LiGrip SE

Lightweight Handheld Laser Scanner

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Your Reliable Partner for Scanning Tasks

LiGrip SE is equipped with dual 12MP high-definition cameras and utilizes latest generation of proprietary surveying-grade SLAM algorithms from GreenValley International (GVI). It delivers precise, reliable data with no rework required. Rated IP54 for water and dust resistance, it adapts seamlessly to harsh environments. Paired with a variety of productivity accessories, the SE flexibly handles complex scenarios. Combined with our turnkey software solution, it ensures convenient operation and immediate results—making it your ideal choice for mobile mapping.

12MP×2
High-definition Cameras

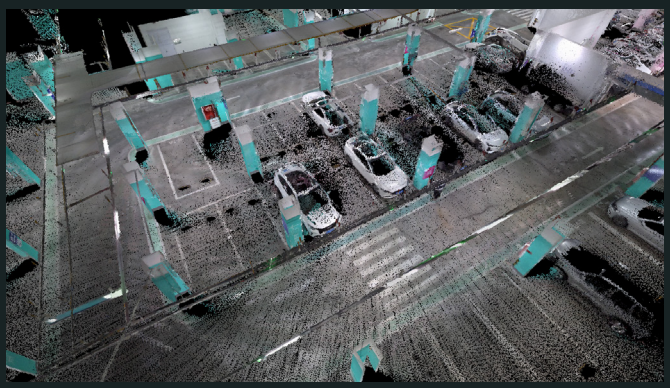
Surveying-grade
SLAM Algorithms

IP54
IP Rating

Dual 12MP Panoramic Cameras

Featuring two 12MP high-definition fisheye cameras, SE delivers superior point cloud colorization, realistically restoring scenes with vivid detail.






Surveying-Grade SLAM Algorithm

Powered by self-developed surveying-grade SLAM technology from GreenValley International (GVI), SE outperforms opensource algorithms in navigating complex environments—such as mines, forestry, indoor spaces, and shopping malls—with ease and confidence.

- Relative Accuracy: 2cm *- Absolute Accuracy: 5cm* *- Precise horizontal and vertical alignment*


Rugged & Reliable (IP54)

With **IP54-rated** water and dust resistance and an operating temperature range of **–20 °C to 40 °C**, SE is well suited for rigorous outdoor surveying and inspection tasks, delivering stable performance in challenging conditions such as rain, snow, and dust.

Multi-Form Data Collection

Supports various deployment modes to flexibly adapt to diverse collection scenarios.

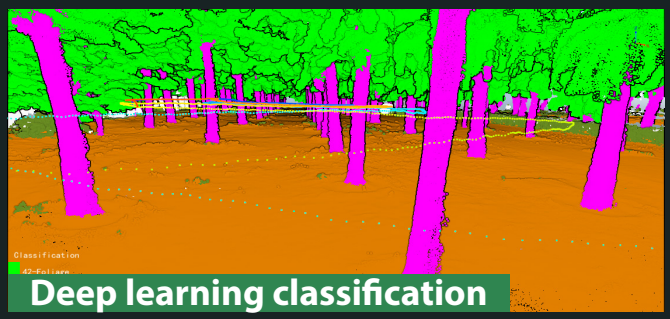
- *Backpack Kit: Supports dual batteries for long-duration and long-distance operations.*
- *Frontpack Kit: Frees your hands for long-duration work in complex environments.*
- *Telescopic Pole Kit: Extends measurement height, effectively collecting facade and stockpile data.*
- *Robot Dog: Suitable for data collection in dangerous environments.*

