

User Manual of Infrared Thermal Analysis Software

V1.0.1

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V1.0	202001			New
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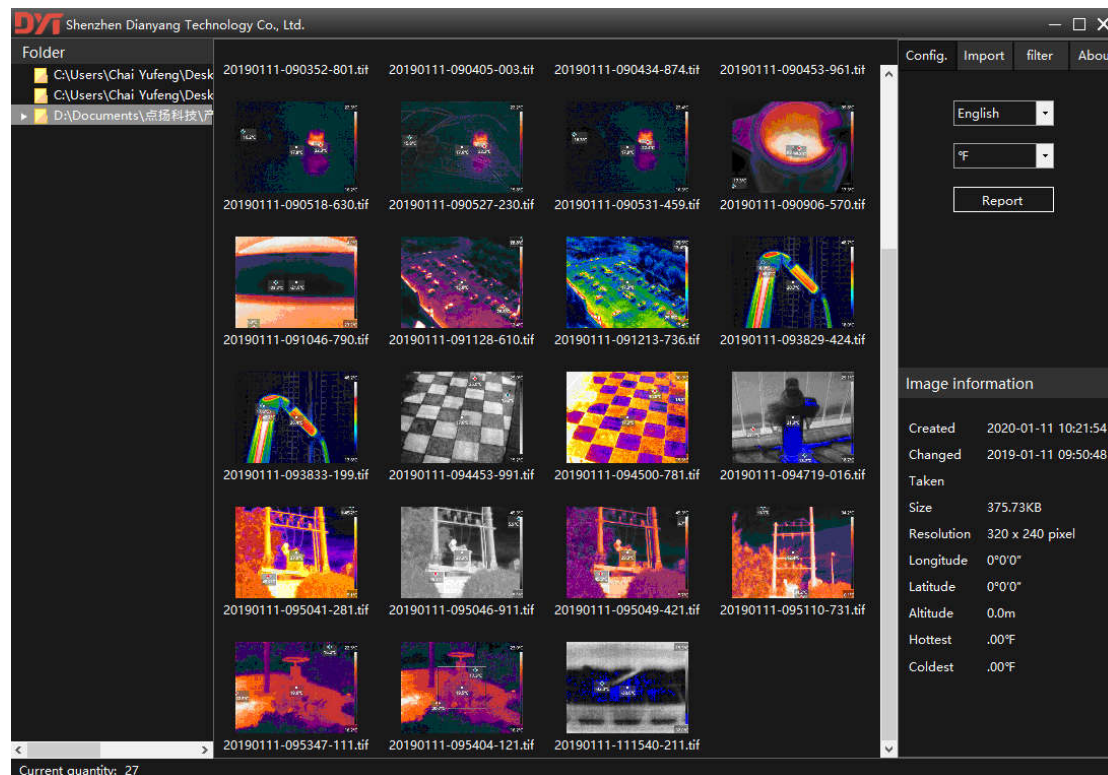
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1 Overview

Now some infrared cameras on the market cannot perform professional analysis after took pictures, Shenzhen Dianyang has developed this professional analysis software, which can perform secondary analysis on all infrared thermal imaging pictures taken by Shenzhen Dianyang equipment. No need going to the scene to shoot again, it can greatly improve work efficiency.



2 Running Environment

This software can support Win7 / Vista / Win10. To run this software normally, you need to install the following software,

- .Net Framework 4.0 or above.

