤ 1cm
Communication	WIFI	IEEE802.11 a/b/g/n/ac/ax
	Bluetooth	BT 5.2 Module, V2.1+EDR/4.2 /5.2
	Radio	Frequency: 410-470MHz
		Portocol: SOUTH, TRIMTALK 450S, TRIMMK III, TRANSEOT, SATEL, Meridian Link
		Air Baud Rate: 9600, 19200, 11000
	GSM	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
		LTE-TDD: B38/B39/B40/B41
		UMTS: B1/B2/B4/B5/B6/B8/B19
		GSM: B2/B3/B5/B8
Environment	Robustness	Designed for indoor and outdoor use
	Temperature	-10 ~ +40℃
	IP Rating	IP54
LiDAR & Imaging	Camera	3*2MP Panoramic camera | 5MP AR stakeout camera
	Camera FOV	360 * 129°
	Laser Class	Class 1/905nm
	Laser channels	40
	LiDAR FOV	Horizontal 360° | Vertical -7° ~ 52° (Place tilted down at 45°)
	Point Measurement Rate	200,000 pts/sec
	Point cloud frame rate	10 hz
Physical & Electrical	Range	0.1 ~ 40 m @ 10% | 0.1 ~ 70 m @ 80%
	Weight	2138g
	Internal Battery	23.76Wh, 3300mAh/7.2V
	Handle Battery	36Wh, 5000mAh/7.2V(Supports hot swapping, prioritize charging handle battery)
	Size	136.8 × 136.8 × 128.5 mm
	Input	Internal Battery: 20V/1A | Handle Battery: 20V/0.5A | Lemo: 5V-16V
	Charging	Type-C: PD3.0/2.0, BC1.2 fast-charging
Data Transfer	RTK Output Format	CMR, CMR+, RTCM2.X, RTCM3.X
	SLAM Format	.bin, .txt, .asc, .neu, .xyz, .pts, .csv, .las, .laz, .e57, .sbf, .ply, .vtk, .dxf, .pcd, .shp, .pov, .pn, .pv
	Data Transfer	USB 3.0 Type-c
SLAM software	Mobile App	Supports preview of color point clouds, Android compatibility
	Processing Software	Supports spatially correlated viewing of point clouds and panoramic photos
Operation	Support Handheld scan Support surveying pole connection, Support Magsafe	

* The above technical parameters are for your reference. The company reserves the right to change the design and planning of the product based on the actual product.

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