

HSL Hybrid Solution

The LS500 has a unique hybrid solving technology which can perform post processing for the previous data during the scanning. High precision data collected is more faster and efficiency ever before.

Anchor Point Process

The LS500 incorporates an anchor point solution function, guaranteeing accuracy and stability during data scanning endeavors, whether indoors or outdoors, across vast ranges, and under challenging conditions.

Dual-Platform Solving Methods

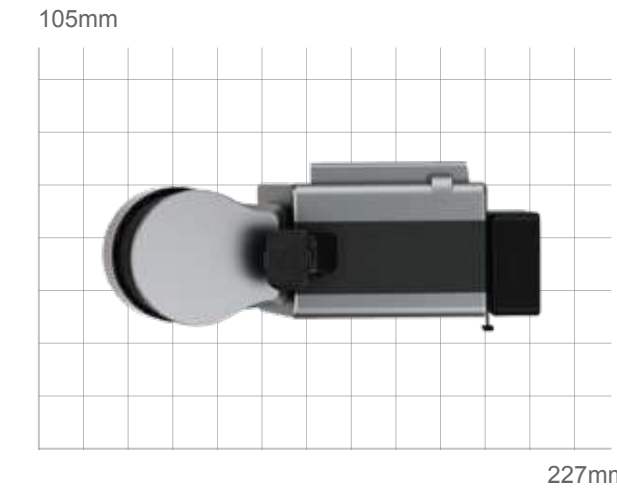
The LS500 can support dual-platform solving methods on the device host and desktop software. You can choose the solving method as you want to improve overall operating efficiency and meet the various needs.

Extreme Conditions Ready

The LS500 has superior weather resistance and can be operated at -35-60 ° C. With IP54 dust and water resistance, it is suitable for various environments.

LS500 Laser Scanner

GNSS Surveying System
Ver.2024.04.03



Size(L x W x H): 227mm x 105mm x 117mm

PHYSICAL

Weight	1.7 kg (handhold parts)
Working Temperature	-35°C~+60°C
Storage Temperature	-40°C~+85°C
SSD	1TB (expandable)
IP Code	IP54 waterproof and dustproof

PERFORMANCE

Relative Accuracy	1cm (peak)
Scanning Range	120 meters
FOV(Field of Scan)	360°x 285°
Scanning Speed	640,000 Points per second
Scan Positioning	SLAM (No need for GPS)
Solution Method	Hybrid algorithm
Live Preview	Mobile APP
Solving Methods	Device&desktop

LASER

No. of Laser Sensor	1
Safety Level	Class I
Laser Lines	32-line

ELECTRIC

Battery Type	Lithium ion battery (hot swap)
Battery Time	1.5h (standard battery) 2.5h (high-capacity battery)
Charging Temperature	0°C~+40°C
Operating Temperature	-35°C~+60°C
Standard Battery	14.8V, 50.32Wh/3.4Ah
High-capacity Battery	14.8V, 99.16Wh/6.7Ah



LS500 Laser Scanner

HIGH PRECISION POSITIONING
EMPOWERS A DIGITAL ERA

Features

Excellent Performance

LS500 configures a rotating laser sensor probe with 120 meters working distance; sample rate up to 0.64M points per second; large field of scan up to 360°x285°; Point accuracy up to 1.0cm.

Color Touch Screen

The vibrant color touch screen not only showcases device status information but also provides clear operating instructions, ensuring ease of use and facilitating quick start-up.

Multiple Power Supply Options

The LS500 supports both internal and external batteries. With our external battery option, users can enjoy the convenience of hot-swappable dual batteries, ensuring uninterrupted power and flexibility in usage.

Visual SLAM

Featuring advanced built-in high-resolution visual SLAM components, the LS500 can efficiently capture visual images, and perform high-precision visual SLAM technology mapping.

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Introduction

The LS500 Laser Scanning System uses SLAM technology (simultaneous localization and mapping), which is real-time positioning and mapping technology. Unlike traditional GNSS-dependent systems, it autonomously conducts self-positioning and incremental 3D mapping even in uncharted territories, be it indoors or outdoors. Its sleek and lightweight design ensures effortless maneuverability, simplifying measurement tasks. With synchronized data acquisition, the mere act of walking facilitates information data collection. This versatile system finds extensive applications across diverse fields including stockpile measurement, urban development, underground infrastructure digitization, agricultural and forestry analysis, as well as surveying and mapping.



Application

The LS500 has excellent platform compatibility and supports multiple platform scanning methods such as backpacks, UAV, vehicles, USV, and robot dogs, catering to diverse mobile measurement needs and expanding the horizons of possibility. We can provide the whole sets based the working methods.

HANDHELD

BACKPACK

VEHICLE-MOUNTED

DRONE

Smart City

Digitization of Underground Facilities

Agriculture, Forestry, Geology

Surveying and Mapping

Software

LS MASTER - Mobile Application:

The mobile application is designed to empower users with comprehensive functionality, including viewing device status, controlling the scanner for data collection operations, real-time previewing of scanned point cloud data, and local data solving. This versatility transcends physical limitations, seamlessly facilitating various scanning methods with ease.

- ◆ Real-time browsing of scanned point cloud data provides an intuitive means to monitor data collection progress and assess its effectiveness during operations.
- ◆ The application boasts support for a diverse range of browsing interaction methods and enhanced human-computer interaction functions, ensuring a more convenient and intelligent operating experience for users.

MAPPING MASTER - Processing Software

For optimal efficiency and flexibility across various projects, the LS500 offers dual-platform processing capabilities, enabling users to select either the device itself or our desktop software for raw data processing into high-precision point clouds. Our MAPPING MASTER desktop software excels in transforming raw scan data through advanced algorithms.

- ◆ The desktop solution software facilitates batch processing of multiple data sets and offers support for various scanning scenario solving modes, ensuring streamlined workflows;
- ◆ Support panoramic video synthesis without third-party software, point cloud coloring and panoramic video can be completed in one stop;
- ◆ Support vehicle, backpack, handheld and other RTK connection modes, support geographic coordinate output, support anchor point process to obtain high-precision scanning results data.

Point Cloud Post-Processing Software

The post processing software is a Windows based software designed and developed for LS-series handheld 3D laser scanners, it is also compatible with third-party device for point cloud processing.

With the scanner function, it supports download and archiving of point cloud result data through the network, as well as control point matching of anchor points;

Supports general point cloud editing and browsing, enabling tasks such as measurement, noise reduction, cropping, merging, coordinate conversion, and rotation offset adjustments. Moreover, it supports format conversion and docking with third-party applications;



Partial Functions:

Color Point Cloud

Control Point Conversion

Creat Contour Lines

Cross-section Generation

Fast Stitching

Fill holes

Fine Register

Ground Point Classification

Heap Volume Calculation

Mesh Model Package

Multi-coordinate System Conversion

X-Ray Display Mode