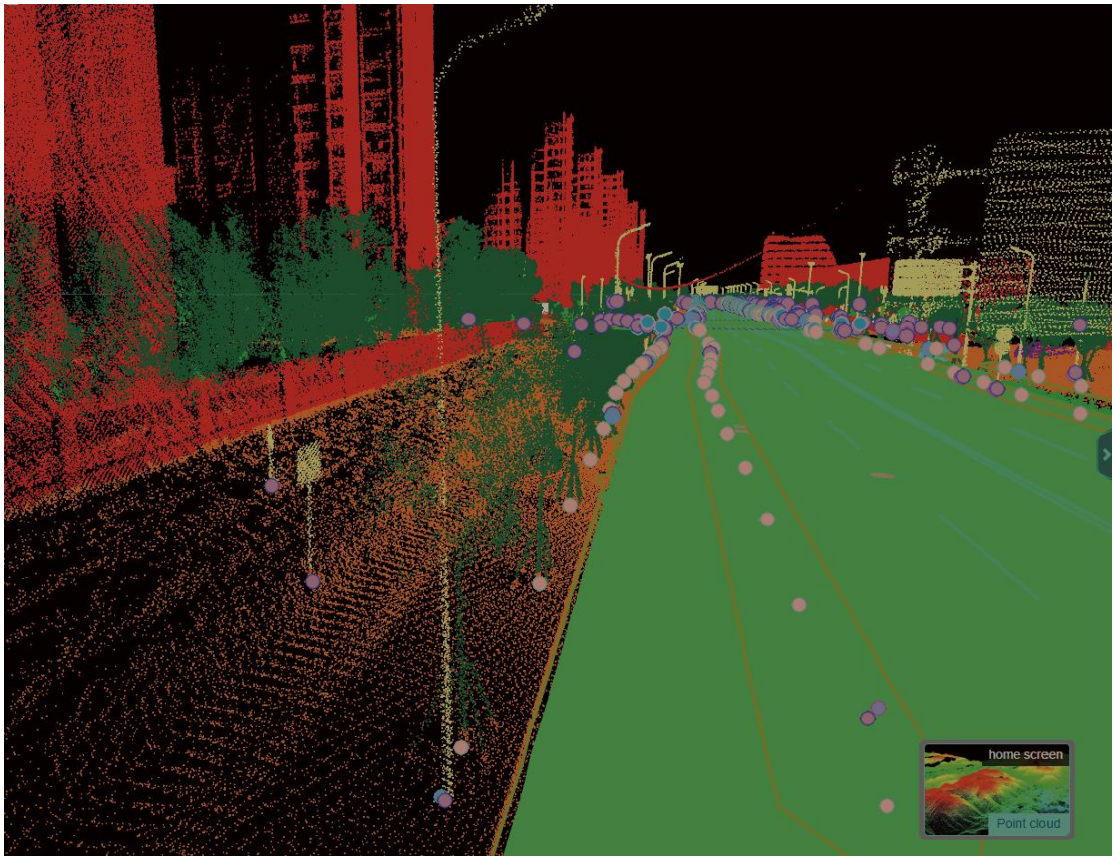
GreenValley International

LiShare User Guide

Anytime, Anywhere, Anyone. Start presenting and sharing your results.



https://www.greenvalleyintl.com

Chapter I LiShare Introduction

System Overview

This platform is developed by GreenValley International, aiming to build a new generation of 3D spatial data cloud collaboration hub. By integrating high-precision hardware acquisition equipment and intelligent algorithm processing system, the full life cycle management of multi-source Heterogeneous point cloud data is realized, and cost-effective cloud ecological solutions are provided for forestry resource census, mine geological modeling, smart city infrastructure and other scenarios.

Core Function Matrix

1. Intelligent Data Management Center

Multi-source heterogeneous data access supports LAS, Lidata, gpkg, GeoJson, CityJson, OBJ, JPG/PNG after processing by LiDAR360 /LiDAR360 MLS / LiPowerLine Distributed object storage adopts EC erasure code redundancy strategy, with storage availability of 99.99, and single cluster supports EB-level data expansion.

2. Cloud Visualization Engine

Functional dimension	Technical realization	Business Value
Dynamic Visualization	Multiple coloring schemes + multi-stage transparency gradient adjustment	Improving the efficiency of geological feature recognition
Intelligent measurement	Supports 9 engineering measurement modes with an accuracy of ± 2mm	Reduce field retest workload

3. Multi-dimensional rendering mode matrix

Rendering Dimensions	Technical characteristics	Application Scenarios
Elevation mapping	Nonlinear mapping algorithm supports 32-bit elevation resolution	Terrain profile analysis
Type rendering	256 Class Preset Classification Color Label + Custom Semantic Mapping	Rapid identification of ground objects
Intensity mapping	Dynamic range compression	Underground pipeline

Rendering Dimensions	Technical characteristics	Application Scenarios
	(DRC) technology, signal-to-noise ratio> 60dB	detection
RGB fusion	Three-channel histogram equalization, color reproduction deviation <2%	Real scene three-dimensional reconstruction
Ecological analysis	Canopy ID layered rendering supports L-system growth simulation	Comprehensive survey of forest resources
Echo Analysis	Multi-pulse separation algorithm, minimum recognition interval 0.3ns	Power line safety detection

4. Collaborative operation system

Space permission management level 3 role Control + preview authorization, support concurrent editing The response time of the conflict detection engine of the intelligent labeling system is less than 200ms, and the labeling consistency is improved by 80%.• Space-time sharing mechanism supports dynamic watermark linking (valid period/password double limit)

5. Full scene adaptation scheme

- Multi-terminal support Web/Windows/Android/iOS four-terminal data synchronization
- API platform (not open source for the time being)

The use of the system needs to know

1. PC Hardware requirements
2. Mobile Hardware Requirements

Selling mode

Provide dual-track service model:
functional suite and VIP technical support.
Please contact info@greenvalleyintl.com for specific charging information.

Chapter II Intelligent Identity Authentication Hub

User Lifecycle Management System

Function module	Technical realization	Business Value
Smart Registration	Support 2 kinds of authentication source docking (SMS/email), registration conversion rate increased.	Lower user access threshold
Unified Login	Federated authentication protocol based on OAuth 2.1, supporting 12 token types, with a login success rate of 99.98.	Seamless multi-system convergence
Password Autonomy	Visual password strength engine, supporting 8 password policy templates, password reset time <20 seconds.	Operation and maintenance work orders reduced by 40%

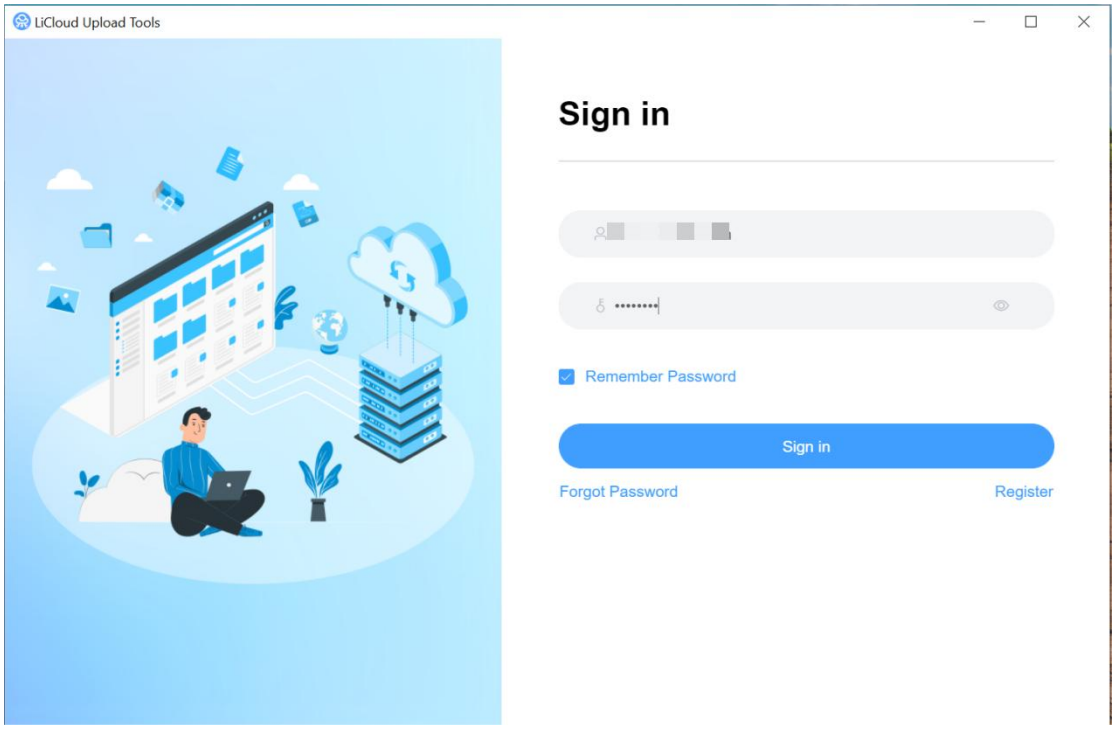
Session Security System

Distributed session Cluster adopts Redis Cluster architecture, session retention time can be configured (1-720 hours), and supports tens of millions of concurrent connections.
Token automatically renews JWT dual Token mechanism (Access/Refresh Token), with no-sense renewal success rate> 99.9.
Cross-Domain Authentication supports CORS enhancement scheme to realize level 5 domain name white list management, SSO cross-domain response time <300ms.

Sign up

1. Upload Tool Entry

Step 1 Client trigger
Click the "register" button in the login interface of the LiShare upload tool, and the client automatically calls the default browser of the system through the deep link protocol to establish the OAuth 2.1 Authorization channel and jump to the Web registration page.



2. Web-site entrance

Step 1 Registration Initialization

Visit the platform registration page, click the "Register Now" button, the system automatically loads the SSL encrypted transmission channel to ensure the security of information transmission.

Step 2 Identity Verification.

Enter a valid email address in the registration form (subject to RFC 5322 standard format verification), and submit the request after completing the man-machine verification (reCAPTCHA v3). Technical support: SMTP over TLS encrypted link delivery, mail delivery rate> 99.7.

Step 3 Mailbox Verification Cloud Service will send an activation email with dynamic verification link to the registered mailbox (including 17-bit random Token, valid for 24 hours). The email body includes:

- Enterprise-class digital signature (RFC 7519 compliant)

Anti-phishing risk prompt block

- Multi-language support option (default matching browser language)

Step 4 Account Activation

After clicking the security verification link in the email, the system automatically executes:

1. Token validity verification (server-side RSA-2048 decryption)
2. Cross-domain session binding (CORS policy whitelist check)
3. Risk device fingerprint detection (based on FingerprintJS Pro v4)

Step 5 Information Improvement

To jump to the account information improvement interface, complete:

- Password settings (compliant with NIST SP 800-63B)

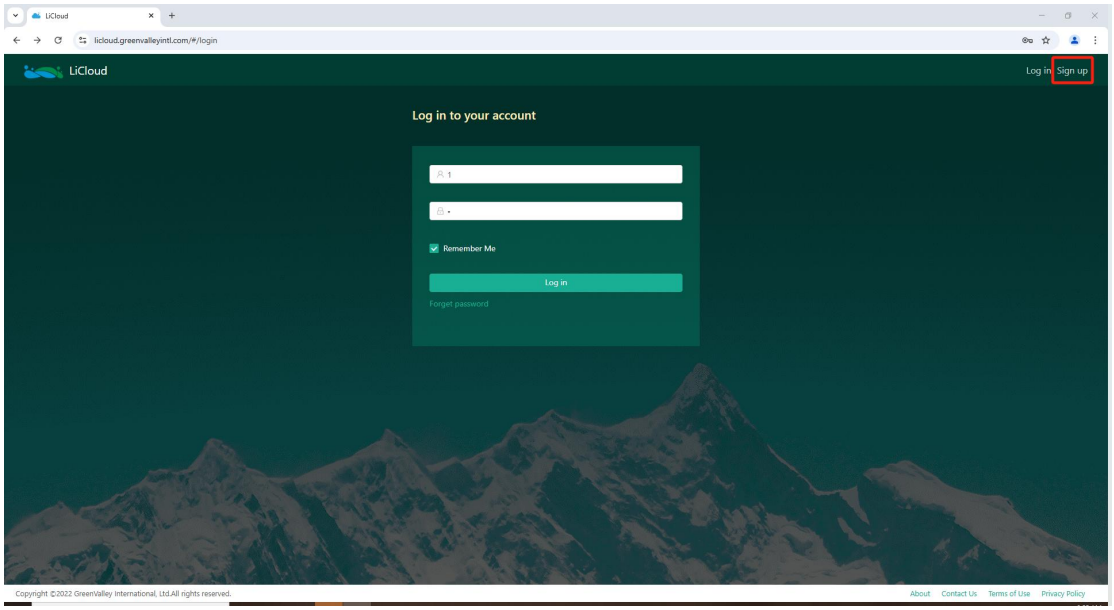
Mobile phone number binding (support 86/+86 double format)

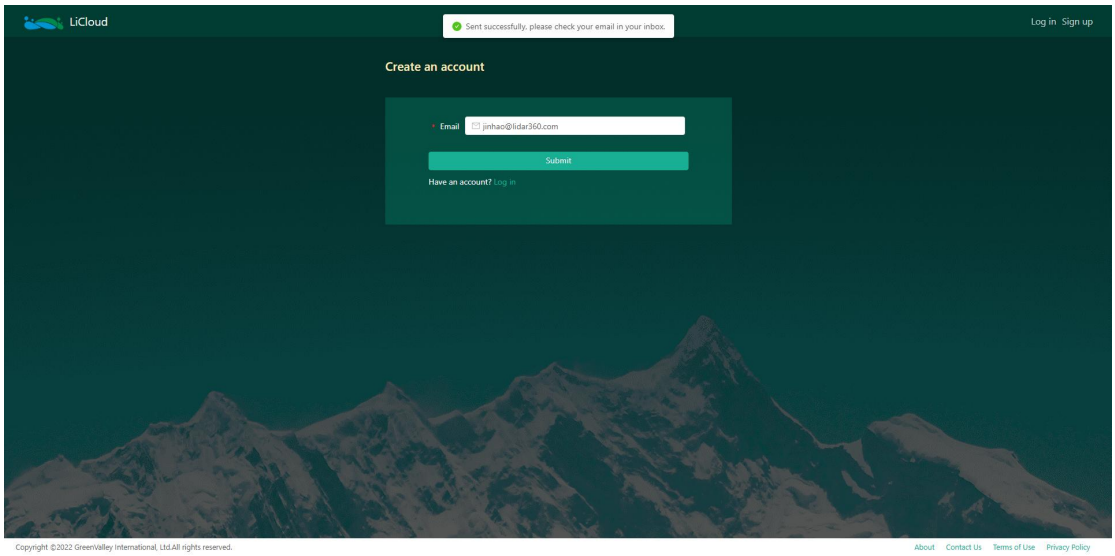
- Privacy Agreement Confirmation (GDPR Compliance Statement)

