SHARE DATA MANAGER

User Manual V5.0

SHAREUAV Ltd

Catalog

1 SHARE Data Manager Overview

1.1 Product Introduction

SHARE Data Manager is an efficient, simple and easy-to-use aerial survey operation auxiliary tool software designed for the whole process of aerial survey. The software provides functions such as one-click copying of camera data, local data management, aerial survey project management and route planning, which can significantly improve the efficiency of oblique photography operations, simplify the aerial survey operation process, and assist users to better complete aerial survey tasks.

1.2 Software Configuration

To ensure that the software runs smoothly, the recommended configuration is as follows (the computer configuration needs to be higher than this configuration):

CPU	Intel® Core™ i7-10700H@2.90 GHz （or AMD equivalent performance processor）
GPU	GeForce RTX2060 4GB
RAM	32GB
Hard Drive Capacity	64GB available hard drive space above
Operating System	Windows 11 Series
Network Environment	The software supports use in offline environment. However, camera activation, firmware download, distortion download, base map display, etc. need to be connected to the Internet.

1.3 Installation

Open the installation package and click “Next ”to complete the installation, all installation settings can use the default settings, and the user can also customize them.

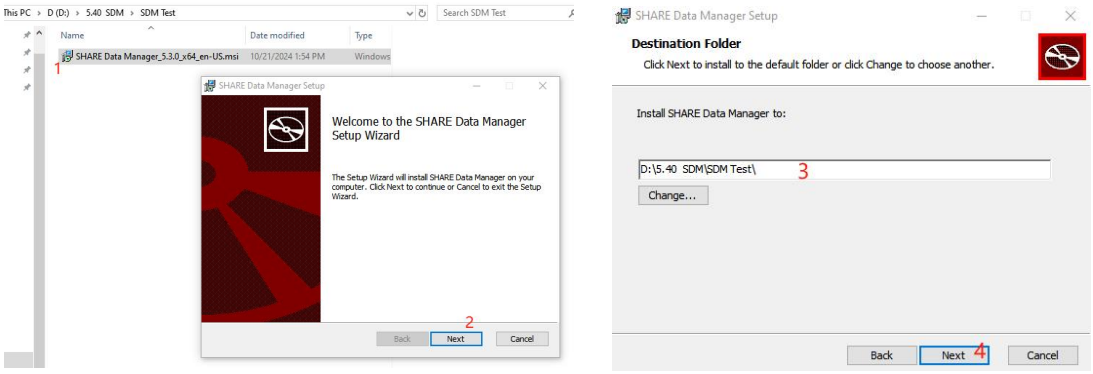


Fig 1 Software Installation Interface

After the installation is completed, one shortcut on the desktop: "SHARE Data Manager" will be created

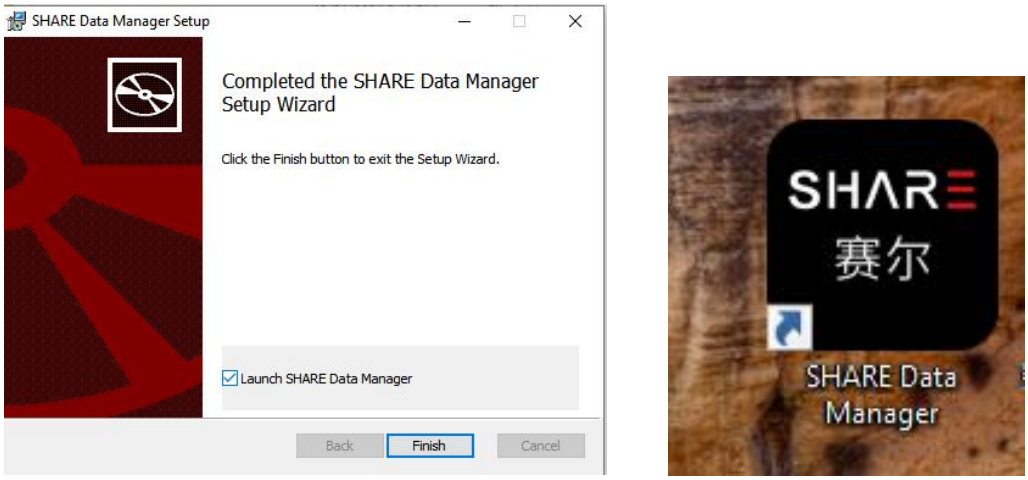


Fig 2 Software Icon

How to obtain the software installation package

Method 1　Official website：

https://www.shareuavtec.com/Content/1901561

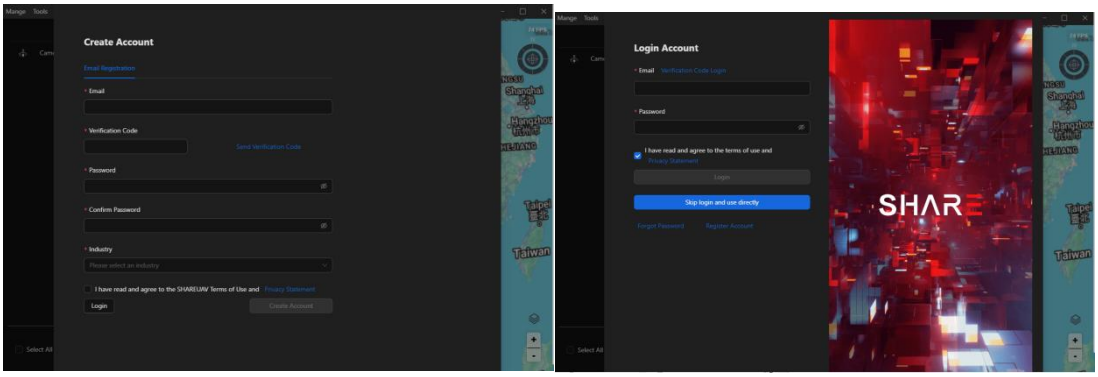
Method 2　Camera drive：

If the camera has multiple disks, the SHARE Data Manager installation package is in the root directory of the GPS drive.

If the camera has only one "Down" disk, the SHARE Data Manager installation package is in the root directory of this disk.

1.4 Register and Login

When you use SHARE Data Manager for the first time, a login window will pop up. Only by logging in to your account can you have complete functions. If you don't have an account yet, please use your email address to register an account and then log in. After the login is completed, the login status will be automatically remembered and the login will be skipped when the software is opened for the second time.



You can also click to skip logging in and use the software directly.

Please note that if you are not logged in, the route planning function is not available..

1.5 Upgrade

When a new version is available, open SHARE Data Manager and you will be prompted to update the version. Click "Update Now" to update the software to the latest version. Click "Update Later" to turn off the update prompt; click "Ignore this version" and then click "Update Later", the software will no longer prompt for this new version; The new version message will only appear if the computer is connected to the Internet. It is recommended to use the latest version of the software.

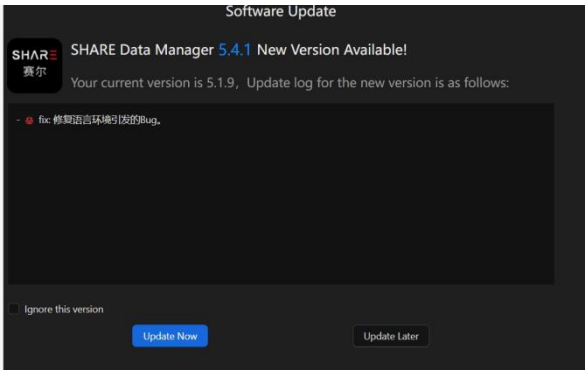


Fig 3 Software Update Interface

1.6 Uninstallation

When you need to uninstall the software, find the “unins000 .exe” program in the SHARE Data Manager directory and double-click it to uninstall it, or uninstall it directly in the control panel of your computer.

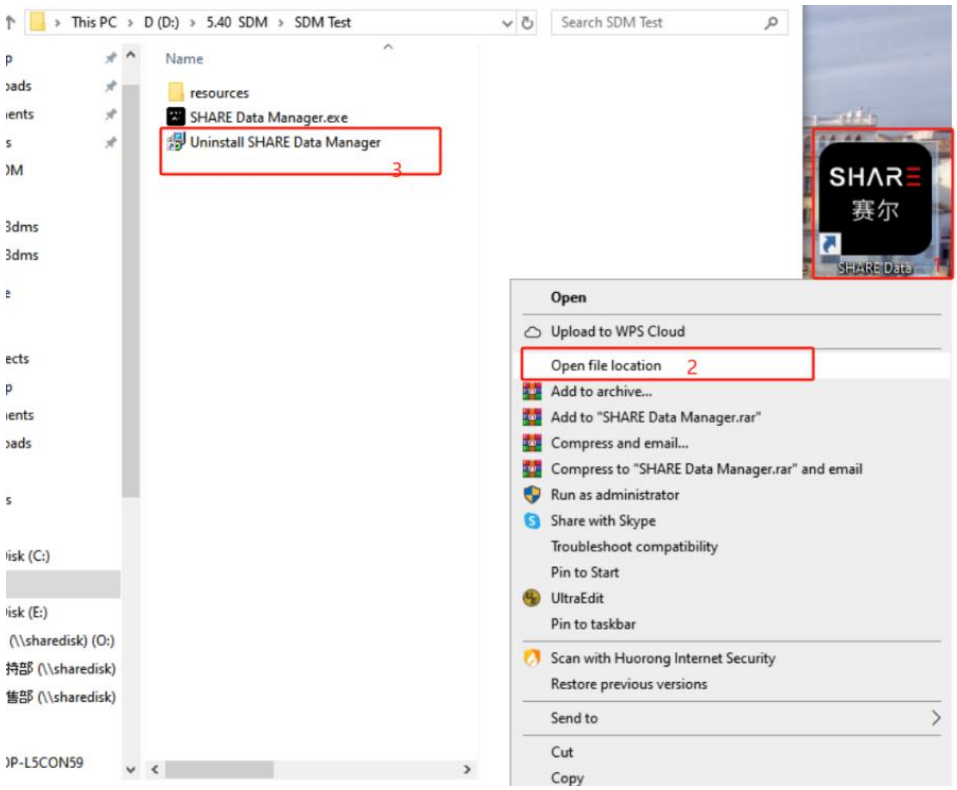


Fig 4 Software Uninstallation

1.7 Interface Introduction

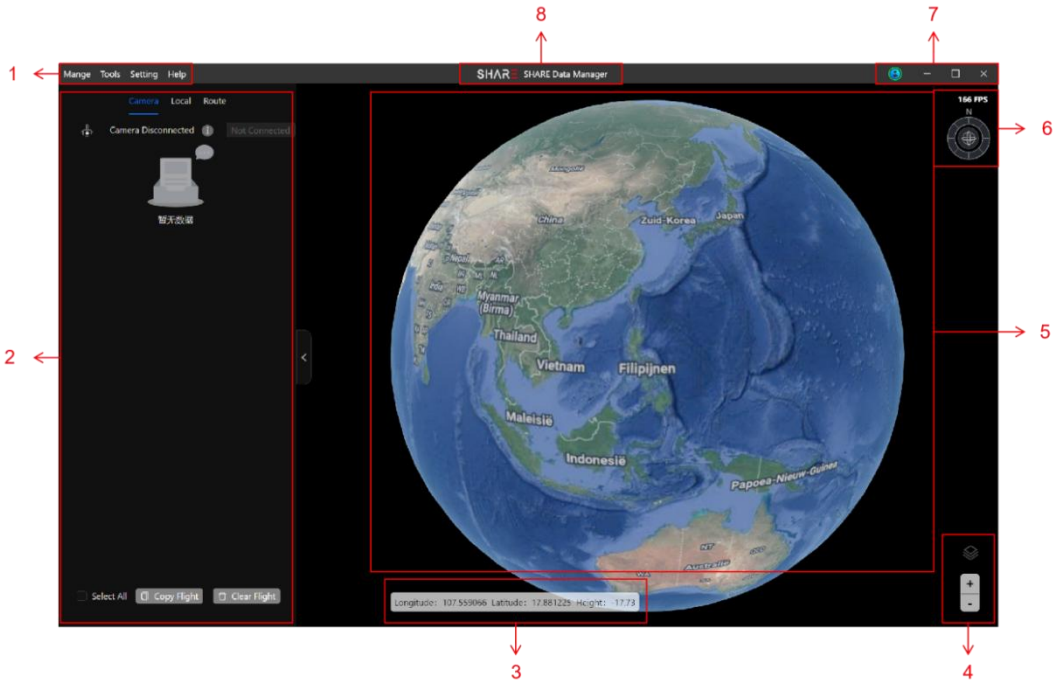


Fig 5 Software Main Interface

1 Menu

In "Manage":you can check the camera information and upgrade the camera firmware online.

