

Post Processing Software

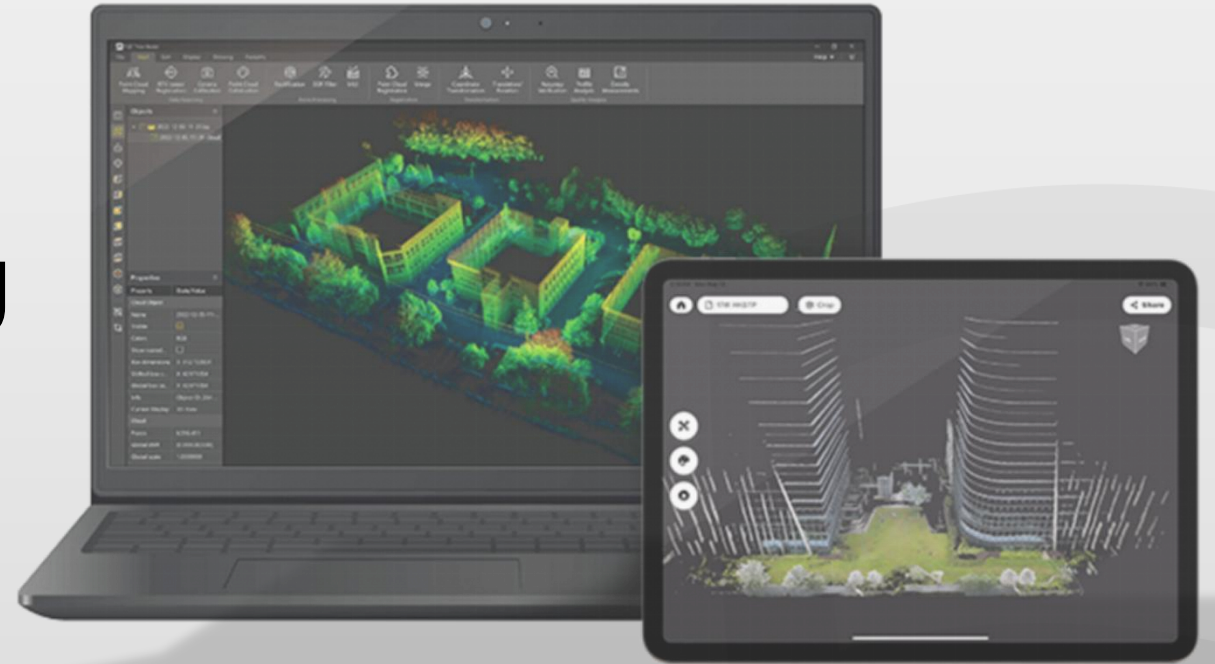
FJD Trion Model on PC
Quick Start Guide

2025.10

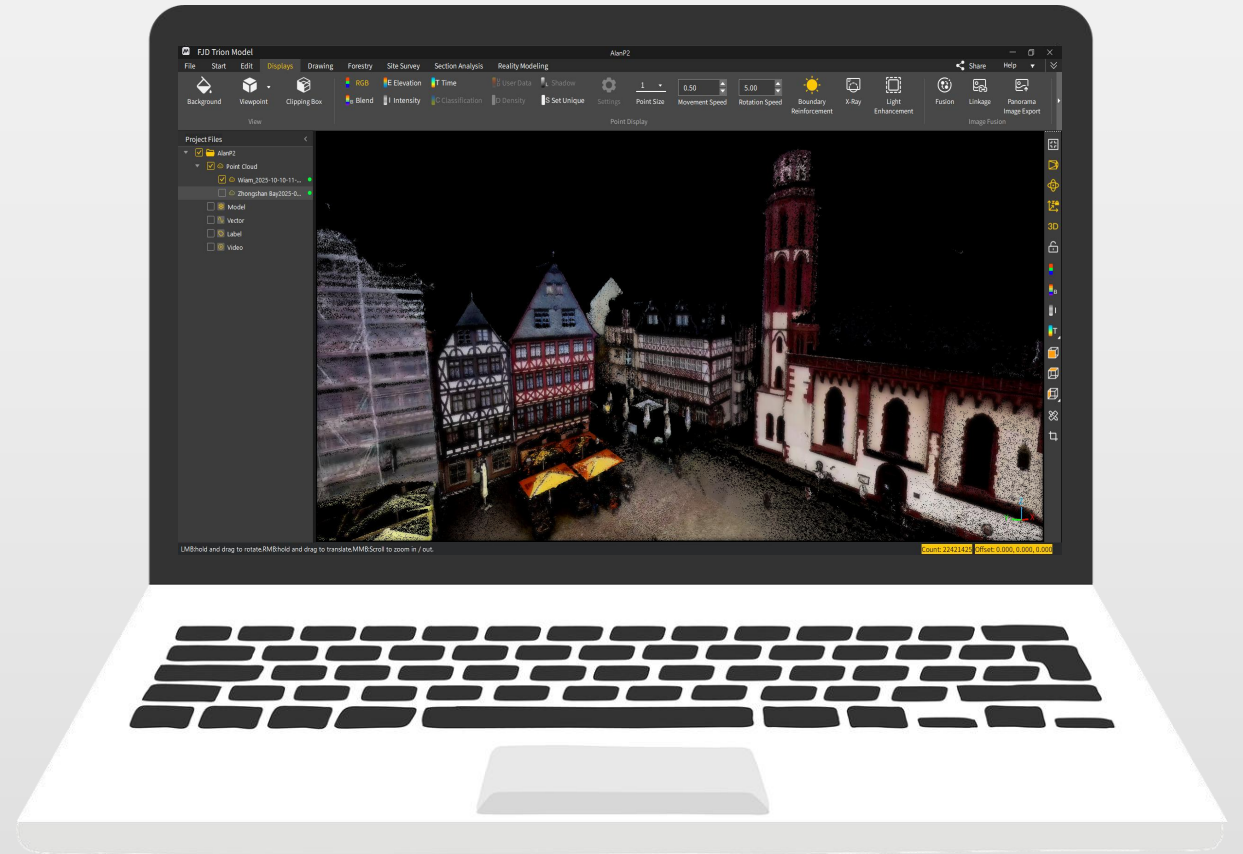


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PC



Preparation

Hardware Configuration



Recommended PC Configuration:

CPU: Intel i7-12700 or AMD 7500 or above

Memory: 32GB DDR5

GPU: NVIDIA RTX 3060 or above

Disk: SSD 1TB

OS: Windows 10 or 11



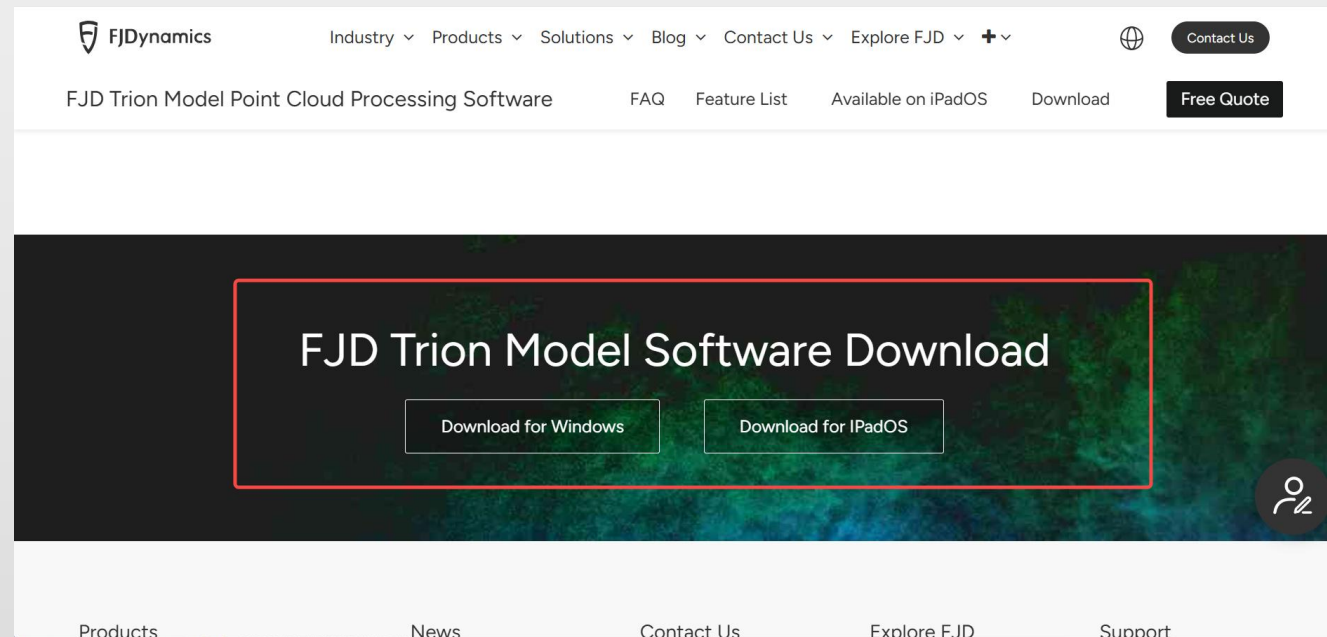
Software Installation



Enter the FJDynamics official website to download the latest installation package.

