

LiDAR360

UNLOCK THE TRUE VALUE OF SPATIAL DATA

LiDAR360

Professional LiDAR Solutions



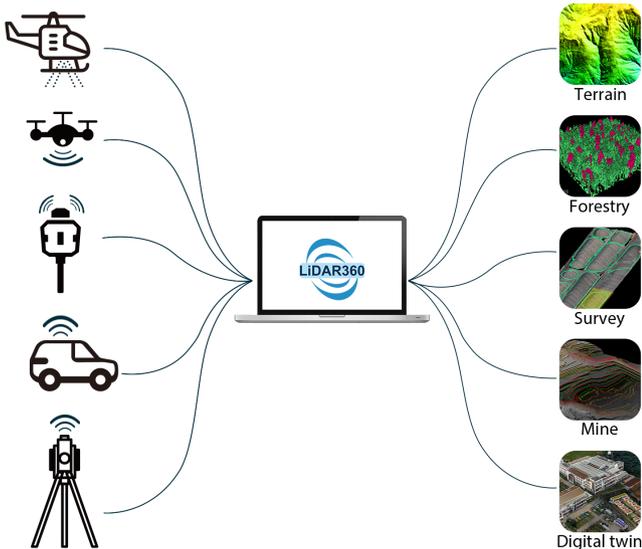
SOFTWARE

INTELLIGENT SPATIAL DATA PROCESSING PLATFORM FOR INDUSTRY

LiDAR360 is an all-in-one point cloud and imagery processing software that integrates data quality inspection, precise processing, intelligent analysis, and industry-specific applications. It delivers high-speed visualization and processing of TB-scale LiDAR datasets.

The platform is widely applied across topographic mapping, intelligent forestry survey & management, surveying, mine safety, geohazard assessment, and digital twin development, serving clients in 137 countries and regions worldwide.

With 700+ professional tools, LiDAR360 delivers an end-to-end intelligent workflow from raw acquired data to final deliverables, unlocking the full value and productivity of spatial data.

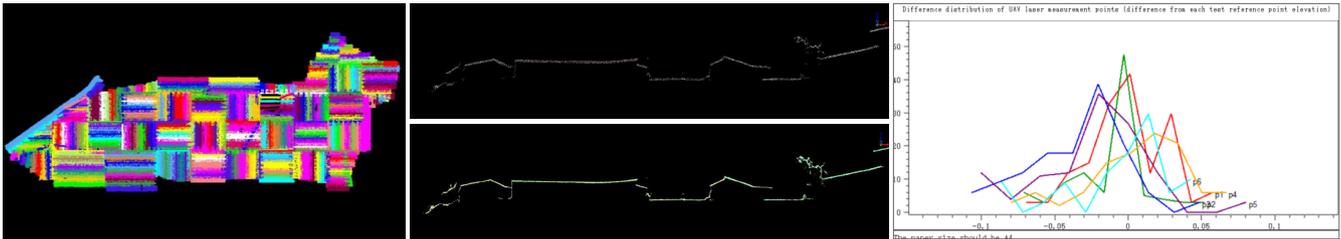


- Massive Data Processing
- Multi-source Data Fusion
- One-click Processing
- One-stop Solution
- Extensive Applications
- High-performance Computing with CPU & GPU
- 60+ Data Formats Supported
- AI Q&A Assistant
- Cloud-Based Data Sharing

Platform

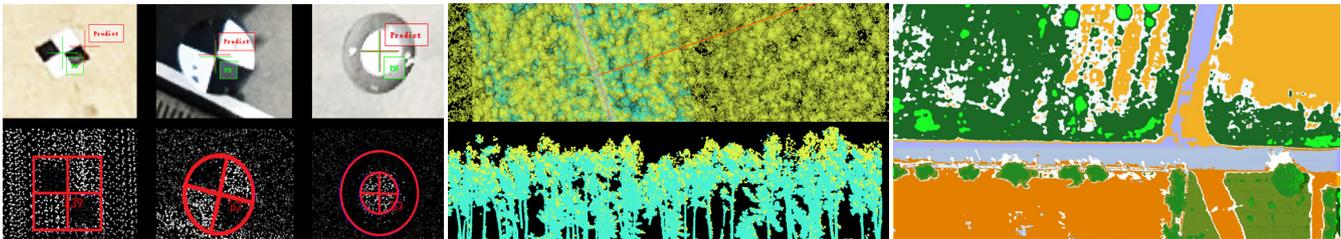
QC&QA , Improve Your Data Quality

- **Accuracy Inspection** — Comprehensive evaluation of acquisition device precision with professional reporting.
- **Data Quality Check** — Automatically assess strip overlap, density, and trajectory compliance to ensure reliable data.
- **Accuracy Optimization** — Align hundreds of strips simultaneously to mitigate device, trajectory, and LiDAR sensor errors, achieving high-precision data alignment.



Multi-Source Data Fusion & Reprojection

- **Multi-source Data Fusion** — Supports automatic registration of point clouds and oblique data with GCPs and multiple targets for high-precision alignment.
- **Extensive Coordinate System** — Covers reprojection of multiple data sources with flexible datum transformations (including grid).



AI-powered Assistant

Built-in intelligent Q&A assistant provides real-time help, workflow guidance, and smart recommendations, greatly improving user experience and efficiency.

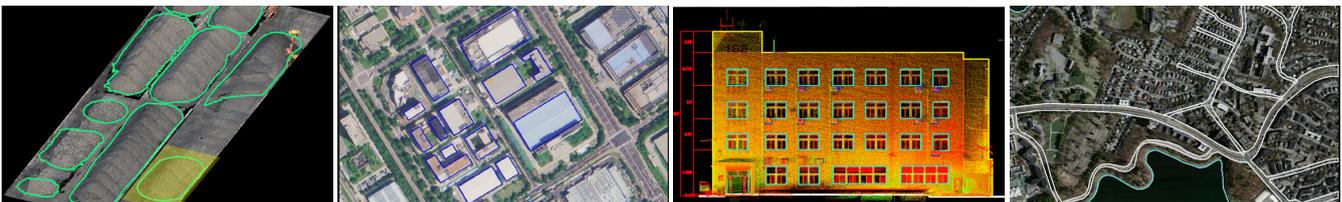
AI-Driven Multi-Source Feature Extraction& Classification

- **One-Click Point Cloud Classification** — Automatically detects and classifies 26 object types, including ground, vegetation, buildings, powerlines, towers, vehicles, and mines.
- **One-Click Image Classification** — Rapidly generates contours and masks for buildings, roads, and other features.
- **Foundation Model Joint Recognition** — Provides semi-automatic object recognition and classification for point clouds and imagery, with joint point cloud–image processing for more efficient and accurate results.
- **Industry-Customized Model Training** — A full workflow from labeling and training to deployment, tailored to professional applications.



