Tersus

MetaVerse Painter
Mobile SLAM 3D Laser Scanner

Overview

MVP S2 is a Mobile SLAM 3D Laser Scanner, supports handheld and backpack bracket. This portable device offers sub-3 cm accuracy and has unique RTK-SLAM technology, making it flexible for indoor and outdoor scenario switching. One of the standout features of the MVP S2 is its real-time point cloud viewing and generation, You can see your data as it's being collected, ensuring you avoid the need for repeated scanning. The device supports hot-swappable dual batteries, allowing for up to 3 hours of continuous scanning per battery set, with hot-swappable support for uninterrupted missions. The MVP S2 uses intelligent dynamic object filtering, making it easier to focus on the key elements that matter.

MVP S2 is a complete solution provided by Tersus, including LiDAR, panoramic camera, mounting brackets and other optional equipment, as well as LiDAR calibration, bore-sighting, datalogging software, RTK real-time settlement location and point cloud processing software.

With massive high-precision 3D spatial data, high-density point cloud data and high-resolution panoramic image data, MVP S2 can be widely used for terrain mapping, mine and water conservancy measurement and maintenance, agricultural and forestry surveying, and disaster emergency response, as well as smart cities, BIM modeling, urban streetscapes, transportation infrastructure measurements, etc.

Key Features

- ✓ Dense point clouds (640,000 pts/sec) and images
- ✓ 1 cm point cloud thickness
- ✓ 120m scan range
- ✓ Field of view 360° * 270°
- ✓ 1cm relative accuracy, 3cm absolute accuracy
- ✓ Advanced GNSS RTK system, support five-constellation, sixteen-frequency GNSS
- ✓ Real-time point cloud generation
- ✓ Hot-swappable dual batteries, up to 3 hours of continuous scanning per set.
- ✓ Single assignment with unlimited duration
- ✓ Multiple platforms (backpack, handheld) supported
- ✓ GCP supported
- ✓ Feature-rich and powerful software

Technical Specifications

System Platform

Relative Accuracy	1cm
Absolute Accuracy	3cm
Point Cloud Thickness	1cm
Field of View	360°* 270°
Weight	2.1kg (handheld)
	8.7kg (backpack)
Battery Single Use Duration	Up to 3 hours
Operating Temperature	-25℃ ~ +65℃
Dust&Waterproof	IP54
Data Storage	1TB

Scanner Performance

Laser Class	Class 1 Eye Safe
Laser Channels	32
Wavelength	905 nm
Measurement Range	120m
Scan Rate	640,000 pts/sec
Frame Rate	5 Hz, 10 Hz, 20 Hz
Horizontal Resolution	0.09° （5Hz）
	0.18° （10Hz）
	0.36° （20Hz）
Returns Supported	Single Return (Last, Strongest, First)
	Dual Returns
Vertical Resolution	1.3°
LiDAR Accuracy/ Precision	10 mm / 5mm

Software

TersusMVP Capture	Real-time point cloud generation and device status monitoring
TersusMVP Mapper	Coordinate transformation, moving objects filtering, and introducing GCP
TersusMVP Viewer	Support interaction display of real images and point clouds
	Support point cloud measurement and clip
	Support flexible roaming view following the trajectory

Optional Accessories

Camera Module	21 million pixels, 1inch SONY CMOS*2, 360° FOV
RTK Module	Signal Tracking: BDS B1I, B1C, B2a, B2b, B3I; Galileo E1, E5a, E5b, E6; GPS L1, L2, L5; GLONASS G1, G2, G5; QZSS L1, L2, L5, L6
	Accuracy: Horizon: 0.8cm+1ppm, Vertical: 1.5cm+1ppm