<https://www.fjdynamics.com/product/fjd-trion-model>

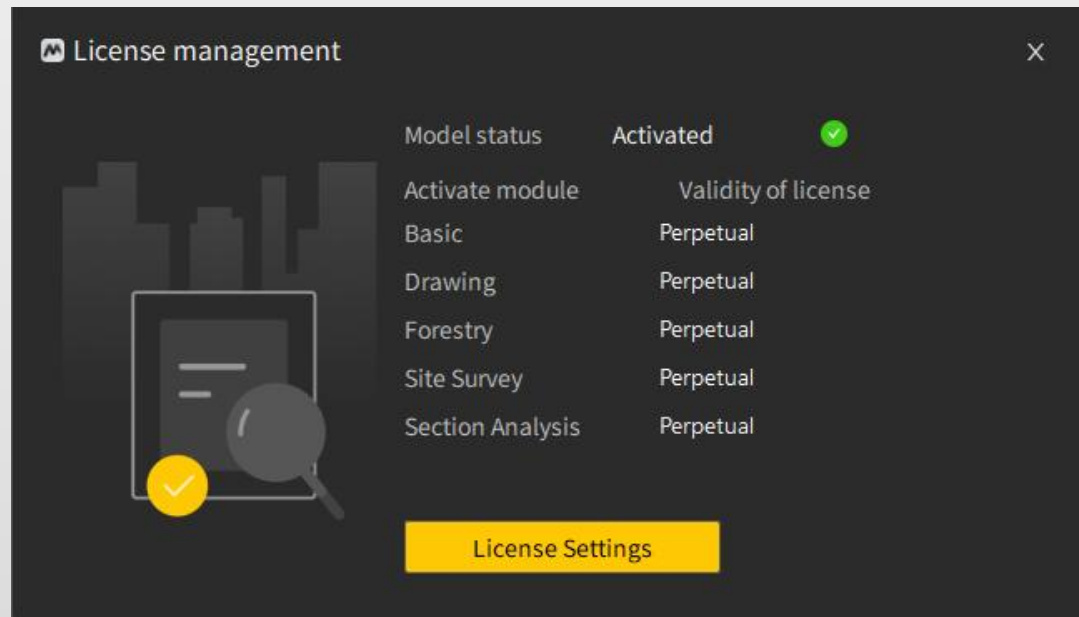
Click the setup to start installing.



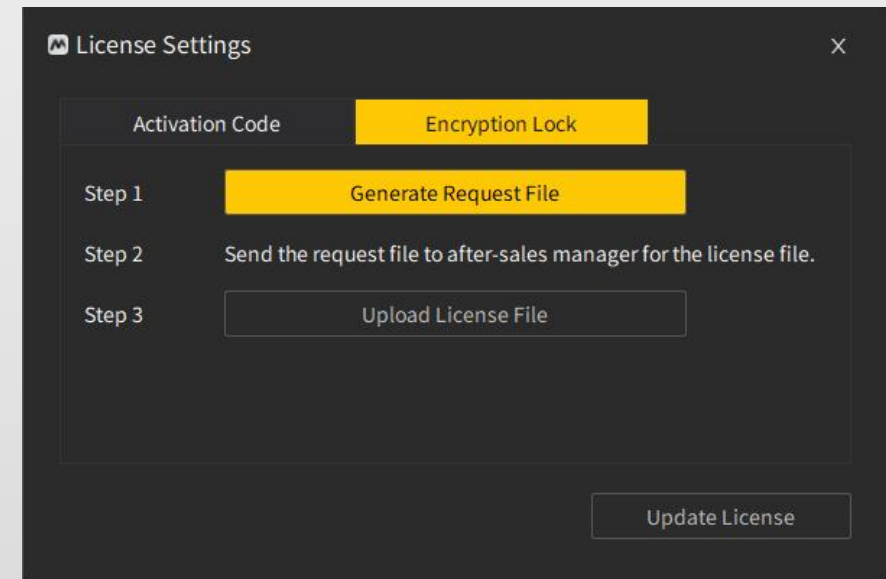
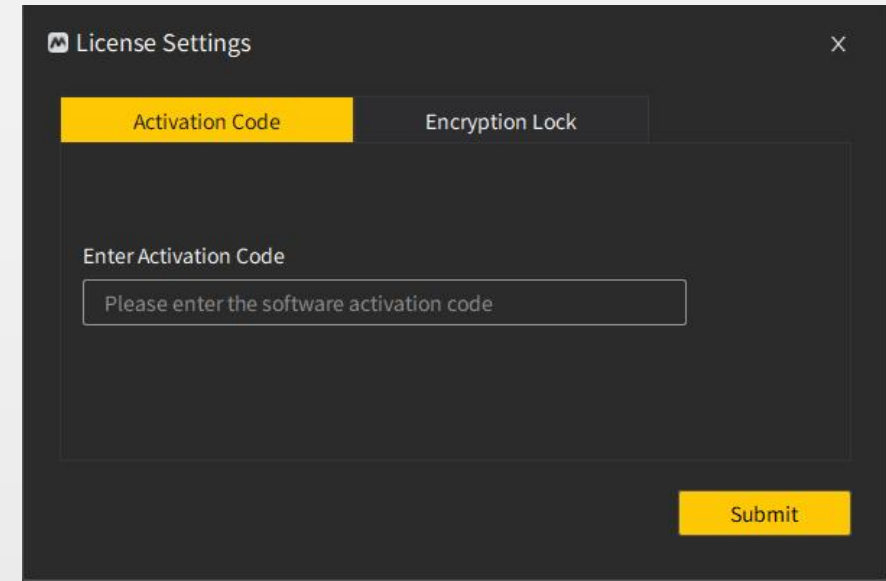
Software License

FJD Trion Model is a point cloud data processing software, a license is required to use it.

It supports two activation methods: **Activation Code** and **Encryption Lock** (please contact FJD sales).



License management



License settings

Create a Project

Create a Project

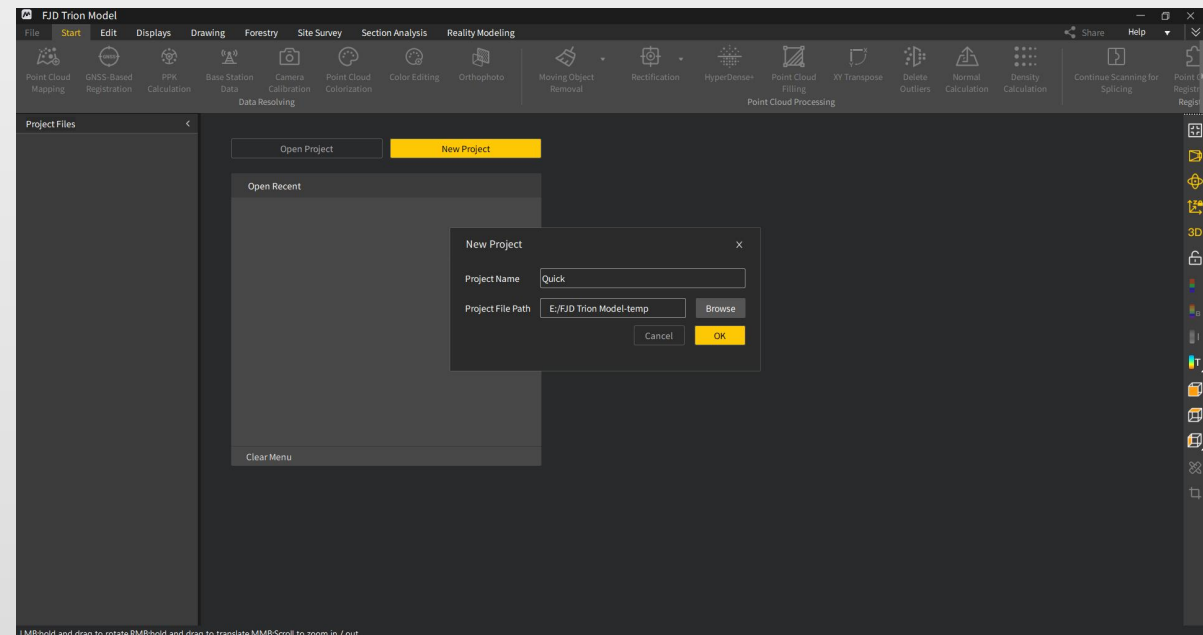
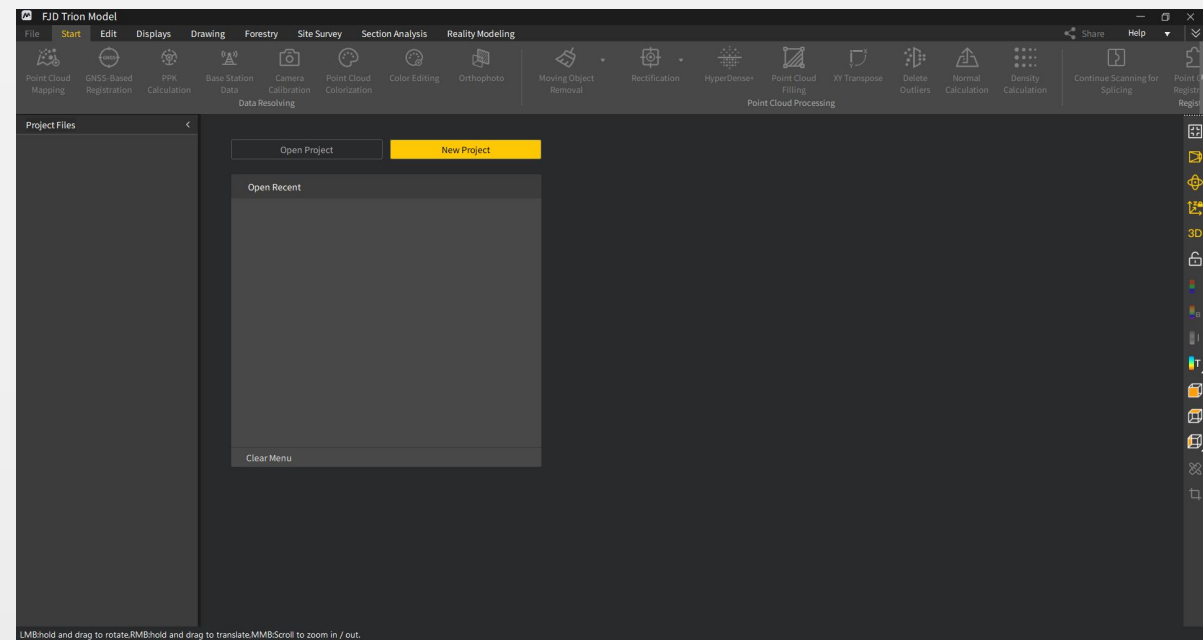
It must have a project file (.Fjdm) first to do data processing and other functions.

1. Click “New Project”

2. Enter its name

3. Set the project file path

- ❖ If you have already created a project file (.Fjdm), you can open it directly by double-clicking the project file in the "Recently Opened" section.
- ❖ You can also open the .Fjdm file by double-clicking it in your local folder.
- ❖ You can put many point cloud data in one single .Fjdm.