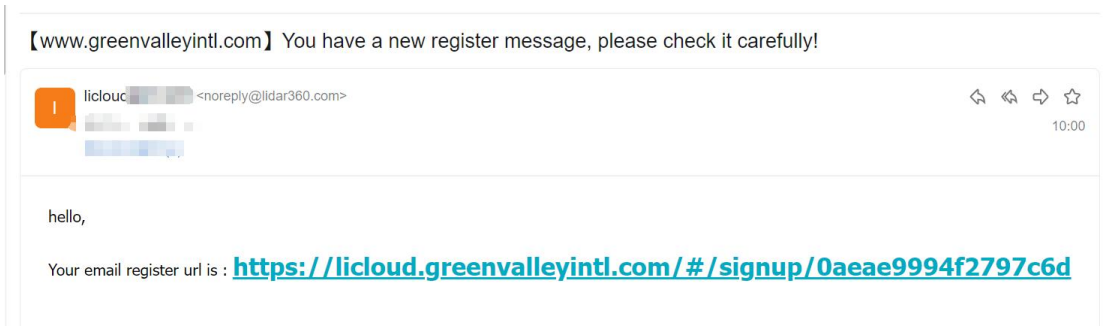
Step 6 Registration Completed

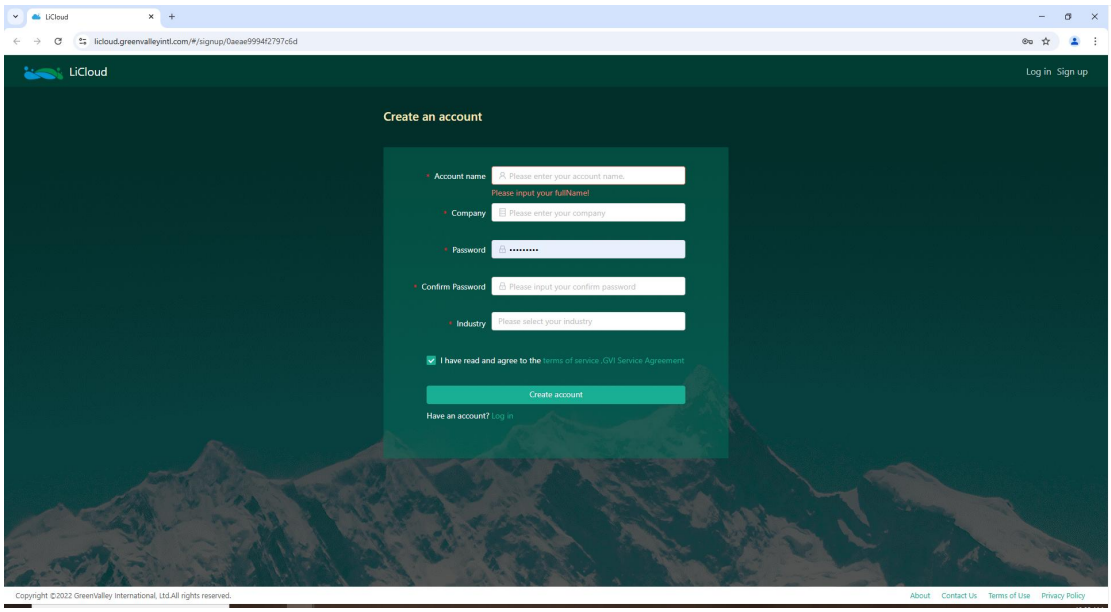
The system automatically executes after submission:

1. Distributed transaction write (MySQL Cluster + Redis Cache double write)
2. Initial RBAC permission configuration (basic role is granted by default)



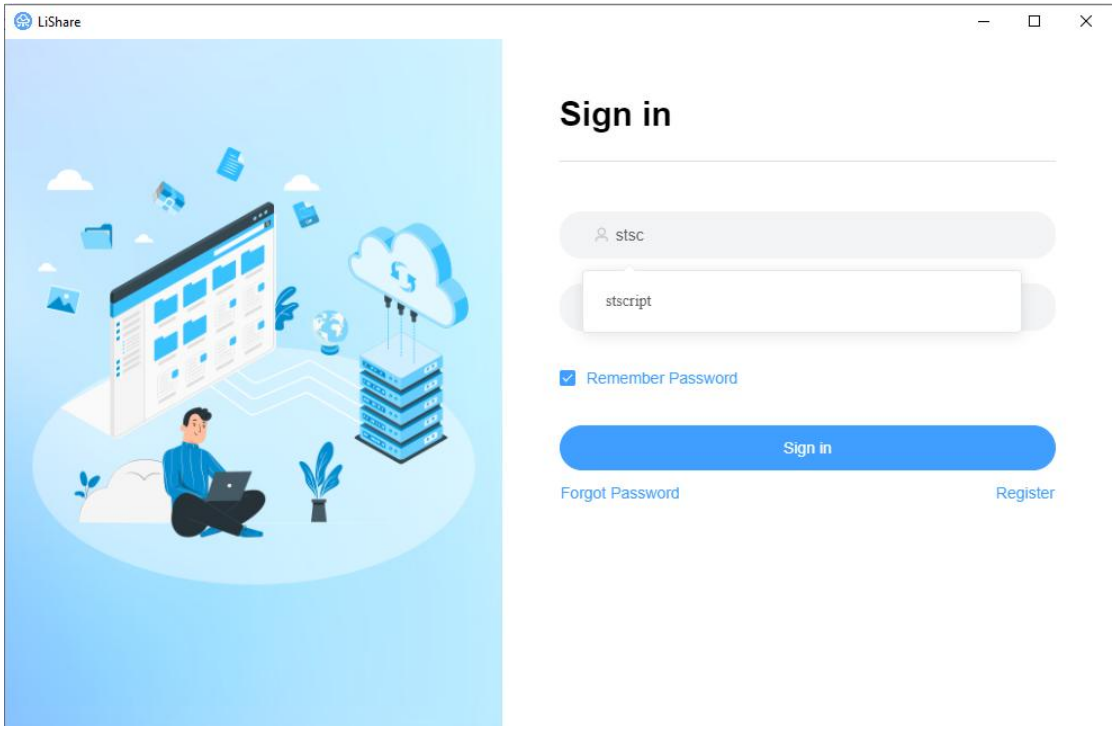






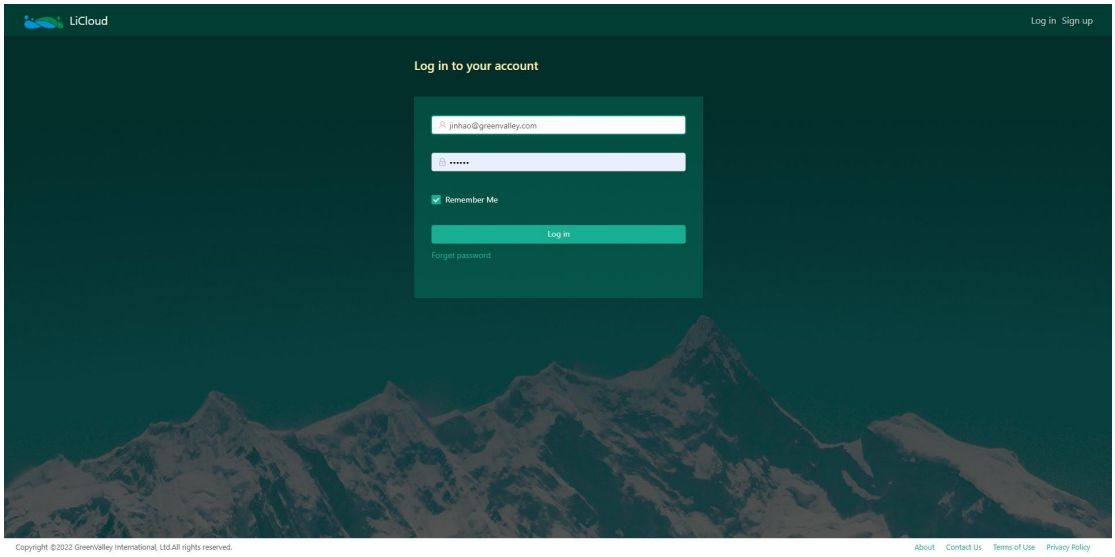
Sign in

1. Upload Tool Login



The upload tool can remember up to 3 account passwords, and the input account will automatically complete the account password.

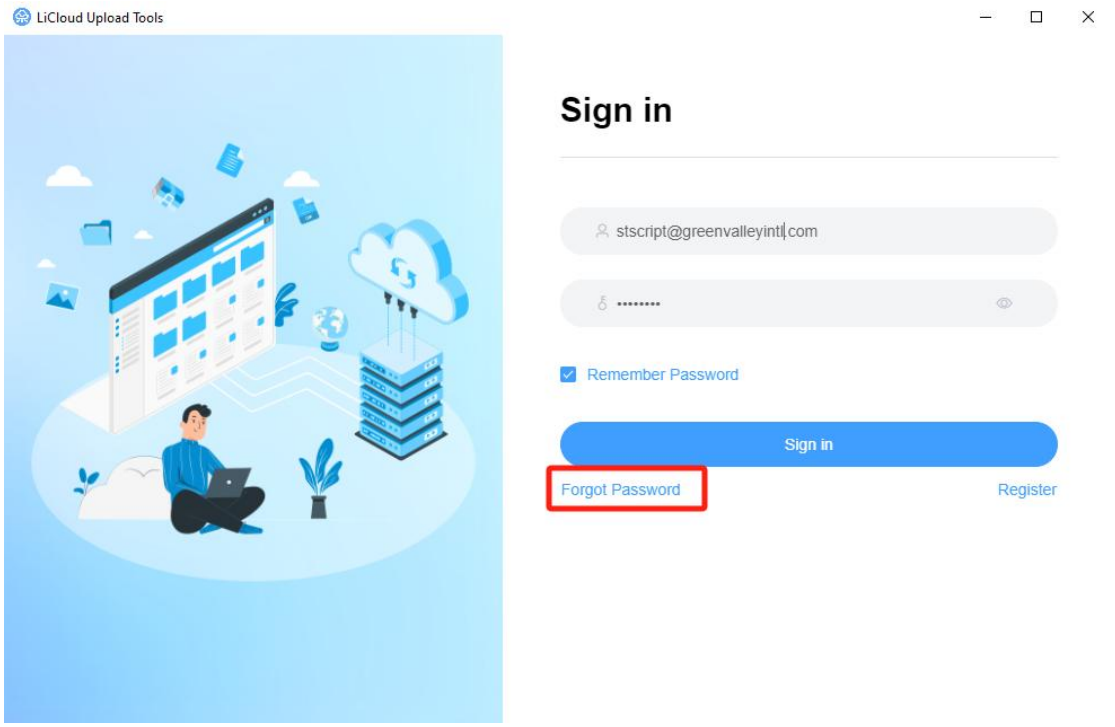
2. web login



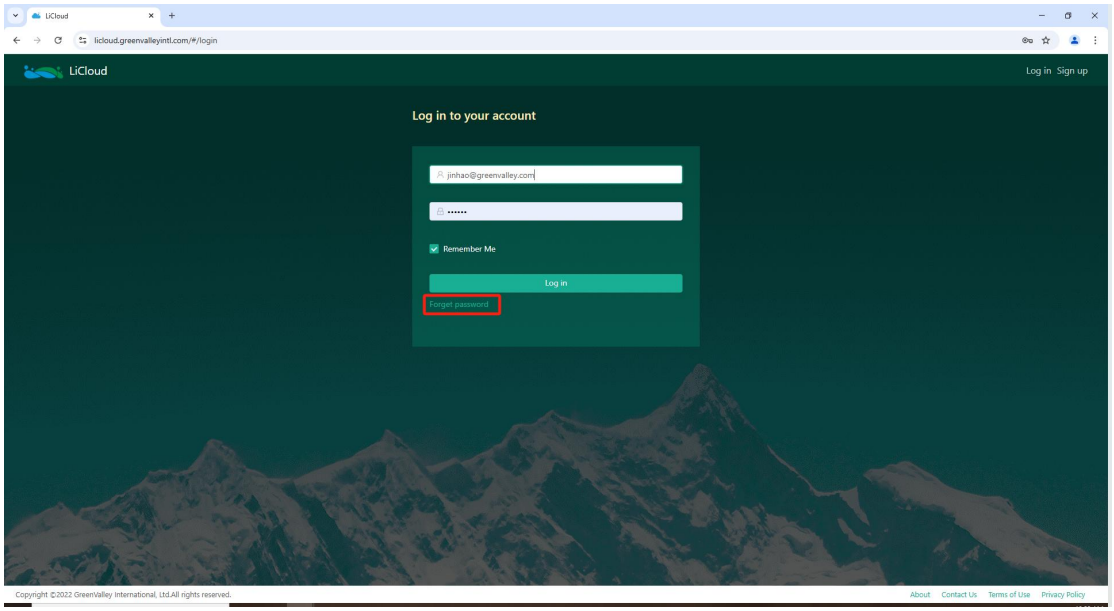
Forgot Password

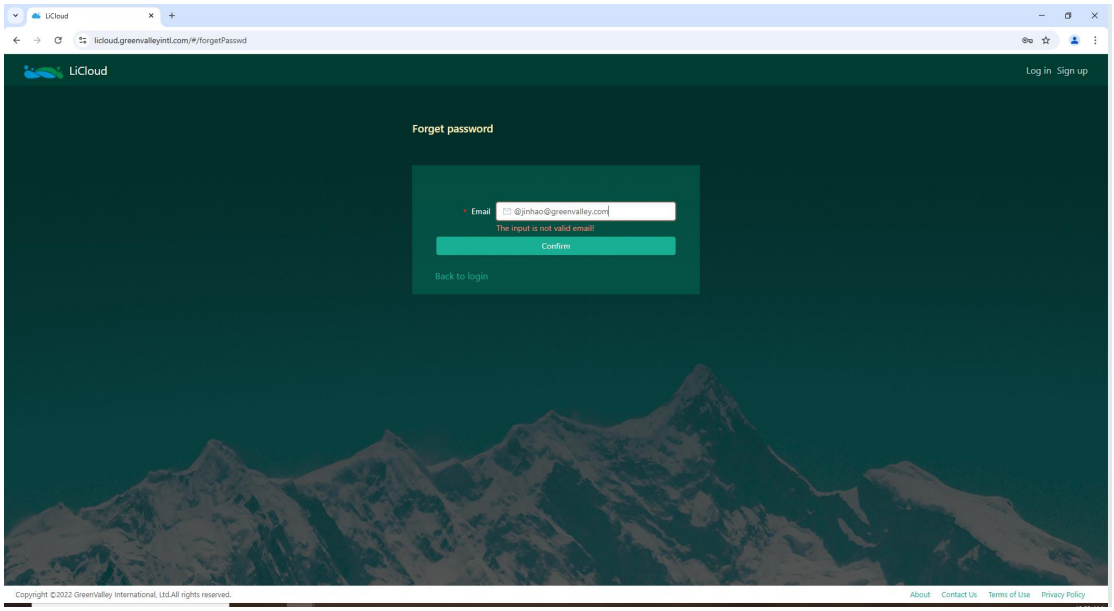
1. Upload Tool Forgot Password

Click the "Forgot Password" button on the page, and the system will open the browser and go to the web site to forget the password.