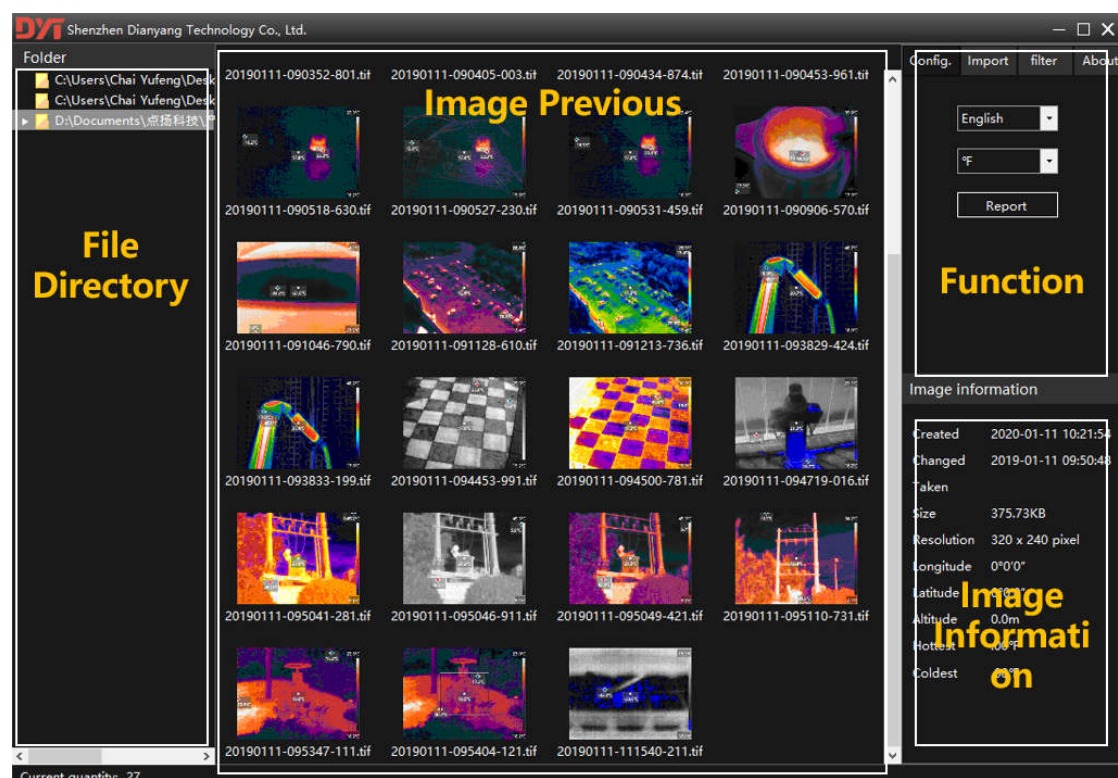
3 Operation

3.1 Installation

Double-click "setup.exe" and install according to the software's prompts. If it detects that the computer does not have the .Net Framework installed, the program will automatically download and install the corresponding version of the .Net Framework program.

3.2 Start to Use

Double-click "DYAnalysis.exe" to start the software, open the following interface, the interface distribution is as follows:



3.2.1 File Directory

File directories can be created, added, and deleted.

3.2.2 Image Preview

When you click each picture, the picture will be selected, and the basic information of each

picture will be displayed in the image information area in the bottom right corner. You can double-click the picture to edit the picture.

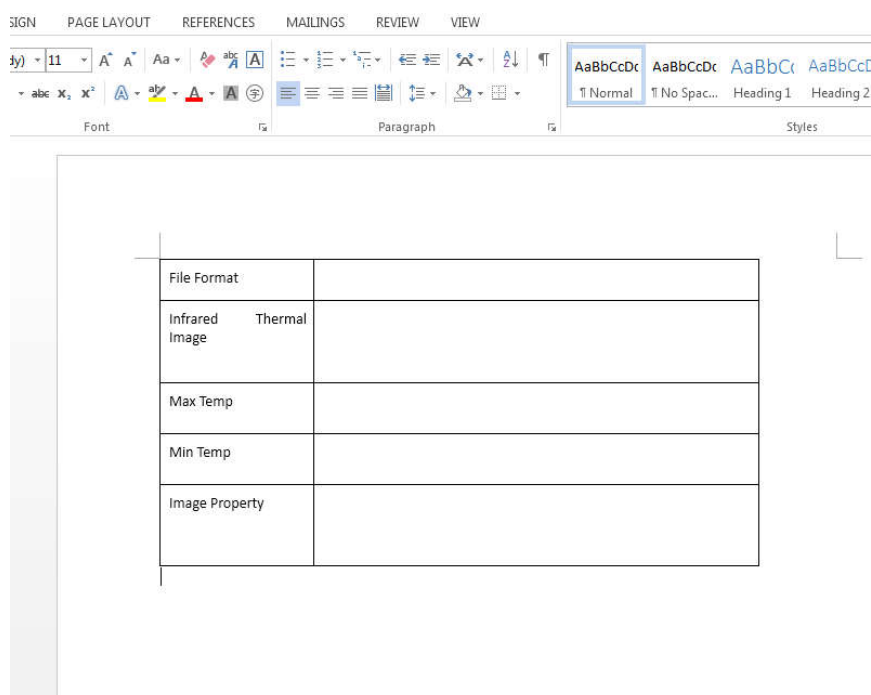
3.2.3 Function

3.2.3.1 Configuration

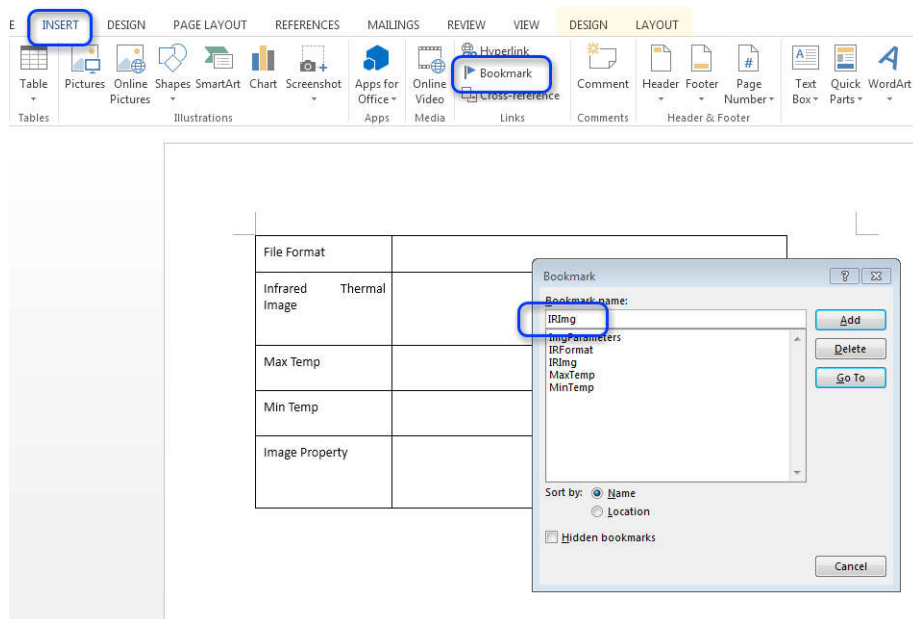
- Different languages can be configured.
- Temperature units can be selected from Celsius, Fahrenheit, and Kelvin.
- The report template can be customization edited by the customers, and the report will be output in the template format when exported.