Vector Data Creation,Editing&Application

- **50+ Professional Tools** — 2D/3D vector drafting and GIS analysis with topology and attribute editing, for efficient mapping.
- **One-Click Vector Extraction** — Powered by visible & spectral data and the SAM model, enabling outline vectorization with 300%+ efficiency boost.
- **Industry-grade automation** — Generate 1000+ building footprints, continuous road curbs, and bulk stockpile toe lines, with direct export to AutoCAD/ArcGIS.

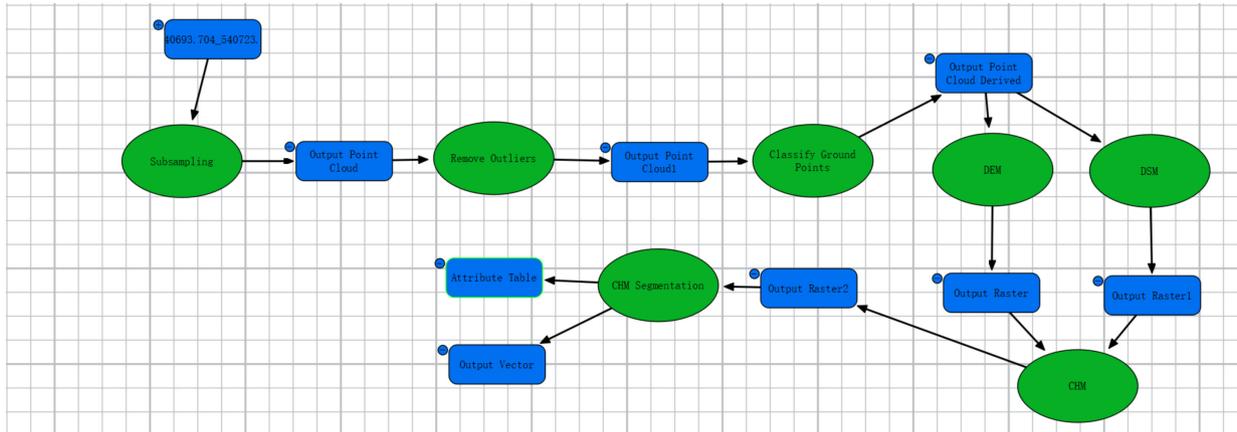


3D Mesh Modeling & Editing

- **Flexible Selection & Editing** — 10+ combinable tools for precise selection, auto hole filling, and bridging.
- **Optimization & Export** — Automatically smooths and simplifies models, allows control of triangle count, and supports export in multiple formats including OBJ.

Model Builder & Distributed Computing

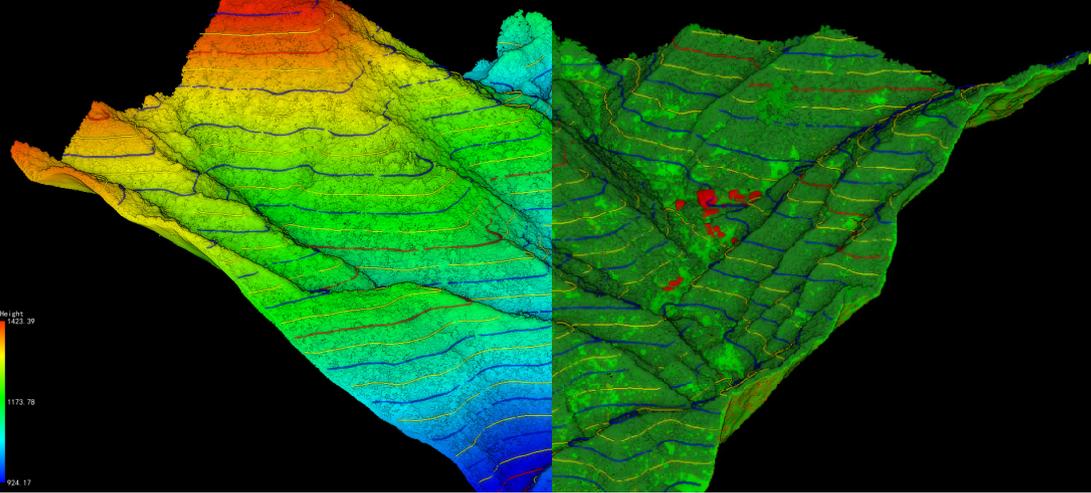
- **Custom Workflows** — Organize functions to create custom workflows and process data in bulk.
- **Script Execution** — Run workflows via scripts without launching the software.
- **Flexible Combination** — Freely combine 200+ modules to build efficient workflows.
- **High-Performance Distributed Computing** — Processes point clouds and imagery across multiple devices for massive datasets.



Distributed Computing Reference Efficiency Table

Device Configuration	Function	Data	Compute Nodes Number	Efficiency Improvement
System: Windows 10 CPU: 11th Gen Inter® i7 GPU: NVIDIA RTX 3050	Image alignment	6947 photos	4	713%
	Smooth+ Subsampling+ Remove Outliers+ Classify Ground Points	30GB point cloud	4	168%
			5	278%
			6	375%

Due to the influence of different device configurations, switches, network bandwidth, and structure, the efficiency improvement of distributed computing may vary. The above figure is for reference only.