In "Tool": there are some commonly used aerial survey tools, for details, please refer to "5 SHARE Tool"

In "Setting": it is the display language and theme settings.

In “Help”: include Contact Us, Feedback,Help Manual,about（check software version and software update）

2 Main Function Bar

"Camera" is for camera management, copying flights, cleaning data, checking camera information, etc.

"Local" is used to check the camera data locally on the computer

"Route" is a route planning, supporting the planning of mapping route, terrain route, accurate terrain route, surround route and facade route

3 Status Display

Display 3D scene scaling and location information

4 Basemap and Zoom

Switching of basemap and scene zooming

5 3D scene map

Data visualization and interactive area, supports left-click pan, middle-click rotation, and right-click zoom. Also supports POS interactive query

6 Navigation Compass

Display the 3D scene direction, double-click to point to the north

7 Account and Logout

Can view account information and log out

8 Software Title

Software LOGO and title

2 Camera Management

2.1 Camera Connection

Before copying data, you need to insert the data storage module into the data reading module and connect it to the computer using a data cable.(SHARE 100M PRO V2 and SHARE 100M A1O cameras, etc. connect the memory card C-port directly to the computer.) . The computer will recognize the storage module's disk drive.

2.2 Camera Information

Open SHARE Data Manager will pop up the window of “Camera Information”, where you can view the camera shutter times, camera firmware, distortion information, camera serial number and other basic information

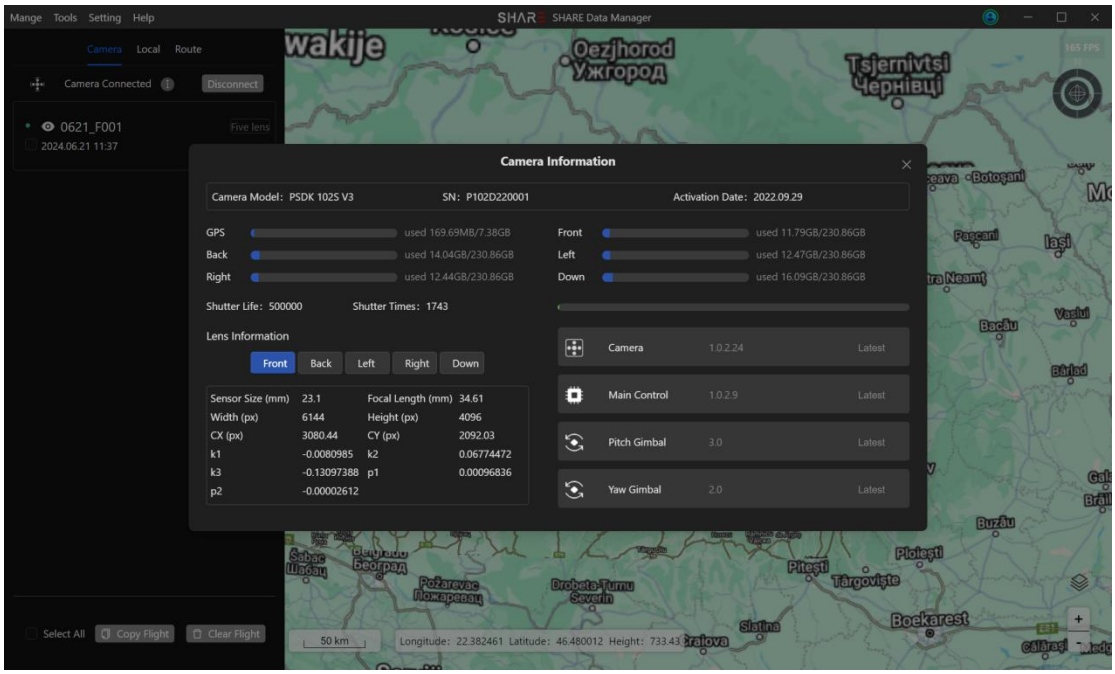
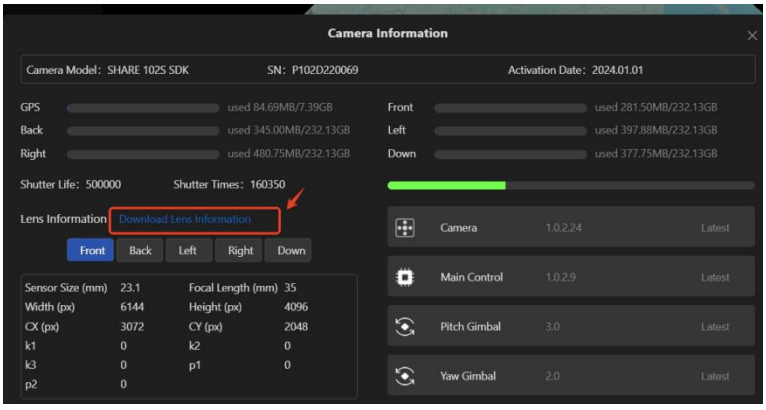


Fig 7 Camera Information

The details of the “Camera Information” interface are as follows:

1 **Lens Information** : displays the distortion information corresponding to lens.

If the Optical Properties (Aberration Parameters) file is missing, the “Download Lens Information” icon will be displayed. Can be downloaded while networked



2 **Shutter Information**: Displays the shutter warranty life of camera and the current number of times the camera shutter has been used.

3 **Storage Capacity Indicator** : memory usage of each drive of the camera

4 **Camera Model**: Display model of the camera

5 **SN**: Displays the camera's serial number

6 **Activation Date**: Displays the time when the camera was activated

7 **Firmware Information**: Displays the camera's current firmware version and check the latest firmware

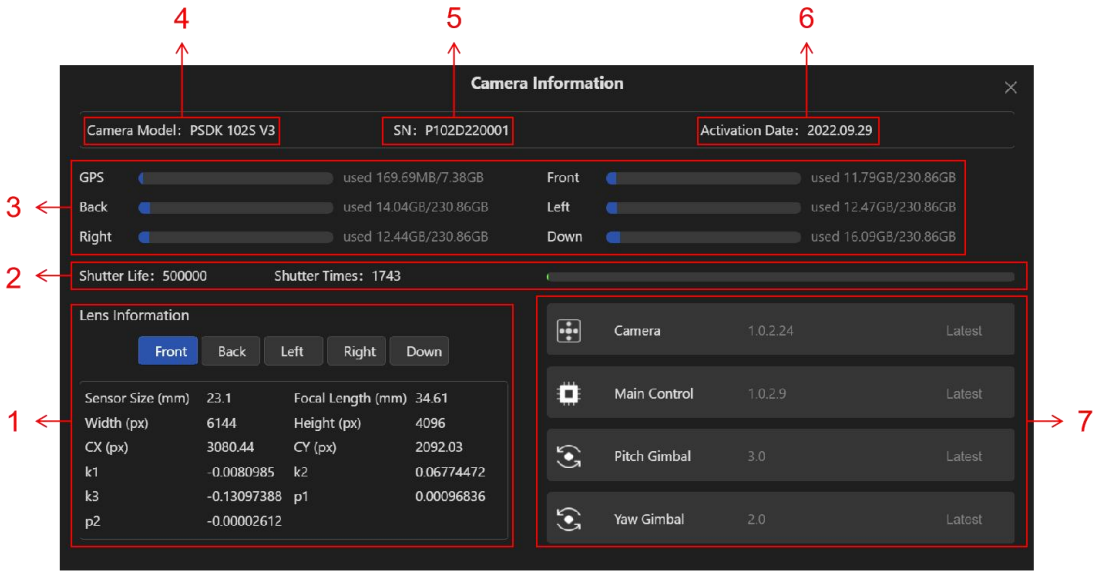


Fig 8 Camera Information

2.3 Firmware Upgrade

The firmware upgrade can optimize the camera performance and improve user experience. So we have developed an online camera firmware upgrade function. SHARE Data Manager will remind you when the camera firmware is updated, and you could upgrade the camera firmware online easily.

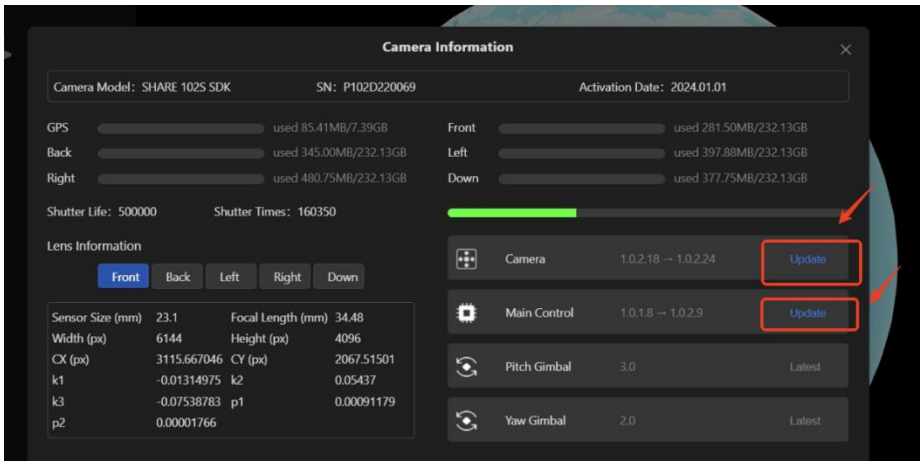
When you enter the "Camera Information"interface, you can see the current camera firmware version and the latest firmware version released by SHARE UAV. This function must be connected to the Internet, so it is recommended that you stay connected Internet when using SHARE Data Manager, so as not to miss the latest firmware we provide.