New Project



Point Cloud Mapping/Colorization

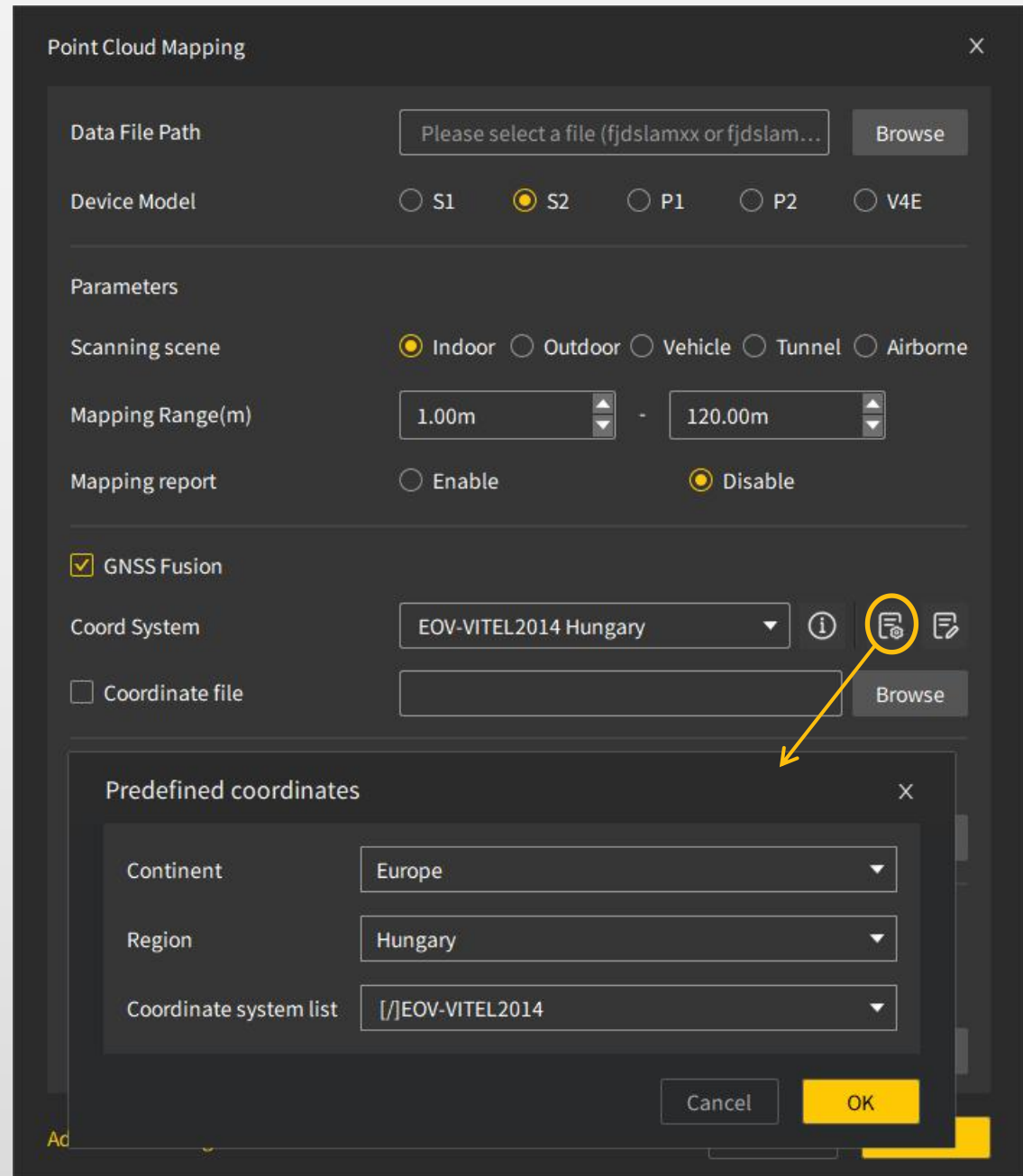
The process of using the original data acquired by the scanner (such as fjdslam, insv and etc.) to obtain point cloud.

1. Click "Start - Point Cloud Mapping" at the top-left corner of the software.

2. Import the .fjdslam (.tgz) file, and choose the device model used during scanning.

3. Select the scenario type (indoor/outdoor). The mapping range is generally set to default, and the mapping report is selected for record.

4. GNSS fusion and coordinate system selection: If RTK was used in the scanning, check the GNSS fusion switch, click the button on the right, and select a coordinate system according to the project requirements. It should be noted that the longitude corresponding to the operation location must be correct.



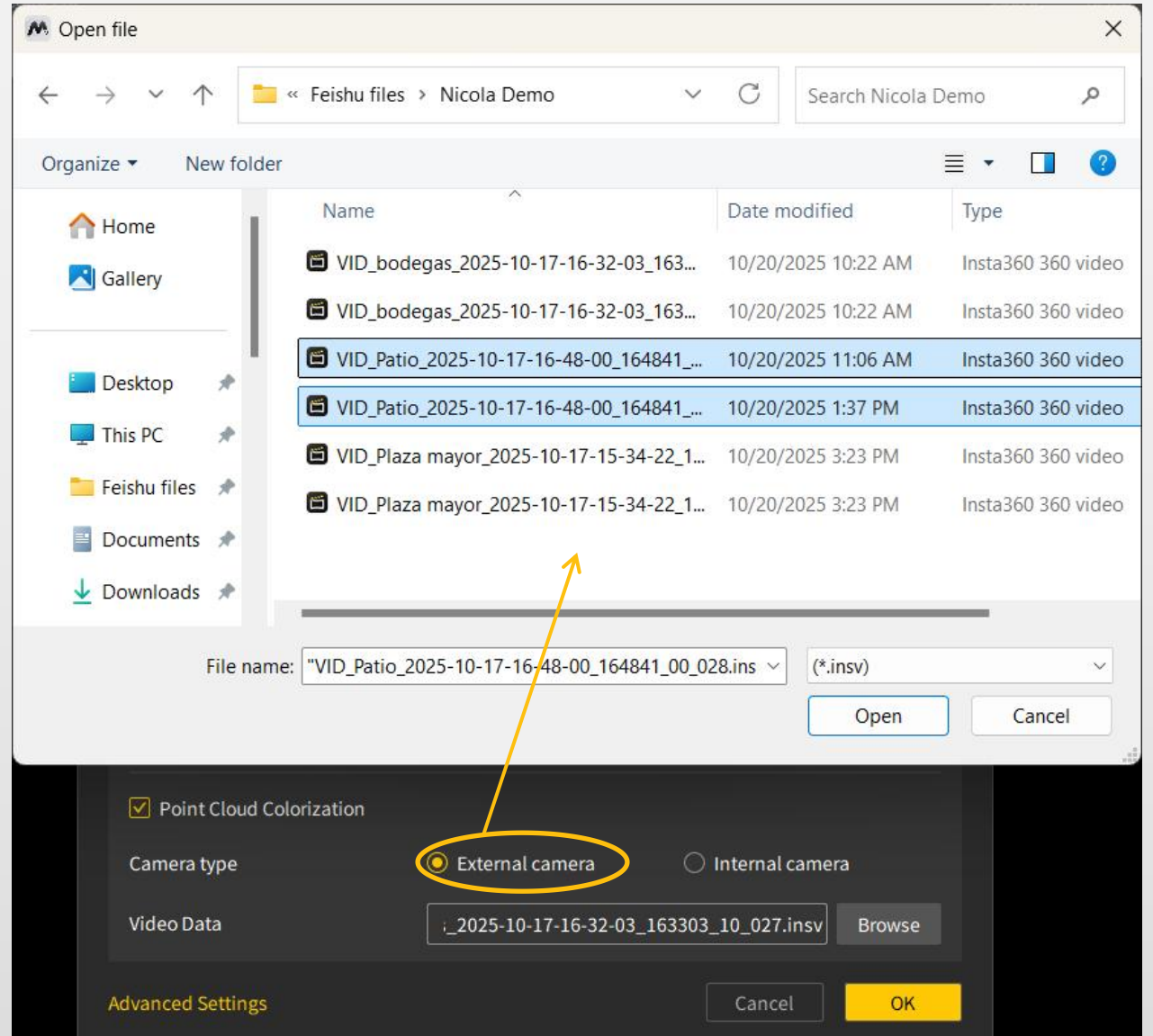
Point Cloud Mapping/Colorization

The process of using the original data acquired by the scanner (such as fjdslam, insv and etc.) to obtain point cloud.

5. If control points were used during the scanning process, check the "Optimize with Control Point" option and import the control point files (formats: *.txt, *.xlsx).

6. Select the external camera or internal camera for coloring. If the external camera is selected, import the INSV files (two INSVs for X3; one INSV for X5). No additional video files need to be imported if you select internal camera.

