Fluke VT report

User Manual

Thanks for buying this product. Please read this manual before use and then carefully collect it for future reference. The pictures are for reference only and the products are subject to the available products.

Contents

Chapter I Configuration of Software and Hardware 4

1.1. Software Environment 4

1.2. Hardware Environment 4

Chapter II Installation Instructions 5

2.1 Software Installation Steps 5

2.2 Common Problems and Solutions for Installation 7

Chapter III Operating Instructions 9

3.1 File 9

3.1.1 Import folder 9

3.1.2 Folder Management 11

3.1.3 Quick Report Wizard 13

3.1.4 File Edit 14

3.2 Picture 16

3.2.1 Import and Save Image 16

3.2.2 Edit Analysis Object 16

3.2.3 Edit Image 19

3.2.4 Export Data and Report 19

3.2.5 Color Band and Customized Color Band 20

3.2.6 Histogram, Graph and Object Data 21

3.2.7 3D Mode 23

3.2.8 Text Annotation and Voice Annotation 24

3.2.9 Analysis Object Settings 24

3.2.10 Isotherm Settings 25

3.2.11 Image Attribute 26

3.3 Report 28

3.3.1 Create New Report 29

3.3.2 Add Report Element 29

3.3.3 Edit Report Element 29
3.3.4 Report Property 30
3.3.5 Import Image 32
3.3.6 Create New Report Page 33
3.3.7 Delete Report Page 34
3.3.8 Save Report 35
3.3.9 Print Report 35
3.3.10 Close Report 35
3.3.11 Open History Record 35
3.3.12 Manage Report Template 36
3.4 Image Optimization 37
3.4.1 Import File and Edit File 37
3.4.2 Rebuild Super-resolution 37
3.4.3 Create Trend Analysis 38
3.4.4 Setting 39
3.4.5 Help 44
Chapter IV Common Use Problems 45
4.1. Device Connection Problems 45
4.1.1. USB Connection 45
4.2. How to Install Programs under Restricted Accounts 45
4.3. How to Restore Default Settings 45
4.4. Why the picture cannot be opened 45

Chapter I Configuration of Software and Hardware

1.1. Software Environment

Description	Detailed requirements
Operating environment	Microsoft Visual C++2010-2015 x64 Redistributable; DirectX module
Operating system	Windows7–Windows10 64-bit operating system
Other software	PDF, Microsoft office (or WPS office)

1.2. Hardware Environment

Description	Detailed requirements
CPU	Intel i3
RAM	8G and above
Graphics card	2G and above (supporting OpenGL)
Hard disc	Above 40G, and the remaining space of the installation directory disk shall be 2G or above
Mouse, keyboard	3-key mouse, PS/2 keyboard

Chapter II Installation Instructions

2.1 Software Installation Steps

1. Double-click or right-click the installation program of .exe to enter the language selection interface, as shown in Figure 2-1.

Figure 2-1 Selecting Language

2. Select a language and click OK to enter the installation wizard interface, as shown in Figure 2-2. Clicking Cancel will end the installation.

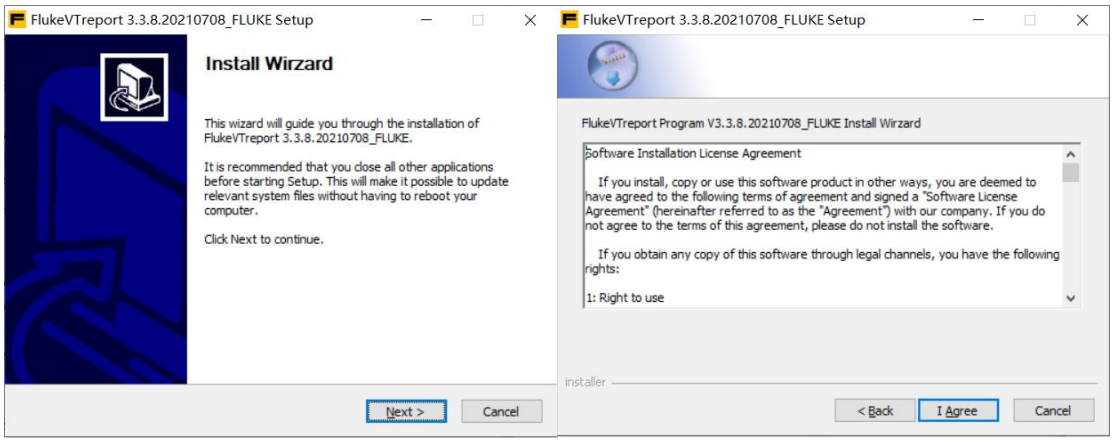


Figure 2-2 Installation Wizard

3. Click “Next” to enter the software installation license agreement interface, as shown in Figure 2-3. Clicking “Cancel” will end the installation.

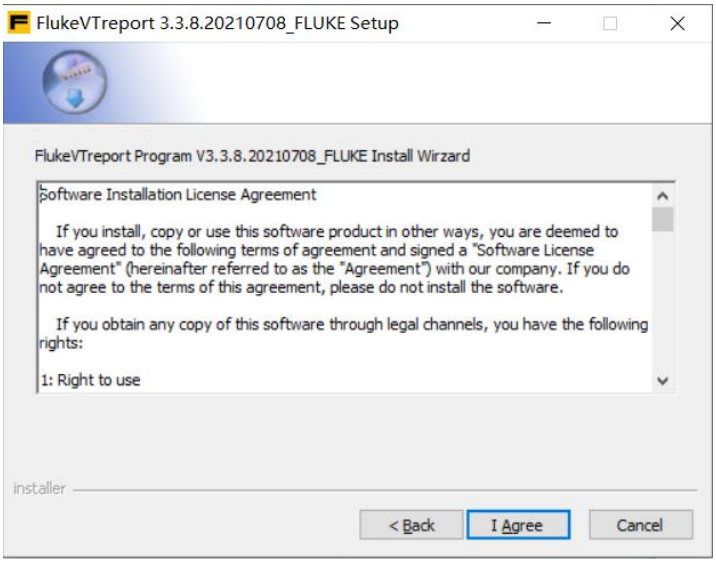


Figure 2-3 Installation License

4. Clicking “Back” will return to the installation wizard interface. Click “I Accept” to enter the installation path selection interface, as shown in Figure 2-4. Clicking “Cancel” will end the installation.

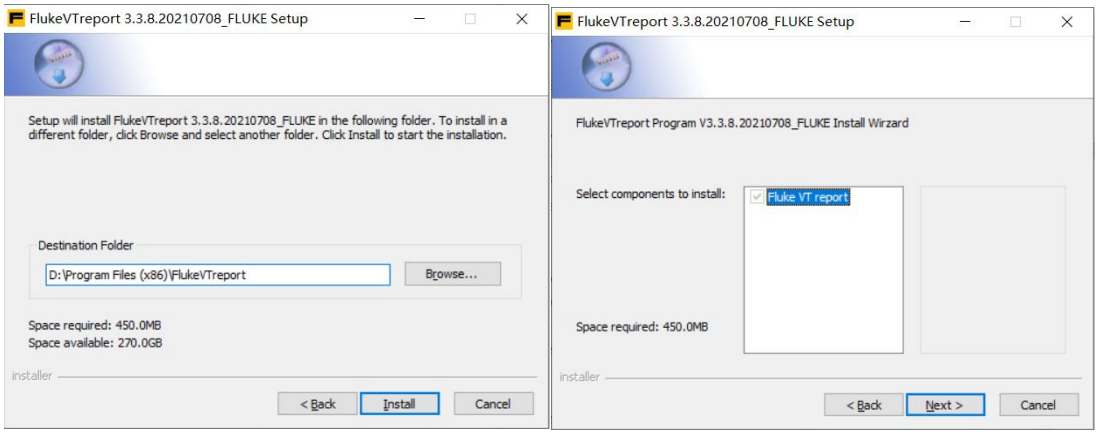


Figure 2-4 Installation Path Selection

5. Clicking “Back” will return to the installation wizard interface. Click “Install” to enter the installation progress interface, and wait for the installation to be completed, as shown in Figure 2-5. Click “Cancel” will end the installation.

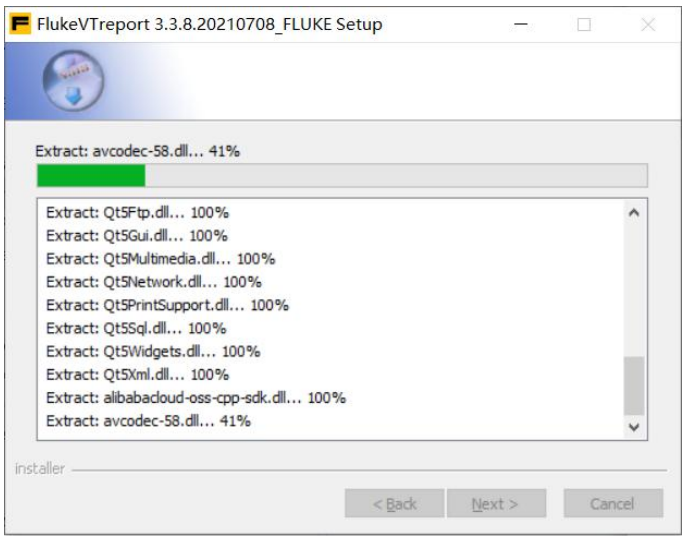


Figure 2-5 Install in Progress

6. Click “Close” when installation is completed, as shown in Figure 2-6.

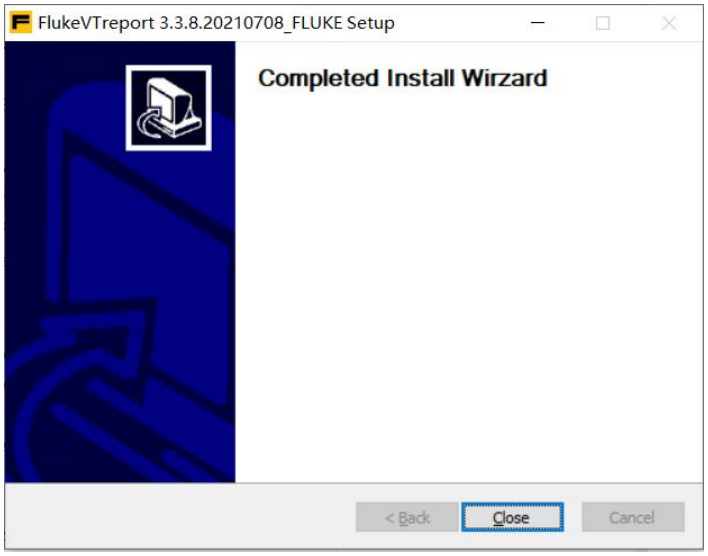


Figure 2-6 Installation Complete

2.2 Common Problems and Solutions for Installation

1. Error 1 may appear when you double-click the shortcut to run the program,

prompting “MSVCR120.DLL cannot be found”, as shown in Figure 2-7.

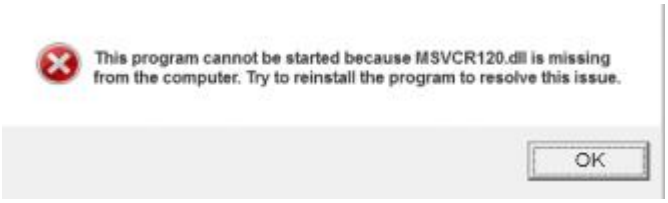


Figure 2-7

Solution: click vc2013_redist.x64.exe in the installation directory “redist” folder to install the runtime library. If any problem is not solved, please solve it according to the solution of Problem 2.

2. Error 2 may appear when you double-click the shortcut to run the program, prompting that “the application cannot start normally (0xc000007b)”, as shown in Figure 2-8.