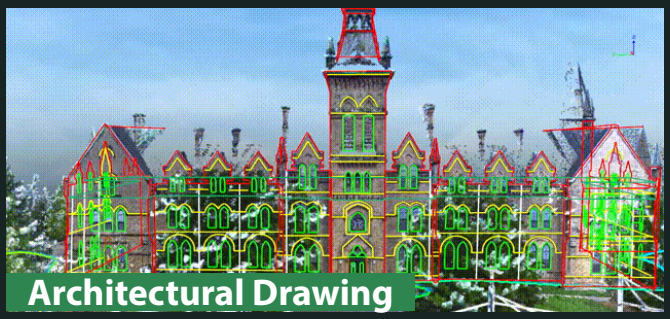
Turnkey Software Solution

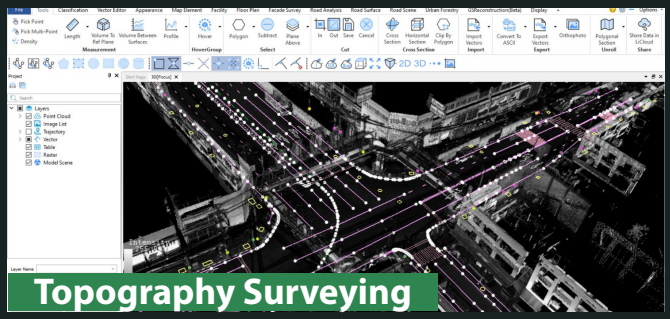

3DGS

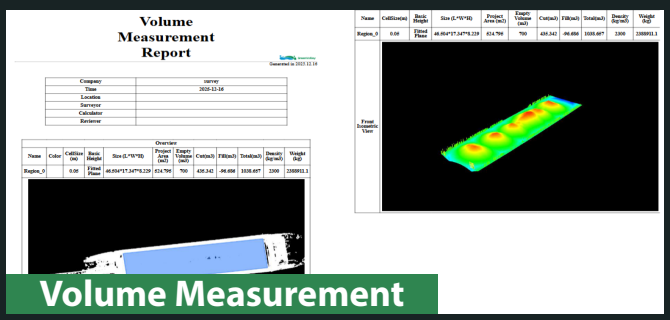

MESH


E57

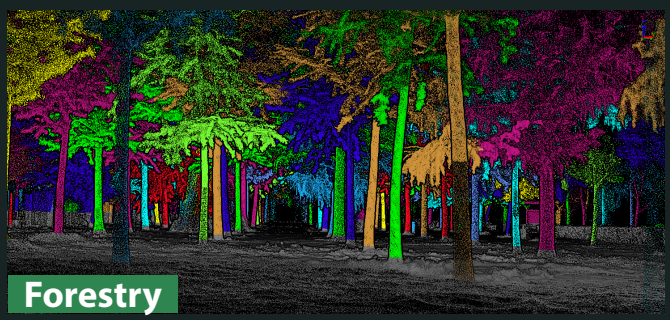

Deep learning classification


Architectural Drawing

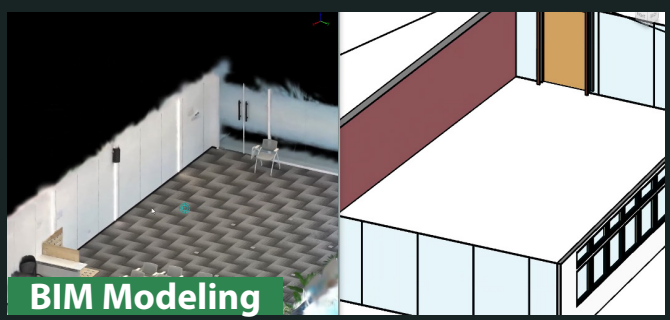

Topography Surveying



Volume Measurement


Forestry


Mine Surveying


BIM Modeling

System Parameters

Absolute Accuracy	<5 cm [1]	**IP Rating**	IP54
Relative Accuracy	<2 cm [2]	**Storage**	256 GB SSD
Repeat Accuracy	<3 cm [3]	**Port**	Type-C
Horizontality / Verticality	<0.05° [4]	**Control Method**	APP, Button
Power Supply Method	Lithium Battery Powered	**Firmware Upgrade**	OTA, Offline
Battery Capacity	3450 mAh	**Operating Temperature**	-20°C ~40°C
Battery Life	2.5h (Single Battery), Up to 5h with Dual Battery Backpack	**Storage Temperature**	-40°C ~ 70°C
APP Platform	Android, iOS	**Battery Storage Temperature**	Recommended Storage Temperature: 22°C ~ 30 °C [6]
Dimensions	SE RTK: 345×187×117 mm SE: 321×187×117 mm	**Weight (incl. battery, base)**	SE RTK: 1.38 KG SE: 1.33 KG

LiDAR Sensor Parameters

Laser	Mid360	**Wavelength**	905 nm
Scan Rate	200,000 pts/s	**Detection Range**	40 m @ 10% reflectivity; 70 m @ 80% reflectivity
LiDAR Accuracy	2 cm	**FOV**	Horizontal 360 ° , Vertical -7 ° ~ 52 °
Safety Level	Class 1 (Eye-safe)		

Camera Parameters

Number of Cameras	2	**Panoramic Camera**	12MP ×2
Capturing Frame Rate	0-5Hz		

[1][2]: Measured in the precision field of GreenValley International (GVI); deviations may occur in some scenarios.

[3]: Two scans with GNSS, with GNSS disconnection not exceeding 100 meters.

[4]: Requires measurement of absolutely horizontal and vertical objects like building walls/interiors.

[5]: Measured at room temperature 20 °C, without camera recording or RTK connection.

[6]: -20 °C~45 °C for < 1 month; -20 °C~35 °C for > 1 month.

Equipment Specifications

GNSS Parameters (SE RTK Version Only) [7]

Satellite Systems	BDS B1I, B2I, B3I,B1C,B2bGPS L1C/A, L2C, L2P(Y), L5GLONASS G1, G2Galileo E1, E5a, E5b,E6*QZSS L1C/A, L2C, L5 SBAS L1C/A		
RTK Accuracy	Horizontal 0.8 cm + 1 ppm Vertical 1.5 cm + 1 ppm	**Channels**	1408
Differential Data	RTCM V3.*	**Differential Protocol**	NTRIP
PPK Accuracy	Horizontal 0.5 cm + 1 ppm Vertical 1.0 cm + 1 ppm	**PPK Process**	Included in software

Output Specifications

Colored Point Cloud	Default LiData; Exportable to LAS, E57, txt, etc.	**Panoramic Images**	imglist + JPG
MESH	LOD-OSGB	**Gaussian Splatting (3DGS)**	lisplat, ply

Telescopic Pole Adapter

Weight	300 g	**Supported Telescopic Pole Diameter**	25-25.5 mm [8]
Compatibility	O Series		

Frontpack Kit Parameters

Weight	2.1 kg	**Outer Packaging Dimensions**	560×340×160 mm
Compatibility	O Series		

Backpack Kit Parameters

Weight	3.9 kg	**Dimensions**	580×303×145 mm
Dual Battery Display	Supported	**Hot Swap**	Supported
Compatibility	O2 Series		

[7]: Only the SE RTK version supports GNSS; the SE version does not .

[8]: Only supports telescopic poles with an outer diameter of 25-25.5 mm for the telescopic part; the locking mechanism does not support poles with a protruding ring on the top contact surface.

Map The World In 3D
www.greenvalleyintl.com

E-mail: info@greenvalleyintl.com
Address: 729 Heinz Avenue, Suite 9,
Berkeley, CA 94710, USA