7. Click "OK", and the software will start automatic point cloud processing.



Point Cloud Mapping/Colorization

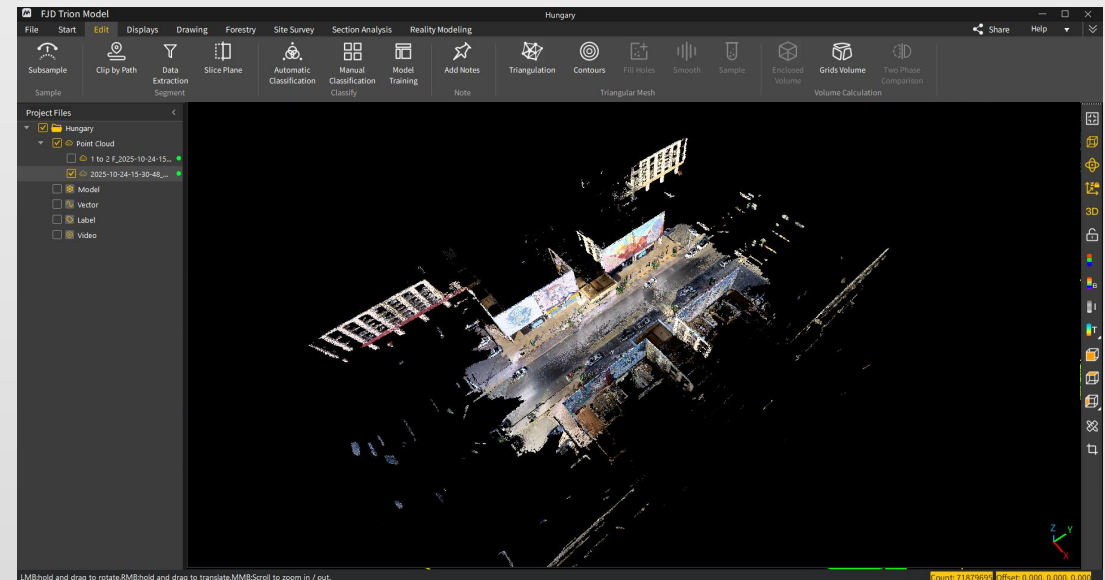
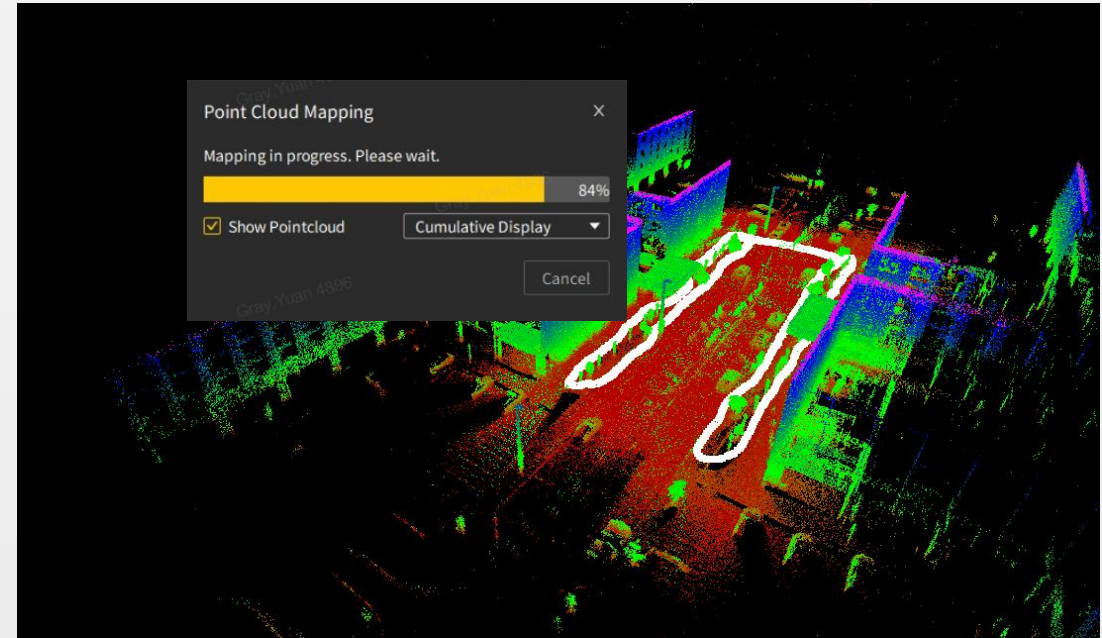


8. No manual intervention is required during the point cloud mapping process, and the mapping effect will be displayed in real time in the software view.

9. After the completion of mapping & coloring, the point cloud data will be displayed in the view, and you can rotate and pan the data with the mouse to view it.

10. Additionally, locate the scene data file under the point cloud file in the directory tree.

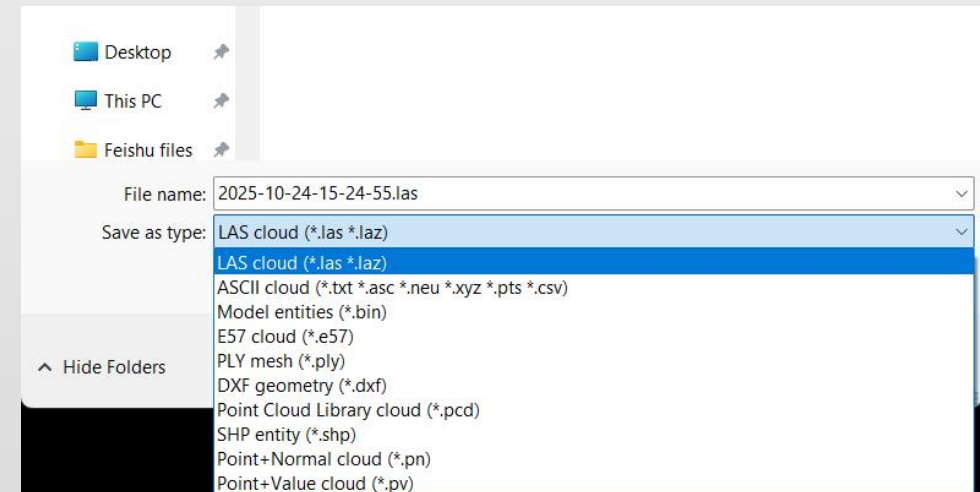
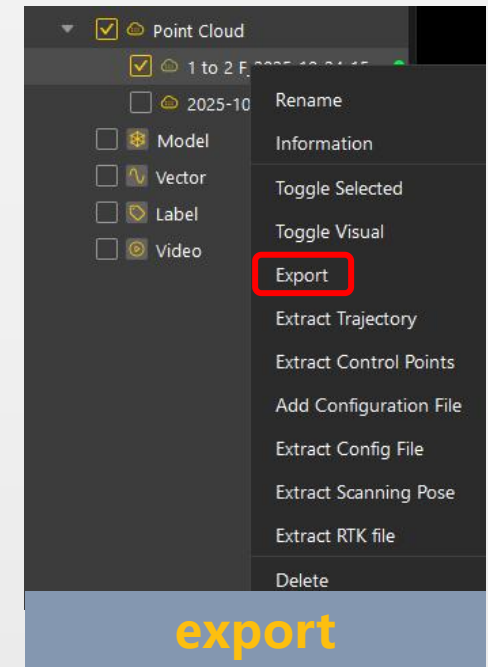
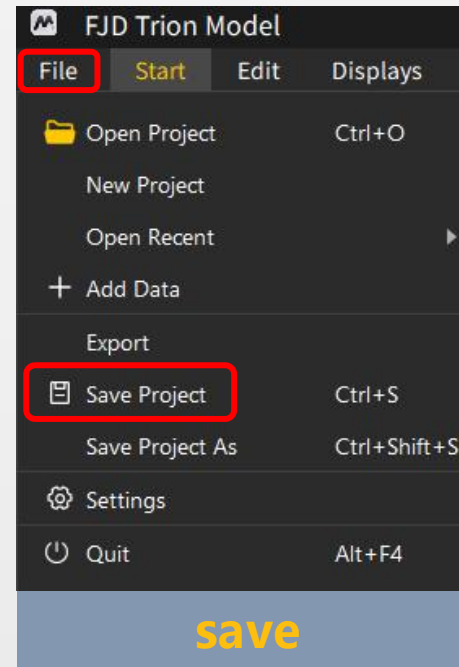
- ❖ If you already have existing point cloud data (in formats such as las, e57, ply, etc.) or model data (in formats such as obj, etc.), you can directly drag the data into the software to open and view it.



Save & Export

After completing the above operations, a preliminary point cloud data will be obtained, then you can save and export the point cloud.

1. Click "File - Save Project" at the top-left corner of the software to save the project.
2. Select the point cloud data in the directory tree, then right-click with the mouse to export the point cloud data.
3. Select the format for saving the point cloud (such as las, e57, pts, txt, etc.) and the save path.



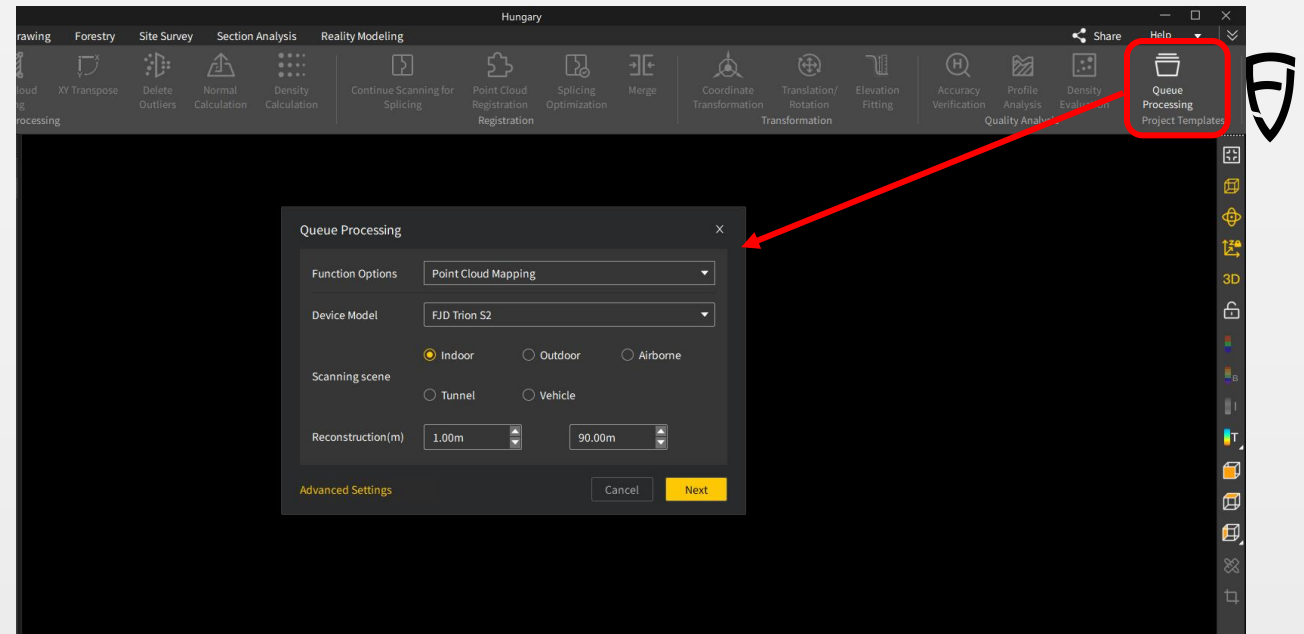
Queue Processing

When there are multiple datasets, Queue processing can be used to perform batch point cloud mapping to improve mapping efficiency. This function supports both point cloud mapping and point cloud colorization.