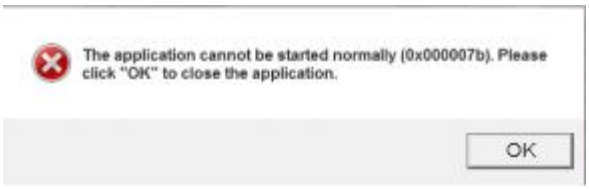


Figure 2-8

Solution: Step 1, unzip DirectXRepair.zip file in the installation directory “redist” folder, as shown in Figure 2-9.

Figure 2-9

Step 2, run DirectX Repair.exe (run DirectX_Repair_win8_win10.exe for Windows 8 or Windows10) to enter the repair interface.

Step 3, click “Detect and Repair” to repair the system DirectX (the computer must be in a networked state). Run the “Fluke VT report” after repairing.

Chapter III Operating Instructions

3.1 File

In the document management center, users can manage IR thermographs and generate quick reports.

3.1.1 Import folder

Data import is to realize the import and display of local folder resource structure directory, as shown in Figure 3-1.

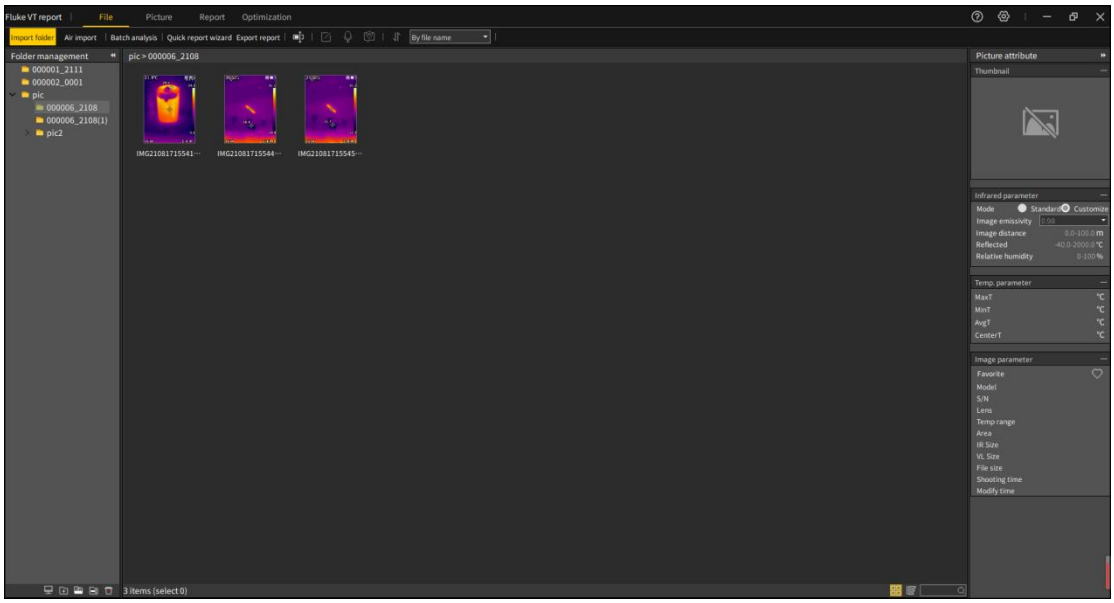


Figure 3-1 Import folder

1. Import folder

Click “Import Folder” in the menu bar, select the folder to be imported, and the imported folder will be displayed in the left folder area; You may also drag and drop to import, or drag the folder to the left folder area;

At present, it supports up to 20 top-level nodes with up to 100 subfolders under each node, and the middle image display interface displays up to 10,000 images.

2. Over-the-air import

First, connect the device through WiFi、 USB(or directly through the network cable);

Then, select a folder, click “Air import”, and then an over-the-air import interface will pop up.

Choose the images or videos to be exported, and click Refresh to see the file list;

Check the files you need to download, as shown in Figure 3-2.

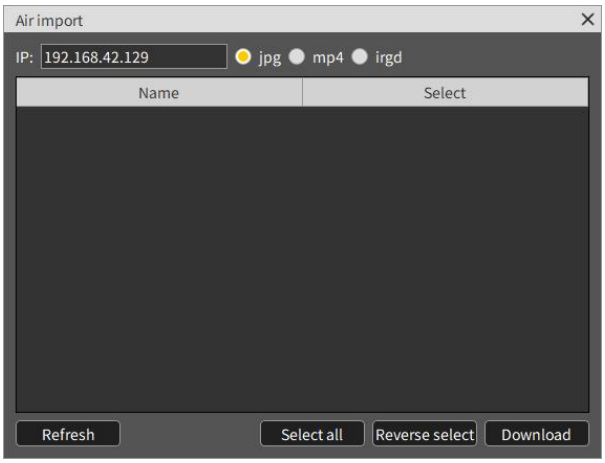


Figure 3-2 Over-the-air Import

3. Batch analysis

Analysis objects can be set for up to 6 images at the same time. View the analysis of IR thermographs taken by different parts of device in the same period or the same device in different periods, as shown in Figure 3-3&3-4.

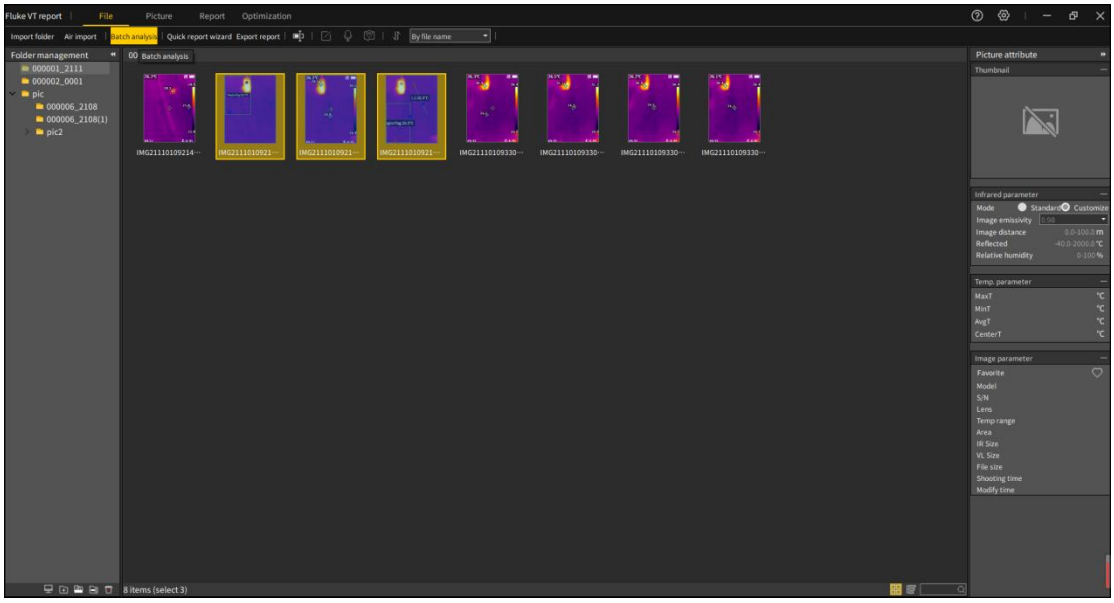


Figure 3-3 Batch Analysis

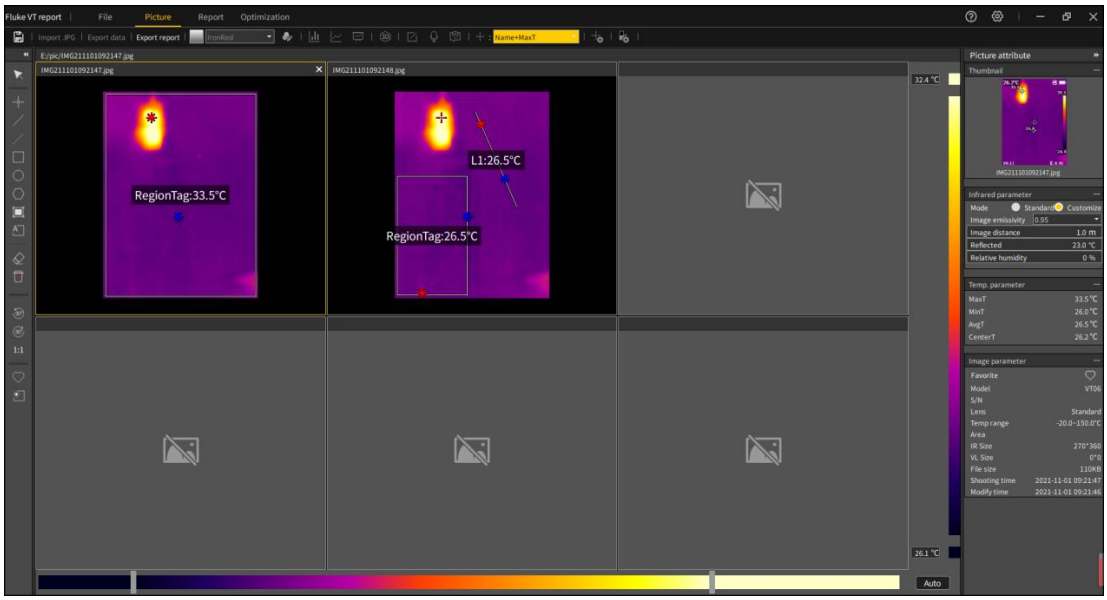


Figure 3-4 Batch Analysis

Select multiple infrared images (only infrared image analysis will be carried out, and the maximum number is 6. Once the number exceeds, the first 6 infrared images will be adopted in the order of selection), and click Batch Analysis to enter the image batch analysis interface for analysis.

3.1.2 Folder Management

You can import a folder on your local computer and display the image information of the current folder. You can create, delete and modify folder information, as shown in Figure 3-5.

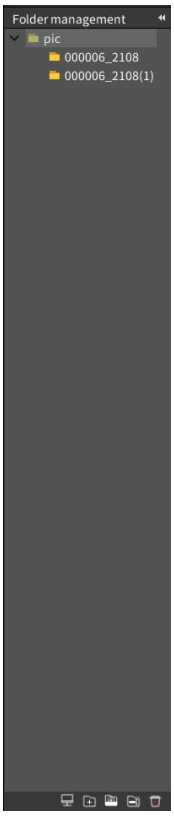


Figure 3-5 File Management

1. New folder

Click New Folder【】 to create a new folder in the currently selected directory structure, and meanwhile a new folder will be created in the default path of the local computer.

2. Create a new subfolder

Select a folder and click【】to create a new folder node under the currently selected folder, and meanwhile a new folder will be created under the current folder path.

3. Delete folder (associate local source file settings)

Select the folder node to be operated, and click Delete Folder【】 (if deleting local source files is associated in 【Settings】–【General Settings】) to delete files in the local computer.

4. Rename folder

Select the folder to be renamed, and click Rename Folder【】.