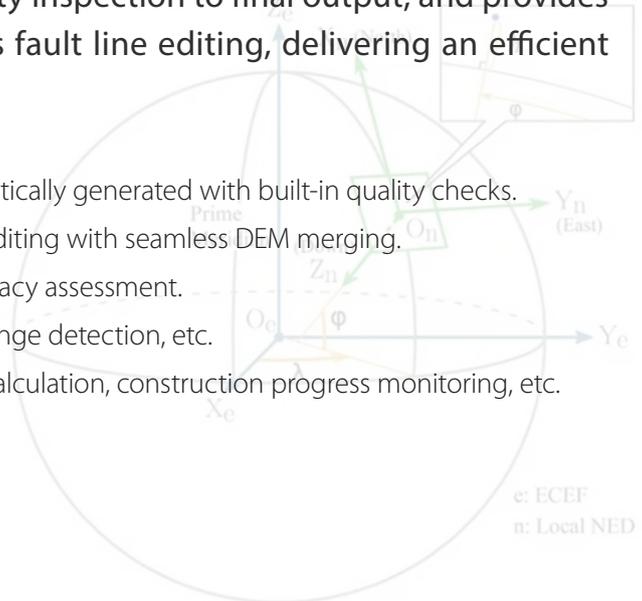


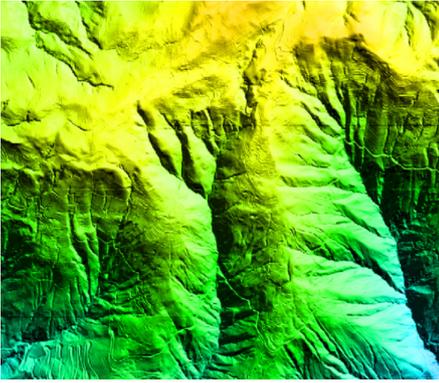
Surveying and Mapping

01

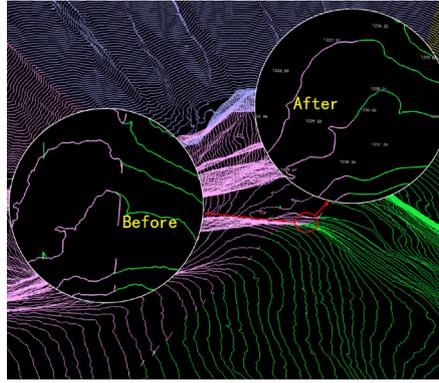
LiDAR can penetrate the canopy to capture sub-canopy terrain features, efficiently generating large-scale, high-precision terrain point cloud data. LiDAR360 accurately extracts ground points and produces a variety of standard terrain products, including DEM, DOM, DSM, and contour lines. With intuitive and user-friendly interactive tools, it supports the complete workflow from terrain product generation and quality inspection to final output, and provides automatic contour and fault line joining, as well as fault line editing, delivering an efficient and streamlined terrain data processing experience.

- **Automated terrain modeling** — DEM, contours, DOM automatically generated with built-in quality checks.
- **Editing & correction** — Semi-automatic contour & breakline editing with seamless DEM merging.
- **Accuracy assurance** — Contour consistency check, DEM accuracy assessment.
- **Smart terrain analysis** — Flooding, REM, SVF, multi-period change detection, etc.
- **Engineering applications** — Road cross-sections, earthwork calculation, construction progress monitoring, etc.