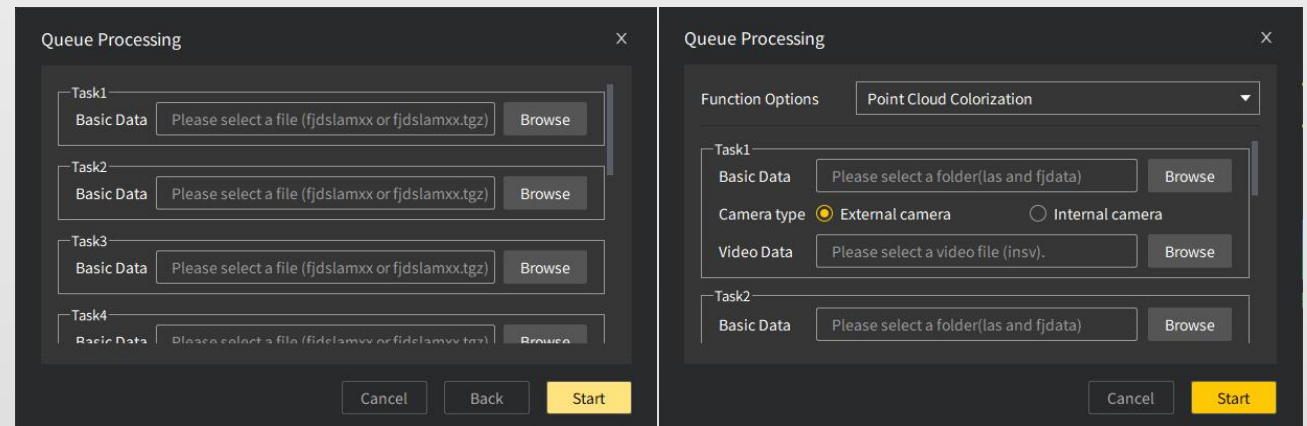
1. Click "Start - Queue Processing" at the top-right corner of the software to open the queue processing window; select the queue type (point cloud mapping or colorization), and set the device model, scene, etc.

2. Point cloud mapping: Select multiple .fjdsлам for mapping, and the software will perform mapping in sequence.

3. Point cloud coloring: Select multiple LAS point cloud data + .fjdata + INSV, and the software will perform colorization in sequence.



Queue Processing



Mapping

Colorization

Data Processing

Software Operation



Perspective/Orthographic
Projection Switching

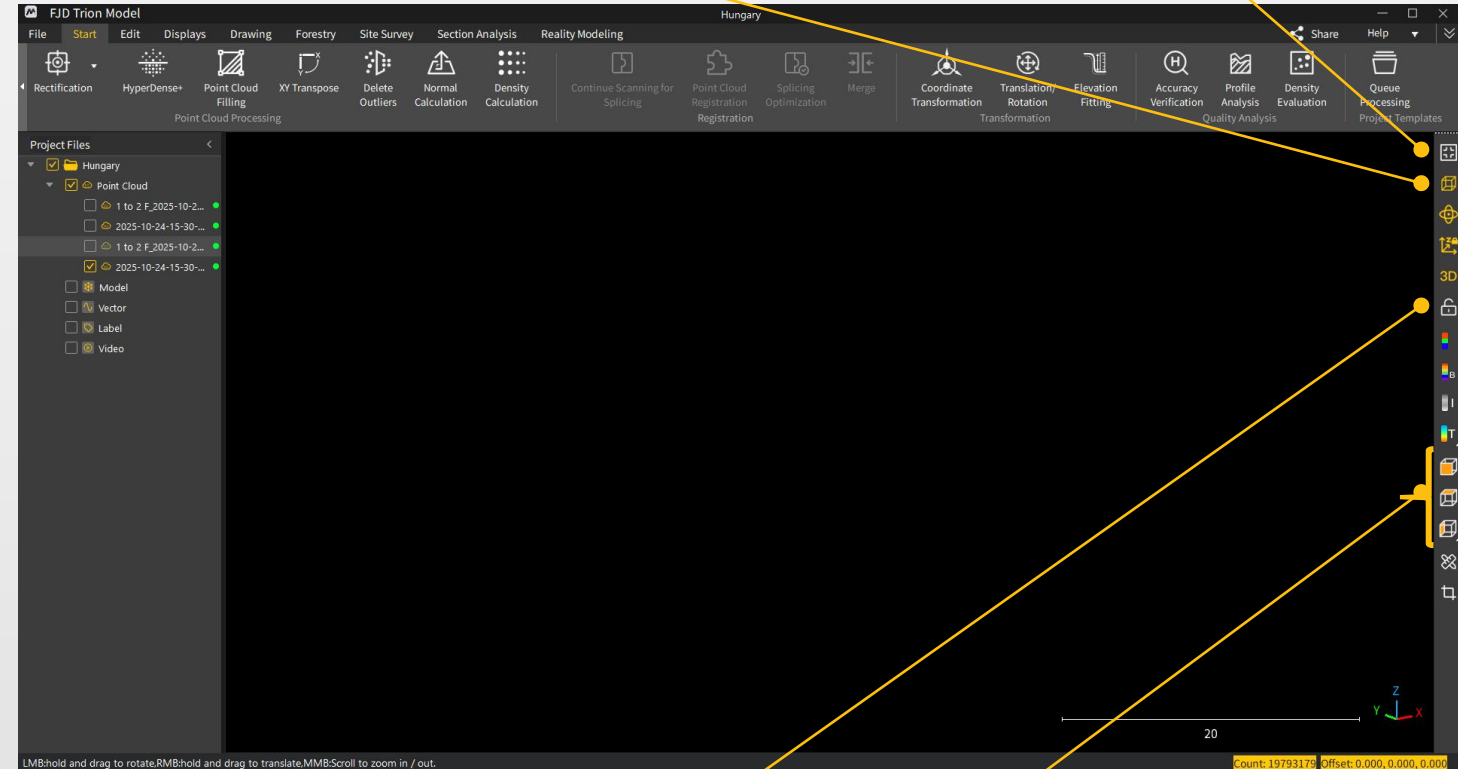
Center the model in the view

Zooming: Scroll
the mouse wheel



Rotating: Hold down the left mouse button

Panning: Hold down the right mouse button



Lock the current view to
prevent movement and
rotation

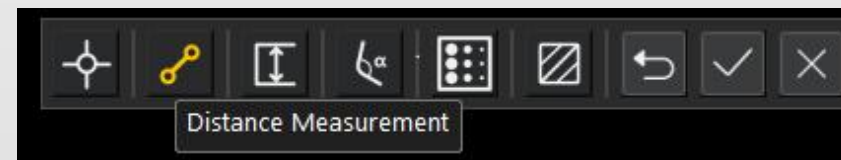
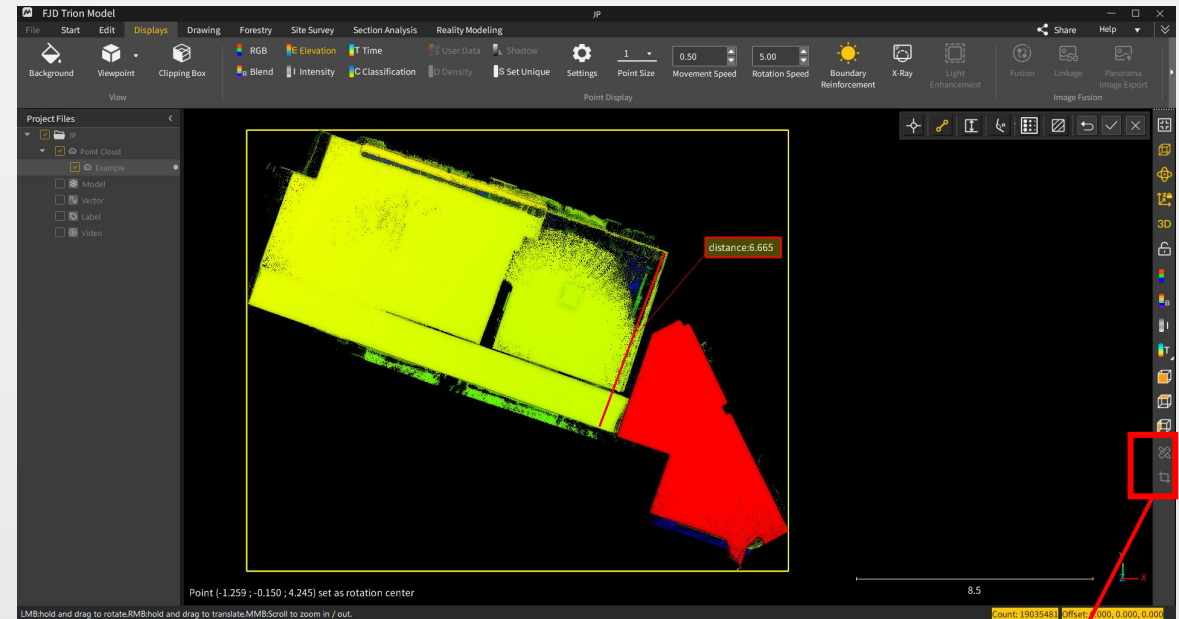
Switch between perspectives such
as top view, left view, and front
view for easy inspection

Measurement



Measure important things in the scene, such as measuring road distances, room areas, etc.