3.1.3 Quick Report Wizard

Quickly export the report content according to the currently viewed infrared image, as shown in Figure 3-6

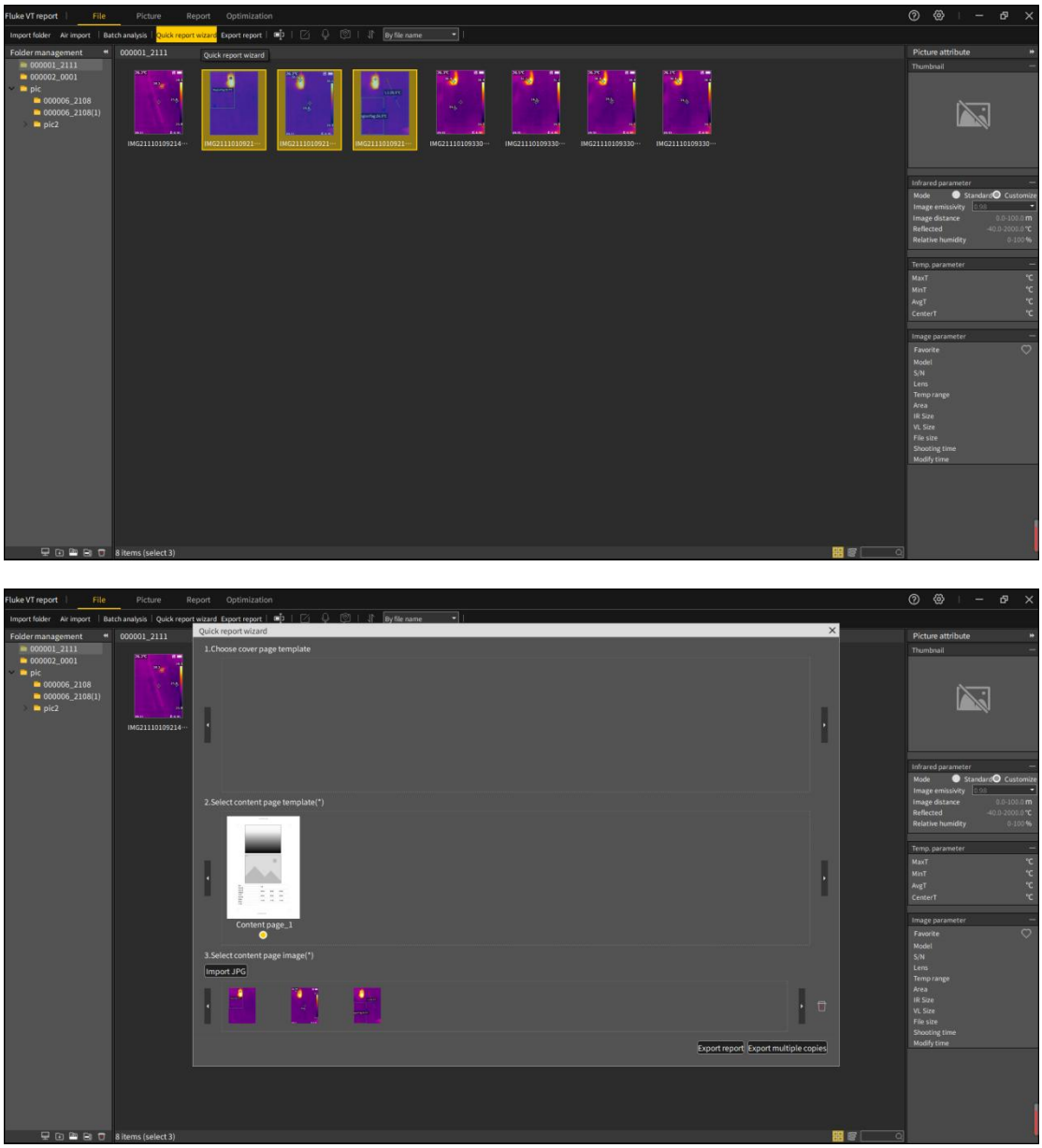


Figure 3-6 Quick Report Wizard

1. Quick report wizard

Select the images that are used to generate the report (up to 20 images are supported);

Click “Quick Report Wizard”, select the cover page template (optional) and the

content page image (mandatory); Click Export Report; select save file format and file name of export report.

You may also choose to export multiple copies. According to the name+number, one infrared image will generate one report file.

2. Export to report

Select the image (optional) to generate the report, click “Export Report” to enter the report editing interface, where a new page will be automatically created to load the selected image, and then the report editing operation can be performed normally.

3.1.4 File Edit

You can rename file names in batches, add text annotation, view voice annotation, and view images according to their types.

1. Modify file name

Select the image to be modified (multiple images can be selected), click the Modify File Name button【】, and enter the modified name, as shown in Figure 3-7

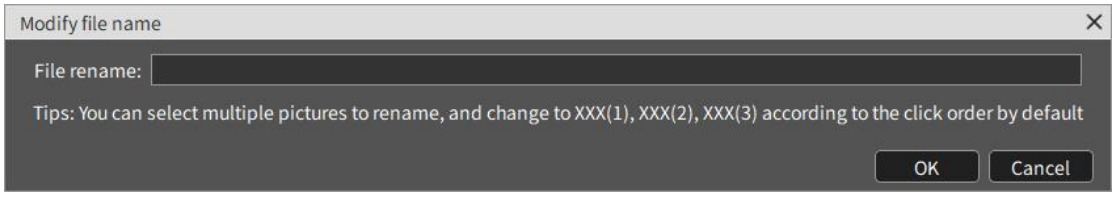


Figure 3-7 Batch Modification of File Names

2. Text annotation

Select an image and click the button【】to modify the text annotation and save them in the image, as shown in Figure 3-8

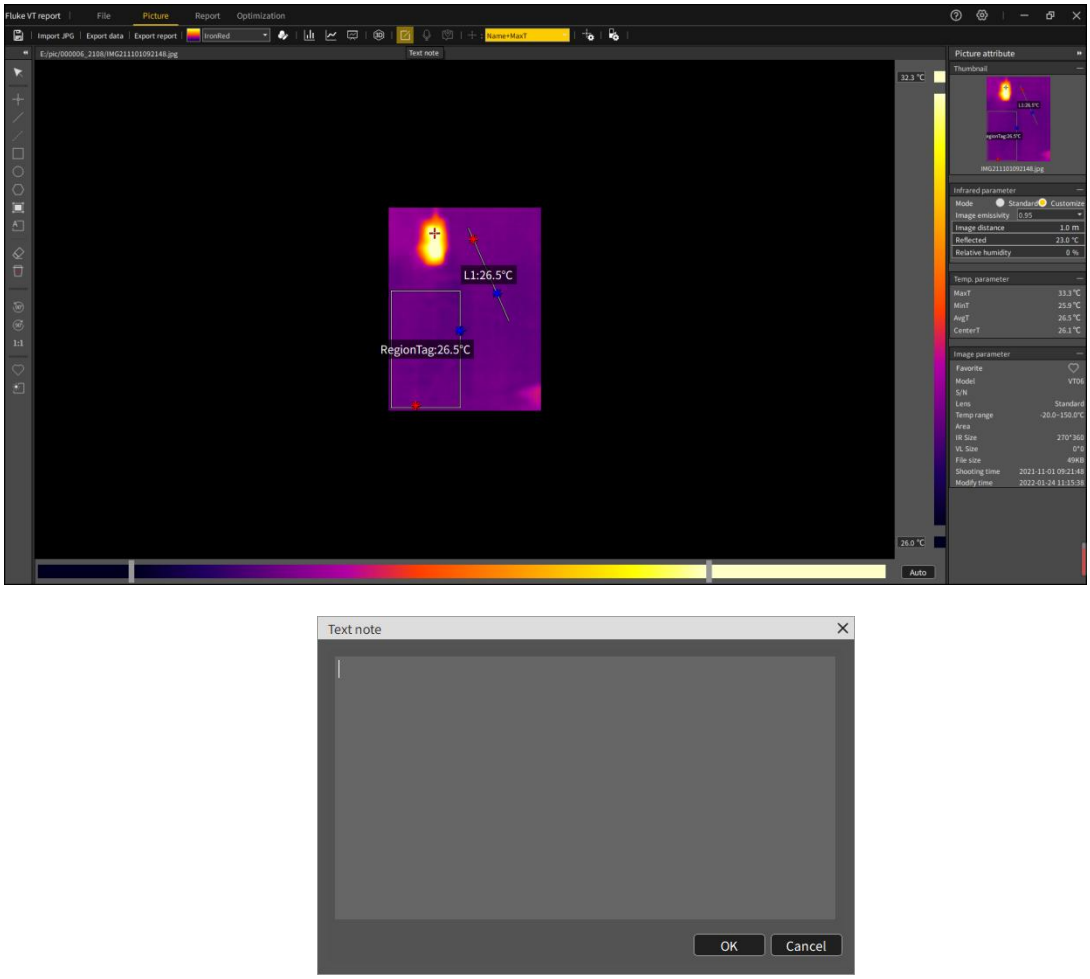


Figure 3-8 Text Annotations

3. Voice annotation

If 【】is operable, it means that the image has voice annotations. Click 【】to play voice information. Clicking the button again will stop playing.

4. File sorting

Files are loaded and sorted by file names by default. You can choose one sorting method to sort.

5. File management (list, thumbnail, search)

In file management, you can switch the viewing mode of display images: , thumbnail or list.

Typing the search content in the search box and press【Enter】to search.

3.2 Picture

In “Picture”, users can view the related properties of infrared images and freely add various analysis objects for precise analysis. View related histograms, temperature curves and object data, and set custom color bands, edit text annotation information, isotherm analysis and other related functions, as shown in Figure 3-9.

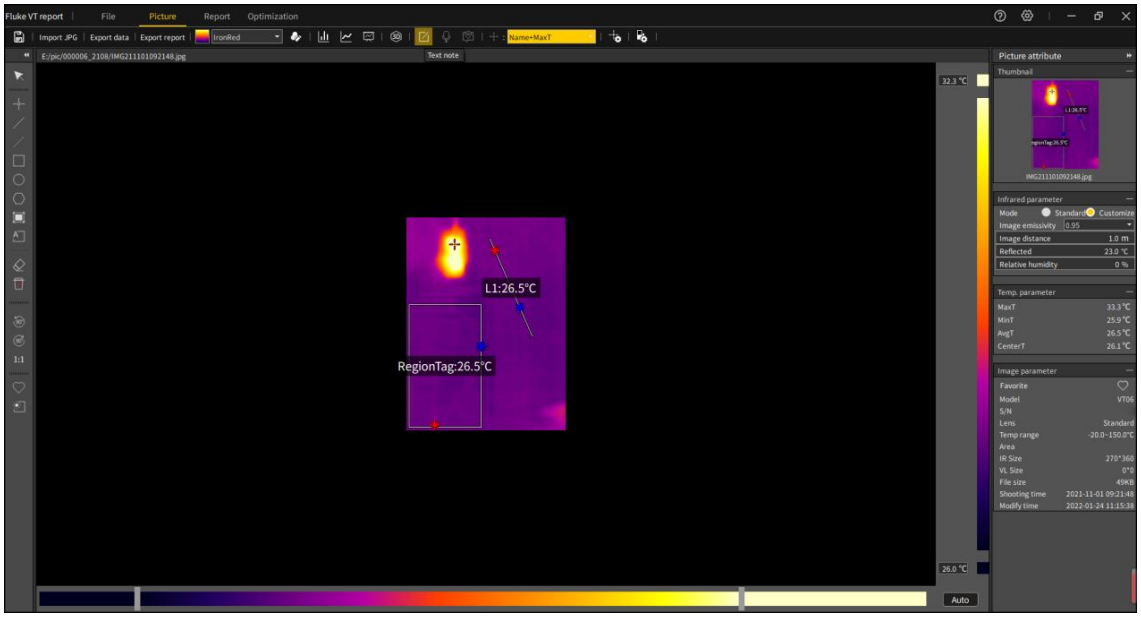


Figure 3-9 Image Analysis

3.2.1 Import and Save Image

Click the “Import Image” button【Import JPG】 to pop up the file manager, select the specific image, and click “OK”. The software will open the selected image, and the image will be displayed in the middle of the interface with specific resolution. The acquired image parameters will be displayed in the right property bar.

3.2.2 Edit Analysis Object

1. Add a line analysis object

On the left toolbar, click the “Draw Line Temperature Scale” button【】 (or use the corresponding shortcut keyboard【L】) to draw lines in the image. Repeat the

operation to draw the polyline temperature scale. You may move the mouse out of the image area or click the right mouse button to end drawing.

2. Add a point analysis object

In the left toolbar, click the "Draw Temperature Scale" button【】 (or use the corresponding shortcut), move the mouse to the area where you want to add a temperature scale in the image, press the left mouse button and release the left mouse button to end drawing.