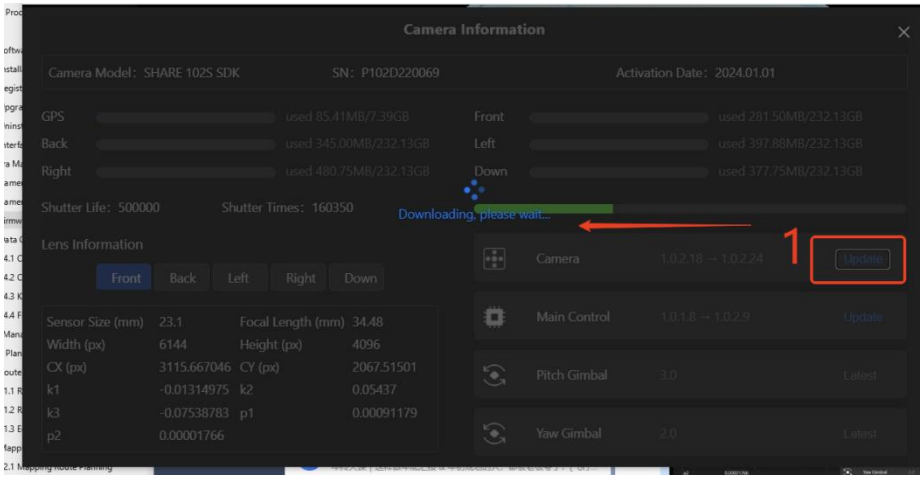
Click "Camera",Main Control", "Pitch Gimbal" and "Yaw Gimbal" ,follow the prompts after the download is completed.

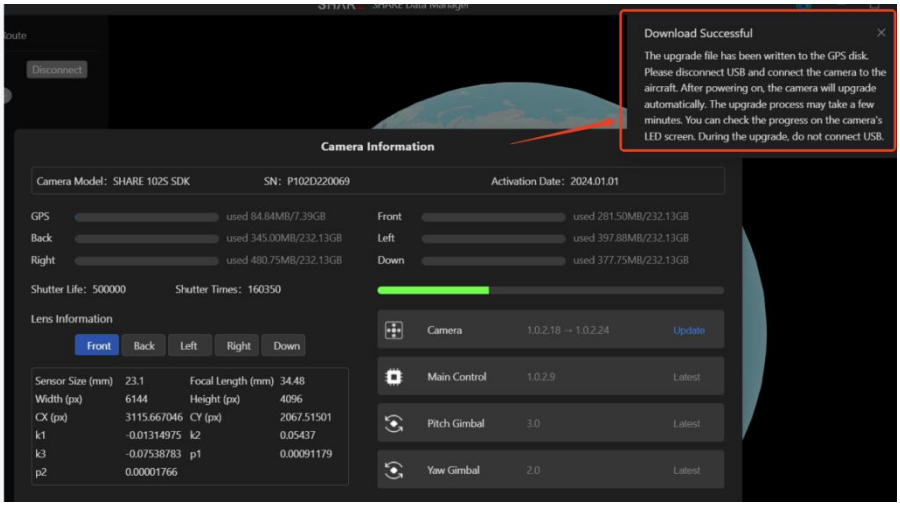
If the camera has the latest "Camera" firmware, "Update" will be displayed behind the "Camera" icon. Click it to download the latest firmware file.

If the camera has the latest "Main Control " firmware, "Update" will be displayed behind the Main Control icon. Click it to download the latest firmware file.

The firmware information of the camera gimbal is displayed behind the "Pitch Gimbal" and "Yaw Gimbal" icons.







Please install all storage devices to the camera, then mount the drone and power on the camera, the firmware update will be completed. You can check the upgrading progress in the SHARE screen of camera, wait for the upgrade to complete, the camera will restart automatically after upgrading

2.4 Data Copying

2.4.1 Check Data

Before copying fight data, place the mouse on the flight name to display its details . Please confirm that the number of POS and the number of photos for each lens are consistent . You can also check whether the POS spreads are consistent with the trajectory in the “Map” interface.

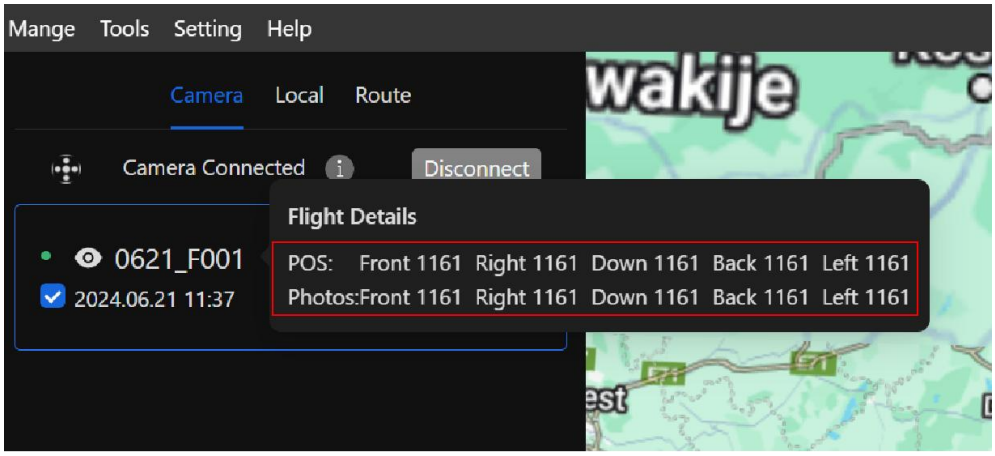
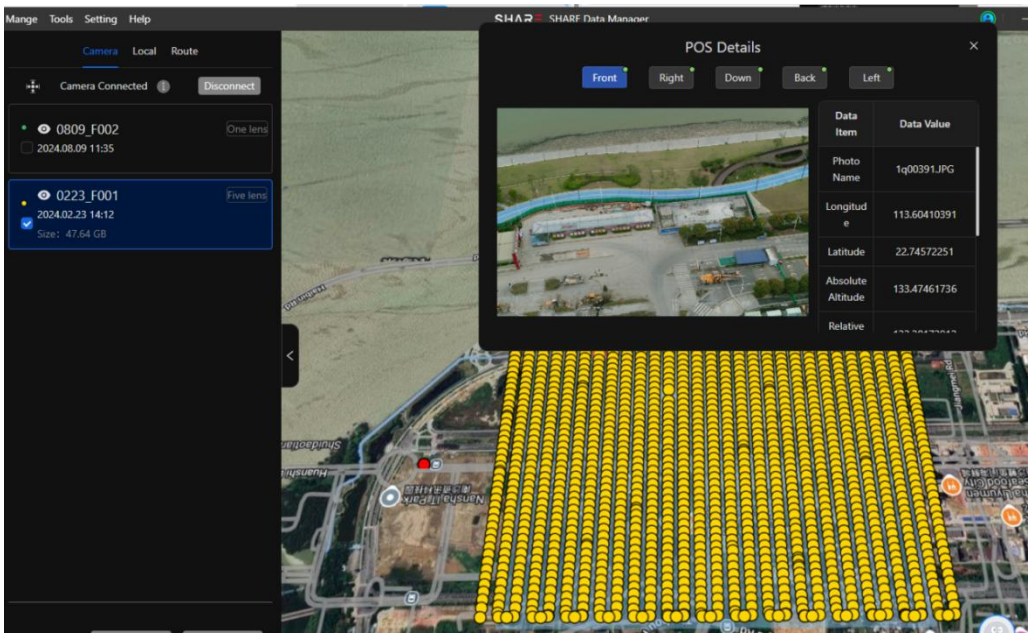
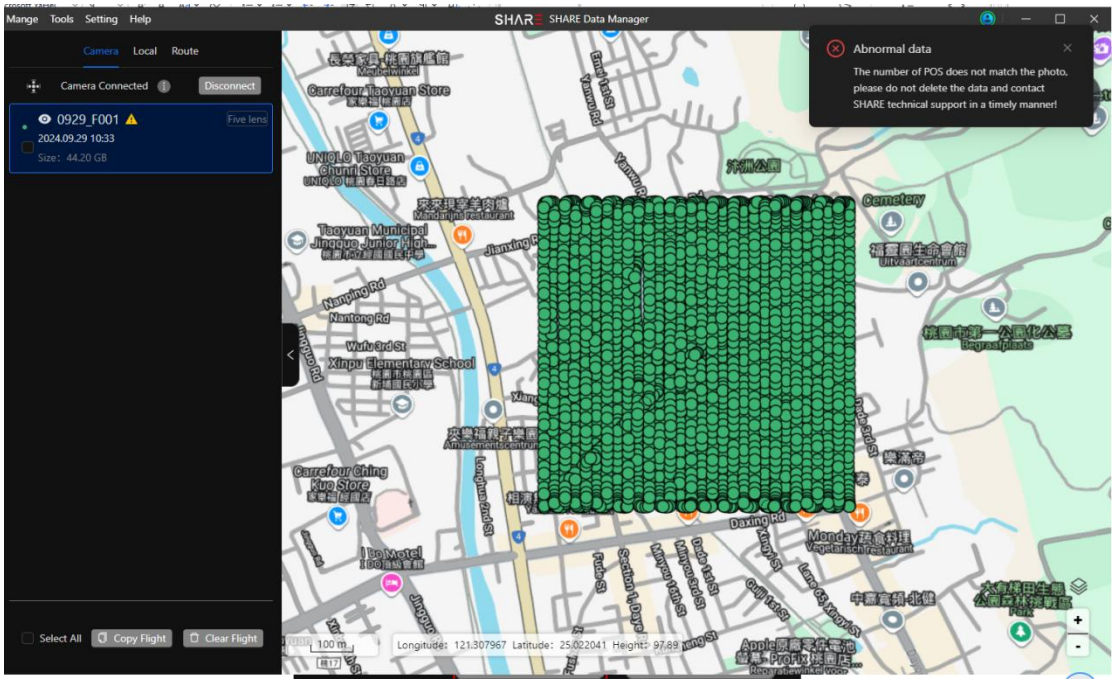


Fig 9 Flight Details

The POS point information of the corresponding flight is displayed in the 3D scene. Click the flight to locate the POS point. The color of the POS point is consistent with the color icon of the flight in the flight list. You can click the "eye" icon to switch the visibility of the POS in the 3D scene. Click on the POS point to view the photo and its information. Different colors represent different flights. (If some red dots that are inconsistent with the flight color appear, please check whether the flight altitude of these points is close to the ground. If the relative altitude is close to the ground, SDM will identify them as ground points and display them in red.



If the data is abnormal, there will be a warning signs next to the flight number, and an abnormal message will pop up in the upper right corner of the software. Please check when copying data. As shown in the figure below, if there are abnormal prompts such as POS and photo not matching, please contact SHARE technical support to check the data



After confirming that the flight information is correct, check the flight to be copied and click Copy Flight.