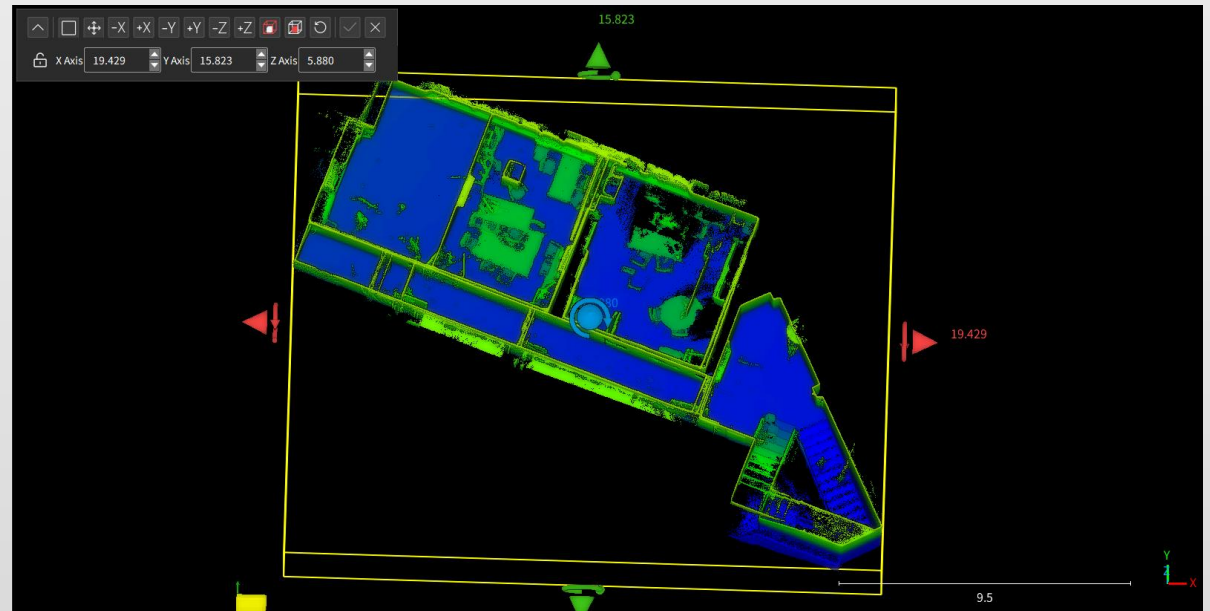
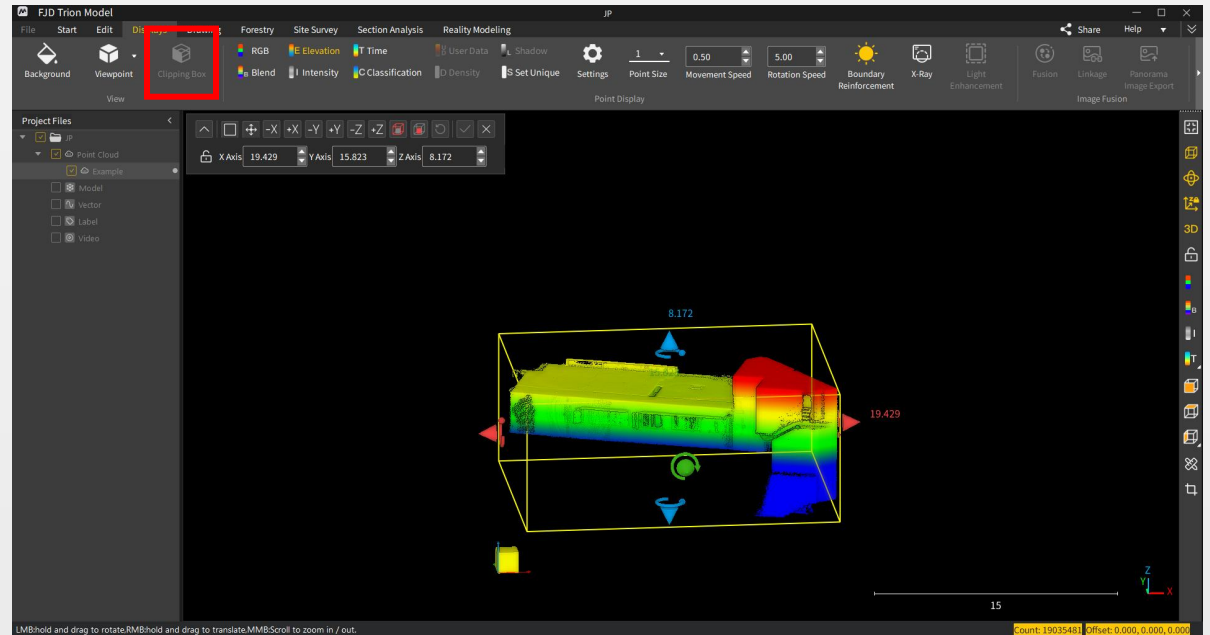
1. Single-click to select the point cloud data file that needs to be measured.
2. Click the measurement function icon in the toolbar. Select the type of measurement needed in the pop-up measurement tool (point position, distance, height, angle, density, area).
3. Click the left mouse button to confirm the first point, click again to confirm the second point, and after completing the area selection, click the right mouse button to finish the measurement and calculation.



Clipping Box

Quickly view/delete point cloud data in a specified area and retain the valid data.

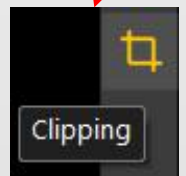
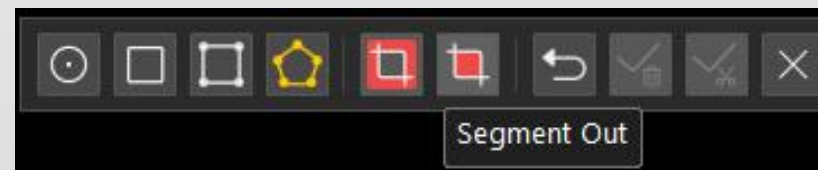
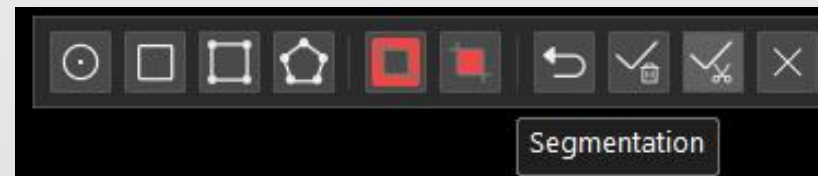
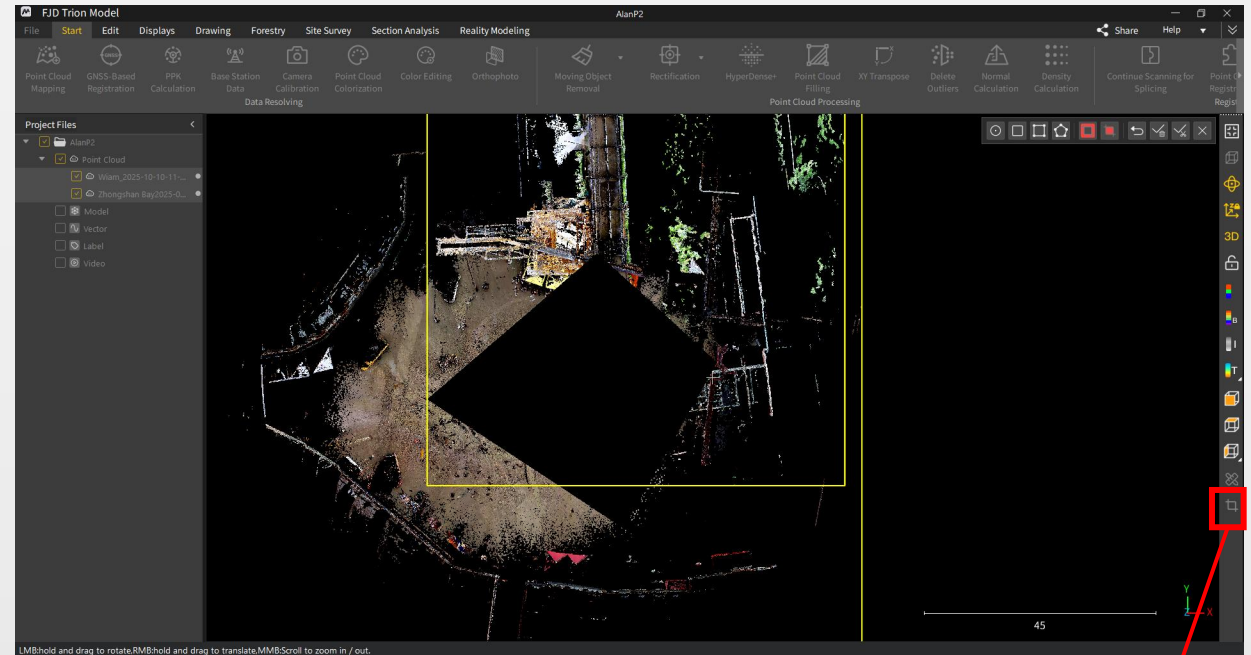
1. Single-click to select the point cloud data to be cropped (multiple selections are allowed).
2. Click "Display - Clipping Box" in the menu.
3. Drag the arrows in the corresponding directions in the view to adjust the range.
4. After completing the selection, you can choose to retain the internal or external area for saving.



Clipping

Quickly select invalid data for deletion/splitting, generally used to remove surrounding pedestrians or noises. can be used in combination with the Clipping Box.