3. Add a temperature difference line object

Select "Temperature Difference Line"【】 in the left toolbar, then press the left mouse button on the image, move the mouse, draw the temperature difference line analysis object, and release the left button to end drawing.

4. Add a rectangular object

Select "Rectangle" 【】 in the left toolbar, then press the left mouse button on the image, move the mouse, draw the rectangular analysis object, and release the left button to end drawing.

5. Add a circle object

Select "Circle"【】 in the left toolbar, then press the left mouse button on the image, move the mouse, draw the circular analysis object, and release the left button to end drawing.

6. Add a polygon object

Select "Polygon"【】 in the left toolbar, then click the left mouse button on the image to generate the first point, move the mouse and click the left mouse button to generate the next point, and repeat to generate the vertex of polygon. Click the right mouse button to draw the polygon analysis object, as shown in Figure 3-x.

7. Automatic stroke

Select "Auto Stroke"【】 in the left toolbar, click the left mouse button on the

image and press and draw a rectangular area, so that the image in the area will be automatically stroked to draw the analysis object.

8. Phase A/Phase B/Phase C analysis object

Click【 】 to quickly draw the analysis objects of Phase A, Phase B and Phase C.

9. Edit analysis object

Select an analysis object, press the left mouse button, move the mouse to change the position or size of the analysis object, and release the left mouse button to end editing.

10. Delete a selected analysis object

Select an analysis object and click【 】 to delete the selected analysis object.

11. Delete all analysis objects

Click【 】 to delete all analysis objects.

12. Rotate 90º counterclockwise/90º clockwise

Click【 】or【】 to rotate the image.

13. 1:1 restore images

Click【 】 to restore the zoom-in image.

14. Collection tag

Click【 】 to collect the tagged images, which is convenient to search files according to their collection types.

15. Area dimming

Select an analysis object and click 【 】 to perform area dimming on non-point

analysis objects.

3.2.3 Edit Image

1. Level and Span

In Image Analysis, drag the sliders of Level and Span below (the slider on the left is the minimum dimming value and the slider on the right is the maximum dimming value) to limit the dimming area of the image to the temperature area of interest.

2. Revolve

In Image Analysis, click the "Revolve Counterclockwise" button 【 】 or "Revolve Clockwise" button【 】 (or use the corresponding shortcut), and the image will be rotated 90° in the selected direction.

3. Restore

In Image Analysis, click the "Restore Image Size" button 【1:1】 (or use the corresponding shortcut), and the image will be restored to its original resolution.

4. Area dimming

In Image Analysis, select an analysis object and click the "Area" button【 】(or use the corresponding shortcut), and the maximum and minimum dimming values of the image will become the highest and lowest temperatures of the analysis object.

3.2.4 Export Data and Report

1. Export data

Click Export Data in Image Analysis, select the specific data function, data object, data export format and data export location, and the corresponding data file will be generated under the selected path, as shown in Figure 3-10

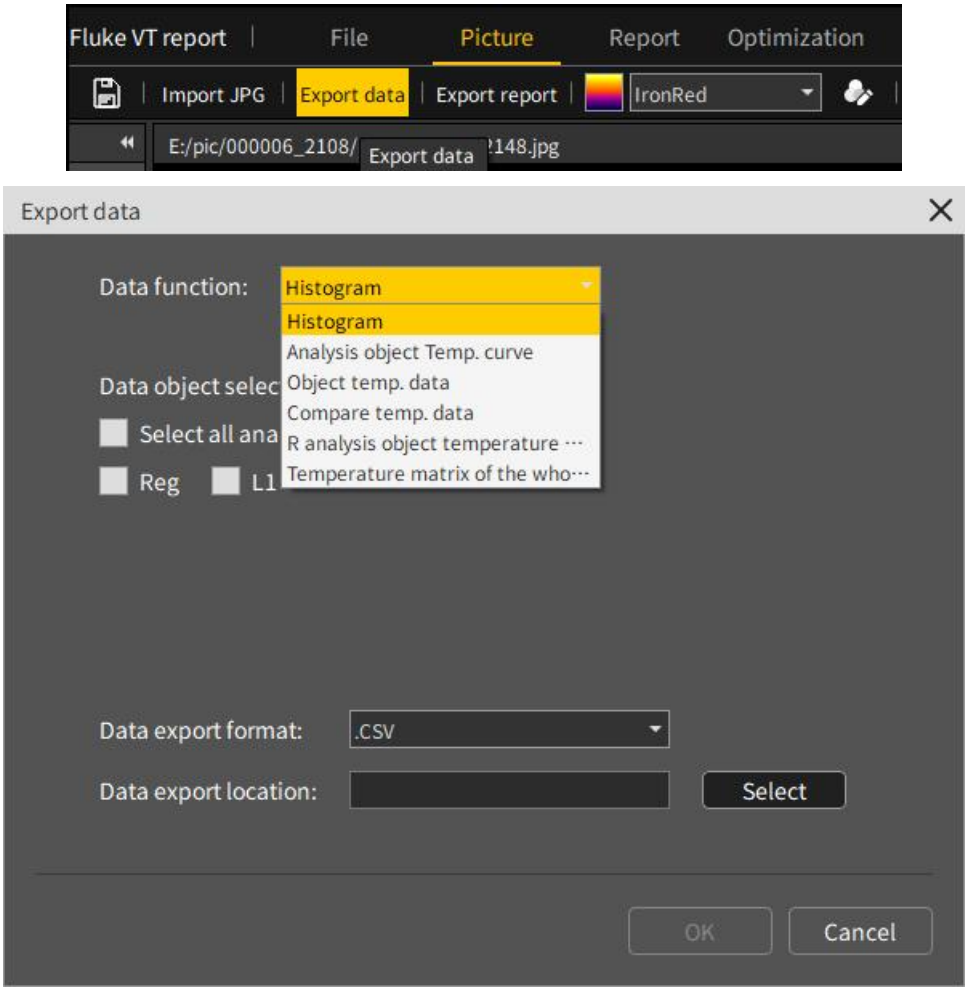


Figure 3-10 Export Data

2. Export report

In Image Analysis, click Export Report to enter the report editing interface, and use the selected template to generate a new report page.

3.2.5 Color Band and Customized Color Band

Adjust the pseudo color information of the image by selecting the color band type or the custom color band.

1. Color Band

In “Image Analysis”, click the “Color Band” drop-down box【

】, select the desired color band in the drop-down box, and the image will be superimposed with the new color band.

2. Customize the Color Band

In “Image Analysis”, click the “Custom Color Band” button【 】, and adjust “Hue”, “Saturation” and “Brightness” to adjust the image to the desired pseudo-color state.

3.2.6 Histogram, Graph and Object Data

View the relevant temperature data of the specified analysis object, as shown in Figure 3-11.

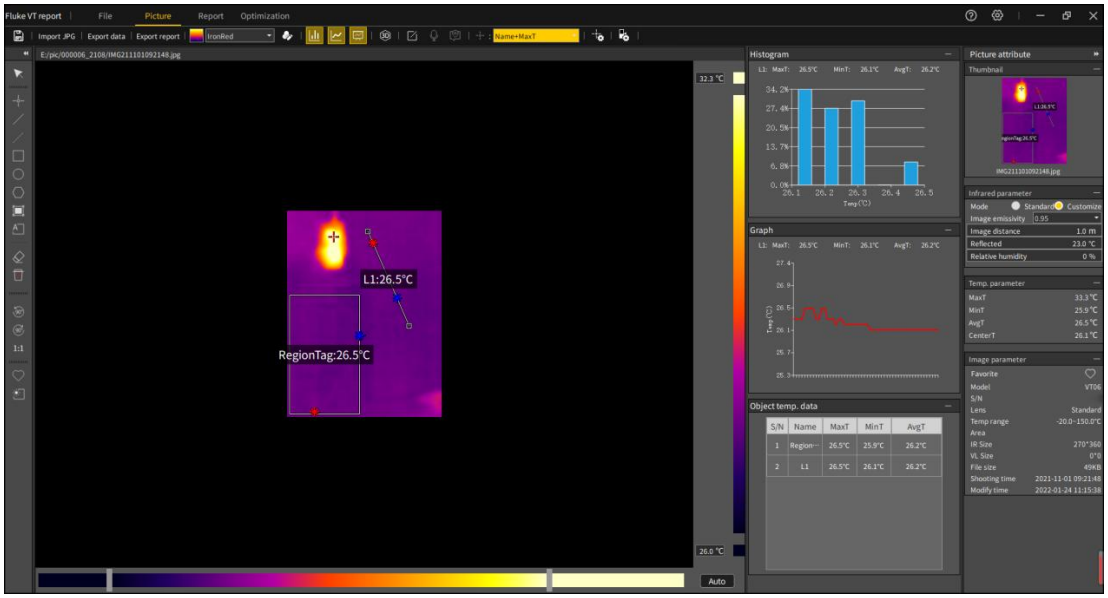


Figure 3-11 Histogram, Line Chart and Object Data

Histogram

Select any non-point analysis object and click the histogram【 】 button on the toolbar, then the histogram information will be displayed immediately on the right side of the image area, as well as the name, highest temperature, lowest temperature and average temperature of the selected analysis object. Click any bar to display the temperature and percentage represented by the current bar, as shown in Figure 3-12:

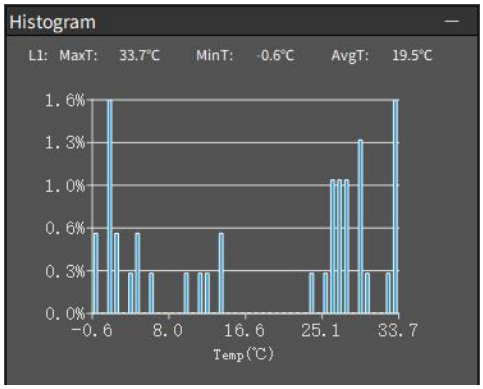


Figure 3-12 Histogram

Temperature curve

Select any line analysis object and click the temperature curve【 】 button on the toolbar, then the temperature curve information will be displayed immediately on the right side of the image area, as well as the name, highest temperature, lowest temperature and average temperature of the selected analysis object, as shown in Figure 3-13:

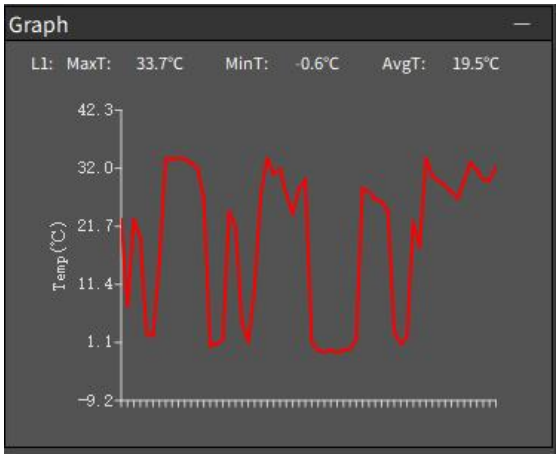


Figure 3-13 Temperature Curve

Object data

Click the temperature curve【 】 button on the toolbar, and all the analysis object information in the image will be displayed immediately on the right side of the image area, including the name of the analysis object, the highest temperature, the lowest temperature and the average temperature, as shown in Figure 3-14:

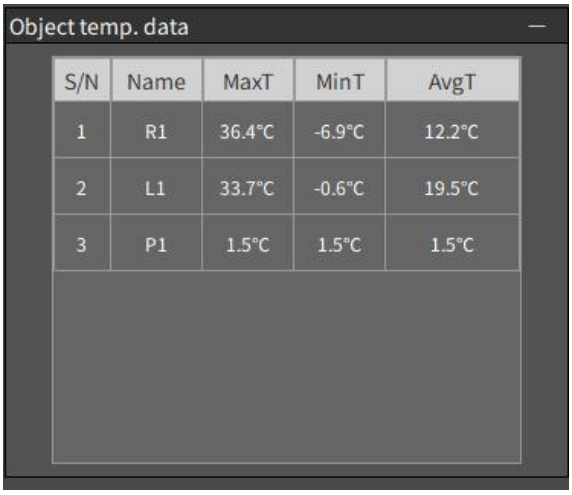


Figure 3-14 Object Data

3.2.7 3D Mode

Click the【 】 button, and the current infrared image will be displayed in 3D mode directly, under which you can view the temperature 3D distribution area of the current infrared image more intuitively.

