LS1
SLAM Scanner

LS1 SLAM Scanner

Powered by industry-leading SLAM algorithms, the LS1 combines LiDAR, vision sensors, and integrated RTK capabilities to achieve real-time centimeter-level precision. It features full-scale, real-time color point cloud output and an instant accuracy display, providing professionals with intuitive and highly accurate data insights. Designed for seamless operation in diverse environments, the LS1 automatically adapts to both indoor and outdoor settings without the need for manual configuration, ensuring efficiency and reliability in any application.

Build-in RTK
1cm Relative Accuracy
<5cm Absolute Accuracy

Detachable Battery
180min Long Duration

3*5 MP Camera
Real-Time Colorization

Global Compatibility
Smart Coordinate System Conversion

Compact All-in-One Design with Built-in RTK
The LS1 features a fully integrated design with no external antennas or add-ons, offering a sleek and simplified solution. It supports a "1+1" base station mode and direct CORS connection, enabling RTK-SLAM for real-time high-precision georeferenced point clouds. Additionally, the LS1 supports PPK-SLAM processing through its software, empowering users to tackle even the most complex and challenging environments with ease.

Adaptive Scanning with Real-Time Accuracy Feedback
The LS1 intelligently adapts to diverse scanning environments, eliminating the need for manual mode selection. Capture dynamic scans effortlessly by walking through the job site, while the integrated accuracy heatmap provides real-time feedback on data quality. This visual tool allows users to monitor scan precision and identify areas requiring further attention, ensuring accurate and reliable results for any project.
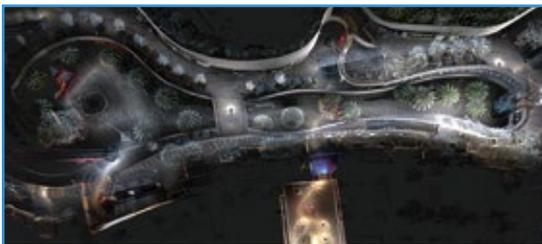
Effortless Scanning for Large-Scale Projects
The LS1 is designed for simple and quick scanning, allowing anyone to operate it with ease. Its real-time scene monitoring ensures accurate tracking of changes, while a 3-hour battery life makes it capable of handling large-scale environments effortlessly. With advanced data fusion from control points and RTK, along with automatic target recognition, the LS1 guarantees high-quality results for any project.

Support Multiple Platform Operation Modes
It enables seamless transitions between handheld, backpack, vehicle-mounted, and airborne operations for diverse surveying needs.
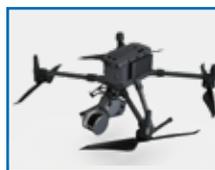
Hi-LiDAR Processing Software (SLAM Function)

SLAM Wizard Processing

One click process with automatic data filtering, georeferencing and colorization, help you easily to get the best result.

Support Comprehensive Coordinate System

Compatible with global coordinate system, Geoid, re-projecting to get georeferenced and clean data.

Support PPK Processing

Boost data accuracy and reliability with Post-Processing Kinematic (PPK) solutions, ensuring precise dynamic positioning for your projects even in areas without network coverage or signal obstruction.

AEC (Architecture, Engineering and Construction) Module

Architecture

Effortless point cloud slicing and unfolding for seamless CAD geometry assistance.

Engineering & Construction

Extracting precise horizontal and vertical sections to create detailed drawings for engineering analysis and project planning, simplifying the visualization of complex structures for infrastructure, construction, and diagnostics.
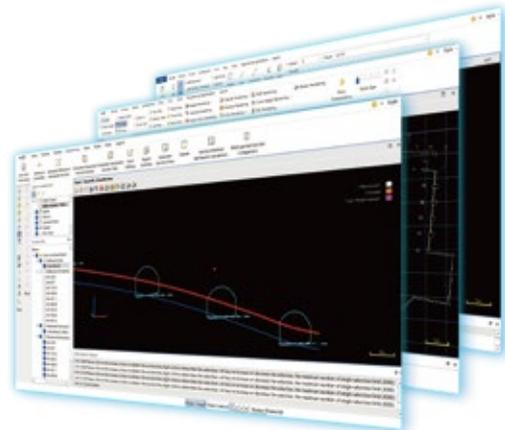
APP
- Live-streaming color point cloud
- Perform in-app Editing and quick Volume Calculation

PC
- SLAM Process Wizard and Automatic Data Fusion
- Volume function for detail comparison and report
- Support PPK-SLAM, adopts comprehensive coordinate system, geoid and coordinate transform
- Architectural Drawing Generation

Scenarios

Building Plan and Elevation

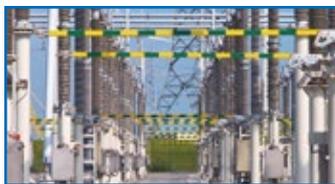Volume Measurement

Underground Space Mapping

Highway Survey

Mine Survey

Forestry Survey

Power Line Survey

Emergency Mapping

Realistic 3D

Specifications

Laser Scanning Parameters	
Point Frequency	320,000 pts/s or 640,000 pts/s
Measurement Range	120 m or 300 m
Field of View	360° x 270°
Measurement Accuracy	<5cm
Relative Accuracy	1cm

General Parameters	
Weight	<1.85 kg (exclude battery and GCP benchmark)
Battery Endurance	180 minutes
Battery Capacity	70.56 Wh
Storage Capacity	1TB
Protection Rating	IP54
Operating Temperature	-20°C to 55°C
Storage Temperature	-25°C to 60°C

Imaging Parameters	
Image Resolution	2592(H) x 1944(V)
Camera Field of View	135° x 100°

Mapping and Processing	
Mapping Modes	SLAM, SLAM-RTK, PPK
Real-time Processing	Real-time Solution Real-time Coloring Accuracy Heatmap

GNSS and Positioning	
RTK Protocol	Ntrip
Supported Satellite Systems	BDS B1, B2, B3, B1C, B2a, B2b GPS L1C/A, L1C, L2P(Y), L2C, L5 GLONASS L1, L2 Galileo E1, E5a, E5b, E6 QZSS L1, L2, L5, L6 IRNSS L5 SBAS L1, L2, L5

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