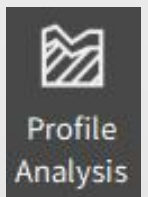
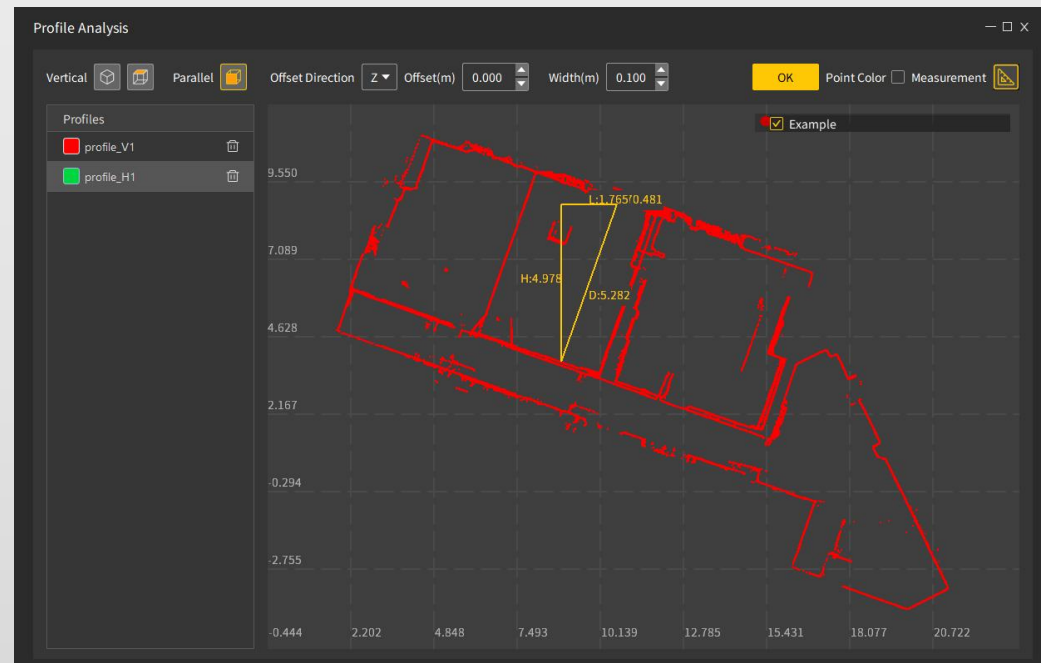
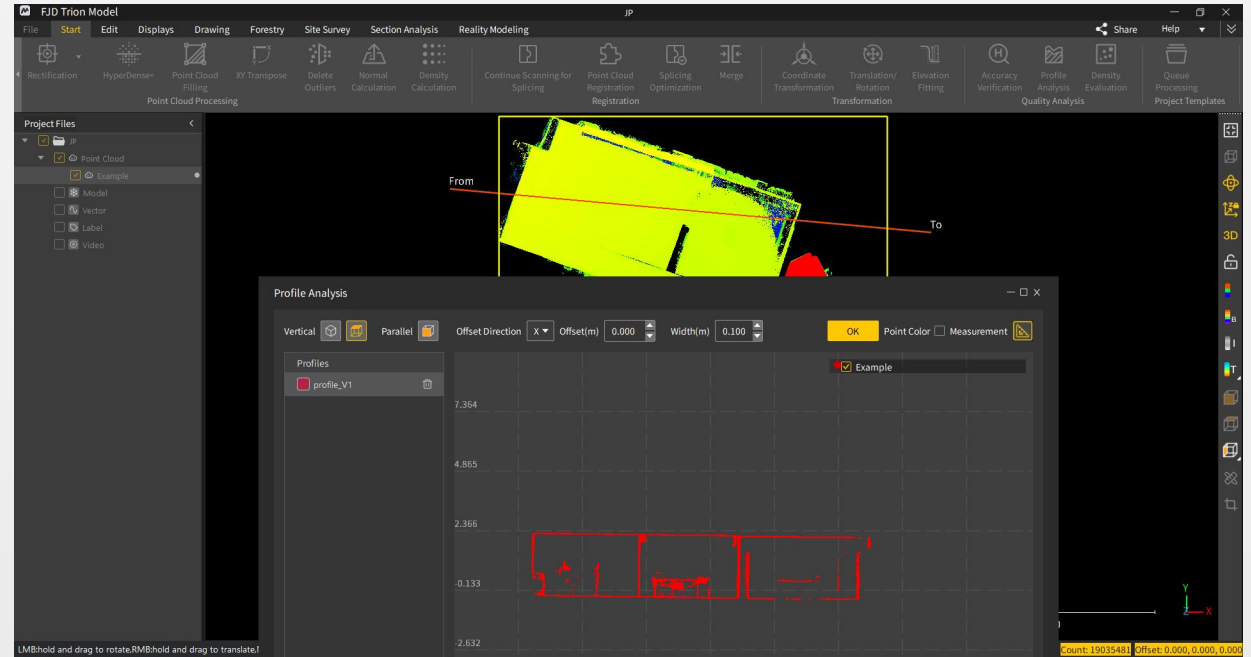
1. Single-click to select the point cloud data to be cropped (multiple selections are allowed).
2. Click the "Clipping" icon in the right toolbar.
3. Select the shape of the selected area, such as circle, rectangle, polygon (flexible).
4. After completing the selection, you can choose to retain the point cloud in the internal or external area for saving.
5. Finally, you can keep them separately (segmentation) or delete the part (cropping) you don't need forever.



Profile Analysis

Check the thickness, slope, and layering status by creating vertical or horizontal cross-sections on the point cloud to assess its quality.

1. Single-click to select the point cloud data (multiple selections are allowed).
2. Click "Start - Profile Analysis" in the top toolbar to open the pop-up window.
3. Left-click in the view to select the start point and end point, then it creates a cross-section.
4. The cross-section results are displayed separately in the window, allowing you to check the data status and measure the point cloud thickness or distances.

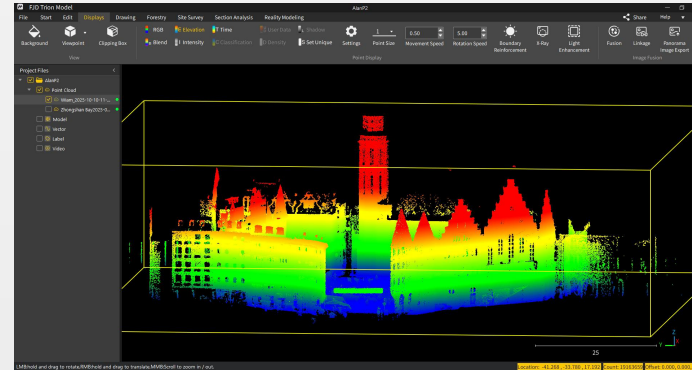


Point Display

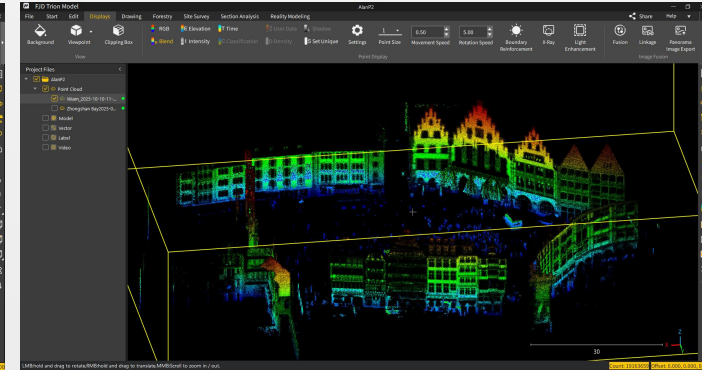


By changing the point cloud rendering method, better point cloud visualization effects can be achieved to help users view the data.

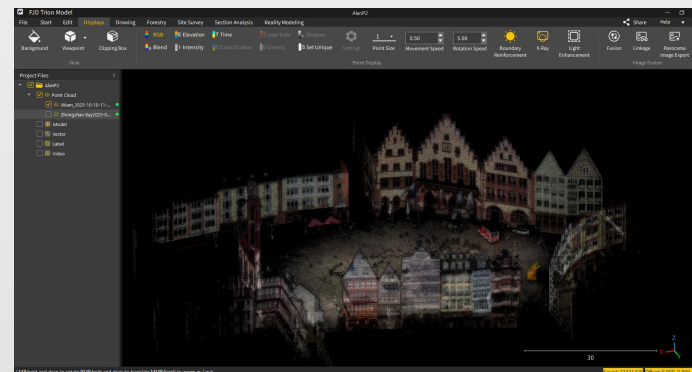
1. Change the view background color/switch point cloud viewing angles (top view, left view, etc.).
2. Change the point rendering mode (RGB true color, elevation based on Z-axis height, intensity to display point intensity information, etc.).
3. Change the display size of points; the larger the value, the larger the points.
4. Enhance the intensity of point cloud boundaries so that users can view the point cloud more clearly. X-ray mode helps check inside.