Click the left mouse button to display the temperature information of the selected point, use the right mouse button to rotate the 3D image, and use the mouse wheel to zoom in and out of the 3D image, as shown in Figure 3-15:

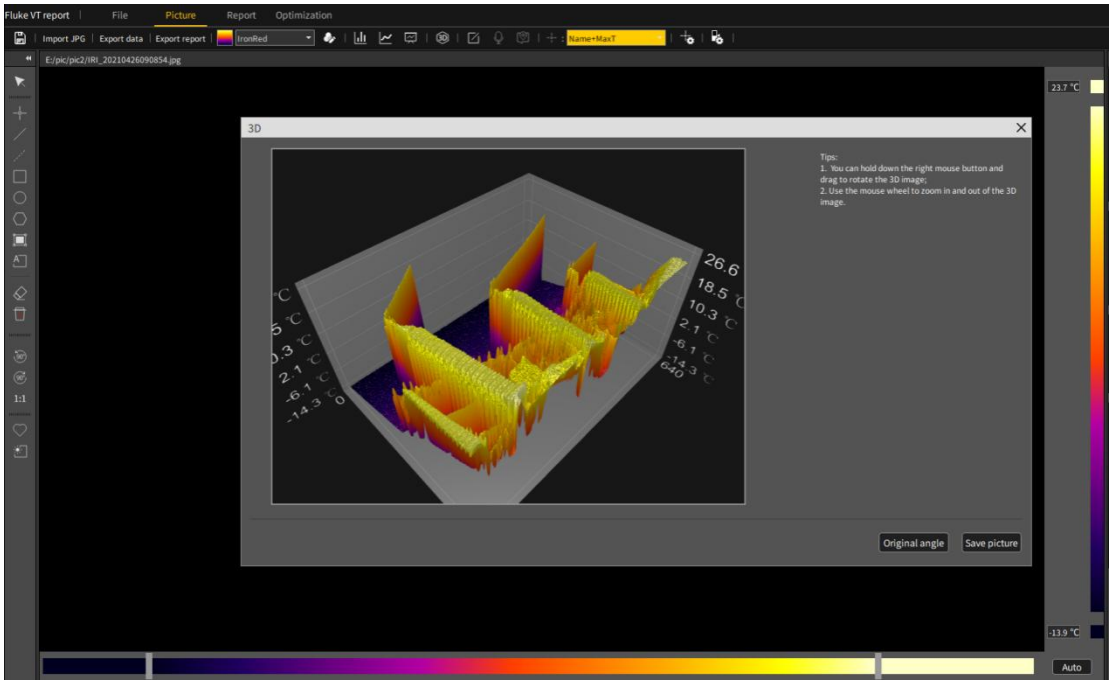


Figure 3-15 3D Mode

Click “Restore View” button to restore the operated 3D image to the original view.

Click “Save Image” button to save the current 3D image in JPG format.

3.2.8 Text Annotation and Voice Annotation

1. Text annotation

In “Image Analysis”, click the “Text Annotation” button【】 to annotate, edit and view the infrared images.

2. Voice annotation

In “Image Analysis”, if the image contains voice annotation information, click “Voice Annotation” to play voice annotation.

3.2.9 Analysis Object Settings

In “Image Analysis”, you can click the “Analysis Object Settings” button 【】 to set the name, display orientation, emissivity type, emissivity, distance, humidity, reflection temperature, alarm type, high temperature alarm threshold and low temperature alarm threshold of a single analysis object. This makes the temperature measurement more accurate, as shown in Figure 3-16.

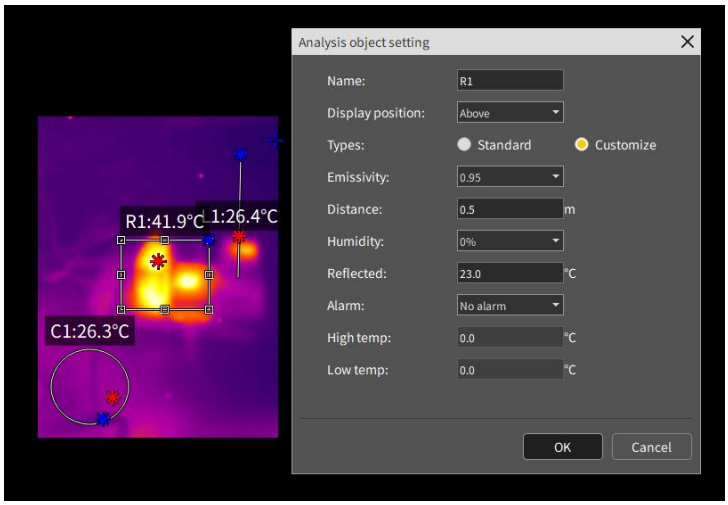


Figure 3-16 Analysis Object Settings

3.2.10 Isotherm Settings

In “Image Analysis”, you can click the “Isotherm Settings” button【 】 to set the relevant information of isotherm, which is convenient for viewing and analyzing the high-temperature and low-temperature areas of the current image, as shown in Figure 3-17.

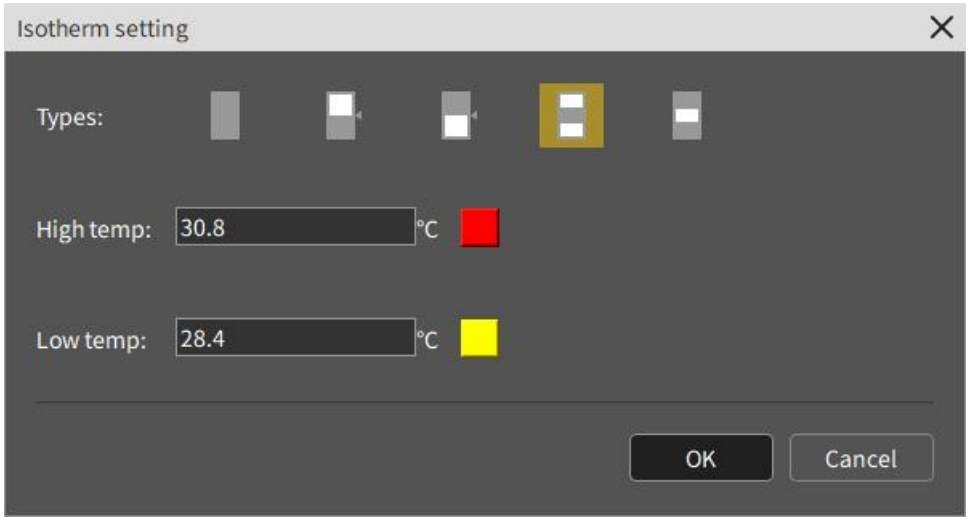


Figure 3-17 Isotherm Settings

High isotherm:

When the selection type is high temperature isotherm, the corresponding high temperature threshold can be entered and the corresponding filling color can be selected. The area above the threshold will be filled with the selected color in the image.

Low isotherm:

When the selection type is low temperature isotherm, the corresponding low temperature threshold can be entered and the corresponding filling color can be selected. The area below the threshold will be filled with the selected color in the image.

Intra-zone isotherm:

When the selection type is isotherm in the intra-zone isotherm, you can enter the corresponding interval threshold and select the corresponding filling color. The image

area between the thresholds will be filled with the selected color.

Extra-zone isotherm:

When the selection type is the extra-zone isotherm, the corresponding high temperature and low temperature thresholds can be entered, and the corresponding filling color can be selected. The image areas above the high temperature threshold will be filled with the selected color, and the areas below the low temperature threshold will also be filled with the selected color.

3.2.11 Image Attribute

You can view the parameter information, temperature measurement parameter information and corresponding image properties of the current infrared image, as shown in Figure 3-18.

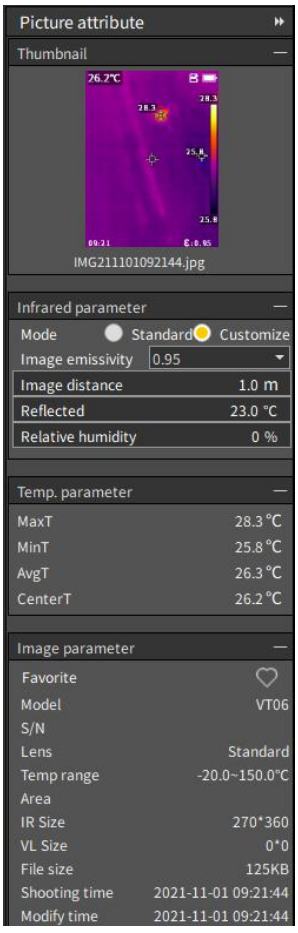


Figure 3-18 Image Properties

1. Thumbnails

Here is the thumbnail of the infrared picture, as shown in Figure 3-19

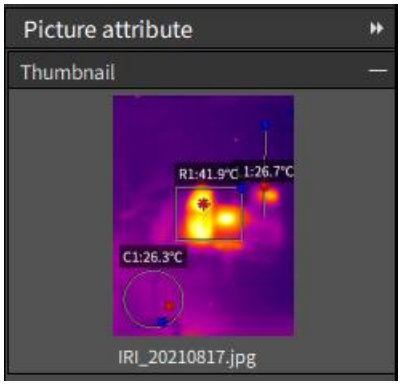


Figure 3-19 Thumbnail

2. Infrared parameters

Here are the temperature measurement parameters of the image. If you modify the parameters here, the temperature of the image will change accordingly, as shown in Figure 3-20.

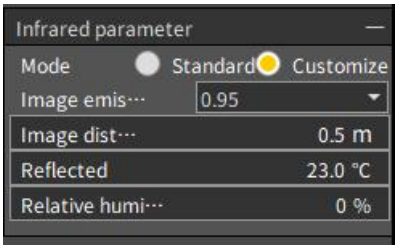


Figure 3-20 Infrared Parameters

3. Temperature measurement parameters

Here is the temperature information of the image, including the highest temperature, lowest temperature and average temperature of the whole image, as shown in Figure 3-21.

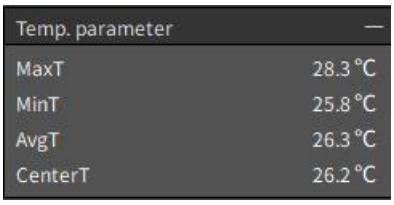


Figure 3-21 Temperature Measurement Parameters

4. Image parameters

Basic parameter information of an image includes collection status, equipment

model, lens, temperature measuring range, temperature measuring area, infrared resolution, white light resolution, file size, shooting time and modification time, as shown in Figure 3-22.