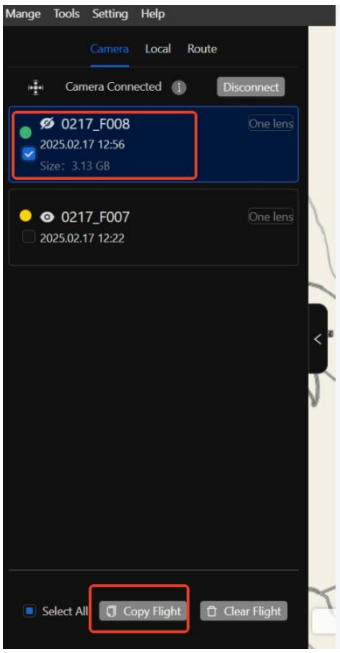


Fig 10 Copy Flight

After setting the store path and the drone model used for flight, click to “Copy Flight”. (When you need faster copying speed, it is recommended to copy to the local drive letter of your computer)

2.4.2 Copy Settings

Check the selected flight in the copy settings interface, set the storage location in the basic settings, check the estimated memory, select the coordinate system of the data, and the drone model.

Note: If the data is collected using the WGS84 coordinate system, enable the "WGS84 coordinate system" in the software.

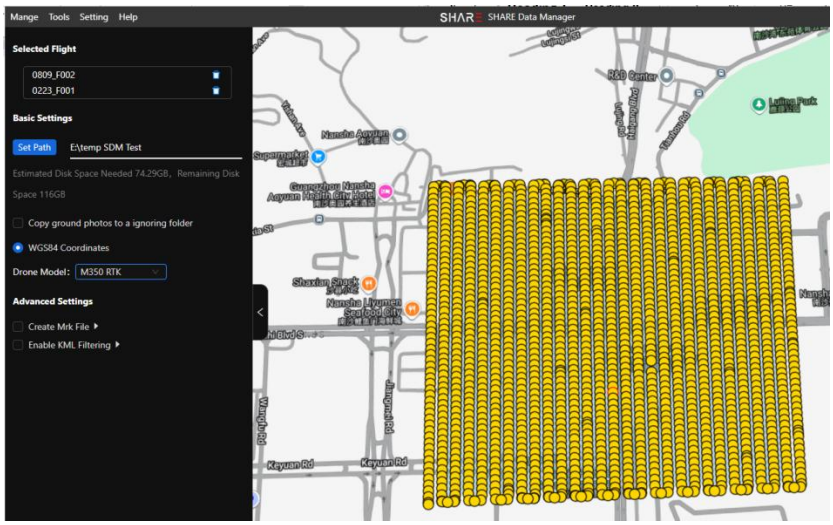
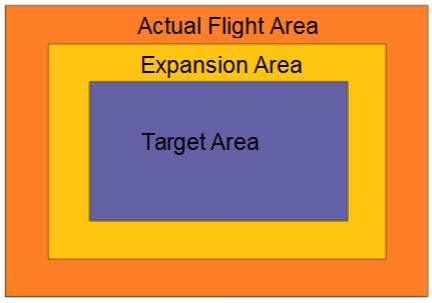


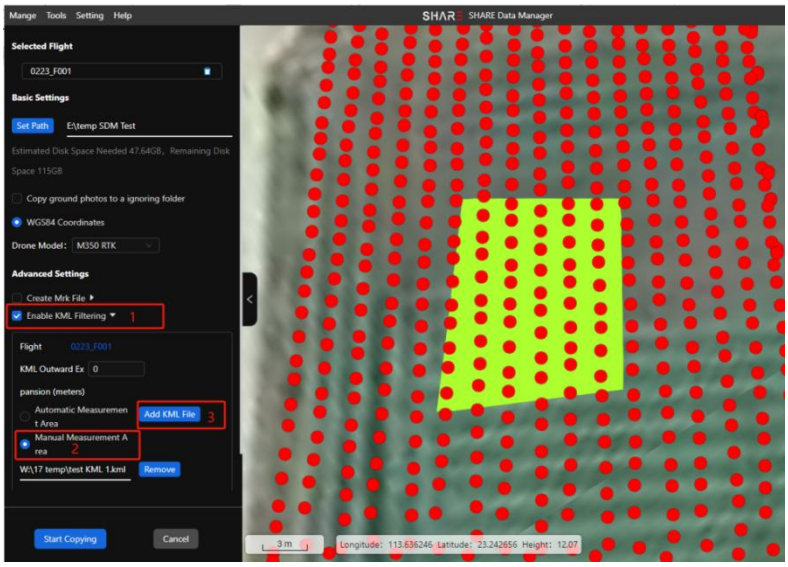
Fig 11

2.4.3 KML Filter

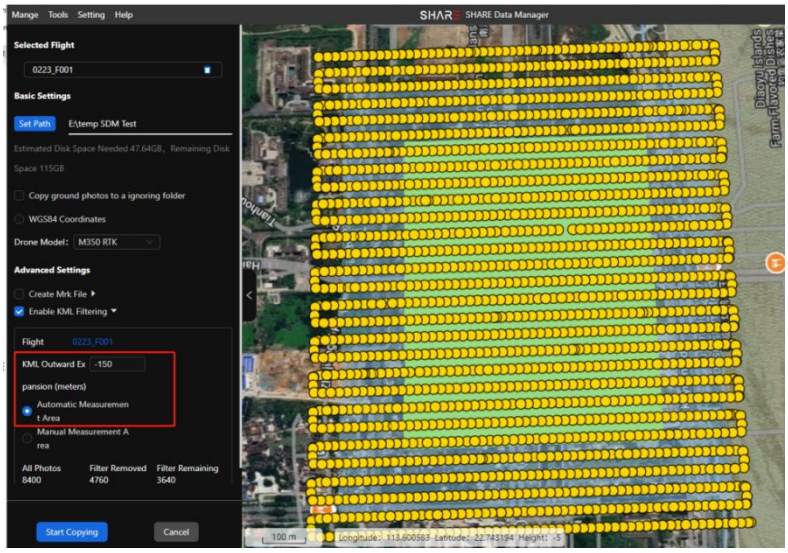
In the collect data process, in order to ensure that each position in the survey area with enough feature points , user will extend(margin) the survey area to obtain the actual flight area. The oblique photography need to set margin at least one flight altitude to ensure that overlap ratio of photos taken at the edge of the survey area meets the requirements of modeling; otherwise, the modeling effect will be affected. Ortho photography need to set margin at least half flight altitude .However, the number of photos will greatly increase, and some of the photos are taken outside the survey area, which is useless for modeling. It will also greatly reduce the efficiency of data processing. In order to only keep valid photos within the survey area , SHARE Data Manager has added the function of filtering photos in KML area. By selecting KML files, you can filter and select photos of the survey area when copying.



In the KML area settings, we can add KML files and select more KML files, software will evaluate the target surveying area and use a few KML regions. After selecting the KML file, it will roughly estimate the number of photos and display it in below. And it will copy the photos outside the KML area to the "Ignored Photos" folder during the copying process; The green part in the map is the filtered area.



In the KML area settings, Supports automatic KML area. Enter the distance that needs to be reduced, and then click the Enter key to see the remaining photos filtered. The green part in the map is the filtered area.The number entered is a negative number. It is generally recommended to enter one-third of the Margin

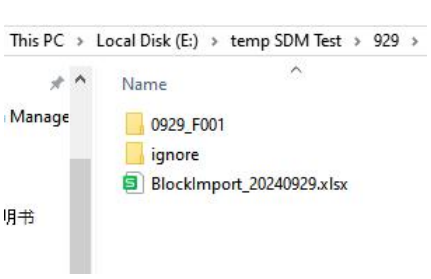


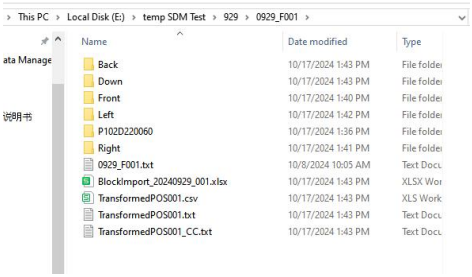
2.4.4 Flight Folder

After completing the copy, you can open the sortie folder. The "0929_F001" folder stores valid sortie photos, and the "Ignore" folder stores ignored ground photos and KML-filtered photos. "BlockImport_20240929.xlsx" is the block of ContextCapture index file

Open the "0929_F001" folder of valid photos, and you can see five folders named with lens names for storing photos of corresponding lens. The "P102D220060" folder is the backup camera distortion parameters, and "0929_F001.txt" is the backup POS file.

If you want to import data processing software such as DJI Terra, just import the valid "0929_F001" folder.



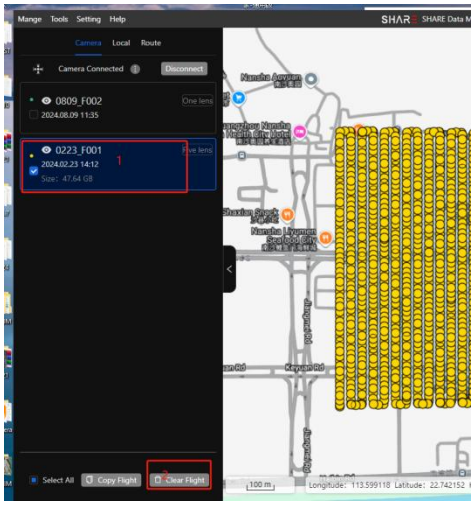


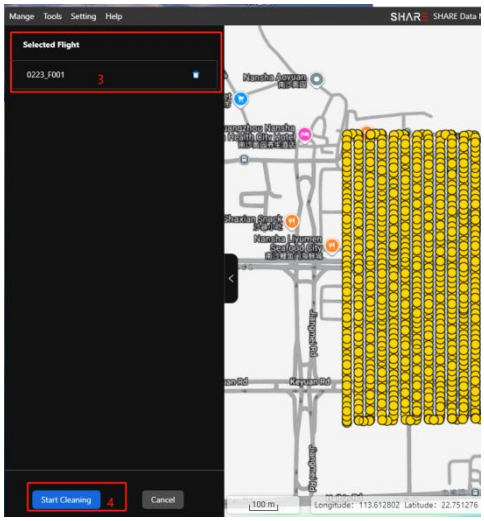
2.5 Clear Flight

This function is used to clean up useless data. After copying the data and confirming that there is no problem with the data. when you need to clean up the memory, select the flight of the need to clean it, and click "Clear Flight 'to clear the data with one click.

Please delete data by using SHARE Data Manager. Files in any drive letter cannot be deleted at will. The data cannot be restored after being deleted , please operate carefully. Before performing this operation, ensure that data is correctly backed up on the computer.

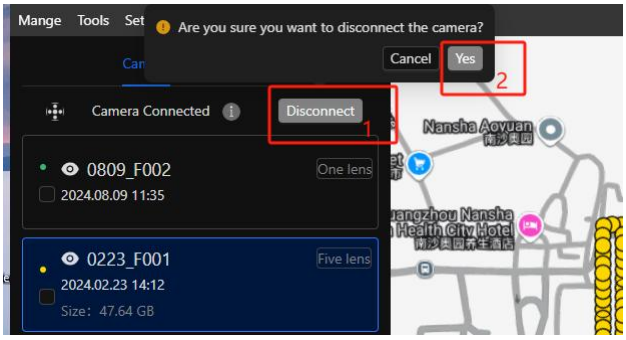
Note: If you click "Clear Flight", the data in the camera's memory card will be deleted. The data that has been copied to the local drive will not be deleted.





2.6 Disconnect

After using SHARE Data Manager to complete the copy flight or clear flight , click the “Disconnect” button to automatically pop up each drive letter. Do not unplug the storage module directly, otherwise it is easy to reduce the life.