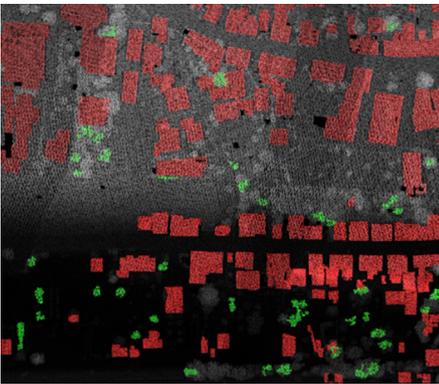
DEM



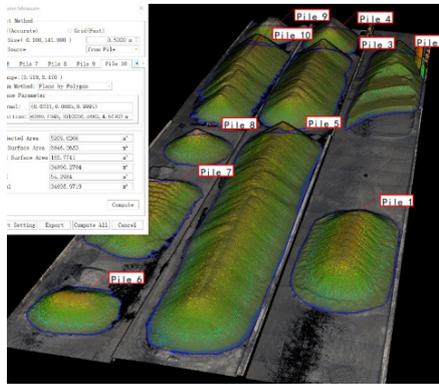
Contours Sheet Join



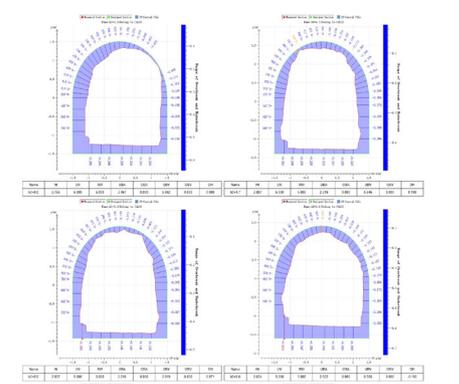
DOM



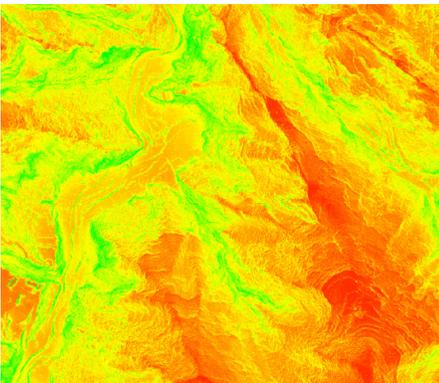
Change Detection



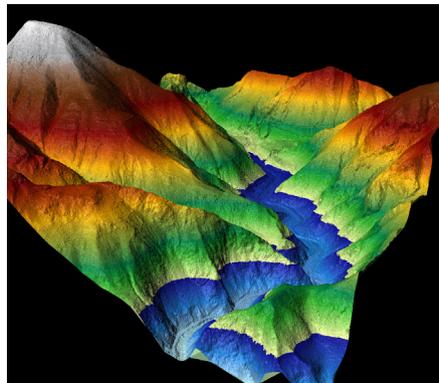
Volume Measurement



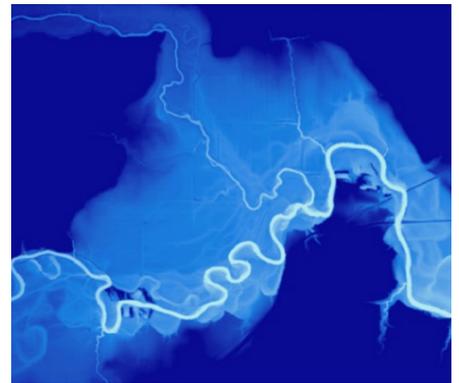
Section Analysis



SVF



Flooding Analysis



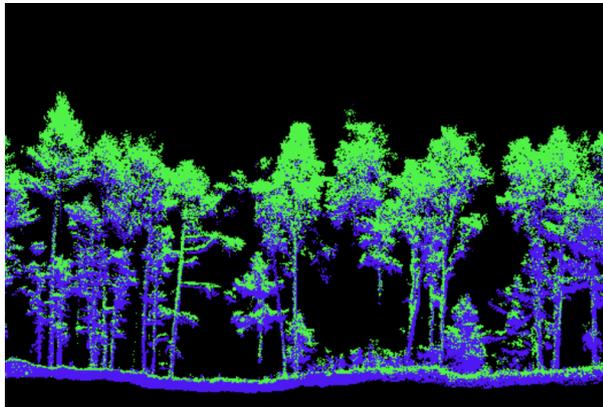
REM

Forestry Survey and Management

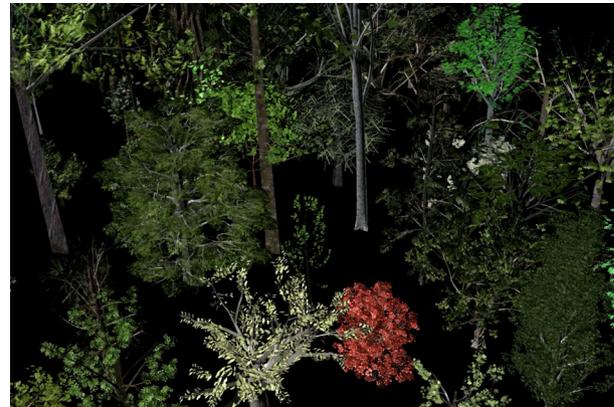
02

LiDAR offers unique advantages in forestry surveys. LiDAR360 uses point cloud data to automatically extract individual tree attributes and forest stand parameters, performing intelligent statistical analysis. Supports sample plot surveys, carbon stock monitoring, and forest stand management, helping users quickly obtain high-precision forestry data, optimize tending decisions, and enhance survey efficiency and data reliability, providing strong support for smart forestry.

- **7+ data sources supported** — Industry-leading AI single-tree segmentation across ALS, ULS, MLS, BLS, HLS, TLS, and orthophoto, with seamless multi-source fusion and registration.
- **70+ species models** — built-in, with instant cloud publishing for results and insights.

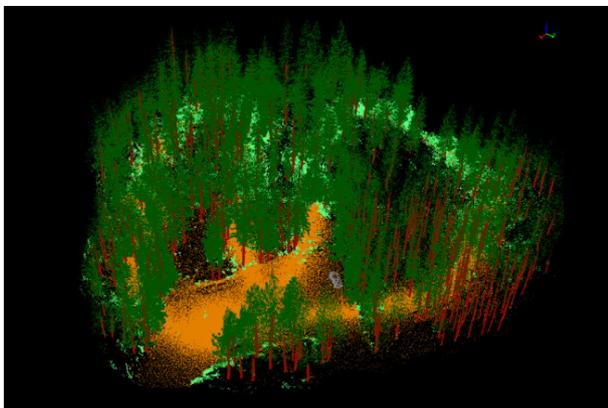


Auto Registration by Tree Locations

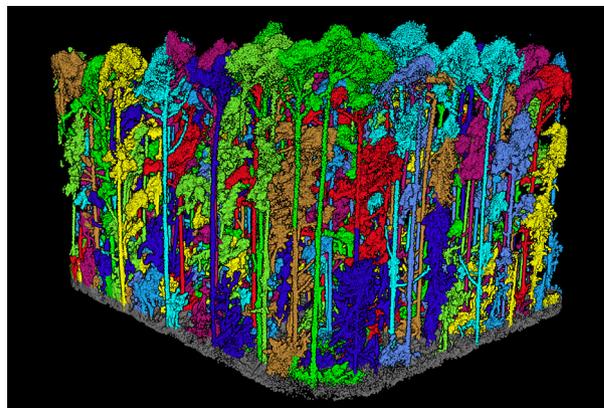


Tree Model (70 Built-in Species)

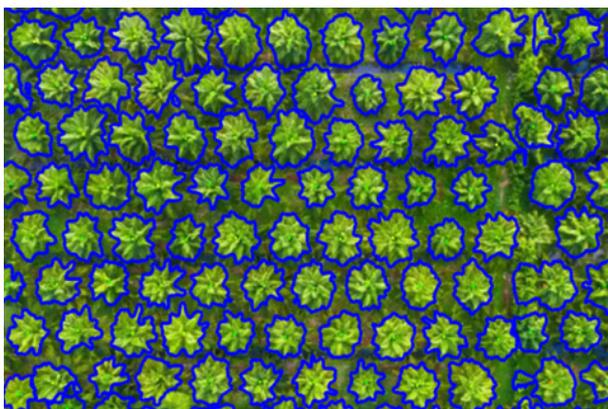
- **18+ individual tree attributes** — automatically extracted with high precision, including tree height, DBH, crown area, CBH, biomass, and trunk volume.