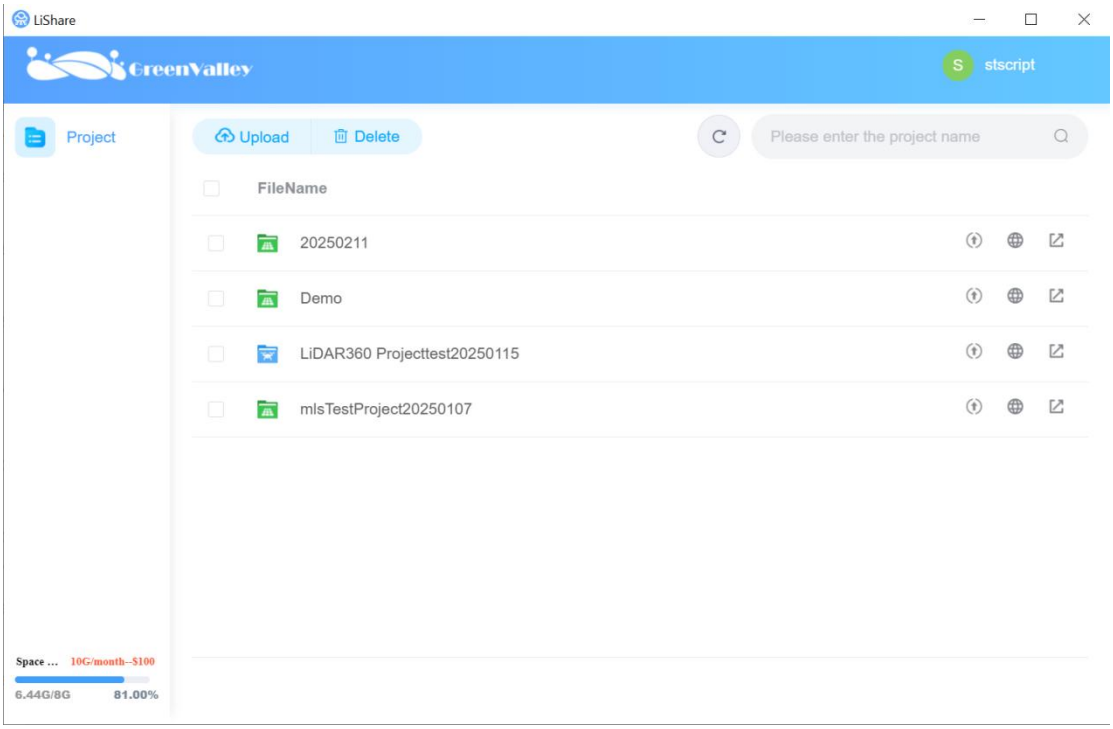
2. Forgot the password on the web site





Chapter III LiShare Upload Tool

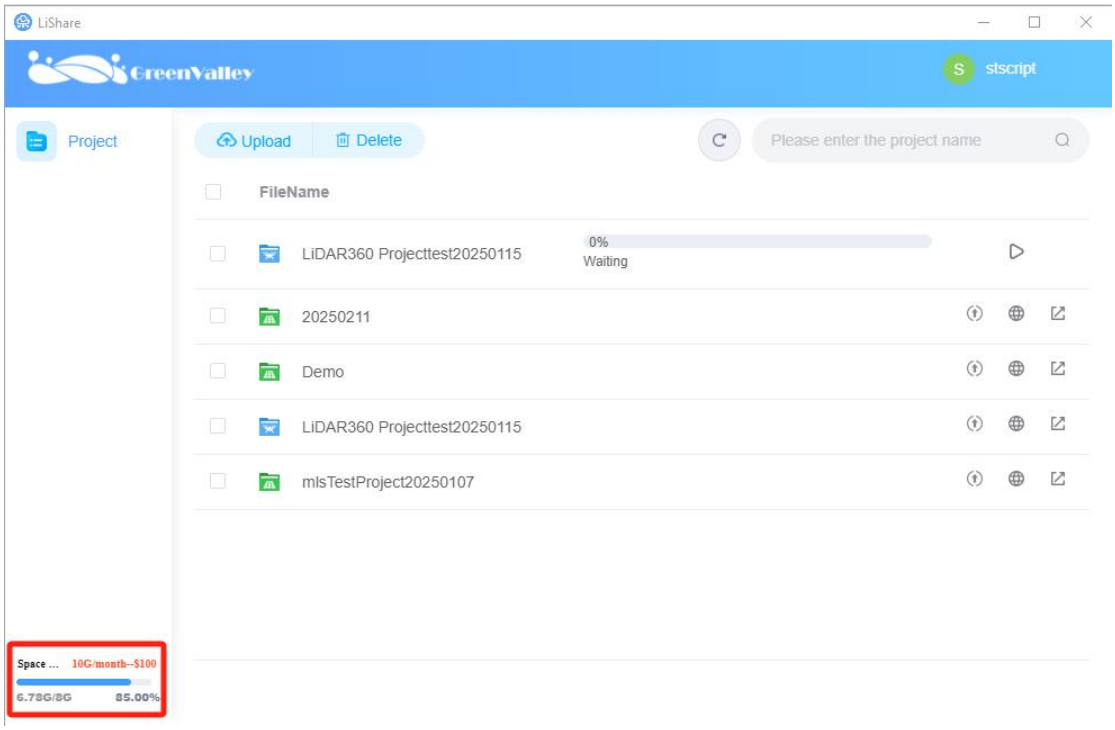
The upload tool is used to upload data processed by each software to the cloud warehouse. The Function section of the LiCloud upload tool includes user login, file upload, file viewing, file deletion, file re-upload, data display, real-time display of user warehouse memory, warehouse expansion, and other functions.

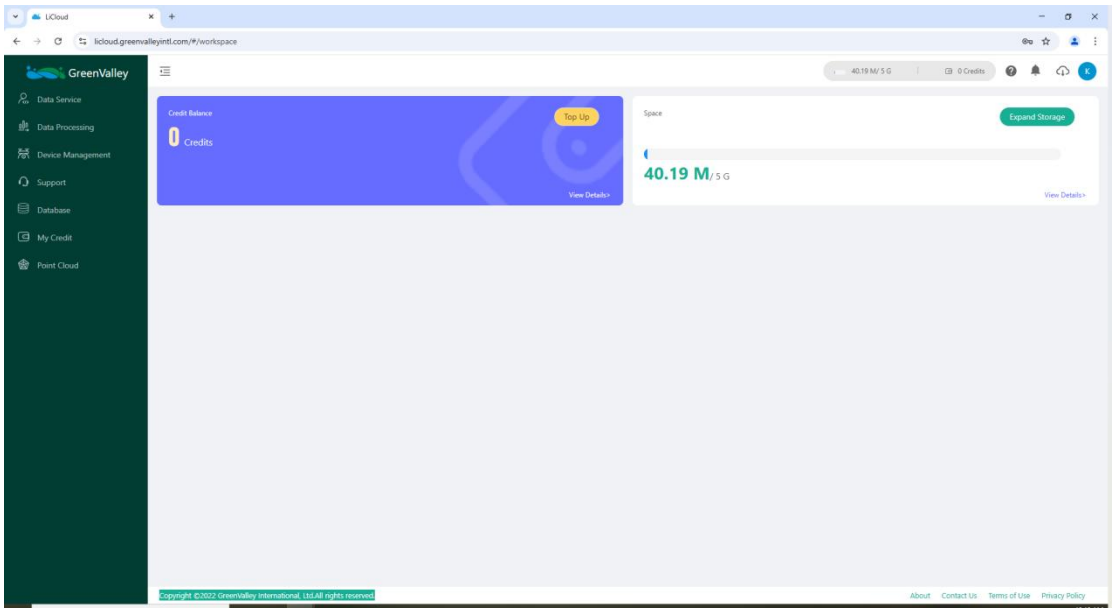


User Module

1. User Center

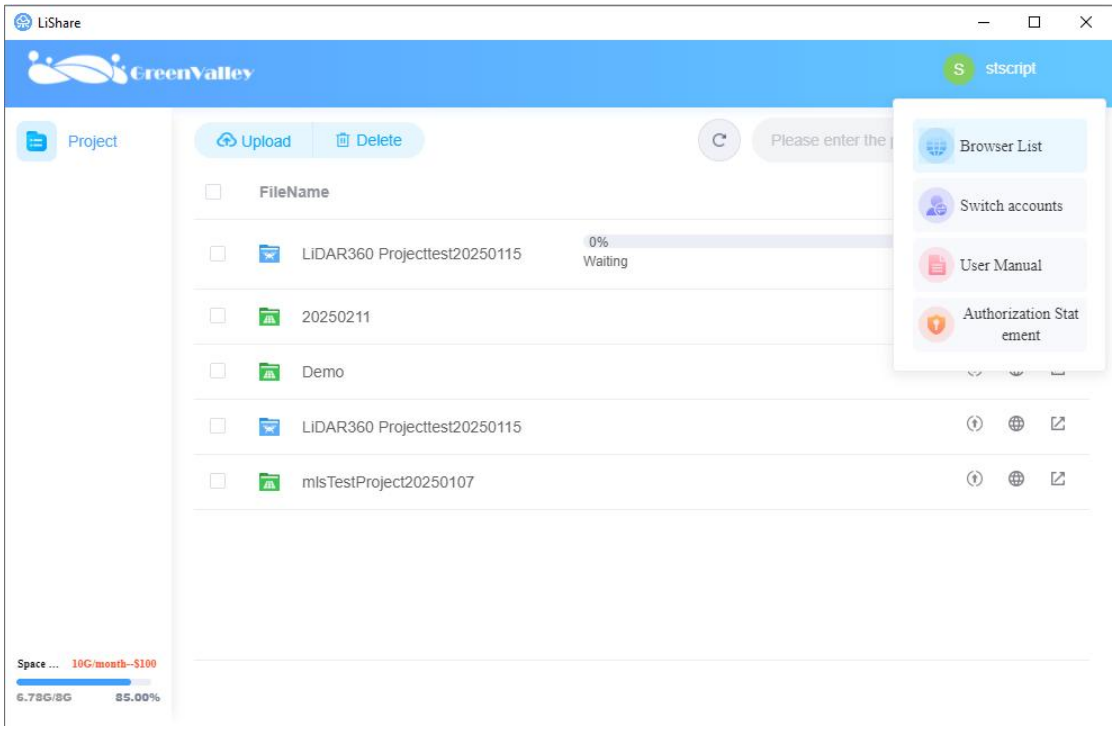
Displays the total memory, used memory, and expansion price of the warehouse. Click to enter the LiShare User center to view user basic information and warehouse information and expand service-related functions.

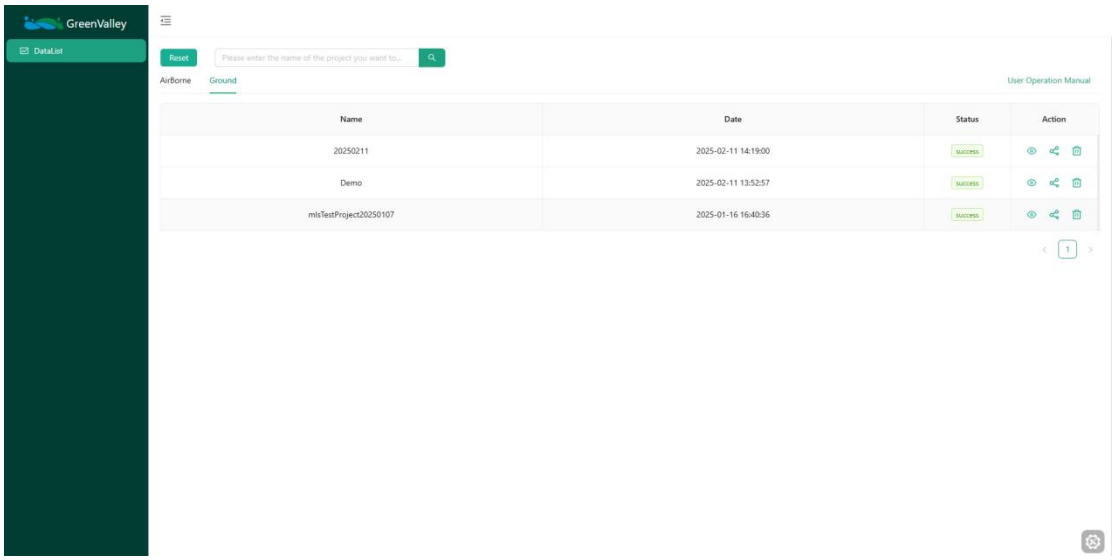




2. Project List

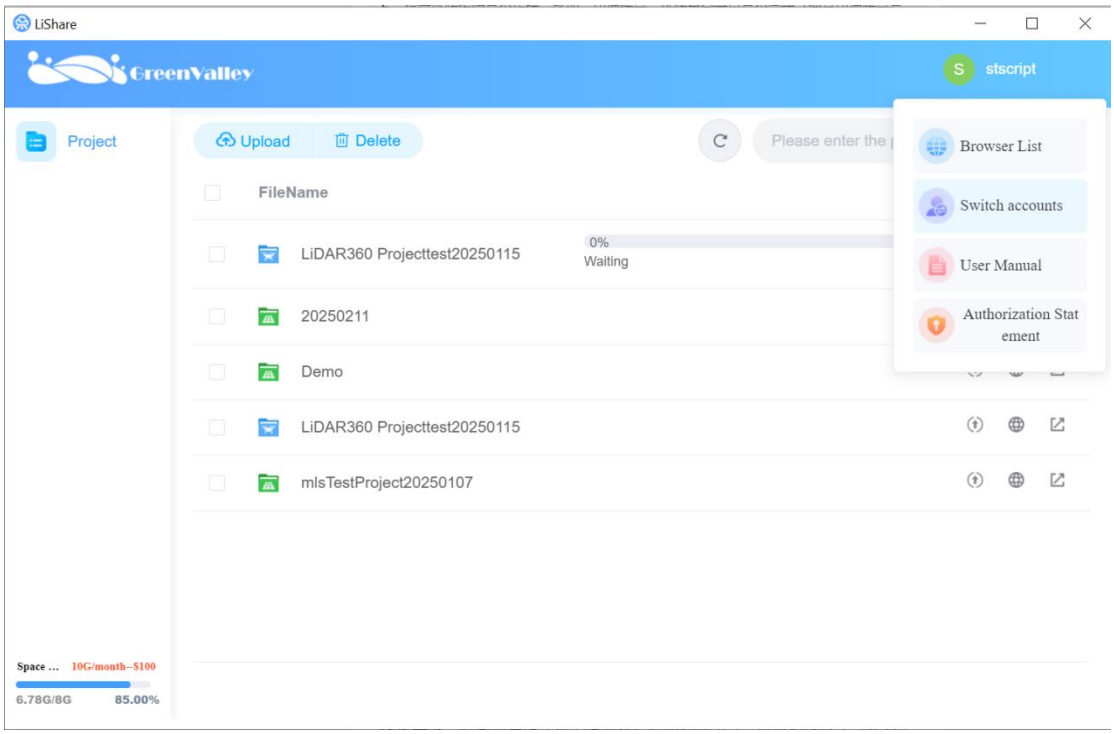
- Operation path: click the "Browser List" button → direct to the LiShare Cloud Project Management Interface
- Function description: View/manage project files deployed in the cloud, support online editing and data update.