3 Local Management

The data copied using SHARE Data Manager will be automatically added to the "Local" interface. You can also manually add flights in this interface to check the data status.Each function is introduced as follows (the order of introduction is consistent with the serial number marked in the picture)

1 Flight List: displays the name of the flight and can check details of the flight data. Please refer to the introduction in 2.4.1 Check Data

2 Folder : Click to open the storage path where the flight folder is located. Convenient and quick browsing of flight data

3 Remove Flight: Click to remove the display of flight data on the "Local" interface. If "Also delete local image files" is checked, the images of the corresponding flight in the storage path will also be deleted.

4 Import Data: Click "Import Data" to add the sorties folder stored in the computer to the "Local" interface and check the data.Supports importing single and multiple flights

5 Clear Flight:After selecting the flight and clicking "Clear Flight", the flight confirmation interface will appear. Clicking "Start Cleaning" will delete the pictures of the corresponding flight from the local drive letter of the computer.

6 Show POS Map:Clicking on the sortie will display the corresponding POS, and you can check some information on the 3D scene interface. Refer to the introduction in 2.4.1 Check Data

Note: Once you click "Clear Flight" to clear the locally stored flight photos, they cannot be restored. Therefore, please confirm that the flight data can be deleted before clearing it to avoid losses caused by mis-operation. You can also use the "Remove Flight" function to delete only the records of Local's flight list.

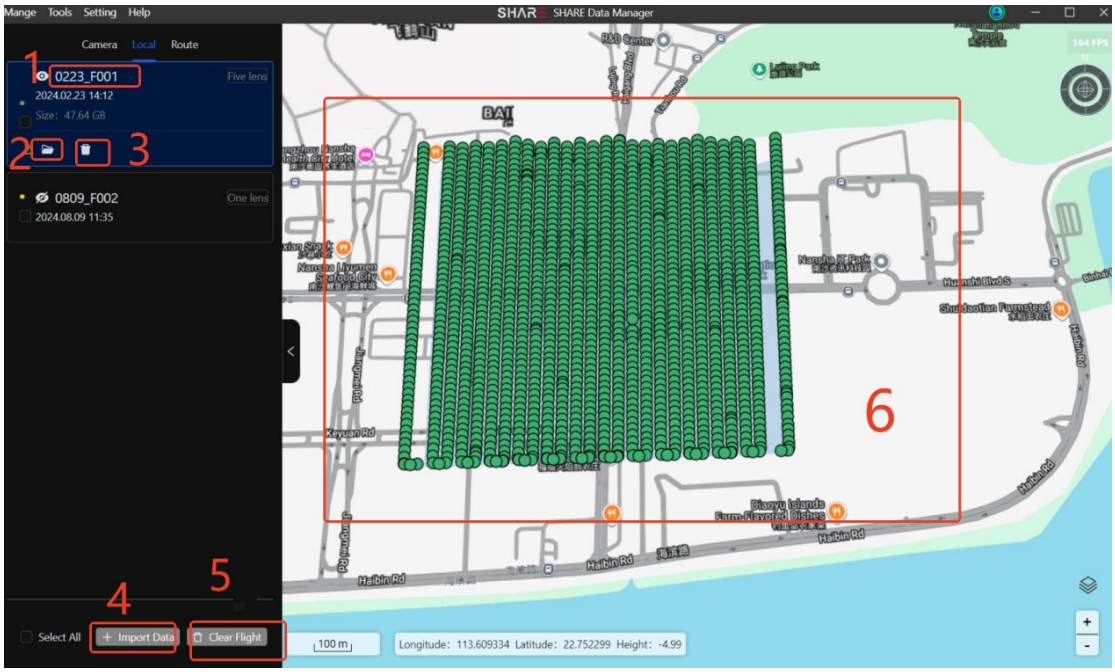
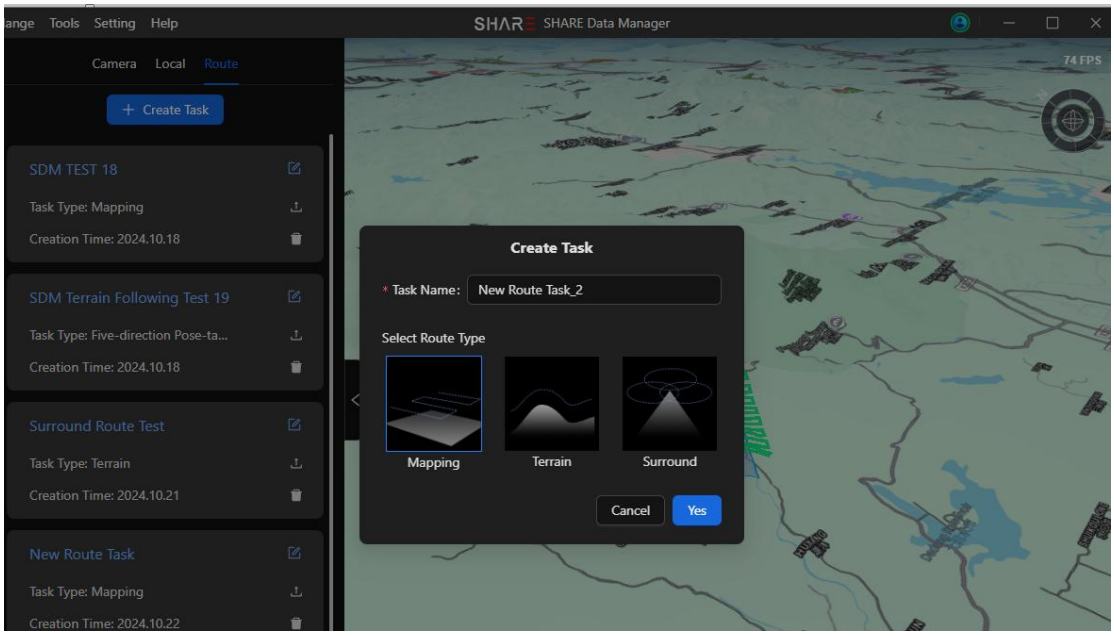


Fig 12 Local Management Interface

4 Route Planning

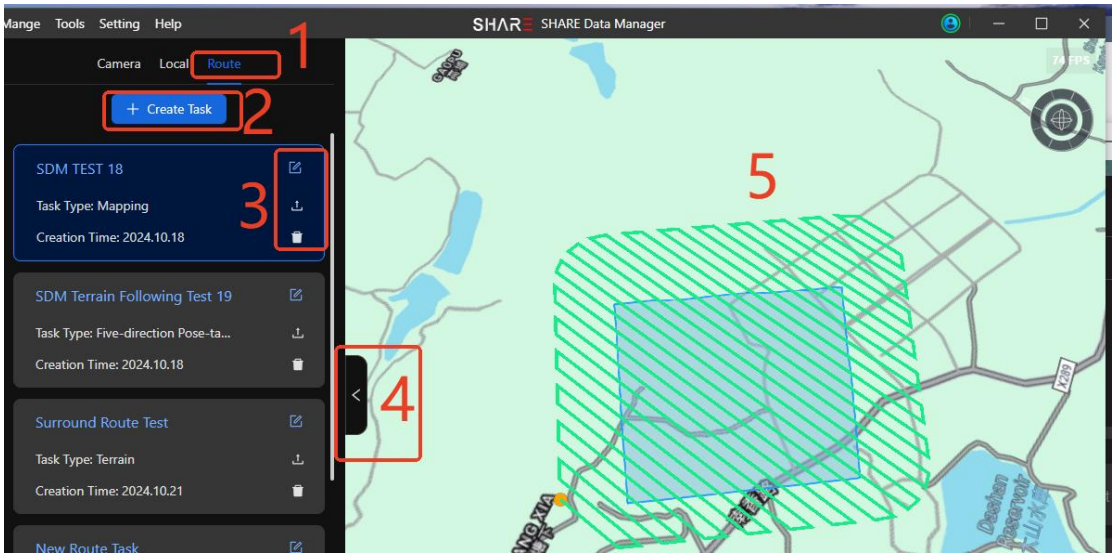
4.1 Route Planning Function Introduction

Users can use the route planning function to plan mapping route, terrain route,surround route



4.1.1 Route Planning Interface

The left side of the software displays the route list and route operations of the route planning function, the middle 3D scene displays the planned route, and the right side of the software displays the planned route and parameter settings, as well as the survey area overview check.



1 **Route**: Click to switch to the route planning interface

2 Create Task: Create a new route task, select the route type, and plan the survey area

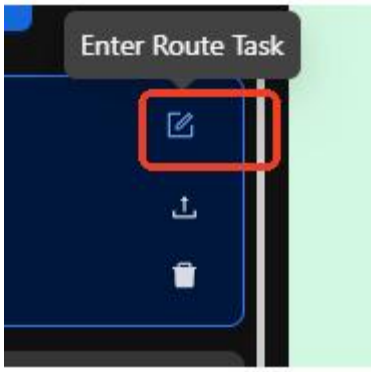
3 Action Button: There are three operation buttons, from top to bottom: edit route, export, delete. Click the Edit Route button to enter the route editing interface;Click the export button to export the route file in KMZ

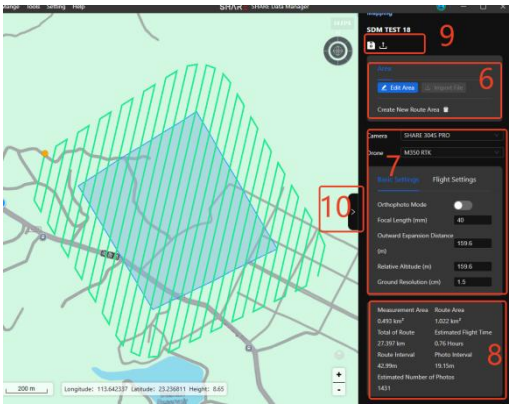
format;Click the Delete button to delete the route task

4 Full Screen Button: Click it to display the route in the 3D scene in full screen

5 3D scene map: Display the planned route

Note: click the "Edit Route button " to enter the route parameter interface as shown below.





6 Edit Area: support manual editing of routes or importing polygon KML and KMZ file to plan routes

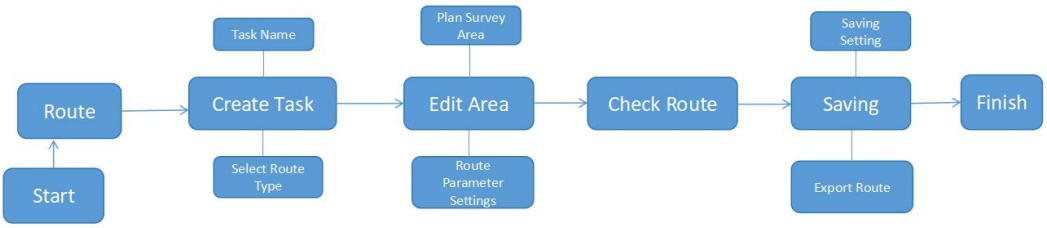
7 Parameter Setting:Set basic parameters, route parameters, camera and drone model, etc.

8 Survey Area Overview: Can check the basic overview of the route and survey area

9 Save and Export : After setting all the parameters of the route and planning the route, you need to click the Save button to save the parameters. If you do not click Save, the route will use the default parameters; After saving the route parameters, you can click the Export button to export the route, the route will be exported in KMZ format.