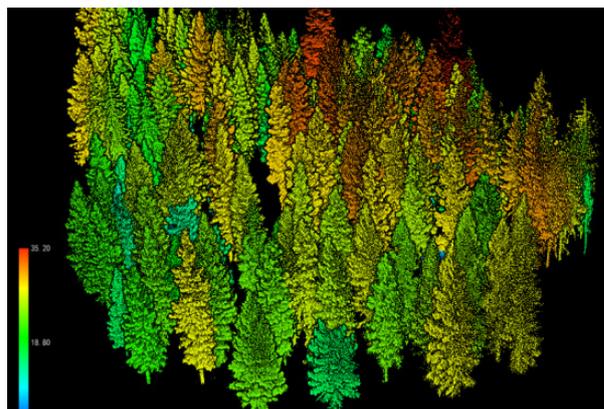
Trunk and Foliage Classification



Individual Tree Segmentation

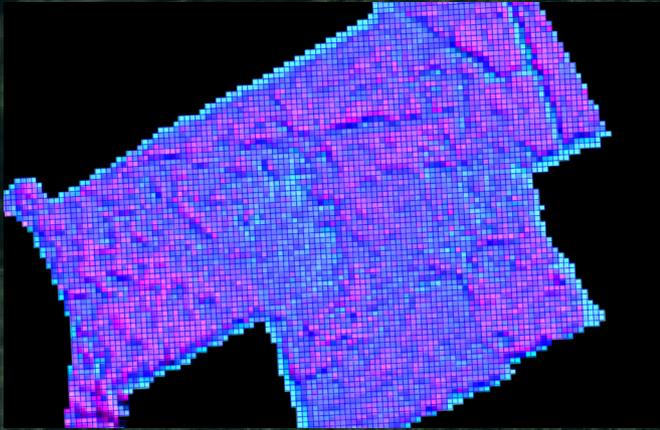


Individual Palm Tree Segmentation

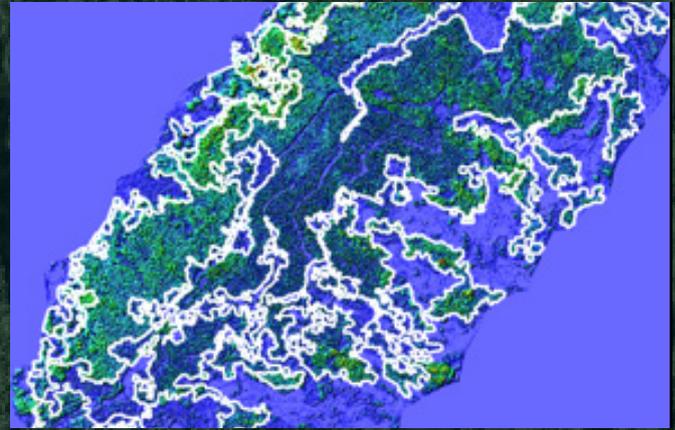


Display by Tree Height

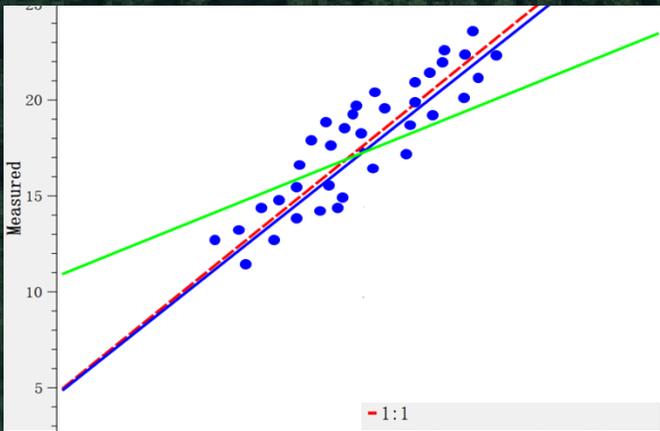
- 90+ stand-level parameters — available, from LAI to canopy cover and gap fraction, with large-scale extrapolation powered by sample plot data.



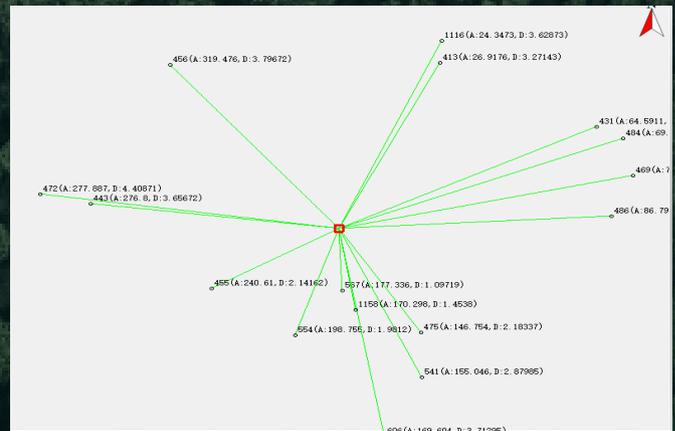
LAI



Forests Stands Delineating

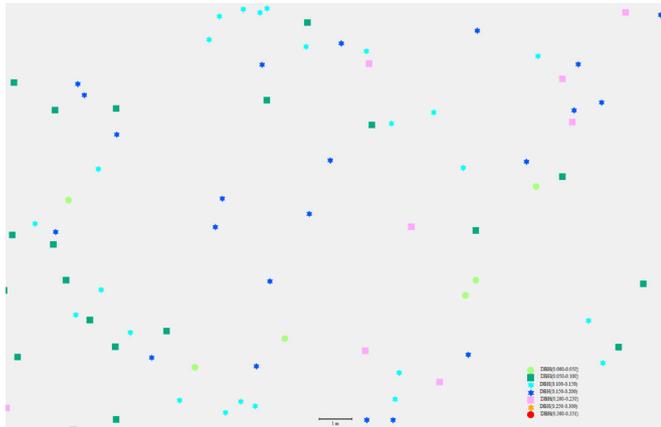


Regression Analysis



Azimuth and Distance

- **Comprehensive stand analysis** — with thinning simulation, trunk volume assessment, and automated individual-tree reports.

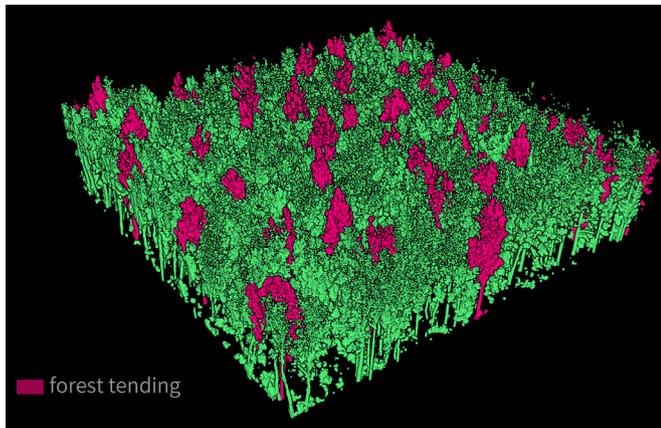


DBH Distribution Map

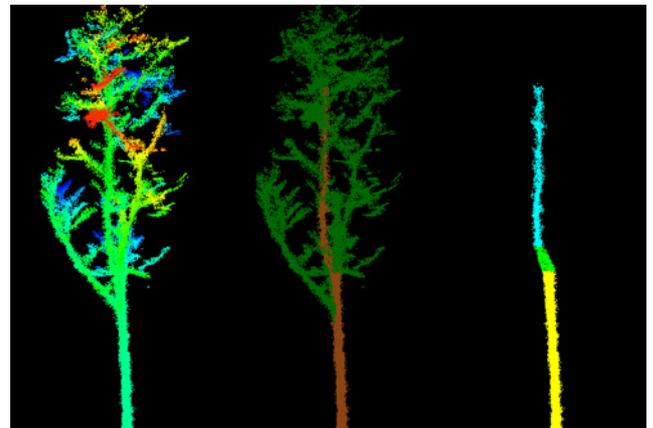
ID	Position	Height(m)	DBH(m)	CrownDiameter(m)	TrunkVolume(m ³)
9	(X, Y, Z)	10.6	0.198	6.2	0.10956



Individual Tree Report



Thinning Analysis



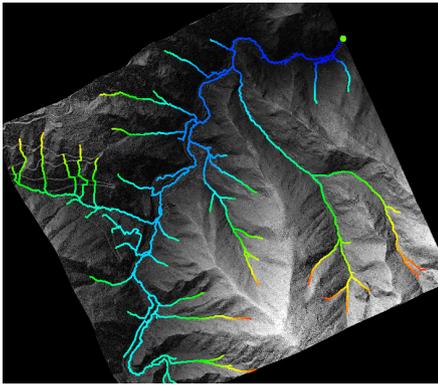
Cutting Analysis

03

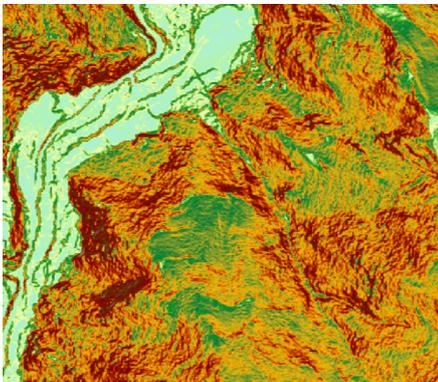
Geological Analysis

The LiDAR360 Geohazard Assessment Module uses accurate ground point extraction to perform structural plane and joint analysis, slope and aspect evaluation, terrain feature and drainage network analysis, and debris flow susceptibility and hazard assessment.