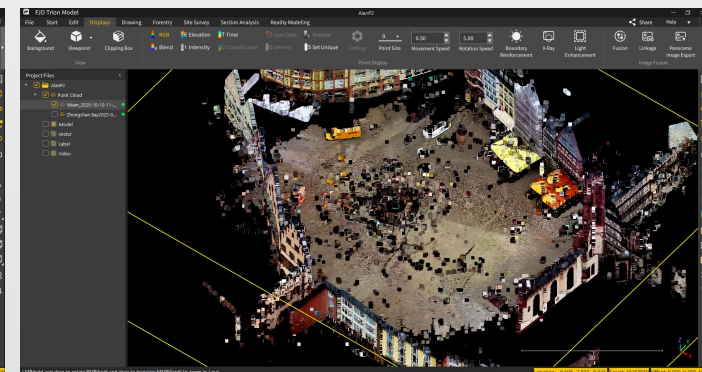
Elevation



Blend



X-ray



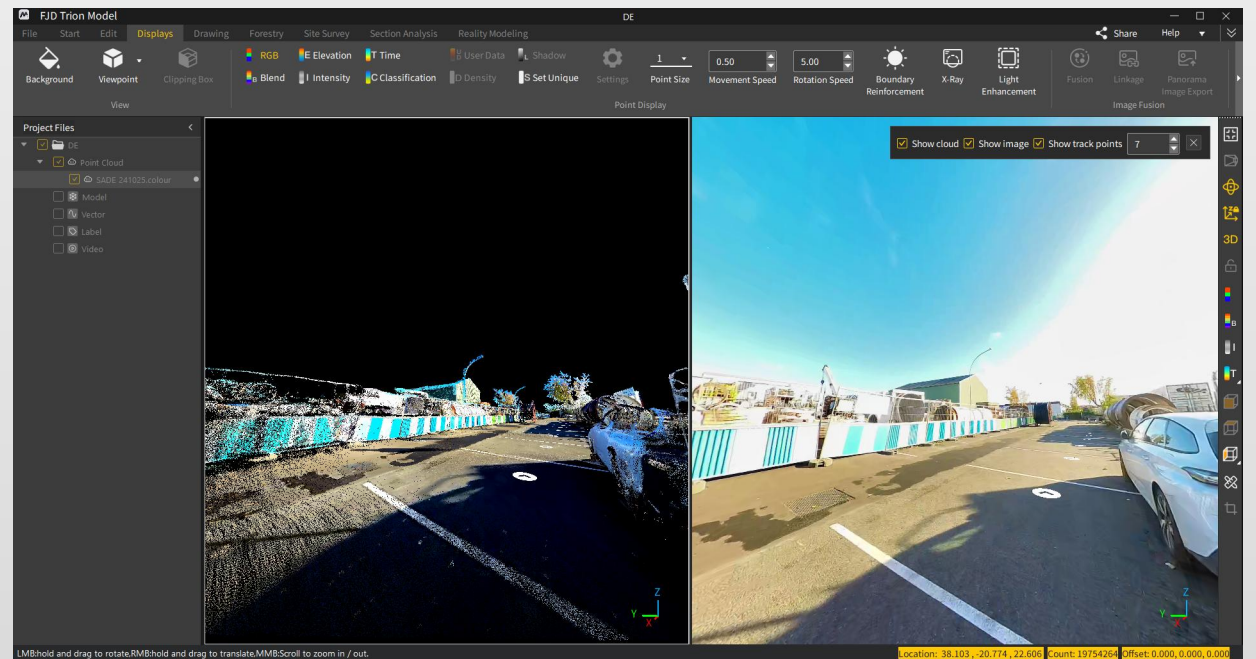
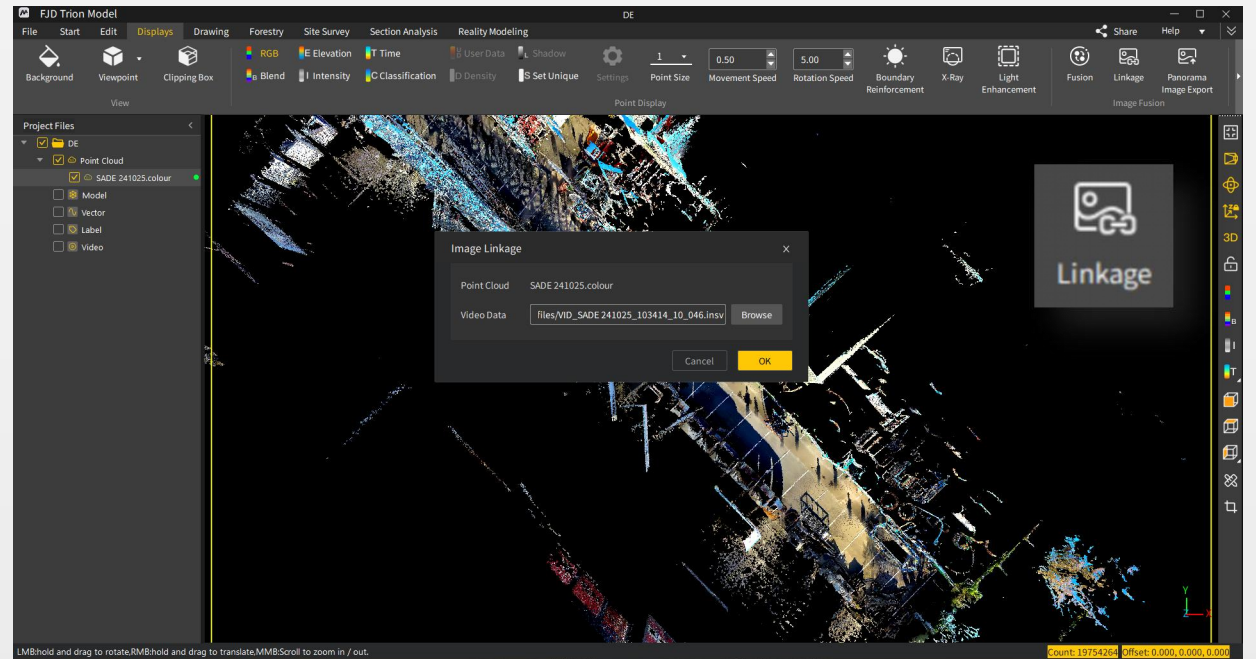
Point Size 9

Data Application

Linkage

Display point cloud and image data of the same location simultaneously to facilitate users in data viewing.

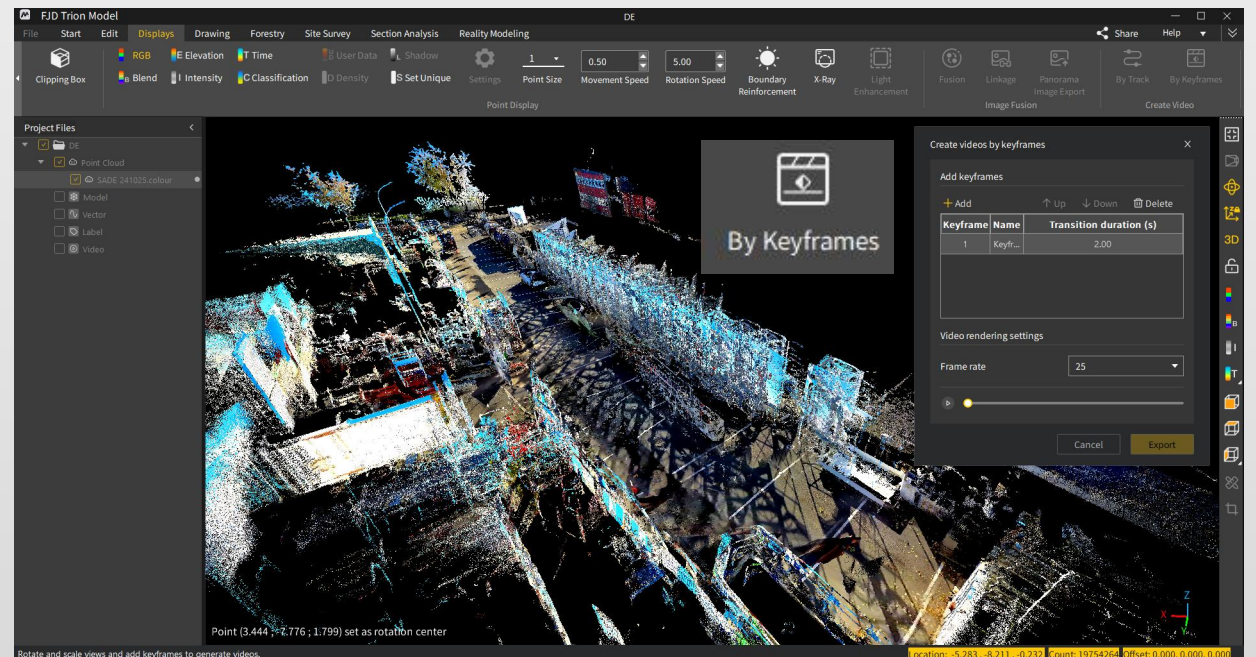
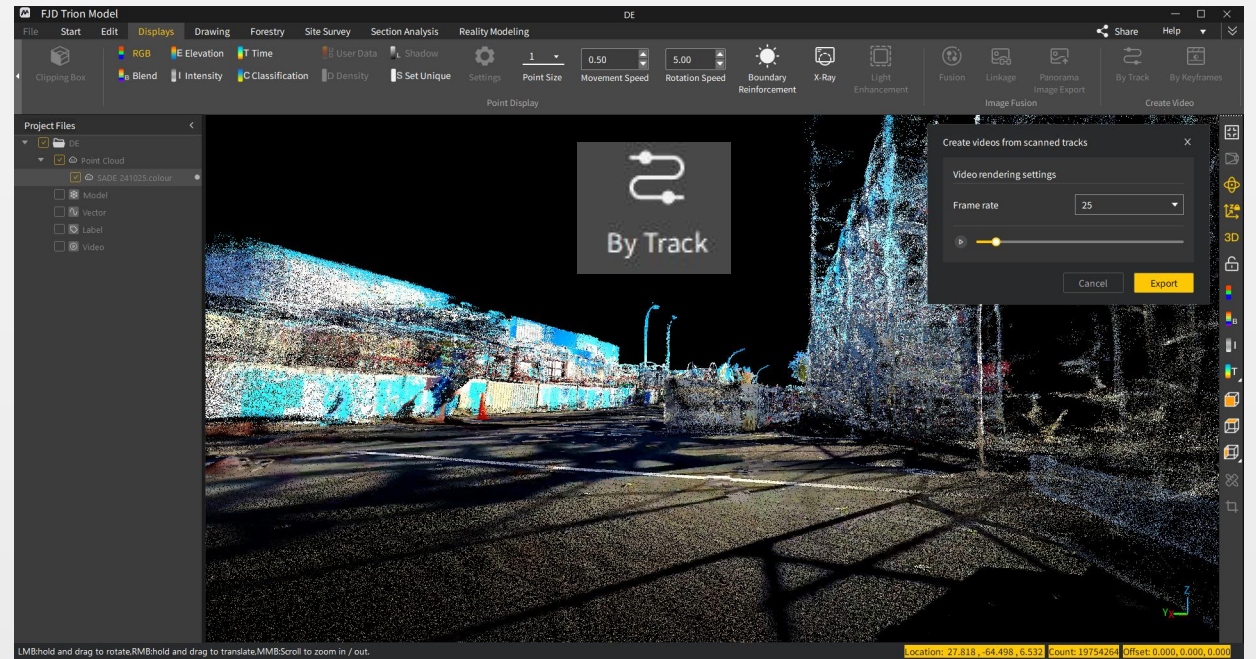
1. Select point cloud data and import video data.
2. Adjust the two windows' size.
3. The track points are on the ground. Double click the white icon, you can move the position.



Roaming Video

Create a roaming video to explore the point cloud. The exported video file can be used for project reports, promotions, etc.

1. By Track roaming: Automatically generate a roaming video according to the scanning trajectory.
2. By Keyframe roaming: Set a fixed perspective for each keyframe, and the roaming video will be automatically generated based on the keyframes.



Share

Upload the point cloud data or roaming video results to the cloud, and the point cloud or video can be viewed remotely via a link.

1. Select the file to be shared.
2. Click the Share button in the upper right corner of the software.
3. Log in to your TPM account. After the data is successfully uploaded, you can share the link. Others can open it in a browser, and view the point cloud or browse the panoramic scene on the web.