10 Back button: Click to return to the route management interface

4.1.2 Route Planning Process



4.1.3 Edit Area Steps

Step1： Plan survey area .Left click to add marker, right click to end editing;Left drag to adjust area size;Double click line to insert marker

Step 2: Setting parameters,Select the camera model and drone model, set basic parameters and flight parameters

Step3： Click 'Finish Editing' after editing to update flight route status

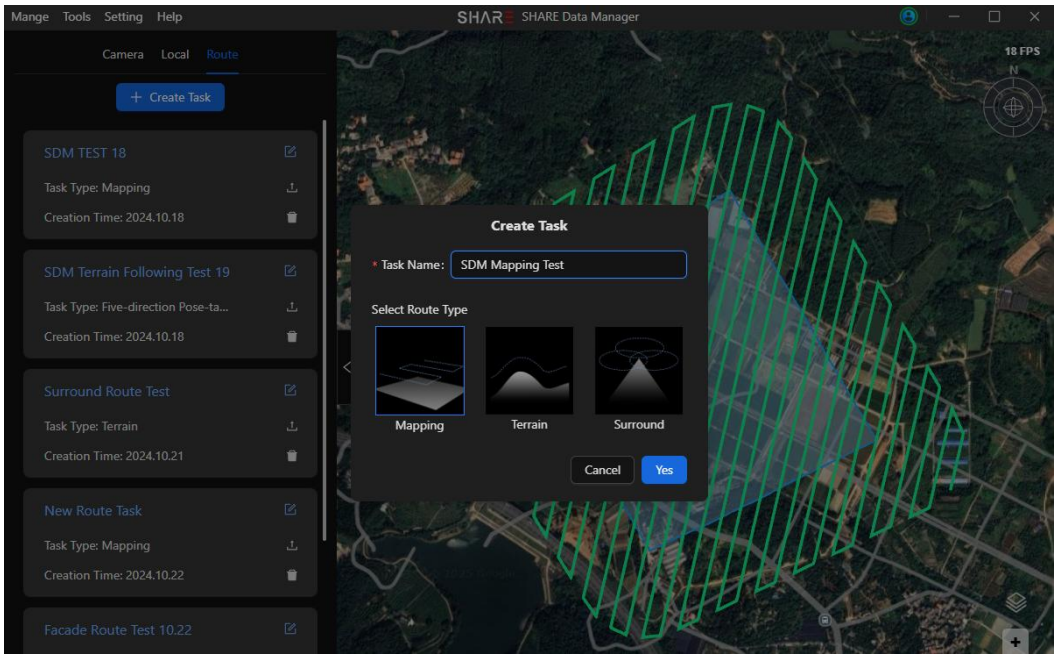
Step4: Check route and check the survey area overview

Step5： Save Settings and export route file

4.2 Mapping Route

4.2.1 Mapping Route Planning

Click “Create Task”, select route mode as Mapping, and then enter the task name



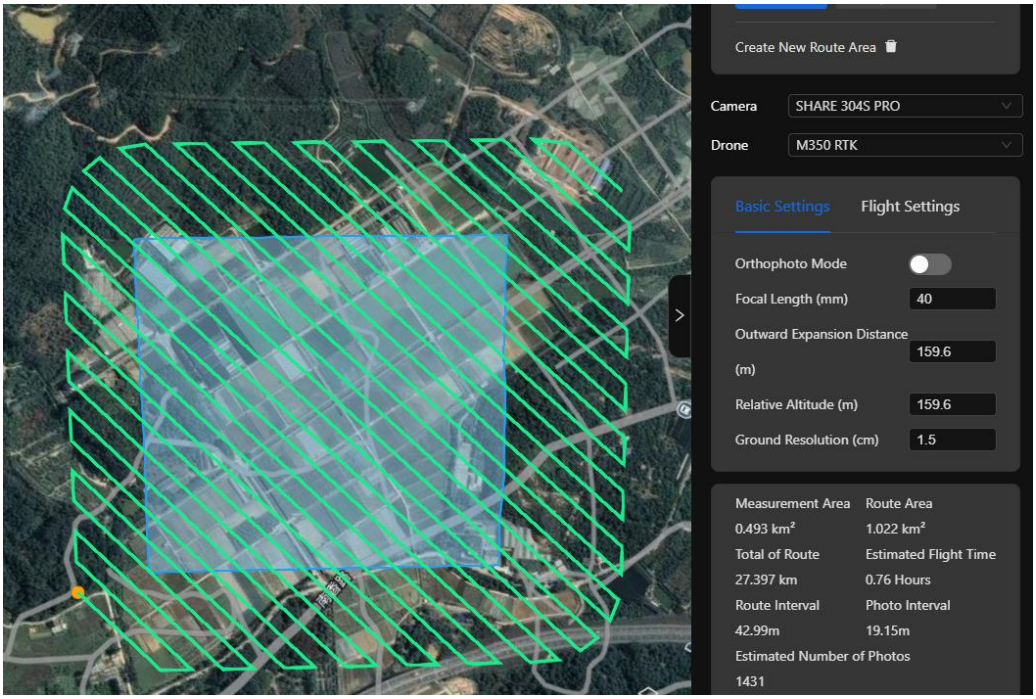
Click "Edit Area" in the "Area" on the right to plan the survey area on the map. Left-click on the map to draw the area to be flown, right-click to end drawing the route, click the "Finish Editing" button to generate the route; you can also click "Import File" to import the polygon KML or KMZ file to generate the route. According to the actual situation, set the camera model, aircraft model and route parameters, etc.

4.2.2 Route Parameter Setting

Camera: Select the camera model used to collect data

Drone: Select the drone model used to collect data

Pay attention to selecting the accurate camera model and drone model so that the software can accurately plan flight parameters.



- **Basic Settings**

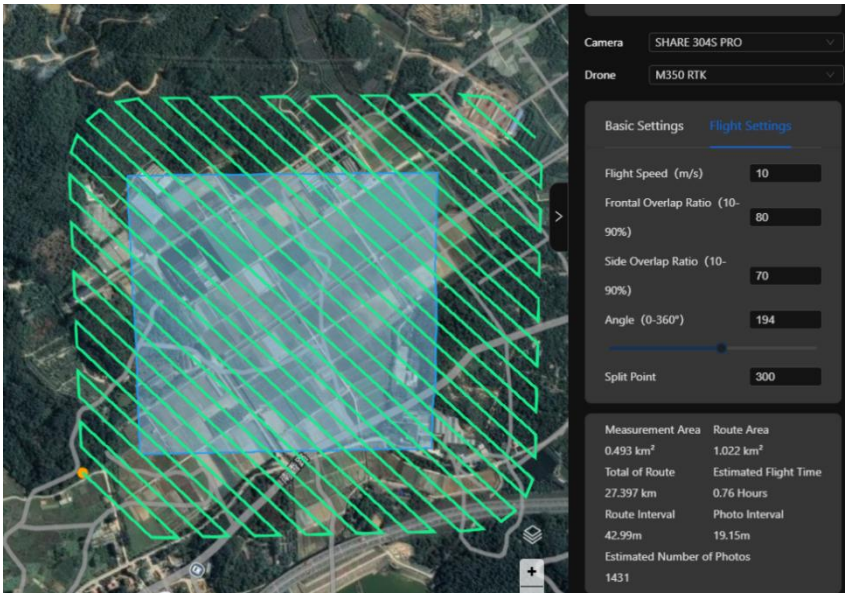
Orthophoto Mode： When turned on, the route is used for orthography, and the measurement area margin is automatically set to half the flight altitude.

Focal Length:The focal length will be automatically recognized after selecting the camera model. Note that if it is a single-lens camera, check whether the recognized focal length is consistent with the actual focal length used.

Outward Expansion Distance :Margin, set the range that needs to be expanded based on the target measurement area.By default, the margin is equal to the flight altitude for oblique photography, and half of the flight altitude for orthophotography.

Relative Altitude : Flight altitude, relative to the take-off point. The flight altitude determines the GSD. The flight altitude can be set according to the required GSD.

Ground Resolution : Ground Sample Distance(GSD),The distance between adjacent pixel centers represents the actual ground distance.



- **Flight Settings**

Flight Speed: Set the flight speed of the drone

Frontal Overlap Ratio: Set the overlap of adjacent photos on a route.The default value is 80%.

Side Overlap Ratio: Set the overlap ratio between routes. The default value is 70%.

Angle: The angle between the route direction and the true north direction (clockwise). The direction of the route can be adjusted by adjusting the value. The value range is 0~360°

Spilt Point：If the route file is too large, it may cause lag when imported into the remote controller. Therefore, the route file needs to be split and output. The default value is 300.

- **Survey Area Overview**

You can check the target measurement area, actual route area (the actual area ,target measurement area plus margin), estimated flight time, estimated number of photos, total of route (route length), route interval, photo interval, etc.

Basic parameter and flight parameter settings affect the survey area overview.

Measurement Area: Required region of interest (ROI), actual target modeling area

Route Area: The actual flight area, target measurement area plus margin area (outward expansion area)

Total of Route: Total route length

Estimated Flight Time: Estimate the time the drone will be in the air collecting data

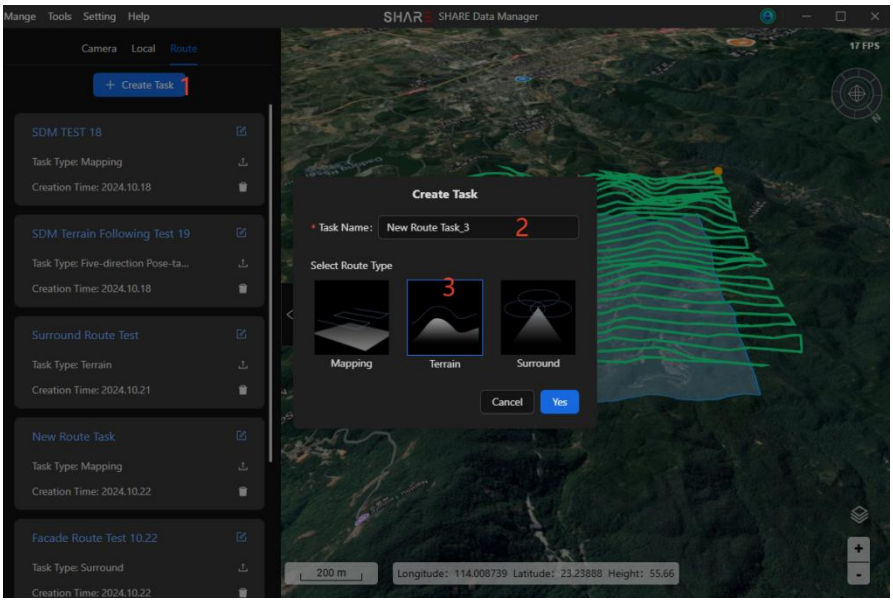
Route Interval: The distance interval between adjacent routes

Photo Interval: The distance interval of adjacent photos on the same route

Estimated Number of Photos： The expected number of triggers. This number refers to the number of triggers （Refers to the number of photos taken by a single lens.）