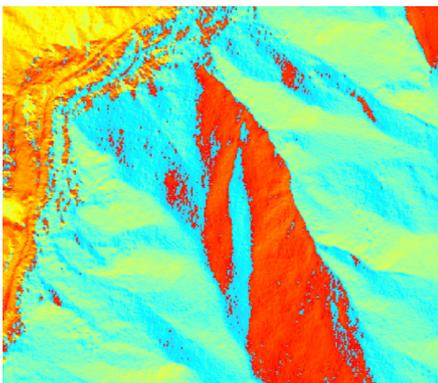
Its efficient and intelligent workflow helps users quickly obtain high-precision terrain data, identify potential hazards, and optimize disaster prevention and operational decisions, significantly enhancing efficiency and safety management.



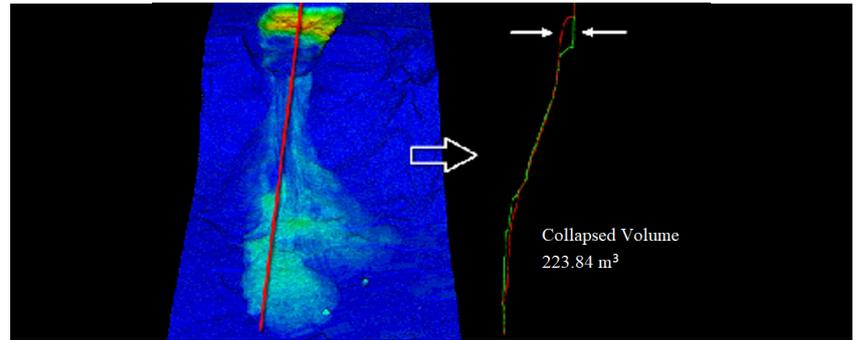
Drainage Analysis



Slope



Aspect



- **Rapid response**

Quickly and accurately capture microtopographic features of geohazards, such as landslides.

- **Parametric multiplicity**

Extract multiple parameters including slope, aspect, and surface roughness.

- **Precise extraction**

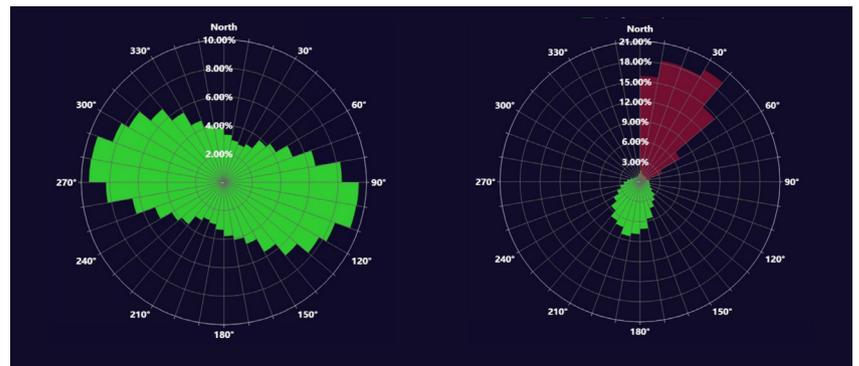
Detect subtle terrain changes across multi-period datasets for section analysis and structural surface extraction.

- **Early warning**

Conduct geohazard warning analysis based on processed data results.

- **Surface hydrology**

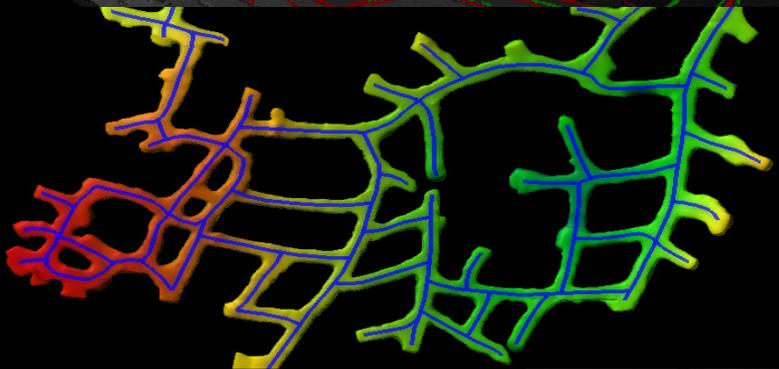
Perform flow accumulation and depression filling analysis to support water flow path and hazard assessment.



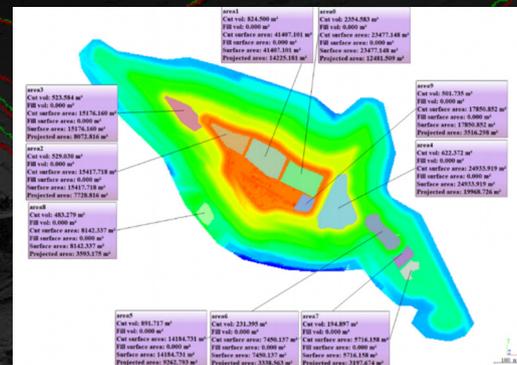
Geographical Rose Diagram

04 Mine Engineering and Safety

In open-pit mining, the LiDAR360 Mining Module supports haul road design, bench design and slope stability analysis, stockpile volume calculation, and multi-period change monitoring, providing reliable data for safe and efficient production. In underground mining, it enables roadway modeling, section analysis, time-series deformation monitoring, and tunneling direction monitoring, helping users track structural changes in real time to ensure safety and construction quality.

