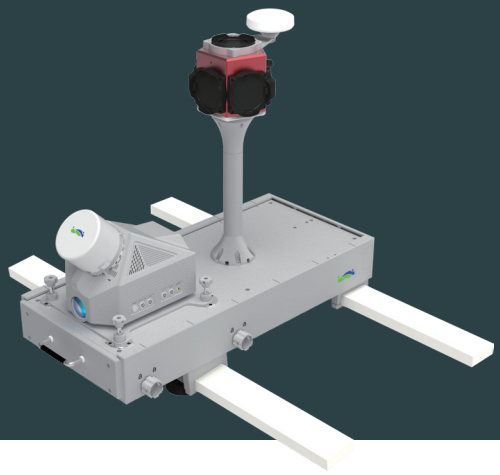
GEOSPACE

LiMobile M1

Mobile Laser Scanning System



The LiMobile M1 mobile laser scanning(MLS) system is equipped with a 45-degree titled lidar and a high-resolution camera, which can quickly obtain 3D data of the road and surrounding features. At the same time, it provides abundant expansion interfaces, supporting optional accessories such as the Ladybug5+ panoramic camera and distance measurement indicator(DMI). It also supports a 2 TB hot-swappable hard disk, facilitating storage and copying of large data volumes. The integrated vehicle mount design allows for installation in different vehicle types. Together with LiDAR360 MLS software from GVI, it enables a one-stop data processing to the delivery of industry results.

Advantages

Lightweight

With a lightweight compact design that significantly reduces the internal space, the main body of the device weighs only 5.5 kg, making it easy and convenient to install and transport quickly.

Continuous Operation

Hot-swappable battery design for a continuous and stable power supply.

Real-time Monitoring

Suports the display of collected data and monitor the operating status of the equipment in the web interface in real-time.

Multi-sensor

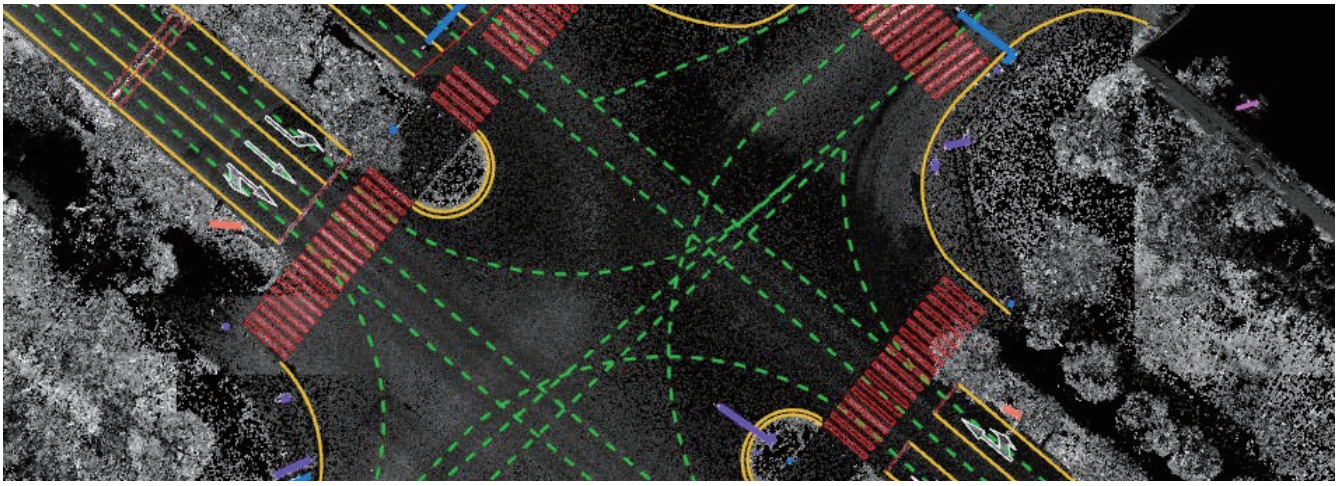
Integration of multi-channel laser, GNSS/INS integrated navigation system, and high-resolution cameras, enabling the acquisition of high-definition point cloud data and imagery data.

Abundant Expansions

Hot-swappable hard disk, DMI, USB 3.0, LAN.

Multi-industry Applications

Widely used in areas such as road asset survey, urban power distribution line analysis, urban landscaping, smart transportation, and more.



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Specifications

System Specifications

Size	265 mm×270 mm×240 mm	Battery Capacity	5875 mAh×5
Data Storage	512G SSD + Removable 2 TB SSD hard disk	Weight	5.5 kg
Operating time	⩾ 4 h	Port	HDMI、USB、LAN
System control and data display	Wireless mode	The tablet is connected to the WIFI of the device for operation control and data synchronization display	
	Wired mode	The tablet is connected to the device via a data cable for data transmission and control	
Applicable Environment	Outdoor	Processor	4 Cores and 8 Threads

LiDAR Specifications

Sensor Model	XT32	Range Accuracy	±1 cm
FOV (Vertical)	31° (-16° ~ +15°)	FOV (Horizontal)	360°
Scan Rate	640,000 pts/s @ Single return 1,280,000 pts/s @ Dual return	Instrument Range	0.05 to 120 m

Positioning and Orientation System Specifications

GNSS System	GPS: L1C/A, L1C, L2C, L2P, L5 GLONASS: L1C/A, L2C, L2P, L3, L5 BEIDOU: B1, B2, B3 GALILEO: E1, E5a, E5b	IMU update rate	Standard: 100 Hz (User selectable up to 300 Hz)

Accelerometer	Bias In-run Stability	0.02 mg (1σ)	Gyro	Bias In-run Stability	3° /hr (1σ)
	Bias Repeatability	1 mg (1σ)		Bias Repeatability	65° /hr (1σ)
	VRW	0.02 m/s/ √hr		ARW	0.15° / √hr
	Operating Range	±16 g		Operating Range	±490° /s

Wide Angle Camera Specifications

Megapixels	8.9 MP	Sensor Type	CMOS
Frame Rate	13 FPS	Sensor Size	1 "
Resolution	4096×2160	Power Consumption	3.8 W

Ladybug5+ Panoramic Camera Specifications [1]

Megapixels	30 MP (5 MP x 6 sensors)	Sensor Type	CMOS
Frame Rate	30 FPS (JPEG Compressed)	Sensor Size	2/3 "
Resolution	8192×4096	Power Consumption	13 W maximum

Data Output

Relative Accuracy	⩽ 3 cm[2]	Absolute Accuracy	⩽ 15 cm[2]
Point Cloud Data Format	Las, Laz, LiData		

Software

Pre-processing Software	LiGeoreference	Post-processing Software	LiDAR360 MLS

[1] Ladybug5+ Panoramic camera is an optional module, the weight and dimension of the system may vary depending on the choice of modules.
[2] May be affected by environmental and route planning factors.