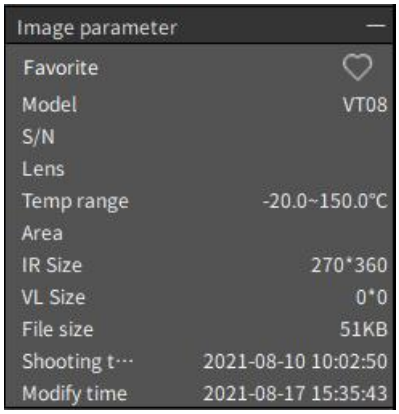


Figure 3-22 Image Parameters

3.3 Report

It is allowed to customize and edit report contents and page elements, and save them as Word or PDF files, as shown in Figure 3-23

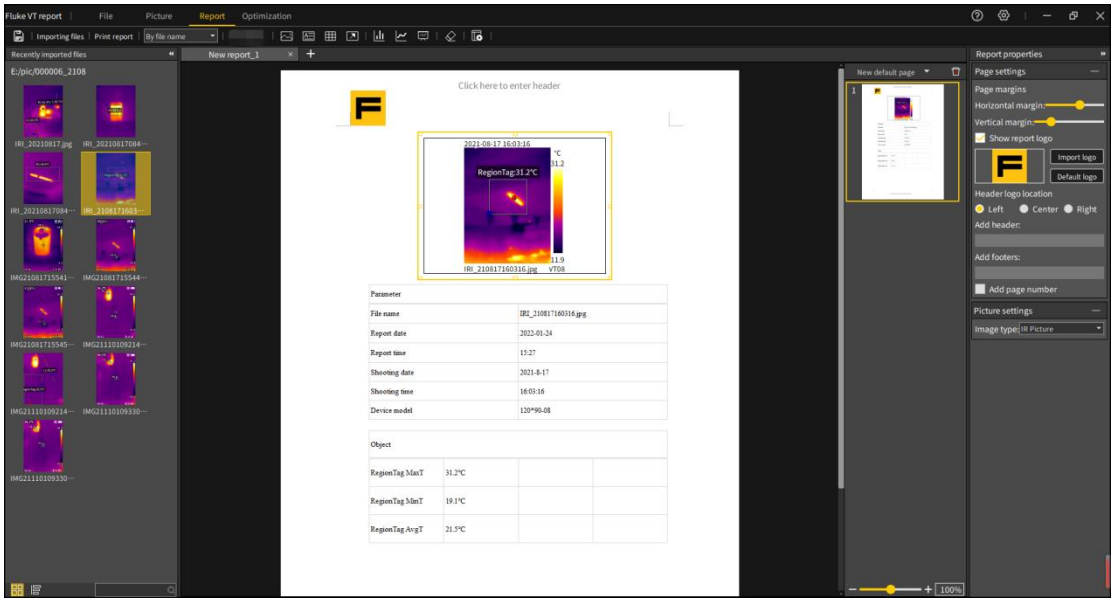


Figure 3-23 Report Edit

In Report Edit, enter the report editing function page. It is the image list bar on the left side of the page and displays the images in the folder recently opened by File

Management;

The middle bar of the page is the report file currently being edited; The right area in the middle of the page is the report single page management bar, where each single page in a report file can be managed;

It is the report property bar on the right side of the page, where you can set the properties of report pages and report elements.

3.3.1 Create New Report

Click the【 】button in the title bar of the report file to add a blank report file.

3.3.2 Add Report Element

1) Click "Add Image" ,"Add Table" ,"Add Text" ,"Add Histogram" ,"Add Temperature Curve" ,"Add Object Data" in the function menu bar (or click their corresponding shortcut keys) to enter the state of adding report elements;
2) Move the mouse to an appropriate position in the report area, and click the left mouse button to add the corresponding report elements to the report.
3) Click "Add Arrow" in the function menu bar to enter the state of adding arrow. Click the left mouse button and slide in the report area to draw the starting point and end point of the arrow.

3.3.3 Edit Report Element

Select a report element in the report single page area, then drag and zoom the report element, and edit the report content and set its properties, as shown in Figure

3-24

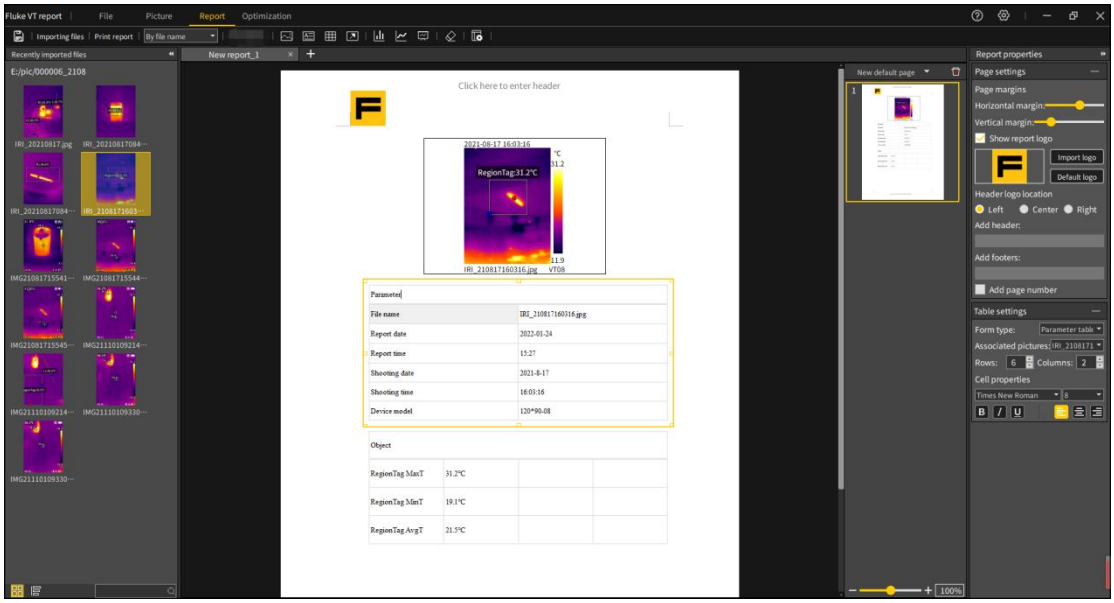


Figure 3-24 Report Element Editing

3.3.4 Report Property

In the report properties list, you can modify page margins, report logo, header and footer, table properties, text box properties and other related information, as shown in Figure 3-25 report properties.

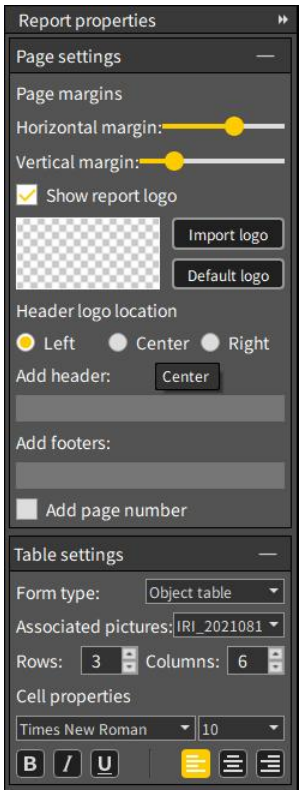


Figure 3-25 Report Property Settings

Set report page properties

In the right report property bar, you can set the basic properties of the report page.

You can set the distance of the upper, lower, left and right edges of the report in Page Margin Setting.

“Show Report Logo” will display the logo image in the report header.

“Logo Position” is used to set the position of the logo image in the header. The logo position can be set as left-aligned/center-aligned/right-aligned. The image area displays the thumbnail of the current logo.

Click “Import Logo” to import the previous image as the report logo, and click “Default Logo” to import the system default report logo.

You can input the text displayed at the header and footer in “Add Header” and “Add Footer” edit boxes.

Add Page Number will display the page number in the generated report.

Set text properties

When a text element is selected, you can set the selected text element in the report property bar.

Properties that can be set include text font, text font size, bold, italic, underline, text alignment, etc.

Set table properties

When a table element is selected, you can set the selected table element in the report property bar.

You can select the type of the current table in Table Type combo box, including Ordinary Table, Parameter Table and Object Table. Associated infrared images can be selected from parameter table and object table through Associated Images.

The contents of parameter table and object table are set in Settings-> Report Settings. The related data comes from the related infrared images.

Set image properties

When an image element is selected, you can set the selected image in the report property bar.

In the “image types”, the image types include “infrared image”and “ordinary image”.

3.3.5 Import Image

You can import new infrared images and edit their report contents.

When you drag an image into the list on the left in Report Edit or import an infrared image to be made in the local file system to make a report, other report elements associated with the image element, such as the associated parameter table/object table, are automatically filled in at this time, as shown in Figure 3-26.

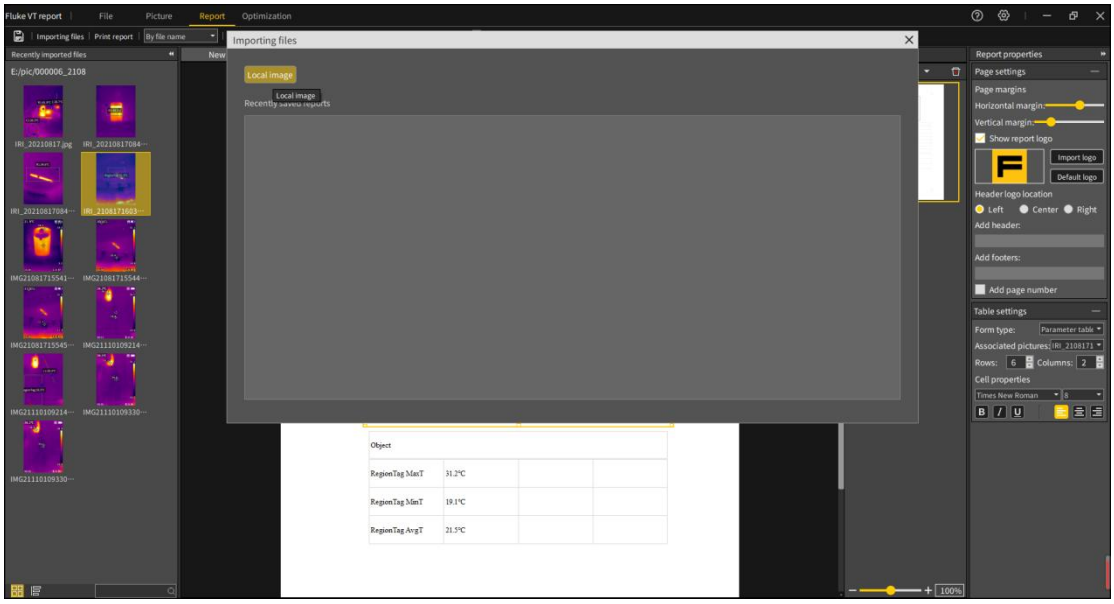


Figure 3-26 Import Images

3.3.6 Create New Report Page

In the right list of the report pages that have been made, you can create new single pages: add default page, add last template page and add template page, as shown in Figure 3-27.

Figure 3-27 New Report Singe Page

New default page

Click “New Default Page” in the report management bar to add a new report at the end of the current report file. The default report template will be applied to each single page of this report.

Add last template page

Click “Add Last Template Page” in the Add Report Page combo box in the report page management bar, and a new report page will be added at the end of the current report file. The latest report template will be applied to the report page.

New template page

Click “New Template Page” in the Add Report Page combo box in the report page management bar to display Select Report Template. After selecting a page template, the report page to which the corresponding template is applied will be added in the current report file, as shown in Figure 3-28.