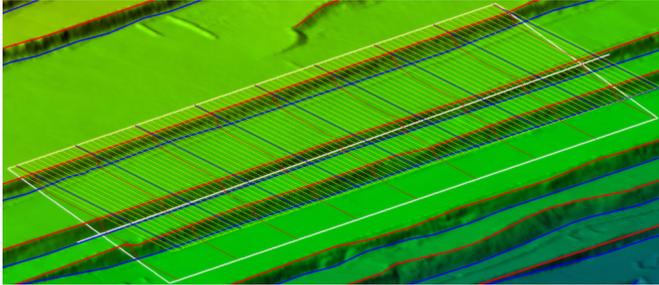


Underground Roadway Model and Centerline

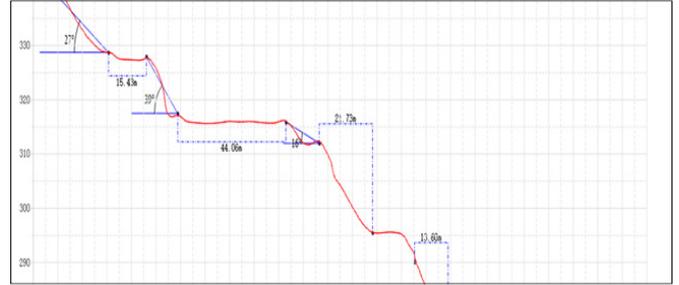


Volume Change Analysis

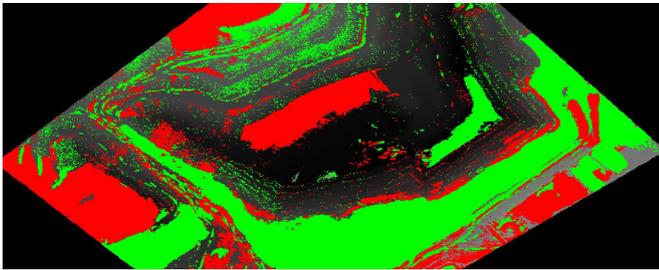
- **Open-Pit Modeling & Slope Analysis** — Automatically extracts toes and crests, and analyzes slope stability to enhance safety and construction efficiency.
- **High-Precision Underground Mine Modeling** — Precisely calculates tunnel volume, backfill, and structural changes.
- **Tunnel Design & Analysis** — Automatically extracts centerlines, generates cross-sections, and calculates excavation volumes and variations.



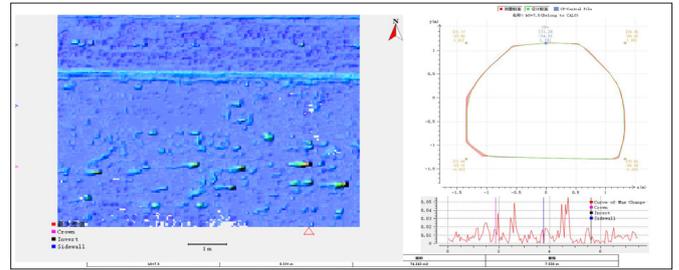
Inter-Ramp Compliance



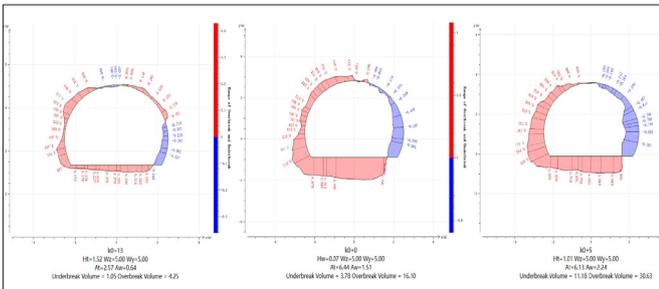
Slope Stability Analysis



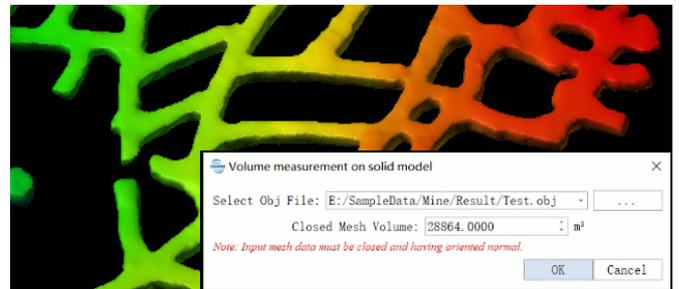
Change Analysis



Tunnel Deformation Monitoring



Overbreak and Underbreak Analysis



Backfill Estimation

05 Photo Module

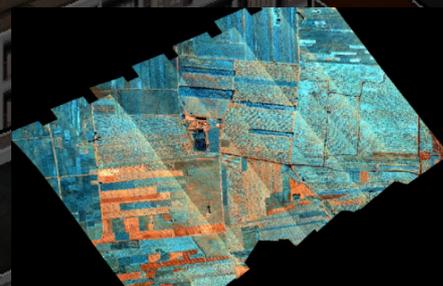
- **3+ Data Types Supported** — Generate high-quality orthomosaics (DOM) from visible, multispectral, and hyperspectral data.
- **Dual-Accuracy Enhancement** — Control point correction combined with automatic target recognition and matching ensures superior image quality and geometric precision.
- **End-to-End Editing Tools** — Photo selection, control point editing, and DOM editing for efficient, reliable results.
- **Wide-Ranging Applications** — High-precision point cloud and imagery fusion for vector feature extraction, point cloud classification, texture mapping, and 3D model rendering.



True Color



Multispectral



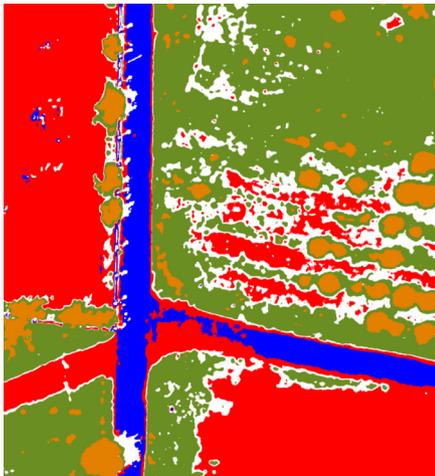
Hyperspectral

Spectral Module 06

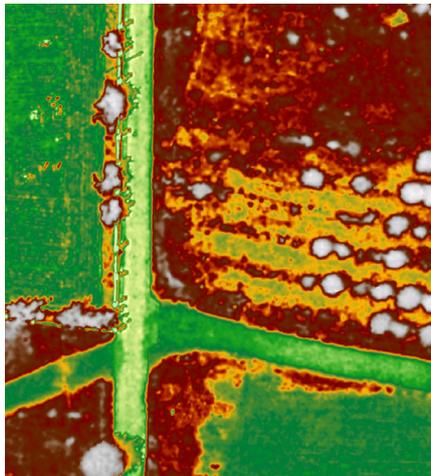


The LiDAR360 Spectral Module denoises, enhances, and classifies spectral data, fusing it with point clouds for rapid feature extraction and multi-source analysis, boosting efficiency and decision-making.