3. Switch account number

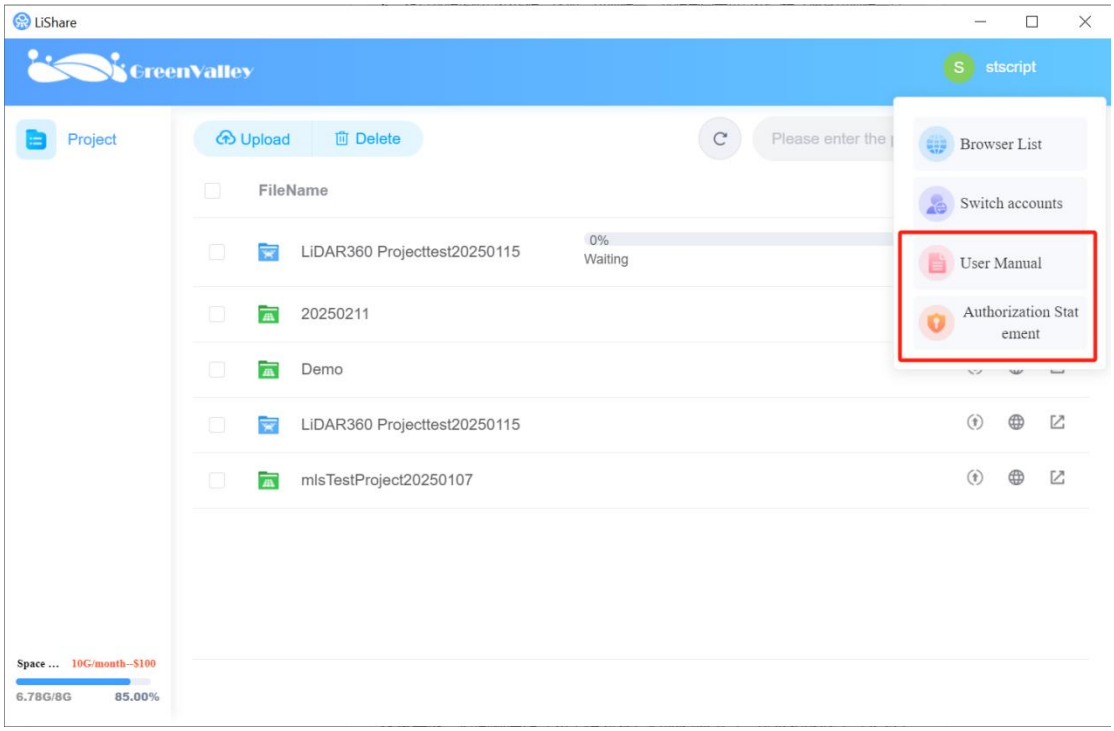
- Operation path: click the "switch account" button → jump to the unified login page.
- Extended Description: Supports quick switching of the primary account and sub-account permission systems.



4. User Manual, Authorization

Content form: provide PDF/online operation guide (including graphic tutorial and frequently asked questions), authorization instructions.

- Access portal: as shown below



Core Module

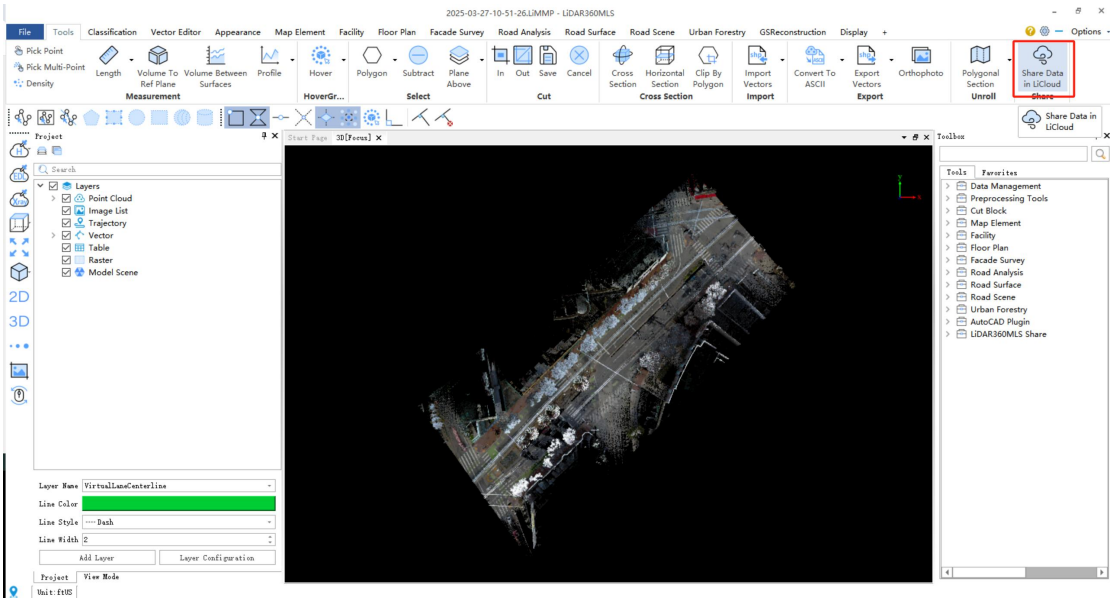
1. Project status management

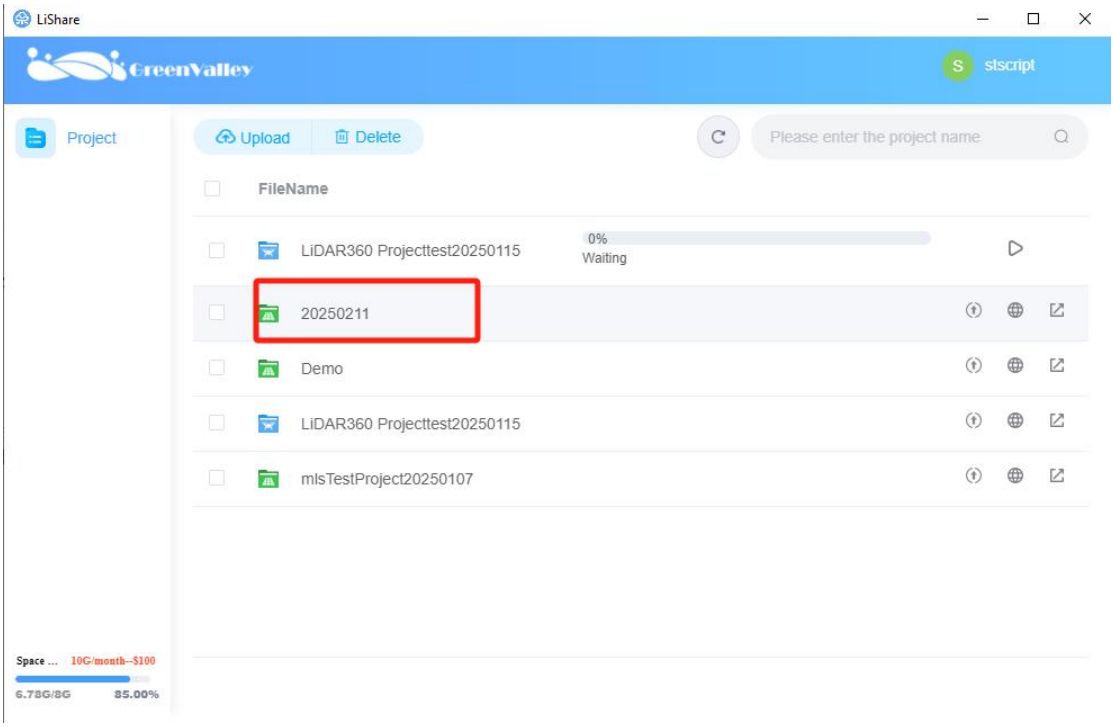
Status Type	*Visual identification*	*Core Operations*
Uploading	*Dynamic progress bar (with percentage)*	*Pause/Cancel + Resumable*
Completed	*Update, results view, share button*	*Version comparison and update + structure analysis*
Fail	*Red alert icon*	*View error details + upload again*

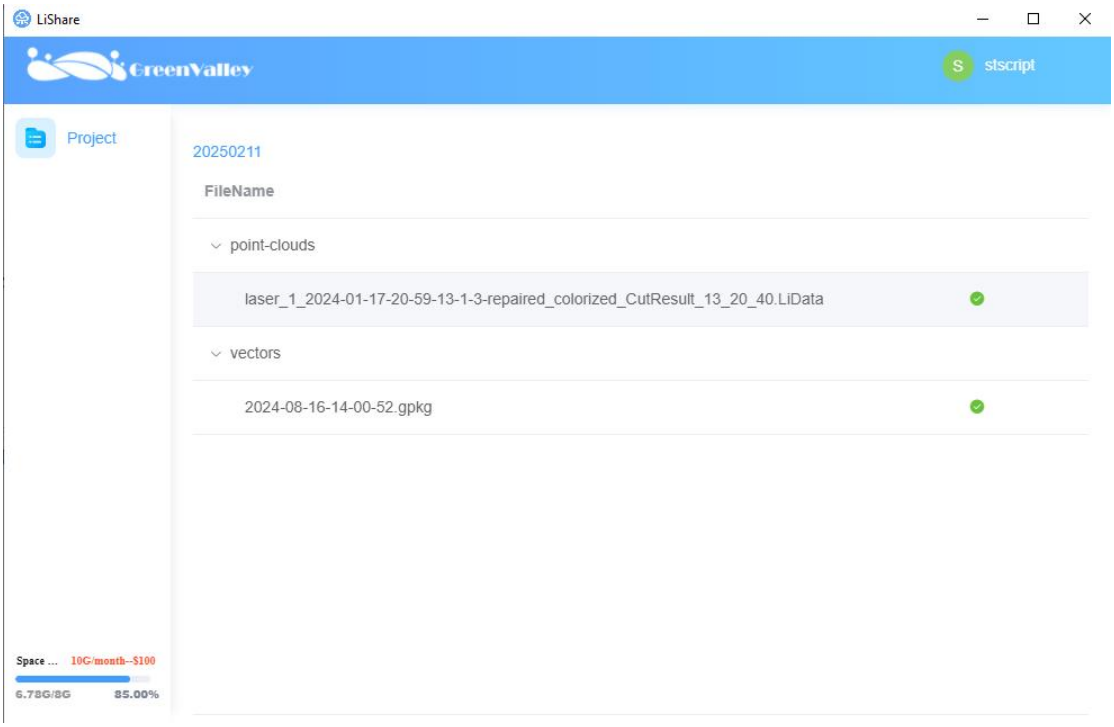
2. Engineering operation matrix

(1) Engineering Structure View

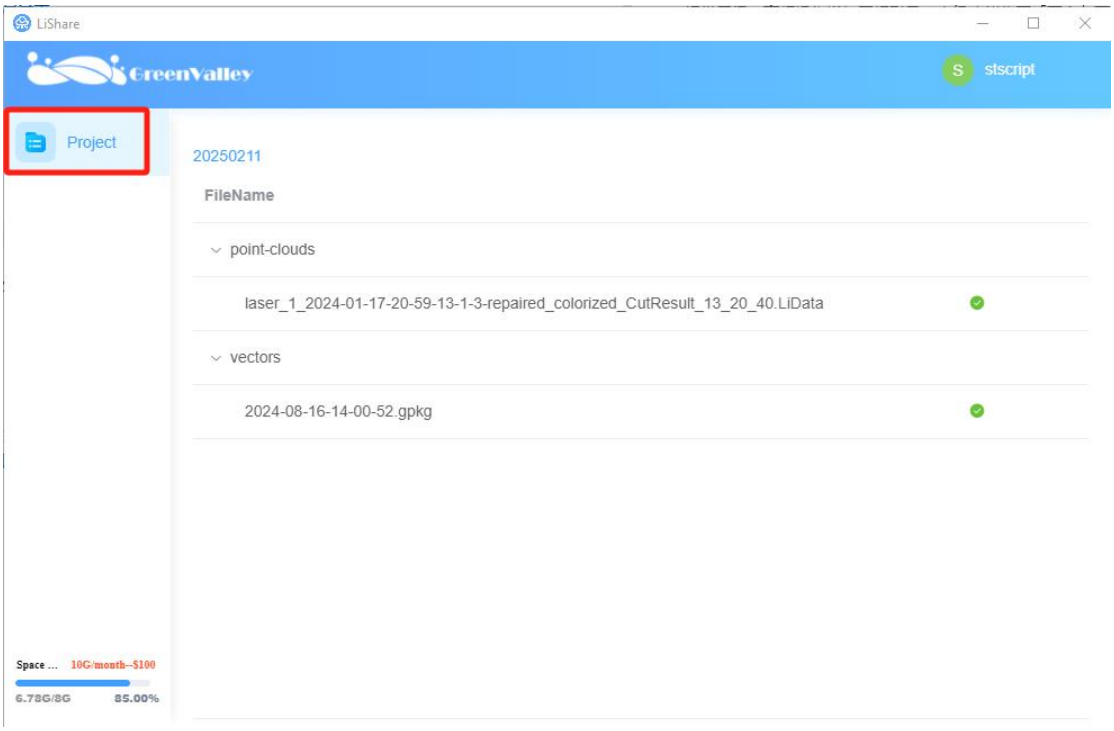
Click the Lishare button in LIDAR360 MLS to upload the project.Interactive path: click the project name → show the three-dimensional directory tree (support zoom/positioning).


2025-03-27-10-51-26.LiMMP - LiDAR360MLS
File
Tools
Classification
Vector Editor
Appearance
Map Element
Facility
Floor Plan
Facade Survey
Road Analysis
Road Surface
Road Scene
Urban Forestry
GSReconstruction
Display
Options
Pick Point
Pick Multi-Point
Density
Length
Volume To Ref Plane
Volume Between Surfaces
Profile
Measurement
Hover
HoverGr...
Polygon
Subtract
Plane Above
Select
In
Out
Save
Cancel
Cut
Cross Section
Horizontal Section
Clip By Polygon
Cross Section
Import Vectors
Import
Convert To ASCII
Export Vectors
Export
Orthophoto
Polygonal Section
Unroll
Share Data in LiCloud
Share
Project
Search
Layers
Point Cloud
Image List
Trajectory
Vector
Table
Raster
Model Scene
2D
3D
Start Page
3D[Focus]
Toolbox
Tools
Favorites
Data Management
Preprocessing Tools
Cut Block
Map Element
Facility
Floor Plan
Facade Survey
Road Analysis
Road Surface
Road Scene
Urban Forestry
AutoCAD Plugin
LiDAR360MLS Share
Layer Name
VirtualLaneCenterline
Line Color
Line Style
Dash
Line Width
2
Add Layer
Layer Configuration
Project
View Mode
Unit: ftUS


LiShare
GreenValley
stscript
Project
Upload
Delete
Please enter the project name
FileName
LiDAR360 Projecttest20250115
0%
Waiting
20250211
Demo
LiDAR360 Projecttest20250115
mlsTestProject20250107
Space ...
10G/month--$100
6.78G/8G
85.00%



Return mechanism: left "Project" navigation button → One-click return to the top level of the Project list.