4.3 Terrain Following Route

4.3.1 Planning Terrain Following Route



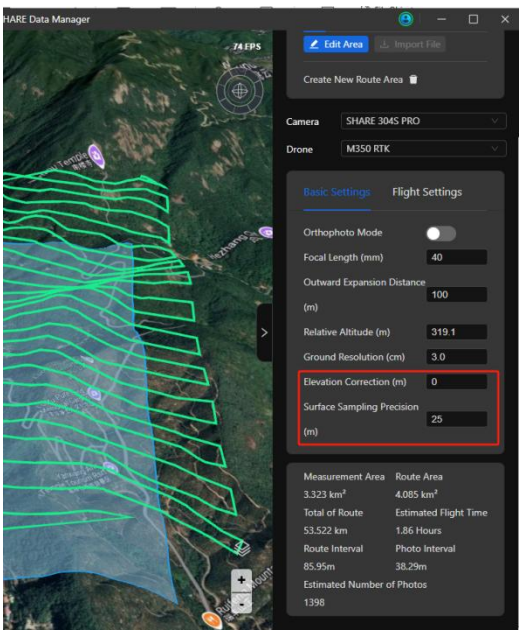
Click “Create Task”, select route mode as “Terrain”, and then enter the task name

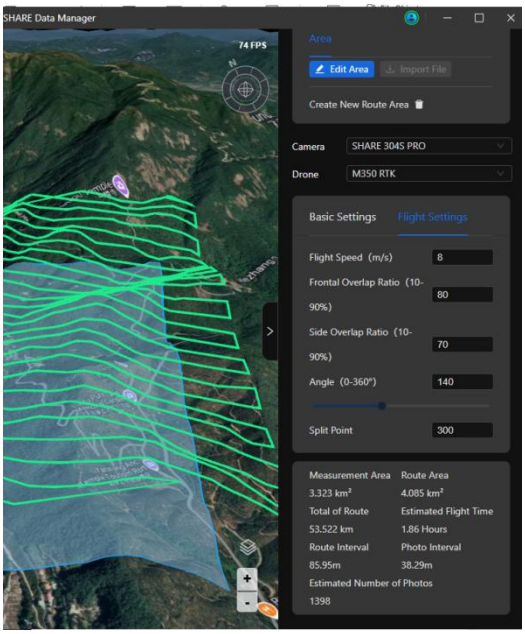
Click "Edit Area" in the "Area" on the right to plan the survey area on the map. Left-click on the map to draw the area to be flown, right-click to end drawing the route, click the "Finish Editing" button to generate the route; you can also click "Import File" to import the KML or KMZ file to generate the route. According to the actual situation, set the camera model, aircraft model and route parameters, etc.

4.3.2 Parameter Settings

“Elevation Correction”： The elevation in the survey area may not match the actual elevation, and it supports adding elevation correction data.

Surface Sampling Precision：The route height is set by distance, and sampling is performed every 25m by default. Pay attention to selecting the accurate camera model and drone model so that the software can accurately plan flight parameters.For the meaning of other route parameters, please refer to the flight parameter setting introduction



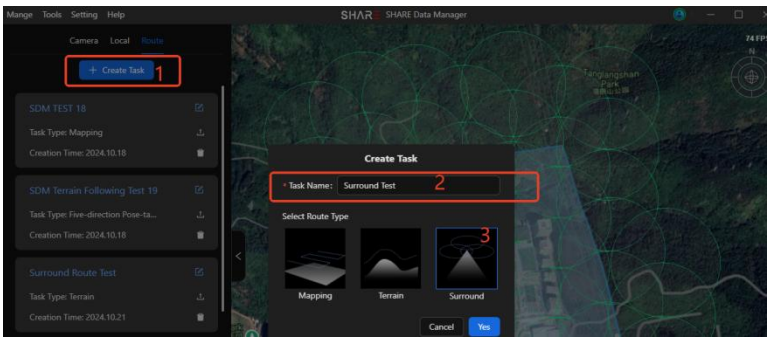


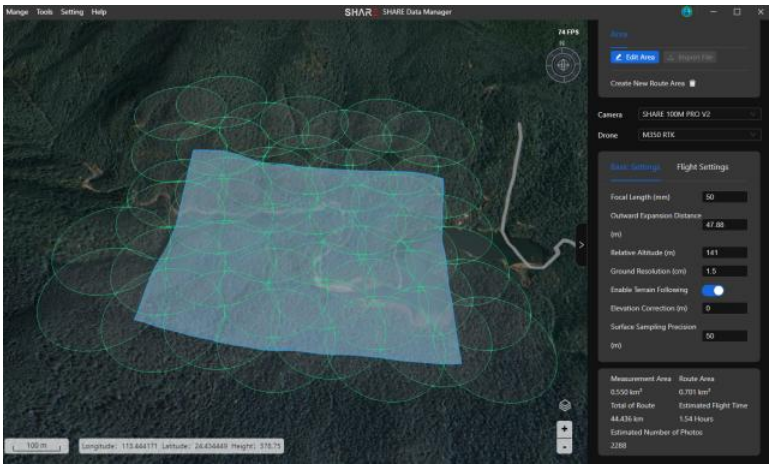
4.4 Surround Route

4.4.1 Surround Route Planning

Click “Create Task”, select route mode as Surround, and then enter the task name

Click "Edit Area" in the "Area" on the right to plan the survey area on the map. Left-click on the map to draw the area to be flown, right-click to end drawing the route, click the "Finish Editing" button to generate the route; you can also click "Import File" to import the KML or KMZ file to generate the route. According to the actual situation, set the camera model, aircraft model and route parameters, etc.





4.4.2 Route Parameter Settings

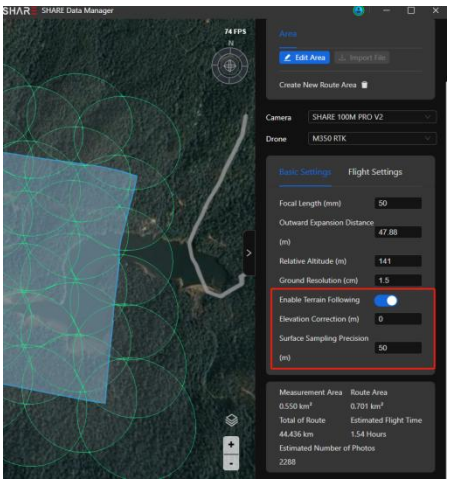
Enable Terrain Following: After turning on this button, a terrain-following circling route is generated, and can set Elevation Correction and Surface Sampling Precision. The route rules are the same as the terrain-following route. This button is on by default

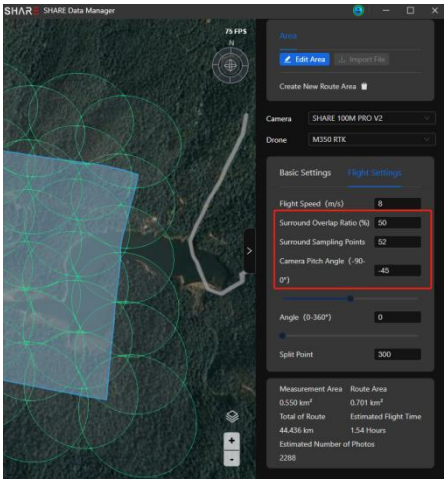
Surround Overlap Ratio: Set the overlap ratio between adjacent circling routes

Surround Sampling Points: Set the number of waypoints on a single loop route

Camera Pitch Angle： Set the pitch angle of the camera's gimbal, the default is -45°. Define the lens vertically downward as -90°, horizontally forward as 0°

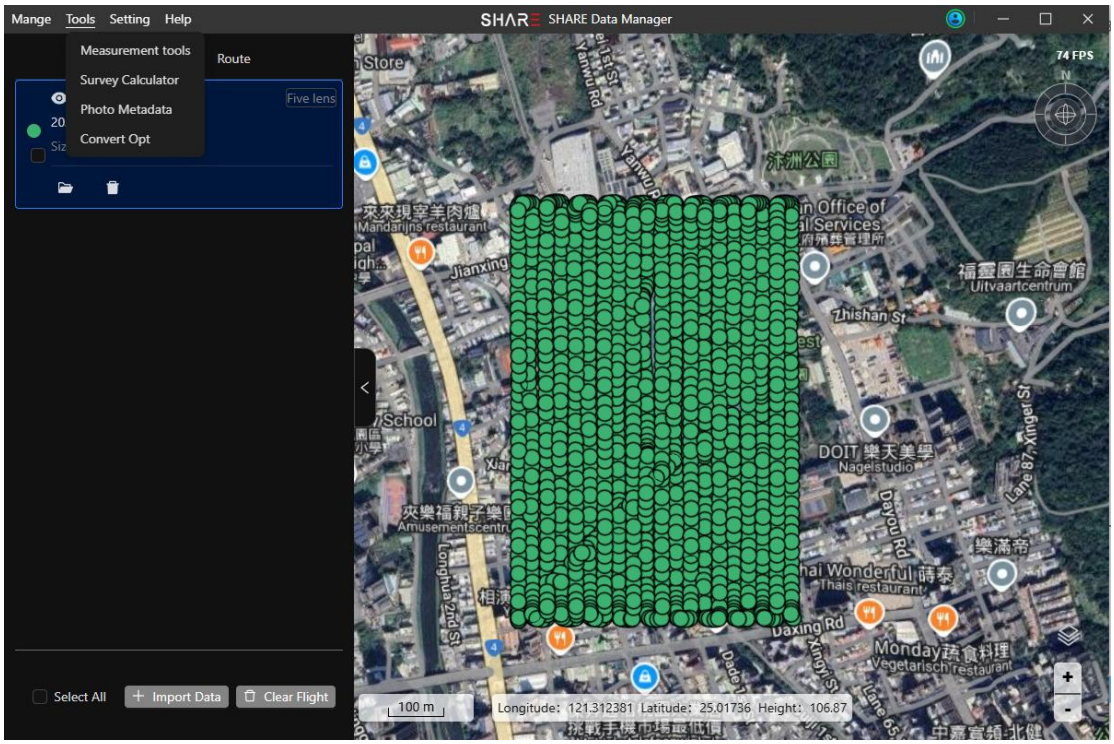
Pay attention to selecting the accurate camera model and drone model so that the software can accurately plan flight parameters.For the meaning of other route parameters, please refer to the flight parameter setting introduction of 4.2.2 Route Parameter Setting





5 SHARE Tool

The toolbox includes Measurement Tools, Survey Calculator, Photo Metadata and Convert Opt functions to help you complete aerial survey tasks better.