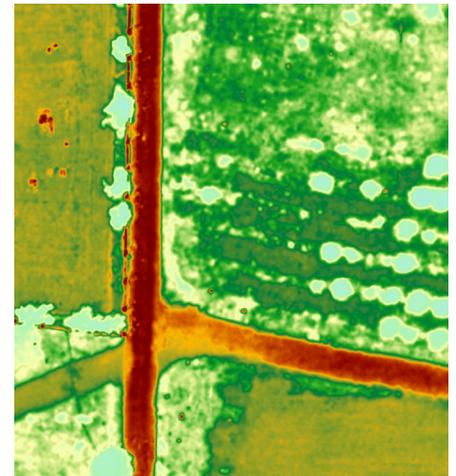
- **Spectral Classification & Analysis** — Spectral angle classification with spectral library support, plus 113 spectral indices (e.g., NDVI, NDWI).
- **Multi-Source Fusion** — Combine spectral and point cloud data for synchronized analysis of 3D structure and physical features, strengthening decision-making.



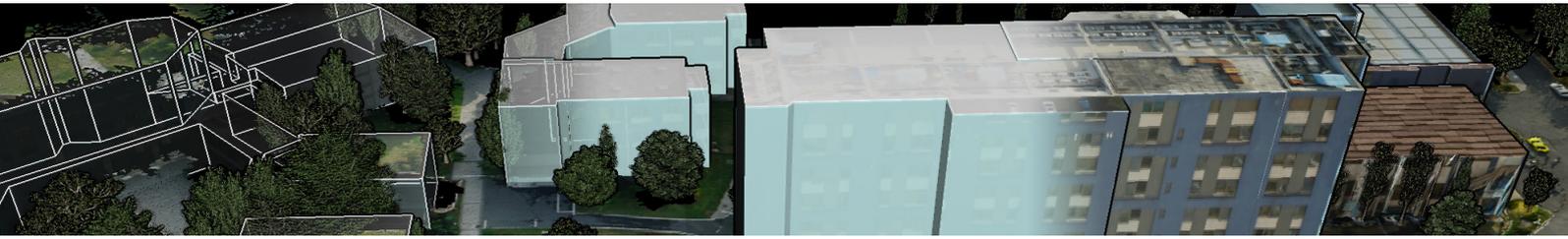
Classify by Spectral Angle Mapper



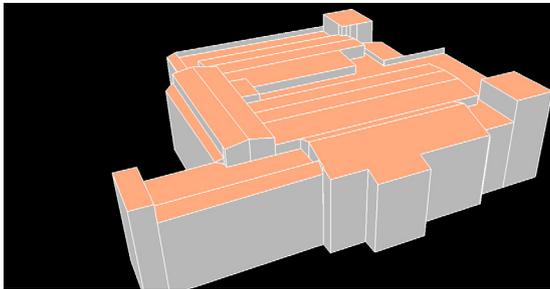
NDVI



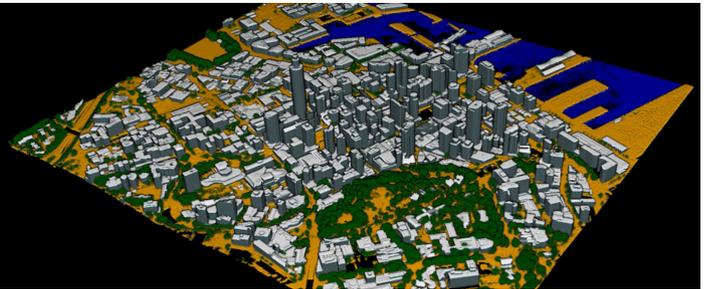
NDBI



- **City-scale Building Modeling** — Generate 10,000+ LOD2.2 individual building models in just 20 minutes, dramatically accelerating large-scale scene creation.
- **Diverse Texture Mapping** — Supports oblique imagery, orthophotos, material and custom textures, along with texture editing.
- **Automatic Attribute Calculation** — In addition to inheriting 2D footprint attributes, automatically computes 8 key attributes (e.g., area, base elevation).



LOD2.2 Automatic Modeling



Large-Scale Rapid Modeling



Model Texture Mapping

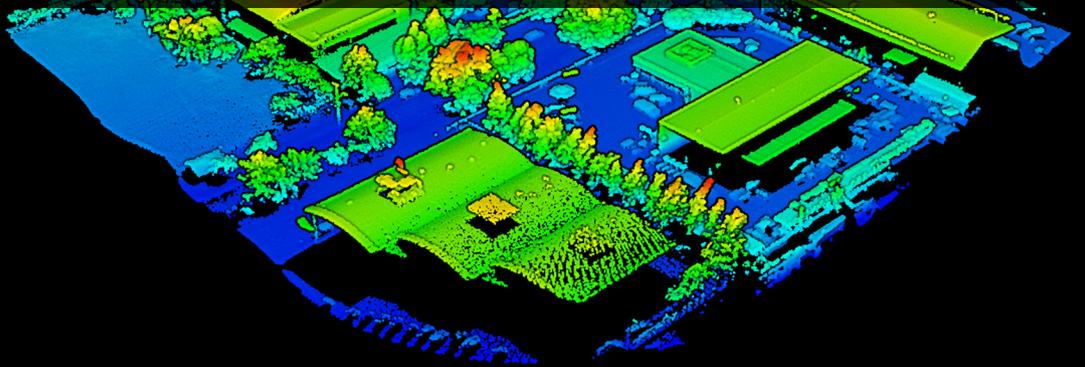
	BLDG HEIGHT	EAVE HEIGHT	BASE ELEV	ROOF DIR ^	ROOF AREA	ROOF PERIMETER	FOOTPRINT AREA
1	29.553	22.118	-26.893	17.839	2172.68...	214.488	2146.823
2	6.997	0.989	-4.547	18.449	511.471...	103.066	465.819
3	7.592	5.531	-4.582	19.153	444.500...	97.706	438.296
4	16.188	9.668	-13.548	19.367	3177.89...	248.167	2503.436
5	9.970	5.060	17.950	20.694	703.675...	138.245	702.901
6	6.077	4.891	35.403	22.244	72.0405...	31.415	71.499
7	14.179	3.620	16.291	45.930	1013.85...	144.576	925.127
8	4.250	2.902	27.140	58.066	114.831...	43.122	109.446
9	44.876	32.429	-35.186	60.834	697.885...	100.971	604.379
10	9.246	6.344	-6.276	109.136	1354.19...	175.665	1299.922

Model Attributes Management



Digital Twin 07

LiDAR360 identifies ground, vegetation, buildings, and other feature targets from massive point cloud datasets, employing intelligent algorithms for terrain and feature scene separation, as well as monolithic segmentation and modeling of vegetation and building targets. It enables city-scale geographic scene and physical model reconstruction, supporting real-world 3D construction projects.





www.greenvalleyintl.com info@greenvalleyintl.com

729 Heinz Avenue, Suite 9, Berkeley, CA 94710, USA



Welcome to scan
the QR code for a trial.