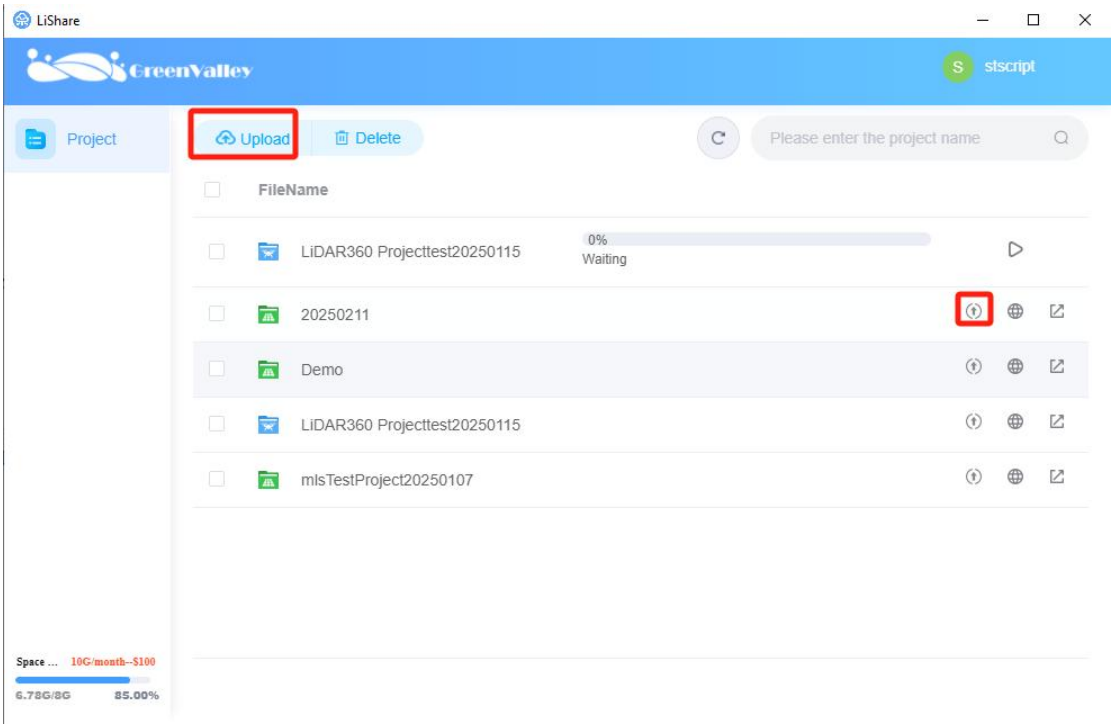


(2) Function Button Group

Renewal Engine

- Cover Update: Direct Replacement Prev.

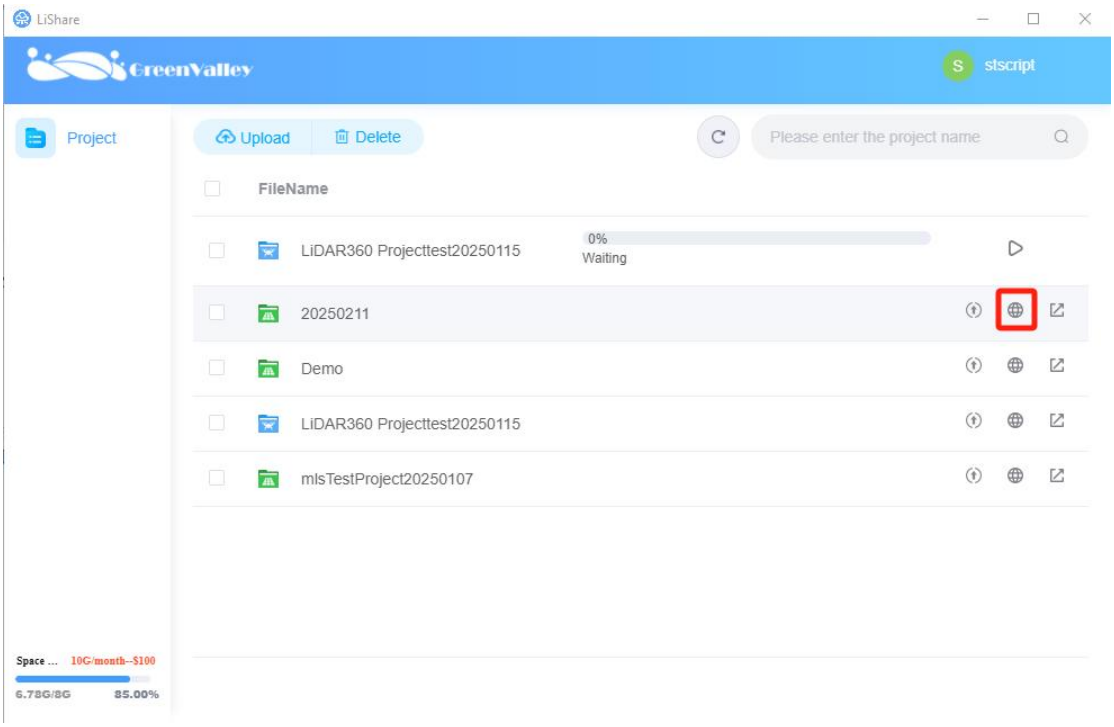
Difference comparison: highlight the file change node.



Show results.

The direct connection to the Lishare Web-side visualization platform.

The preset display template is automatically loaded.

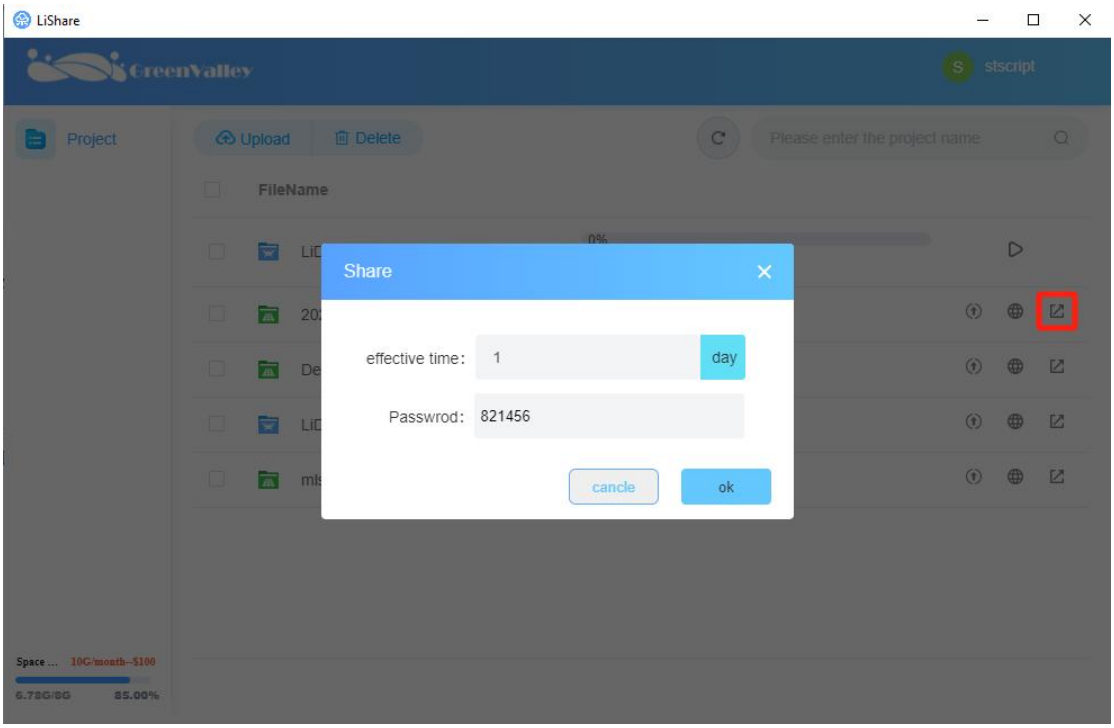


Smart Sharing

Time limit setting: minimum 1 day maximum 14 days custom time setting.

Security configuration: password protection.

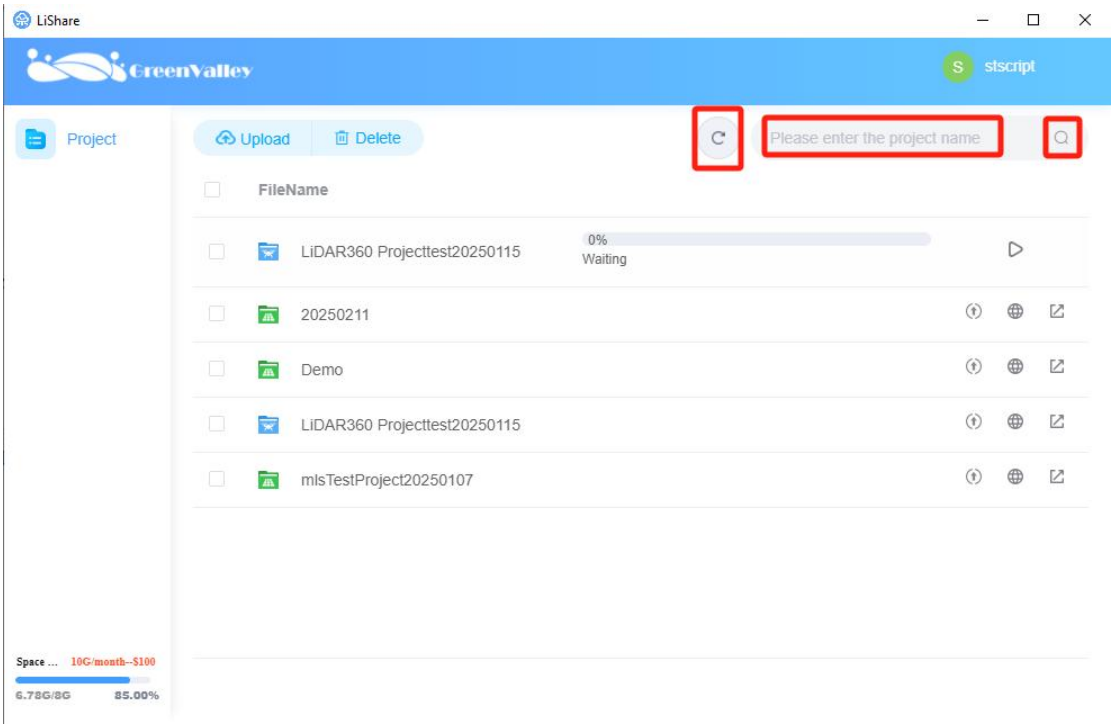
► *Permission mode: Read-only lock*



Search Engineering

Enter the project name, fuzzy match.

Reset button to reset the contents of the input box.

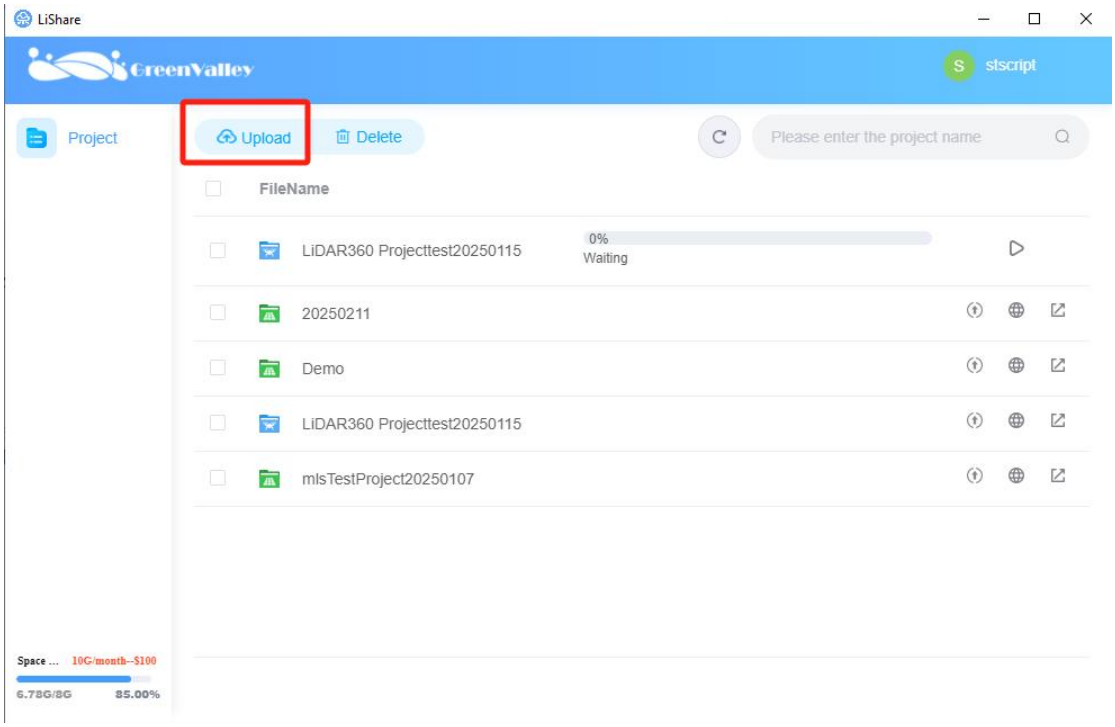


Upload Project

The current project data will be automatically uploaded by clicking open LiShare in Lidar360/MLS/LiPowerLine software.