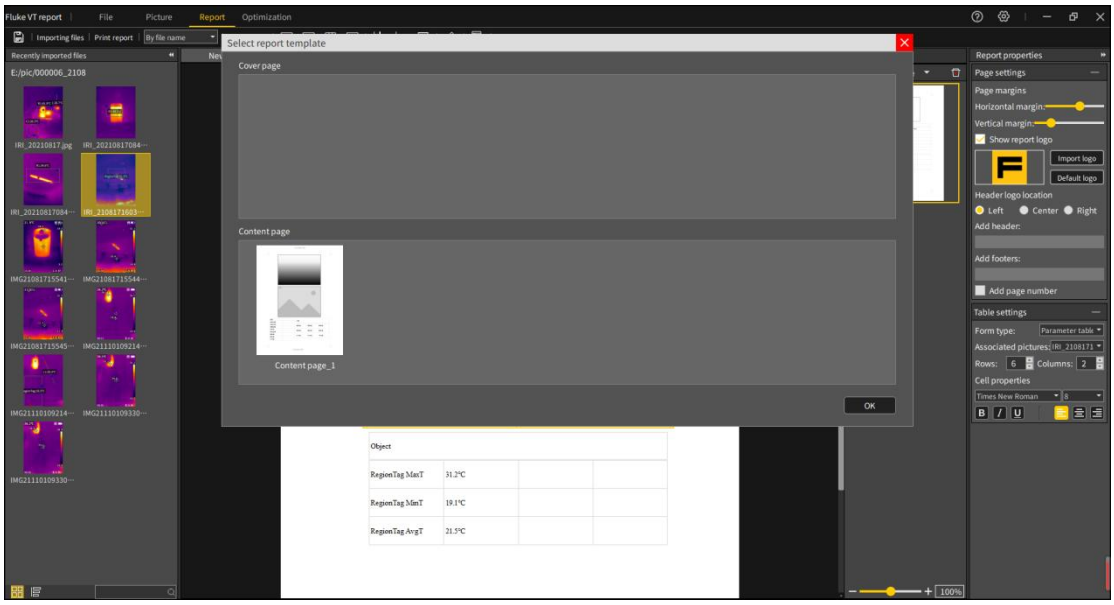


Figure 3-28 Add New Template Page

If the selected page template is a content page template, a new report page is appended to the end of the report;

If the selected page template is the cover page template, a new report page will be added to the first page of the report or the cover page added before will be replaced.

3.3.7 Delete Report Page

Click “Delete” button in the report management bar to delete the currently displayed report single page. When the report file contains only one single page, this

single page cannot be deleted.

3.3.8 Save Report

Save the contents of the report being edited.

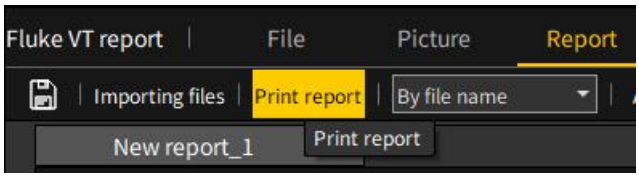
Click “Save Report” in the function menu bar to save the current report. Saving files in pdf or docx format is supported.

Click “Save as Report” in the function menu bar, and select the path to save the report.

3.3.9 Print Report

Click “Print Report”

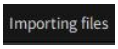
button in the function menu bar to pop up the print setting dialog box, select a printer in the dialog box, set parameters such as print range number of copies, and then click “Print” to print the current report file according to the set parameters.



3.3.10 Close Report

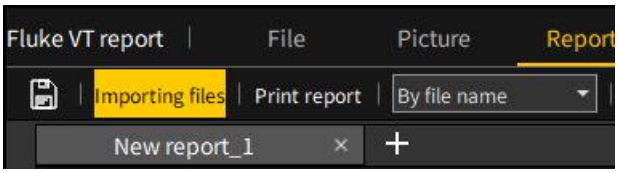
Click the “X” button on the right side of a report title in the title bar of the report file to close the corresponding report.

3.3.11 Open History Record

Click “Importing Files” 

button to view the history of the latest saved

report; Double-click to open the report file corresponding to this record.



3.3.12 Manage Report Template

You can save the content and style of the report being edited as a report template, as shown in Figure 3-29.

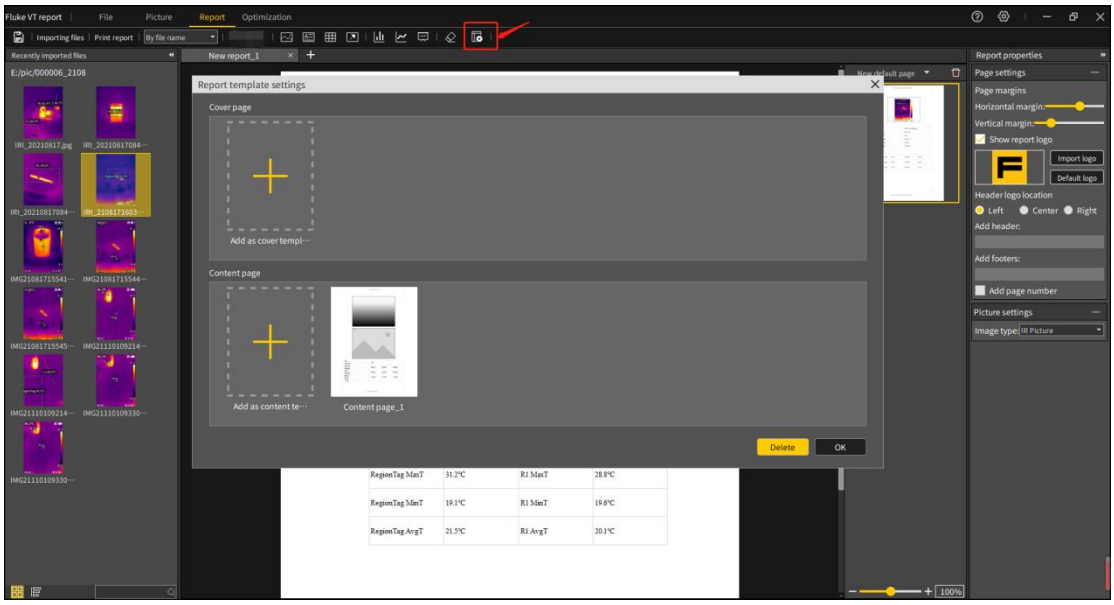


Figure 3-29 New Template

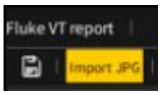
Click “Add this page as template page” in the function menu bar to pop up the report template setting dialog box.

Click the “+” button to add the layout of the current single page as the cover page template or the content page template. The cover page template cannot contain infrared image elements, but the content page template must contain infrared image elements.

Click Delete to delete a report template. Click to modify the name of the corresponding template. System template cannot be deleted or its name cannot be modified, but it is allowed to delete manually added custom templates and modify their names.

3.4 Image Optimization

3.4.1 Import File and Edit File

1. Click the “Import JPG” button and select the required infrared images , and they will be displayed in the left file management box. It is allowed to import images from different folders. 

3.4.2 Rebuild Super-resolution

Super-resolution Rebuild supports to rebuild and generate an enlarged image (magnified twice) from the original infrared image with an original resolution. This makes the analysis and temperature measurement more accurate, as shown in Figure 3-32.

Figure 3-32 Super-resolution Rebuild

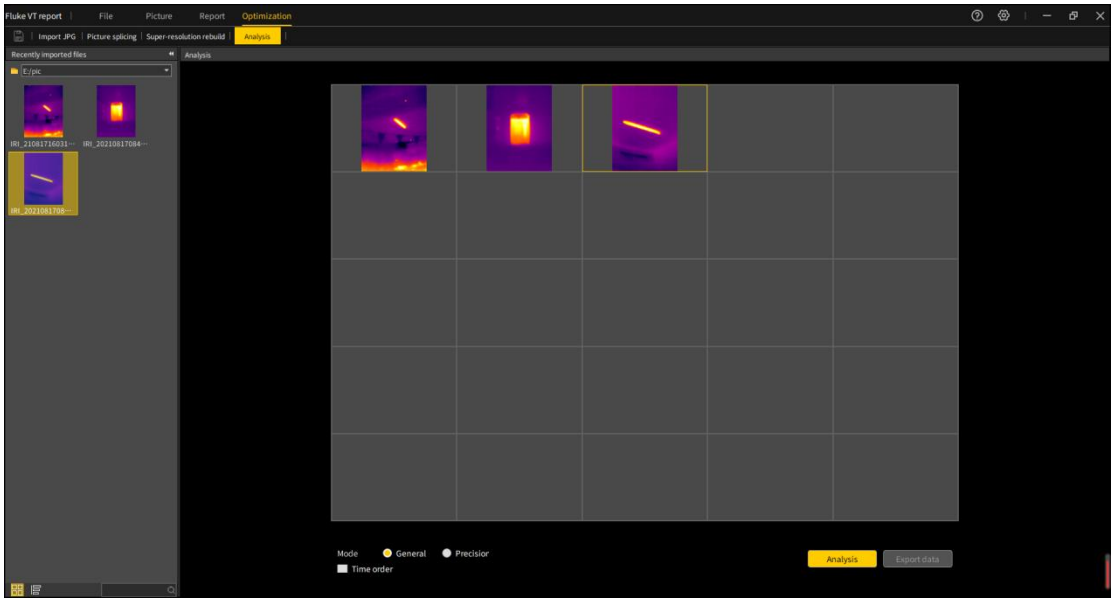
Drag the image in the left file management box into the blank space, and click the “Rebuild Image” button to generate an enlarged image (magnified twice) and

display it on the interface. Click “Back” to return to the original image interface, switch and adjust images for rebuilding again.

Note: the rebuilt image only supports zooming out, not zooming in.

3.4.3 Create Trend Analysis

By selecting different device in the same period or infrared images taken by the same device in different periods, the temperature trend analysis chart is created according to the highest temperature, lowest temperature and average temperature, as shown in Figure 3-33.



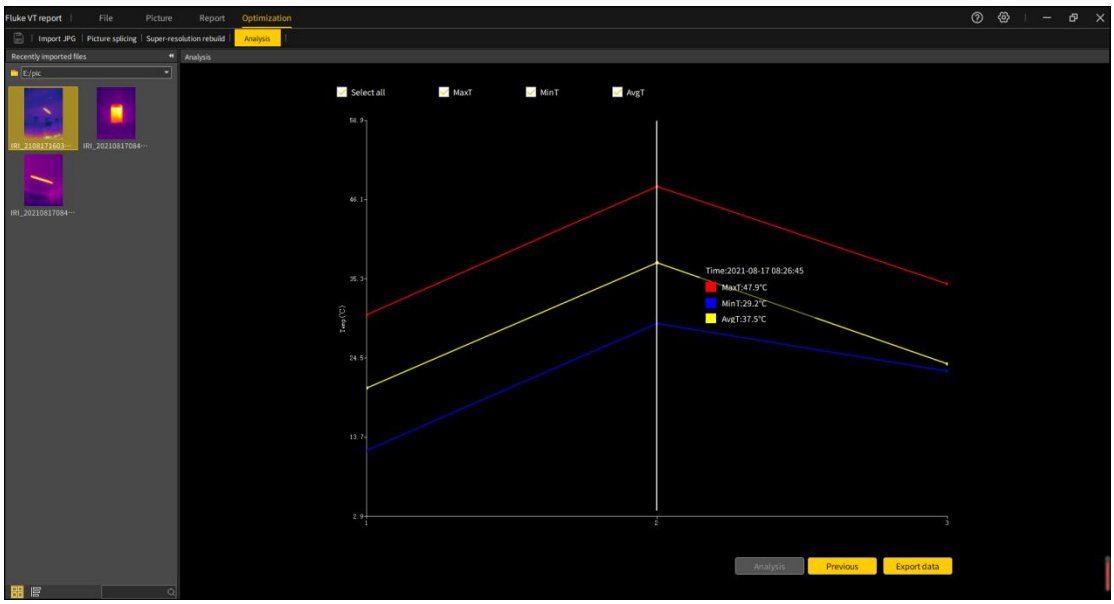


Figure 3-33 Creating Trend Analysis

Drag and drop the images in the left file management box into 25 squares. If there have been any images, they will be replaced. Click the Create Trend Analysis button, and the temperature trend chart will be generated according to the order of images and displayed on the interface. Click “Back”, switch and adjust images, and generate the trend again.