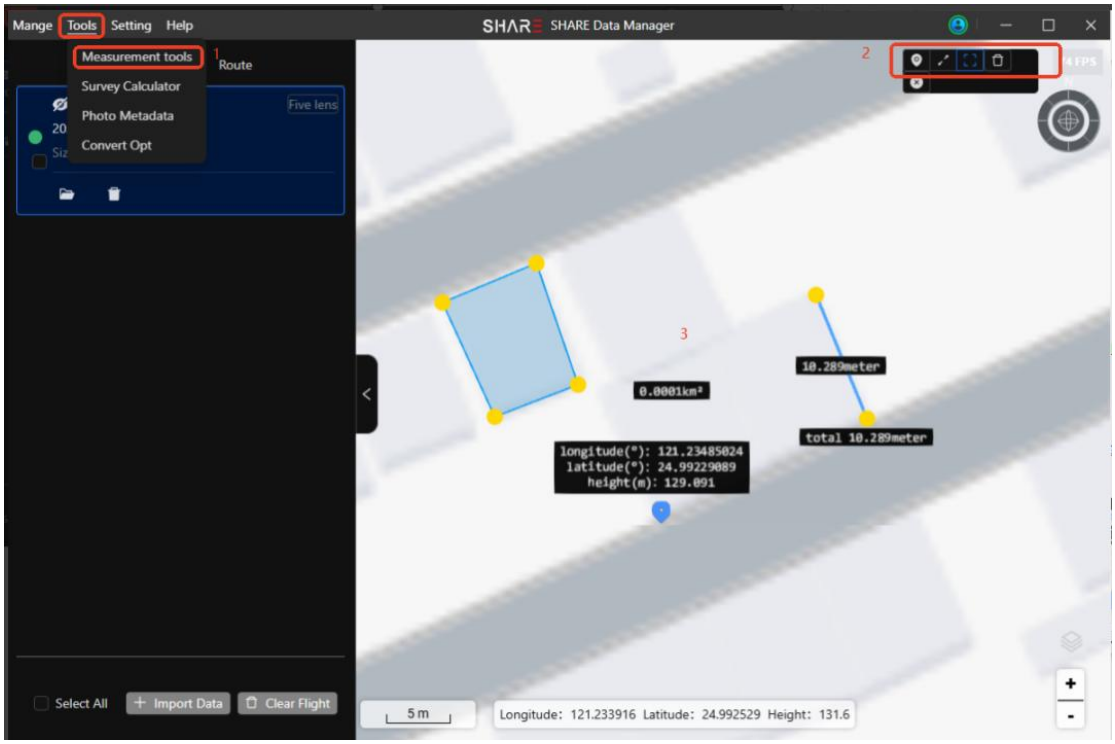
5.1 Measurement Tools

As shown in the figure, click the measurement tool in "Tool", and the measurement icon will be displayed in the upper right corner of the software, which can measure point position, distance, area.

Left-click on the map to draw the distance or area, right-click to end drawing.The measurement results can be checked in the Map

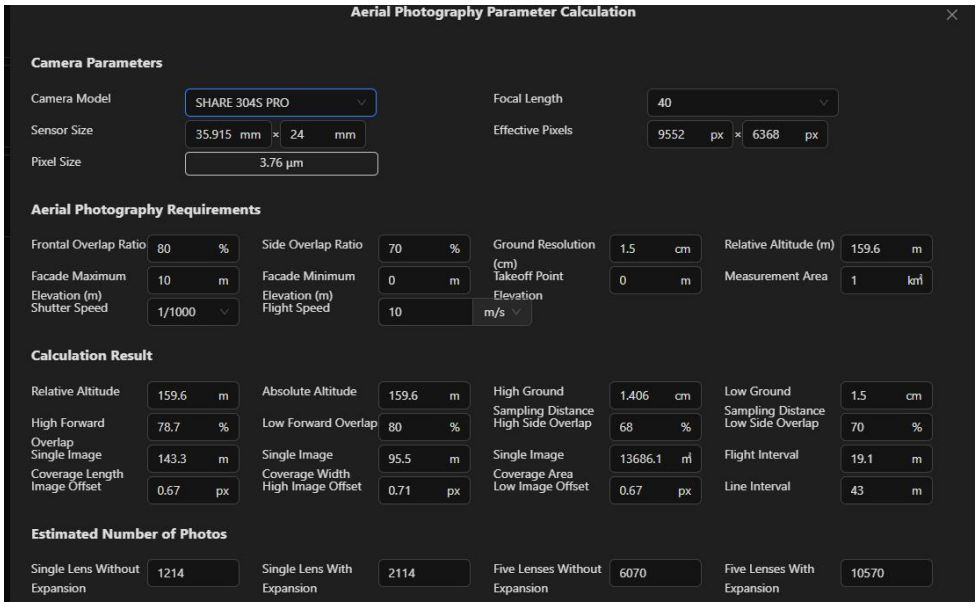
Click the "  " button to delete, which will delete all measurement results.

Click the "  " button to quit, which will exit the measurement function.



5.2 Survey Calculator

you can plan the flight parameters of the aerial photography project in advance, calculate the number of photos required for different survey areas and overlap rates, and estimate the workload of the project. As shown in the figure below, select the camera model, set the flight altitude and flight speed, overlap rate and other parameters for aerial photography, and check whether the overlap rate at high and low places, the interval between photos, etc. meet the requirements.

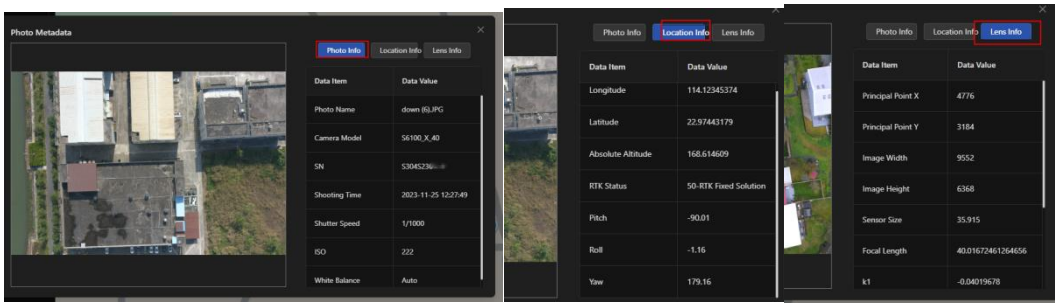


5.3 Photo Metadata

Drag the photo into the "Photo Metadata" tool. In Photo Info, you can view the model, serial number, shooting time, shutter speed, ISO, white balance and other information of the camera used to take the photo.

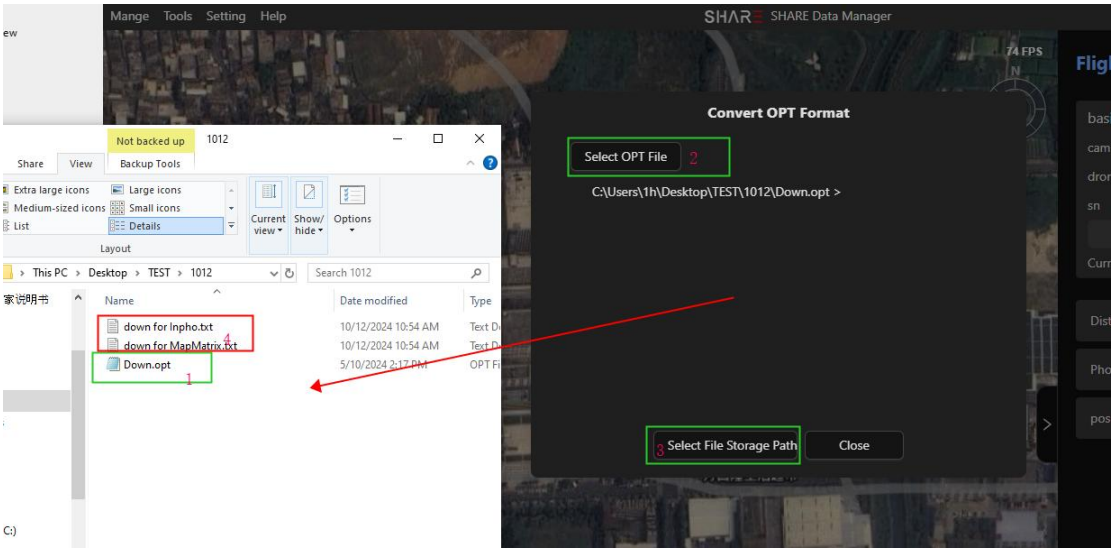
In Location Info, you can view the longitude, latitude, altitude, RTK status, and attitude angle (Pitch, Roll, Yaw) of the photo.

In Lens Info, you can view the distortion information in the photo, including Principal Point X, Principal Point Y, Image Size, Sensor Size, Focal Length, K1, K2, K3, P1, P2



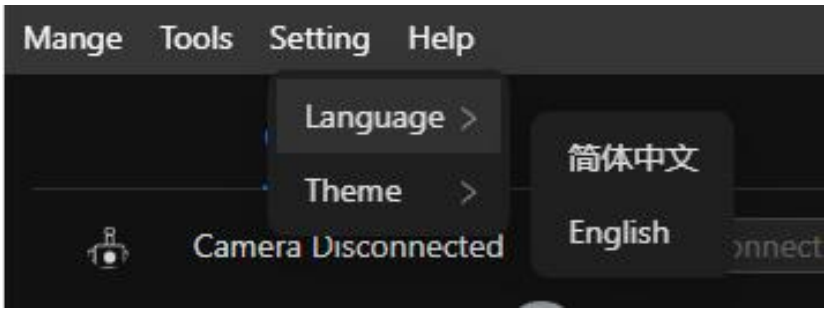
5.4 Convert Opt

Convert Opt tool is used to convert the distortion parameters in opt format to txt format for "Inpho" and "MapMatrix"



6 Software Settings

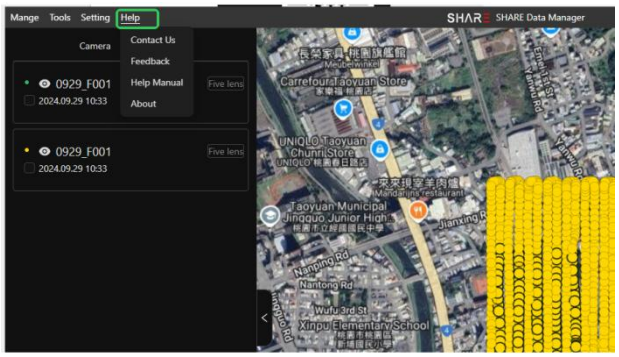
Click the “Settings” button to set the software display language (简体中文, English) and the software display theme (Light,Dark)

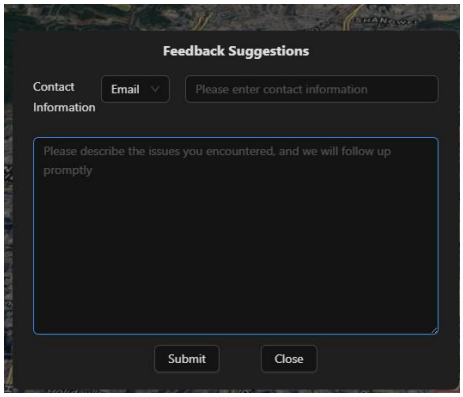


7 Contact Us and Feedback

Click "Help" to contact us, Submit feedback, download Help Manual (Operation Instructions), About(version ,Privacy Policy,Copyright. etc)

As shown in the figure below, if you have feedback, you can use the Feedback Suggestion function to fill in the corresponding content and submit, or call our service hotline directly.





As shown below, there is our company's hotline, service hours, email, address and official number and other information, which is for more information and contacting us.

SHAREUAV 赛尔

Official Website

YouTube

Facebook

If you have any questions about the software

Please contact us via below email:

technical.support@shareuavtec.com

SHAREUAV Ltd