The optional project data will be uploaded by clicking Upload through the LiShare upload

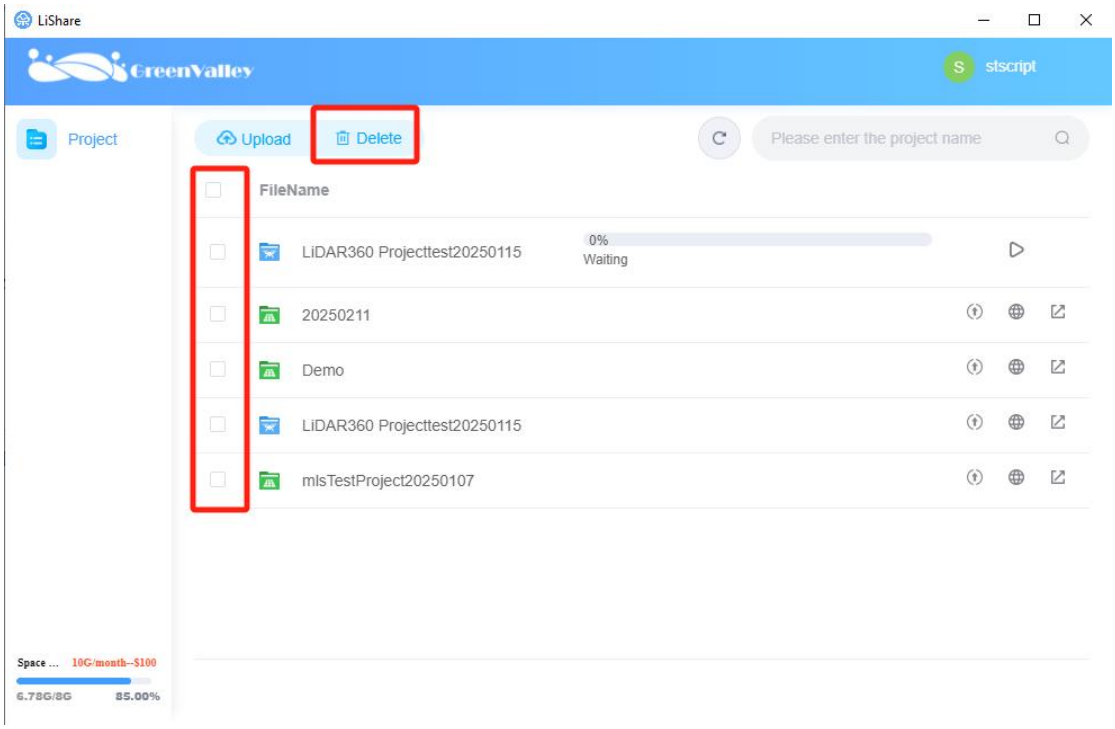
tool.



Delete Project

Support single-choice multiple-choice deletion.

- *LiShare multi-source data synchronization*



Updates and Maintenance

1. Updates

When your application prompts for an update, you will typically encounter the following two types:

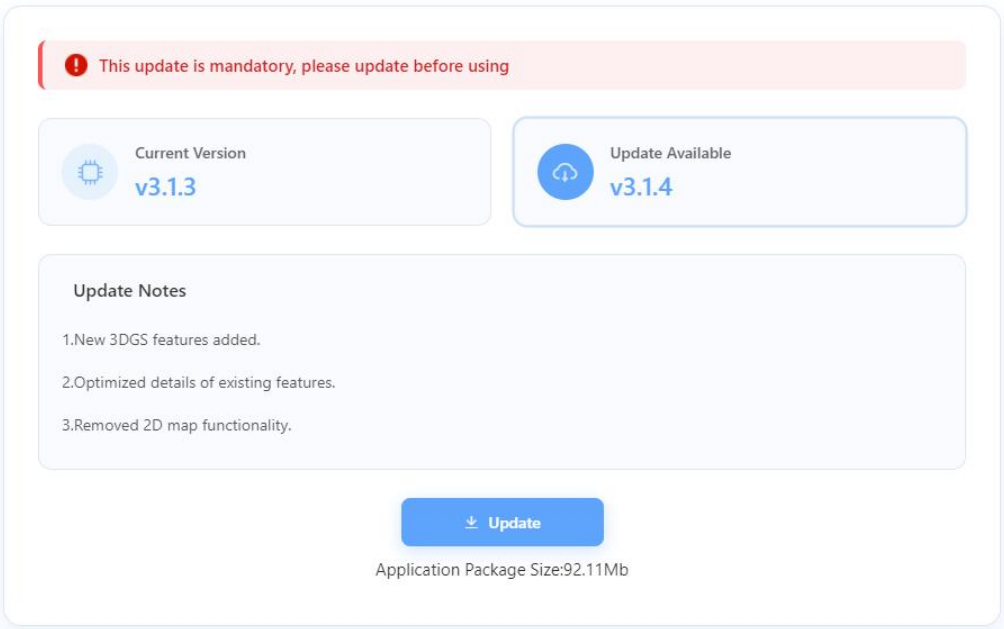
1) **Regular Update**

You may choose not to update and continue using the current version. This type of update is often used for routine iterations, adding non-core features, and experience optimizations.

2)Mandatory Update

You must update; otherwise, you will be unable to continue using the application or its key features. This type of update is commonly used to fix major security vulnerabilities, critical bugs, underlying architectural adjustments, and significant changes incompatible with older versions.

After clicking "Update," the software installation package will automatically download and install. Once completed, you will be prompted to restart the software. Clicking the prompt will launch the latest version of the software.



2. Maintenance

To ensure system stability, security, and efficient operation, we may perform regular or unscheduled maintenance. Below are the types of maintenance you might encounter:

1)Scheduled Maintenance

Purpose: To prevent potential issues and enhance system performance and service quality.

Issues Addressed: Routine inspections, service updates, feature releases, data backups, performance optimizations, etc.

Duration: Typically conducted during off-peak hours [e.g., Weekdays 10:00 PM - 12:00 AM] or [e.g., early weekend mornings], usually lasting 30 minutes to 2 hours. Advance notice will be provided.

2)Emergency Maintenance

Purpose: To resolve sudden system failures or critical security vulnerabilities.

Issues Addressed: Fixing failures that cause system inaccessibility or core functionality issues, urgently patching security vulnerabilities, etc.

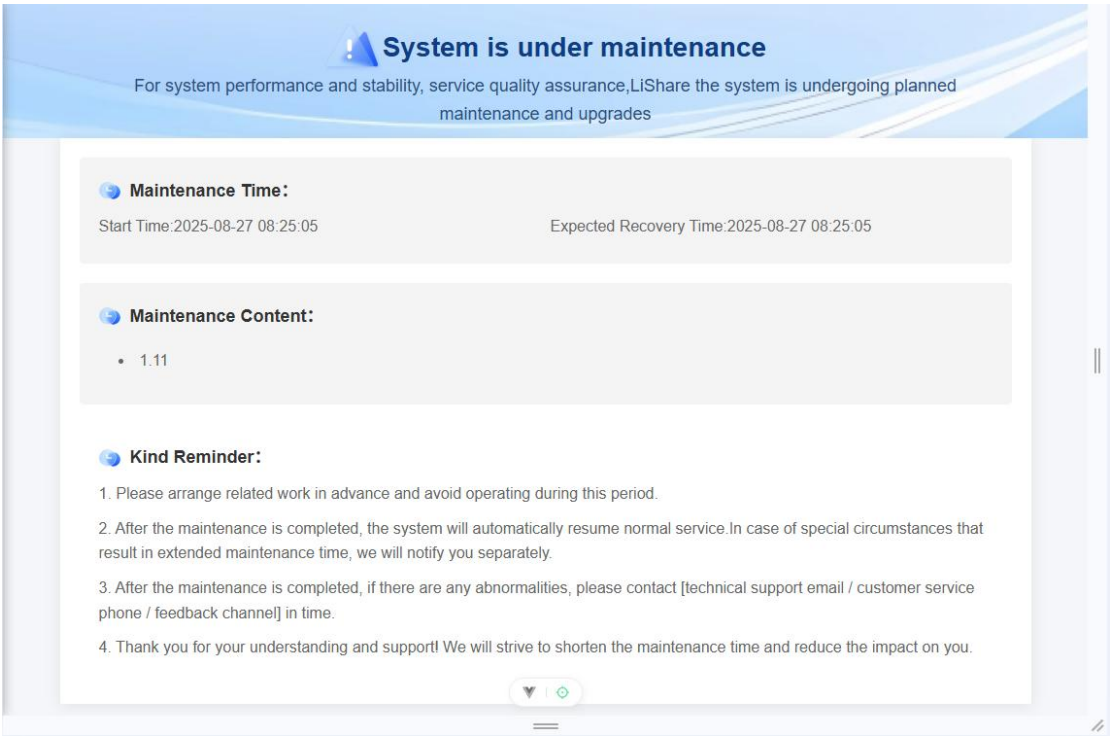
Duration: We will respond and address the issue immediately, striving to restore service within 30 minutes to 4 hours. Due to the urgency, advance notice may not always be possible. We appreciate your understanding.

Friendly Reminder:

All maintenance operations are aimed at providing you with better service.

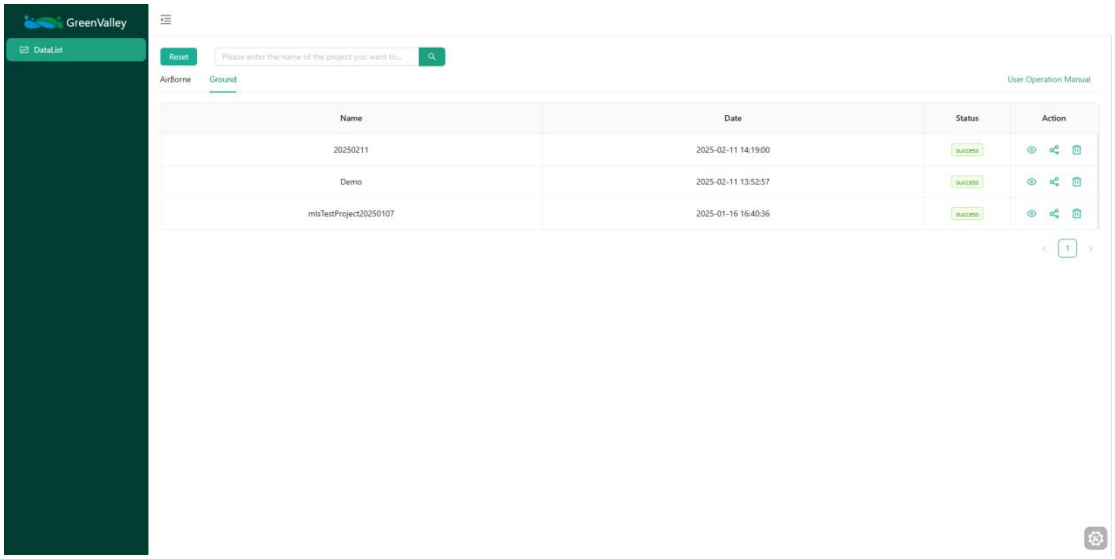
Please plan your work accordingly based on the announcements, as service access may be briefly affected during maintenance.

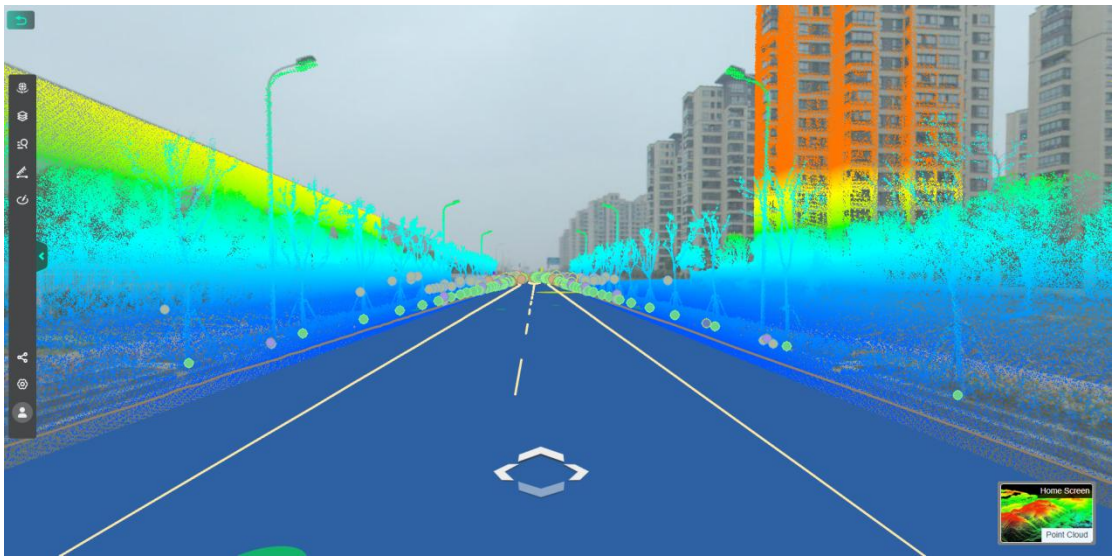
Thank you for your understanding and cooperation!



Chapter IV LiShare

LiShare platform is a cloud-based point cloud data management, analysis and visualization platform, designed for architecture, engineering, mapping, cultural heritage protection and other fields. Through this platform, users can easily upload, manage, analyze and share point clouds, models, panoramas and other data to achieve efficient 3D scene display and collaboration.





1. Three-dimensional results show

1. Operational Compatibility

Maintain the same shortcut settings and view operation logic as the desktop.

- Support panoramic fusion point cloud roaming function

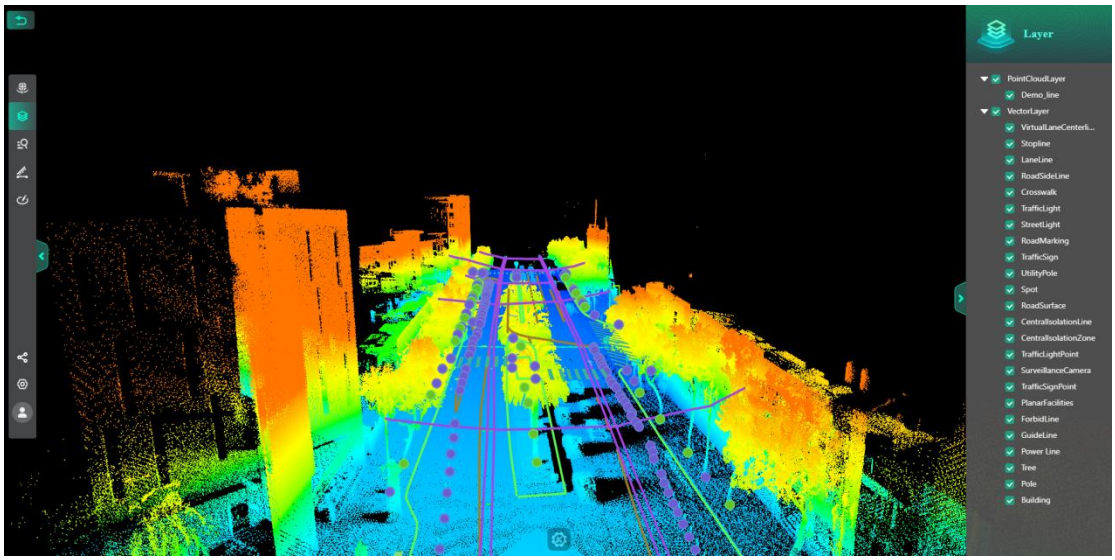
2. Visualization switch → Set the "Point Cloud-Panorama" switch button in the lower right corner → Automatically trigger the fusion rendering mode when the point cloud/vector layer is activated.