General mode: take the highest temperature, lowest temperature and average temperature of the whole image to draw the trend

Precisior mode: take the highest temperature, lowest temperature and average temperature in local area to draw the trend. Operation method is as follows:

Double-click the image to be accurately adjusted, press the left button, drag the mouse, release the left key, and draw a rectangle on the formulated object. After drawing, the object frame will be drawn in the rectangle. If you are not satisfied, you can redraw the rectangle to generate a new stroke area. After stroking, double-click to return to the 25-square interface.

Time order: supports generating trend chart according to the shooting time of images.

Export data: supports exporting and saving data in .csv or .jpg.

3.4.4 Setting

3.4.4.1 General settings

General parameter settings mainly include four parts: system language, system unit, system parameters and display settings, as shown in Figure 3-34.

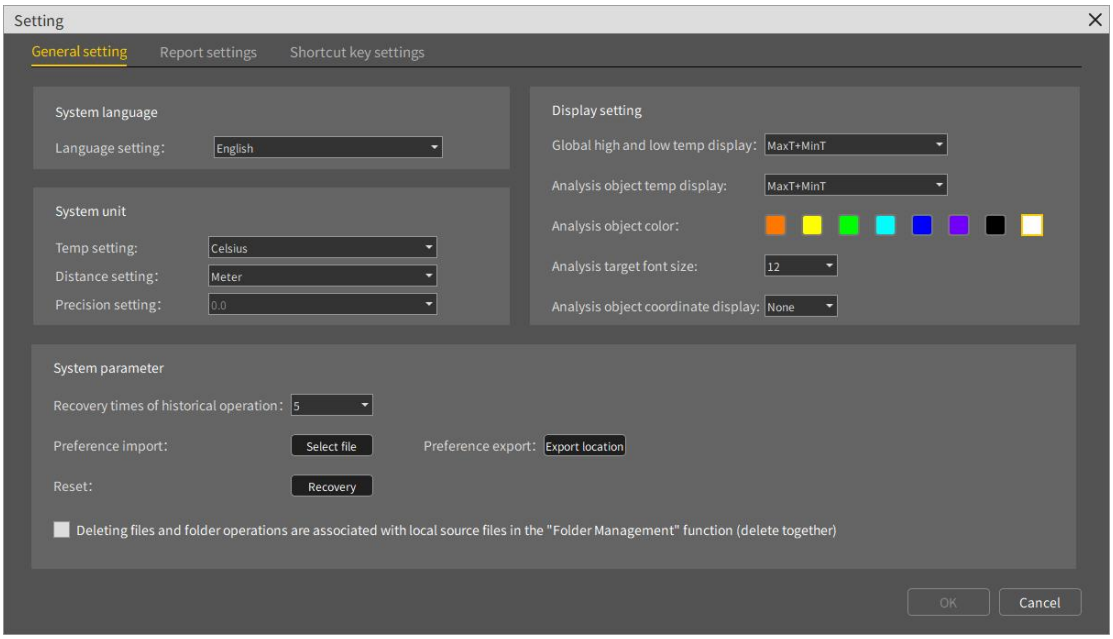


Figure 3-34 General Settings

System language:

You can switch the language categories of the software version.

System unit:

Temperature setting: supporting three units: Celsius, Fahrenheit and Kelvin

Distance setting: supporting meters, inches and yards

System parameters:

Historical operation times: the number of revocations supported by the current operation, including 0, 5, 10 and 20;

Import preferences: select and import the parameter file with saved settings, and the pre-saved configuration parameters will be loaded;

Export preferences: export and save the currently set parameters locally, so as to facilitate direct import next time and configure relevant parameters. Note: The latest modification will be exported only after the parameter modification is confirmed and saved; otherwise, the last parameters will be saved;

Restore factory settings: restore the parameters to the factory default parameters;

Folder deletion associated with local: if checked, the local folder and its contents will be deleted at the same time when the file management interface folder is deleted.

Display settings:

Global high and low temperature display: during image analysis and video play, the temperature display type setting of the whole image area supports four types: highest temperature+lowest temperature, highest temperature, lowest temperature and no display.

High and low temperature display of analysis object: during image analysis and video play, the temperature display type setting of the analysis object area supports four types: highest temperature+lowest temperature, highest temperature, lowest temperature and no display.

Analysis object color: during image analysis and video play, the drawn analysis object frame color settings includes orange, yellow, green, sky blue, deep blue, purple, black and white.

Analysis object font size: during image analysis and video play, the font size settings of the drawn analysis object label support seven font sizes: 4, 6, 8, 12, 14, 18 and 24.

Analysis object coordinate display: during drawing an analysis object, the vertex coordinates and width and height properties of the analysis object can be displayed. Currently, only rectangles are supported.

3.4.4.2 Report Settings

Set related parameters of report page, including report setting and report display setting, as shown in Figure 3-35.

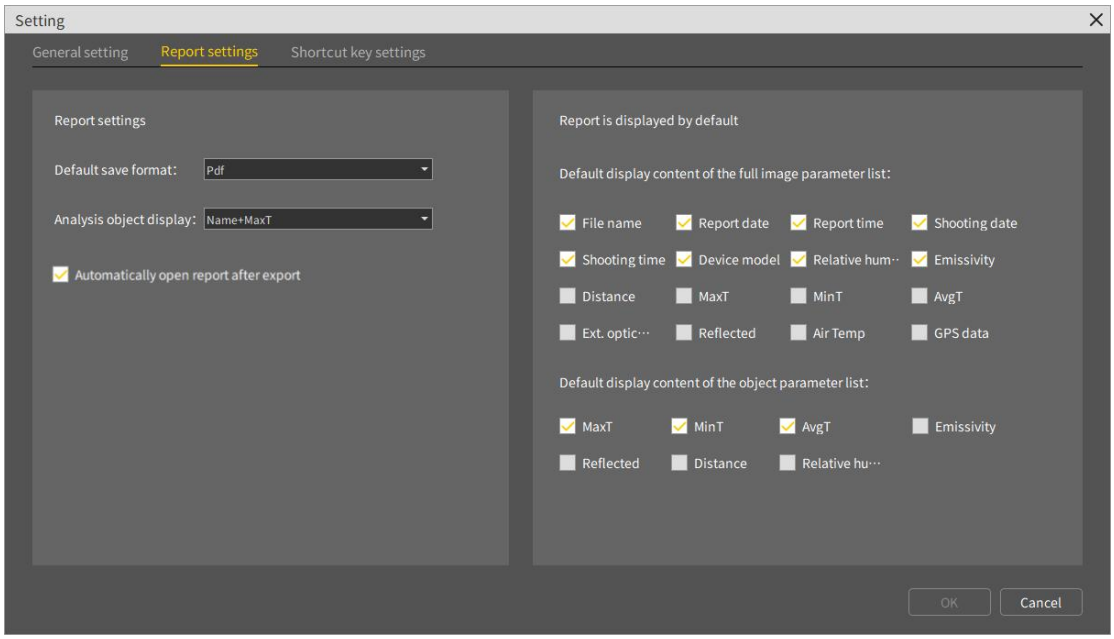


Figure 3-35 Report Settings

Default save format: when saving the report, the format setting support doc and pdf formats;

Analysis object display: the display type settings of analysis objects on the report page support eight types: name+highest temperature, name+lowest temperature, name+average temperature, highest temperature, lowest temperature, average temperature, name only and no display;

Automatically open the report after export: if checked, the report will be automatically opened after the report is saved successfully; If not checked, it will not be opened automatically.

Report default display: it includes full-view parameter list and object parameter list, which are mainly used for setting display options in report interface and table cell box.

Whole image parameters: including file name, report date, report time, shooting date, shooting time, device model, relative humidity, emissivity, measuring distance, highest temperature, lowest temperature, average temperature and GPS data.

The object parameters list includes the highest temperature, lowest temperature, average temperature, emissivity, reflection temperature, measurement distance,

relative humidity, atmospheric transmittance and optical transmittance.

3.4.4.3 Shortcut Key Settings

The shortcut keys used in the system will be set, including general settings, menu bar, file management, image toolbar, video toolbar and report editing bar, as shown in Figure 3-36.

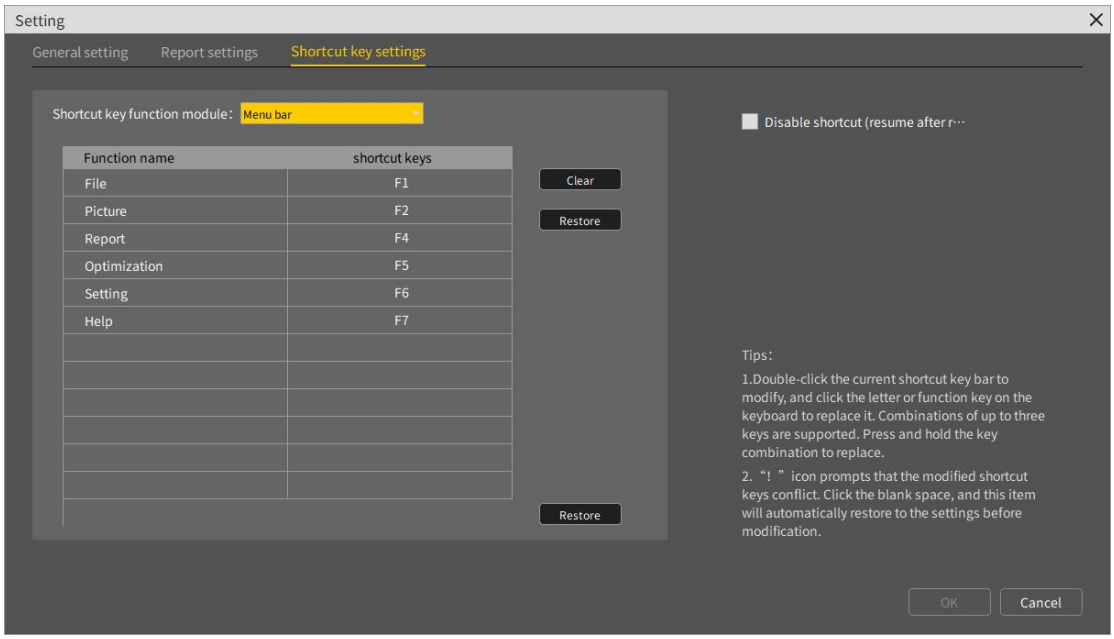


Figure 3-36 Shortcut Key Settings

Some shortcut keys support the functions of modifying, deleting, restoring and restoring default settings. The operation methods are as follows:

Enable editing: double-click to modify shortcut keys.

Modify function: select keyboard keys and switch shortcut keys. If the shortcut keys conflict, it will be restored to the previous setting. Note, punctuation marks, Home and other special characters are not supported.

Delete function: click Delete, and the shortcut keys in editing status will be cleared.

Restore function: click Restore, and the shortcut key in editing status will be switched to the previous content.

Restore default settings: all shortcut keys will be restored to factory settings.

Disable shortcut keys: shortcut keys will not take effect.

3.4.5 Help

3.4.5.1 Upgrade Description

Upgrade description information, including history and iteration update record of current software version will be displayed.

3.4.5.2 Version Information

Version update information, including native system, software language, installation address, version number and other information will be displayed.

Chapter IV Common Use Problems

4.1.Device Connection Problems

4.1.1. USB Connection

Problem: the corresponding USB connection switch has been enabled on device, when clicking “Connect Device” on the video analysis interface of the infrared analysis software, there is a prompt that it cannot be connected;

Solution: Check if the driver is installed on the computer;

4.2. How to Install Programs under Restricted Accounts

Right-click to select the installation package, and select to run the infrared analysis software installation package as administrator.

4.3. How to Restore Default Settings

1. Restarting infrared analysis software can restore settings except shortcuts;

2. In the shortcut key setting interface, click “Restore Default Settings” to restore the default settings of shortcut keys;

4.4. Why the picture cannot be opened

Make sure that Unicode UTF-8 is selected in "Settings"-"Time and Language"-"Change System Time Zone Settings" in the computer settings to provide global language support.