2. Smart Layer Management

• Hierarchical Display:

- Automatic generation of hierarchical trees by engineering data type
- Toggle switch support 500 + layer instant response
- Fast positioning:
- Double-click the layer name to automatically focus the corresponding model area

Support box selection multi-layer batch operation



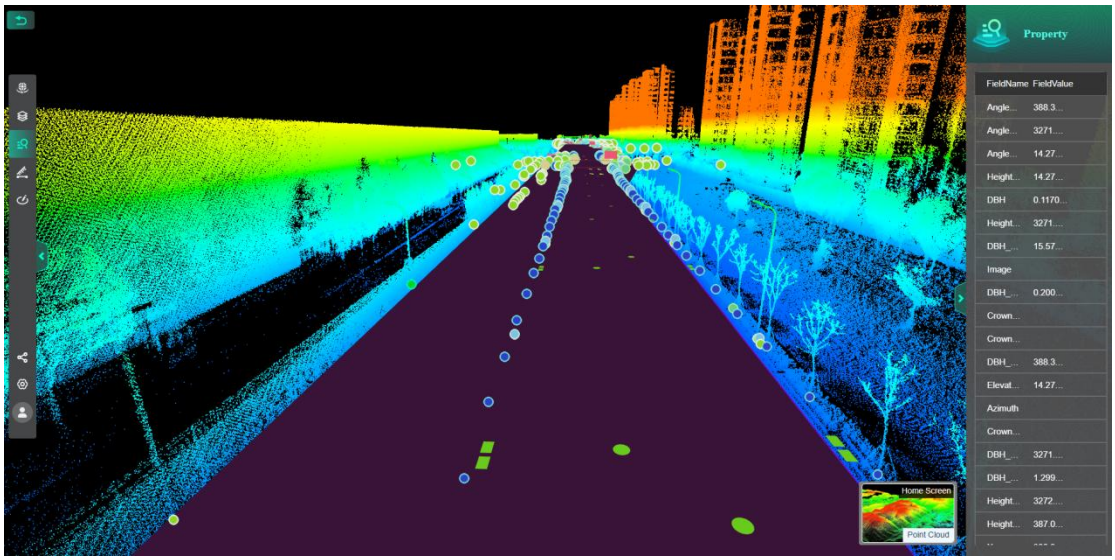
3. Spatial attribute query

Interaction Mode

- Left click on point cloud/vector data to trigger query

Information Panel

- Right Hover Panel Shows Full Property Set



4. Measurement Toolbox

Functional Architecture

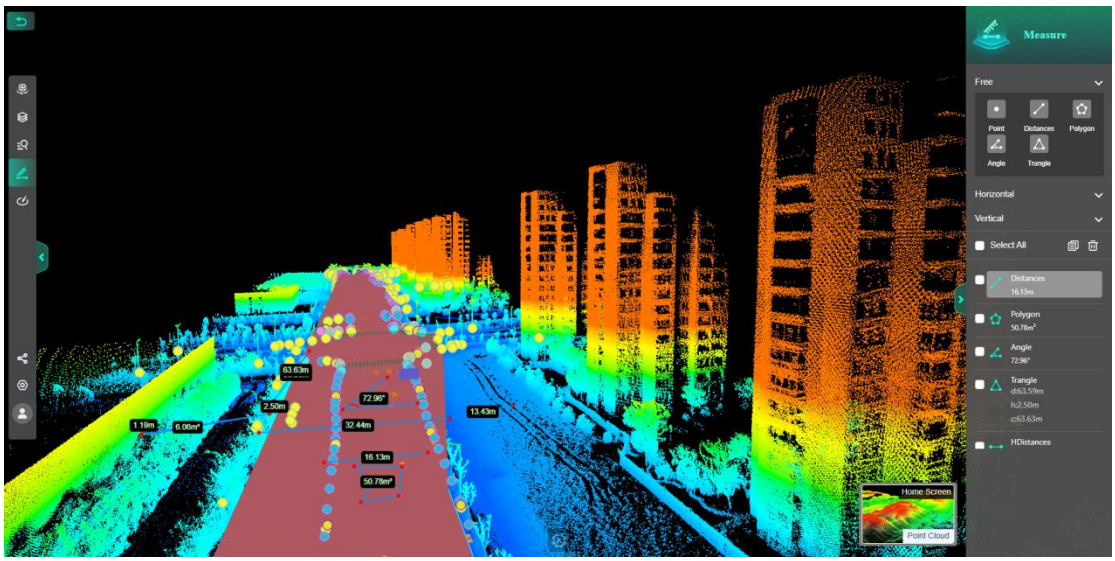
1. Measurement toolset

- Free measurement: Point/Line/Surface/Angle/Triangulation
- Directional measurement: Horizontal/longitudinal line surface measurement tool

1. Results management

- Real-time display of coordinates, length, area, angle values

Support measurement results: → information copy (coordinates, length, area, angle and other information) → data deletion (support batch operation) → 3D viewpoint positioning



4. Callout Annotation System

1. Marking tools

- Support for free angle dimension points/lines/Faces

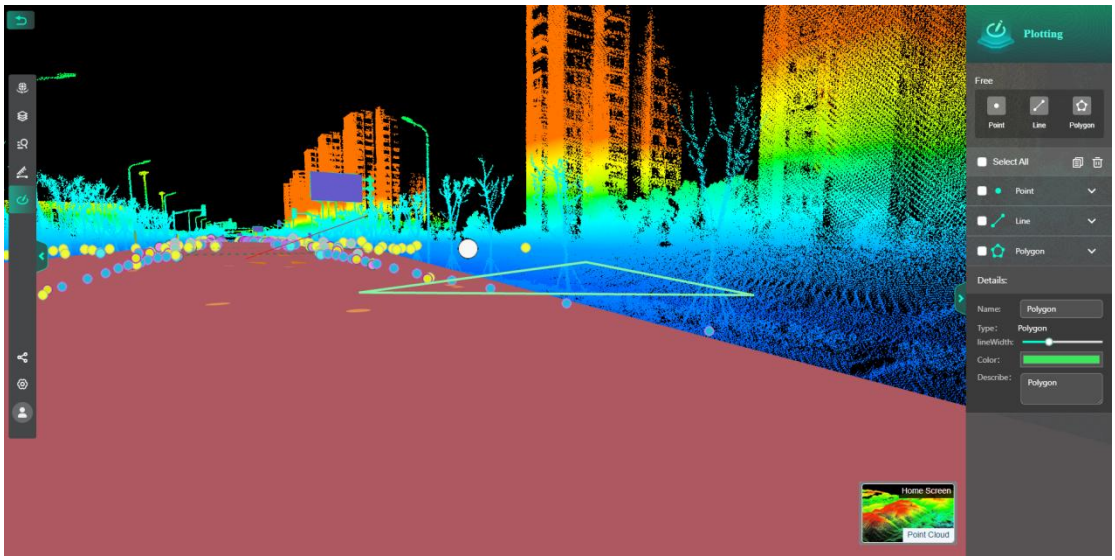
- RGB labeling color plate with 50-level thickness adjustment

1. Callout Management

- Editable Properties: Name/Size/Color/Description

Marking Association Positioning: Click to jump to the corresponding viewing angle

2. - Support for batch export of annotation sets



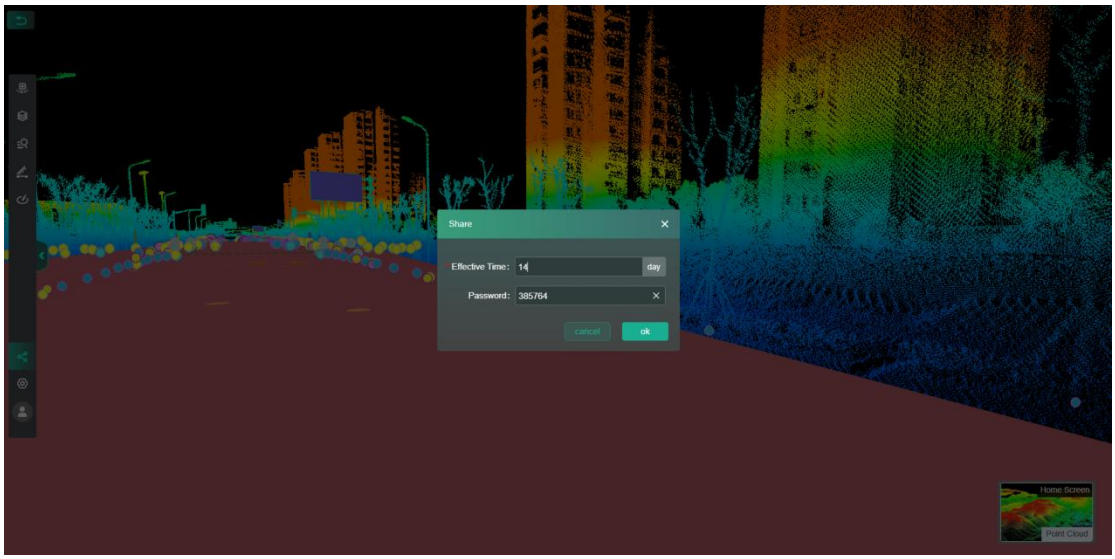
5. Collaborative sharing channel

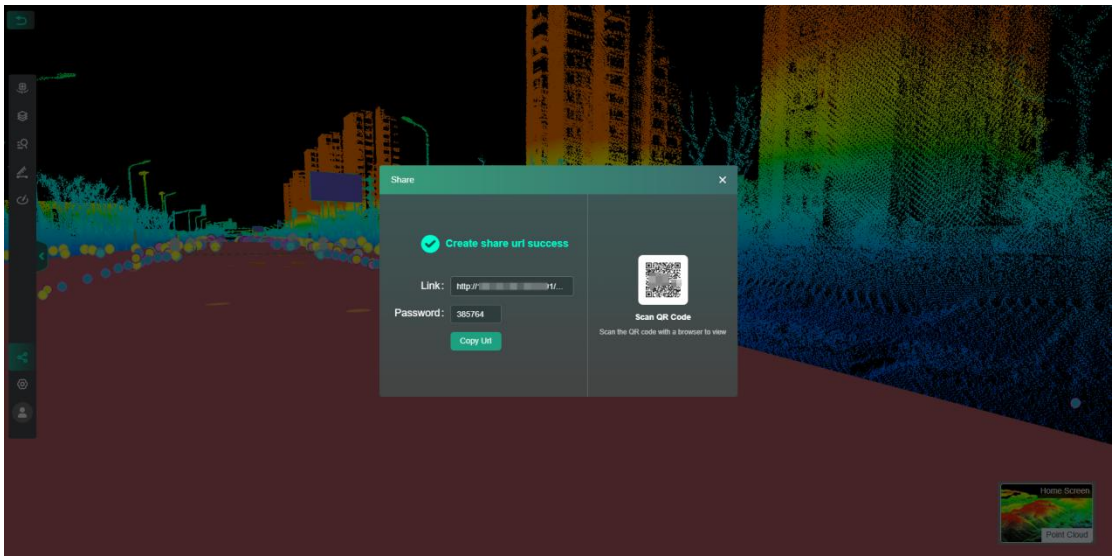
Smart Sharing

Time limit setting: minimum 1 day maximum 14 days custom time setting

Security configuration: password protection

▶ *Permission mode: Read-only lock*

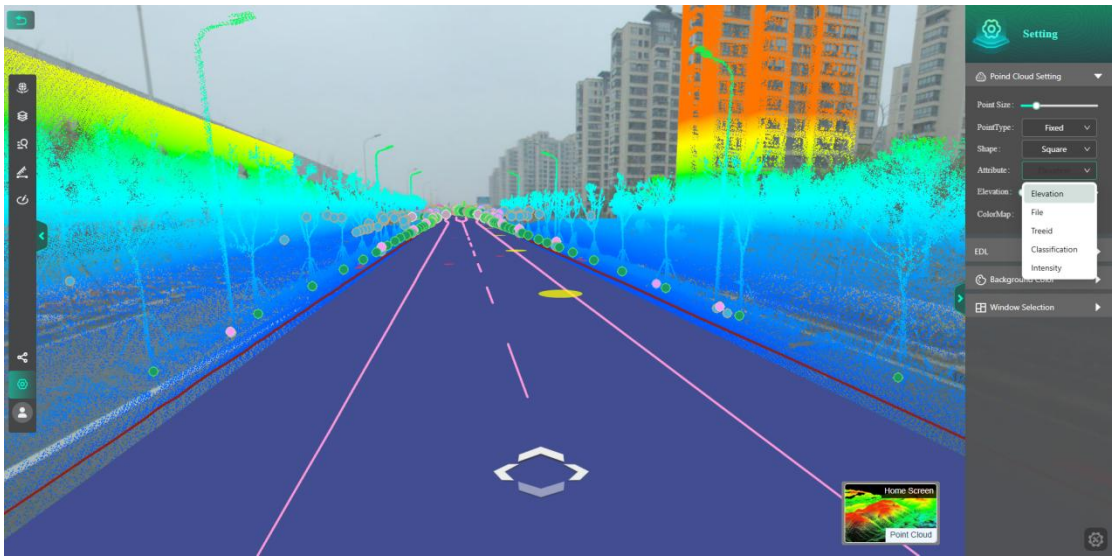


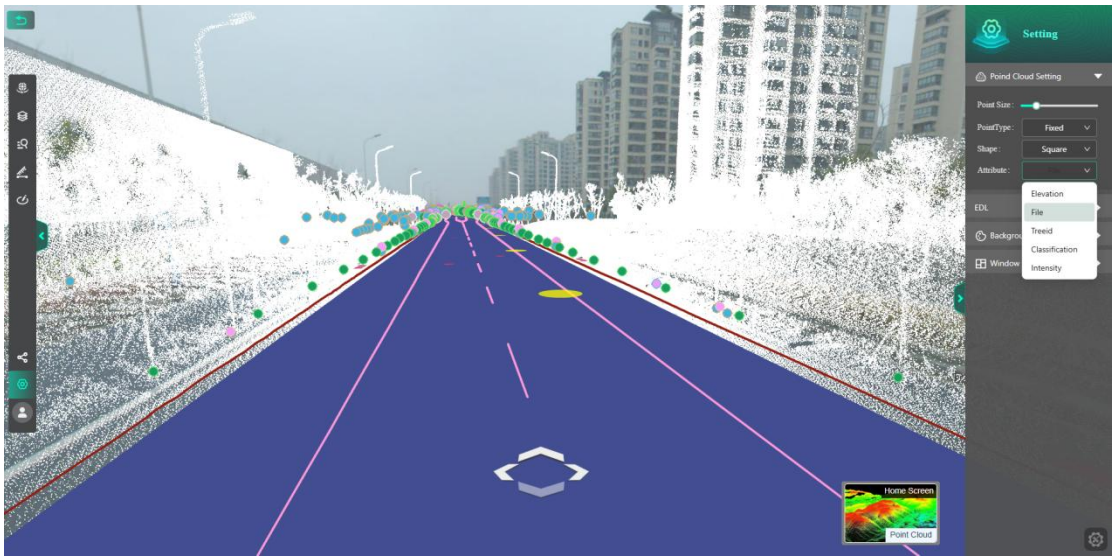


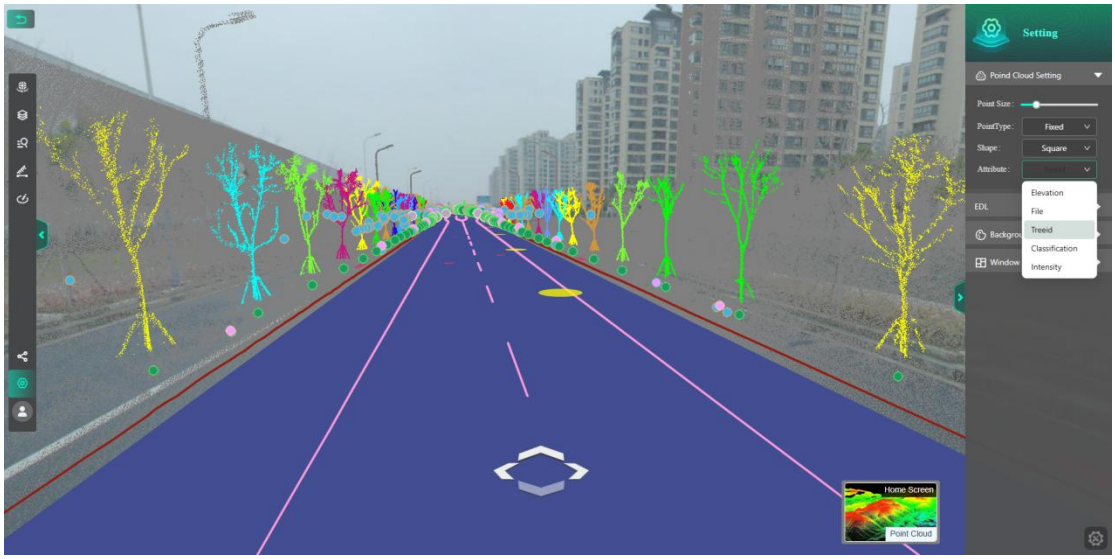
6. Set Center

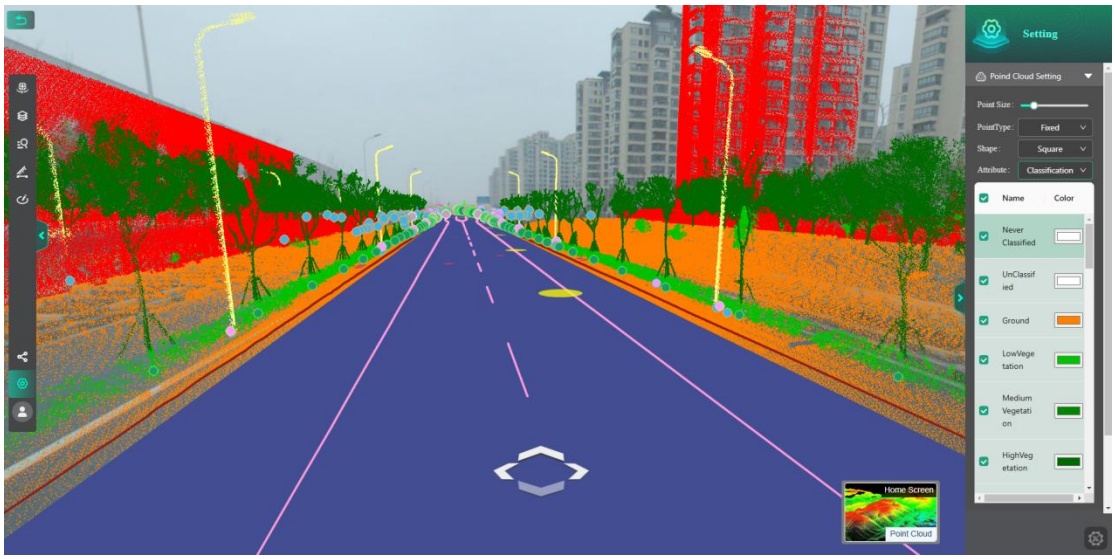
1. Point Cloud Rendering Settings

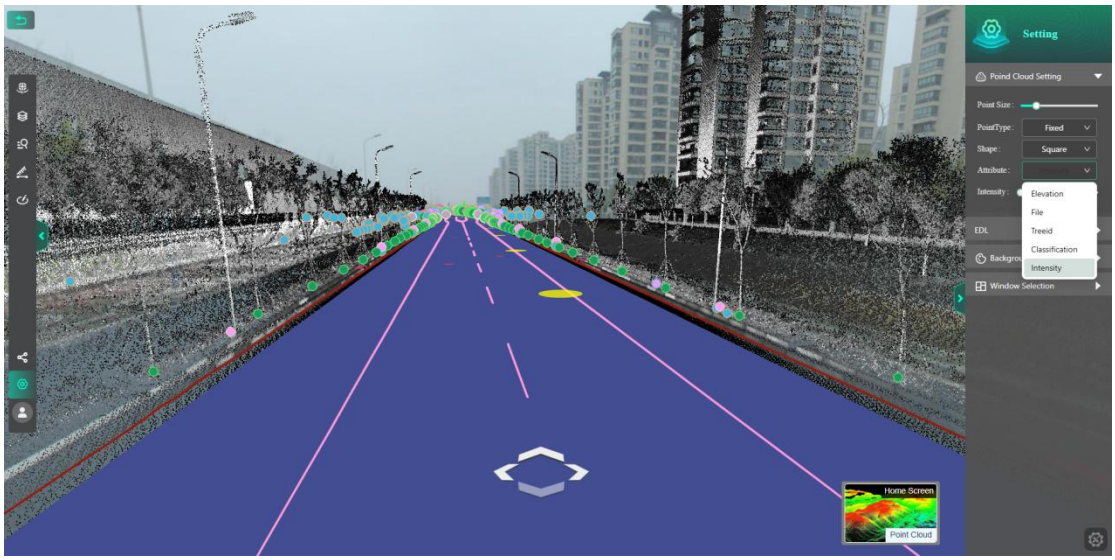
- Display parameters: point size (1-5px)/shape (round/Square/parabolic)
- Shading mode: height/type/intensity/RGB/Tree ID/Echo
- Custom color palette: support type color mapping modification

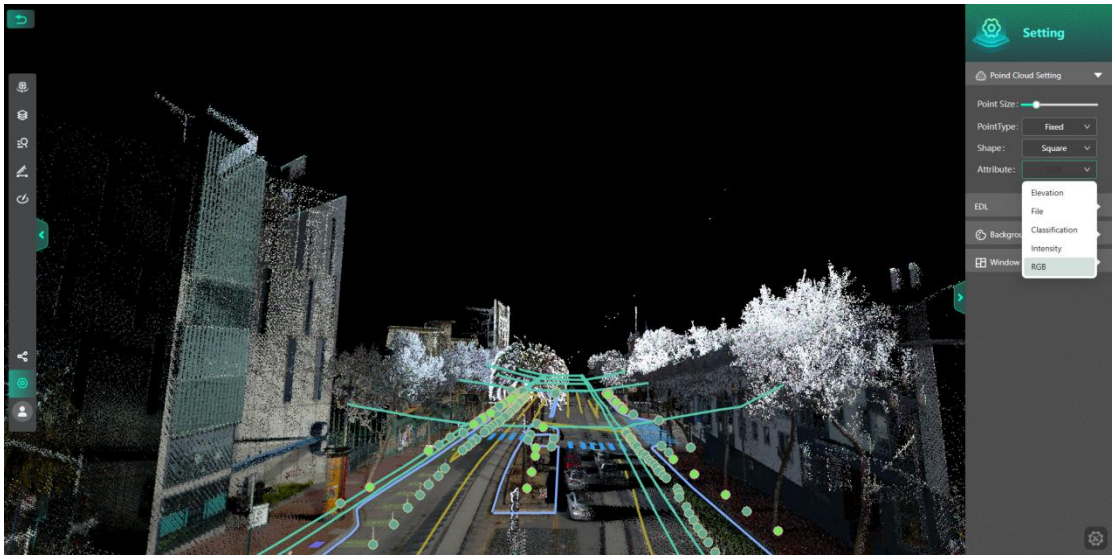



Setting
Poind Cloud Setting
Point Size:
PointType:
Fixed
Shape:
Square
Attribute:
Elevation
File
Treeid
Classification
Intensity
EDL
Window
Home Screen
Point Cloud


Setting
Poind Cloud Setting
Point Size:
PointType:
Fixed
Shape:
Square
Attribute:
Elevation
File
Treeid
Classification
Intensity
EDL
Window
Home Screen
Point Cloud

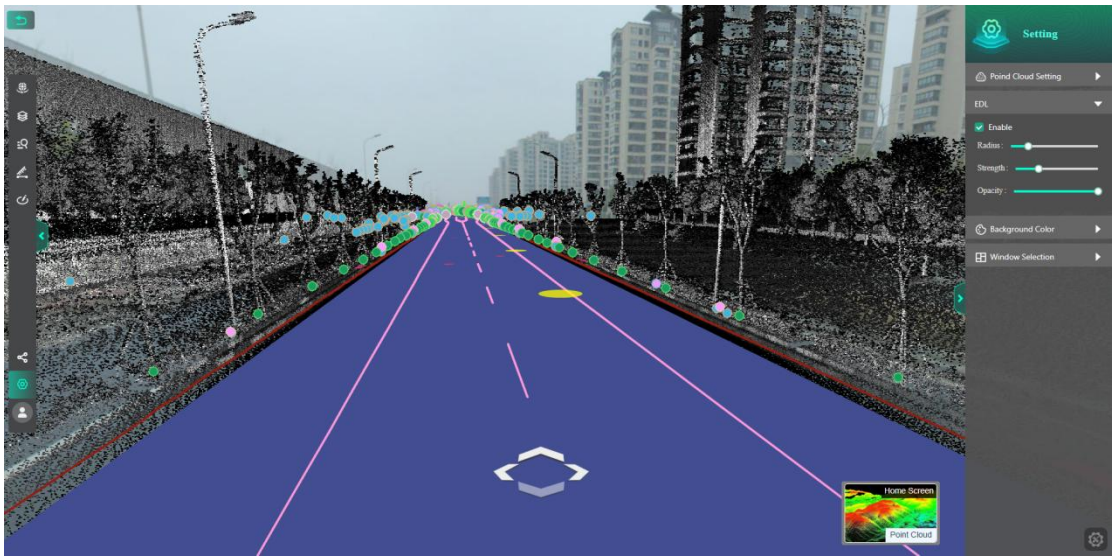

Setting
Poind Cloud Setting
Point Size:
PointType:
Fixed
Shape:
Square
Attribute:
Classification
Name
Color
Never Classified
UnClassified
Ground
LowVegetation
Medium Vegetation
HighVegetation
Home Screen
Point Cloud





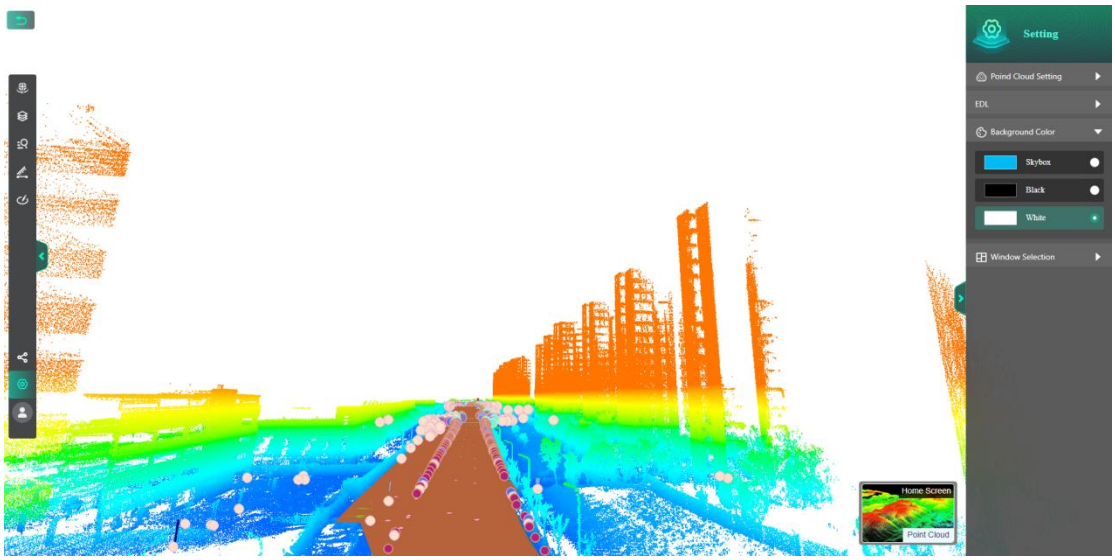
2. EDL settings

EDL mainly uses the shadow effect to highlight the depth of information in the point cloud. After EDL is turned on, each point in the point cloud will be given a different shadow effect according to its depth value, so that the difference in depth of the point cloud is more obvious. This effect is similar to "bulging" or "extruding" the point cloud, making the depth level of the point cloud more prominent. Adjust the effect of EDL by setting relevant parameters. These parameters include shadow Radius, shadow Strength, and overall Opacity.



3. Background Color Settings

Background color: white/black/engineering Blue three choice



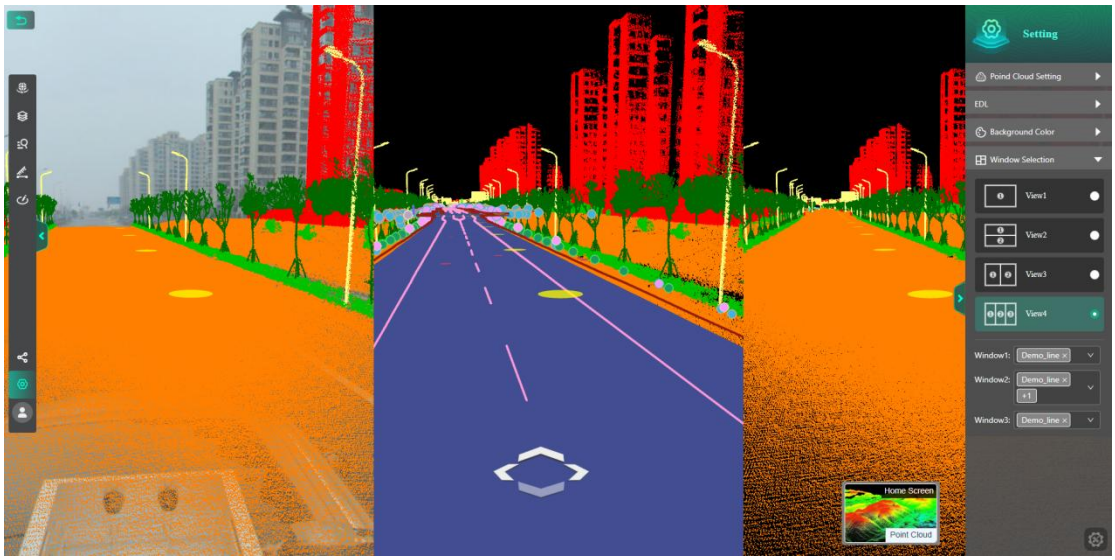
4. Window Settings

Multi-screen mode:

▪Single screen/horizontal double screen/vertical double screen/vertical three screen

▪Panoramic data limit main screen display

▪Window data optional



7. User Center

Same as user module 1. User Center