3.2.3.1.1 How to make report template

1. Open Word and design your own template style, as shown below:



2. Click "Insert" in the navigation bar of Word, and the cursor stays at the position where you want to insert the data. Take "Infrared thermal Image" as an example, click "Bookmark" in the toolbar, enter "IRImg" and click "Add", as shown below:



3. The other items are the same as above, and the corresponding book signatures are as follows (note the case of the book signature),

Item	Bookmark	Detail Description
Infrared Thermal Image format	IRFormat	Select image file format (some device image formats are not optional)
Infrared image	IRImg	Analyzed image
Maximum temperature	MaxTemp	Maximum temperature of the analyzed image
Minimum temperature	MinTemp	Minimum temperature of the analyzed image
Image properties	ImgParameters	Properties of the analyzed image
Temperature measurement information	Mesurments	Analyze the data information of the temperature measurement operation of the image process
GPS image	GPSImg	Analyzed image GPS location map location image (some devices do not have GPS information)

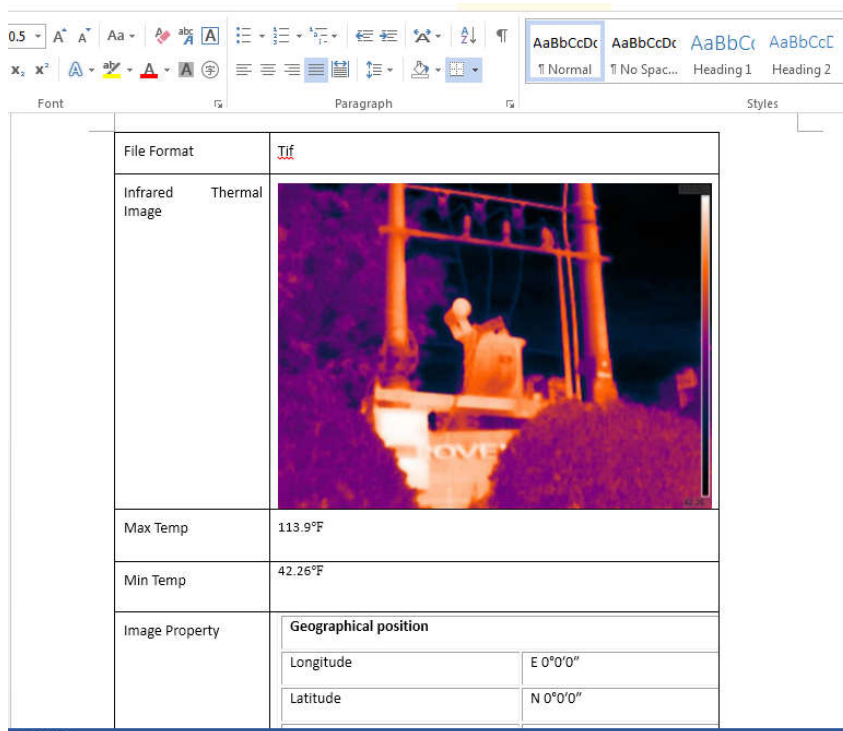
After the bookmark is added, the system will output report data according to the bookmark position.

The template folder must be the following directory "Infrared Thermal Analysis

Software\report_template\", the template file name is "template.docx". It will be created when the software installed.

Or the user can modify the "\Infrared Thermal Analysis

Software\report_template\template.docx" file, then save as the same directory and file name, the output report will use the modified template.

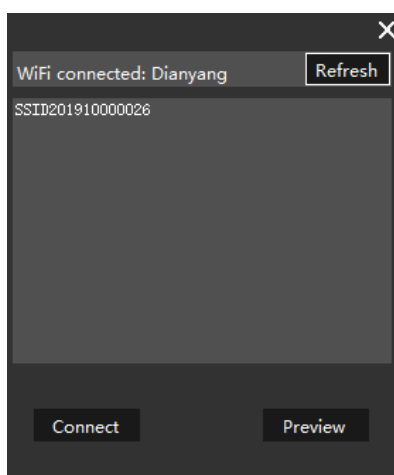


3.2.3.2 Import

3.2.3.2.1 WiFi Import

Turn on the camera's WiFi. Please check the user manual of the camera for how to turn on the WiFi.

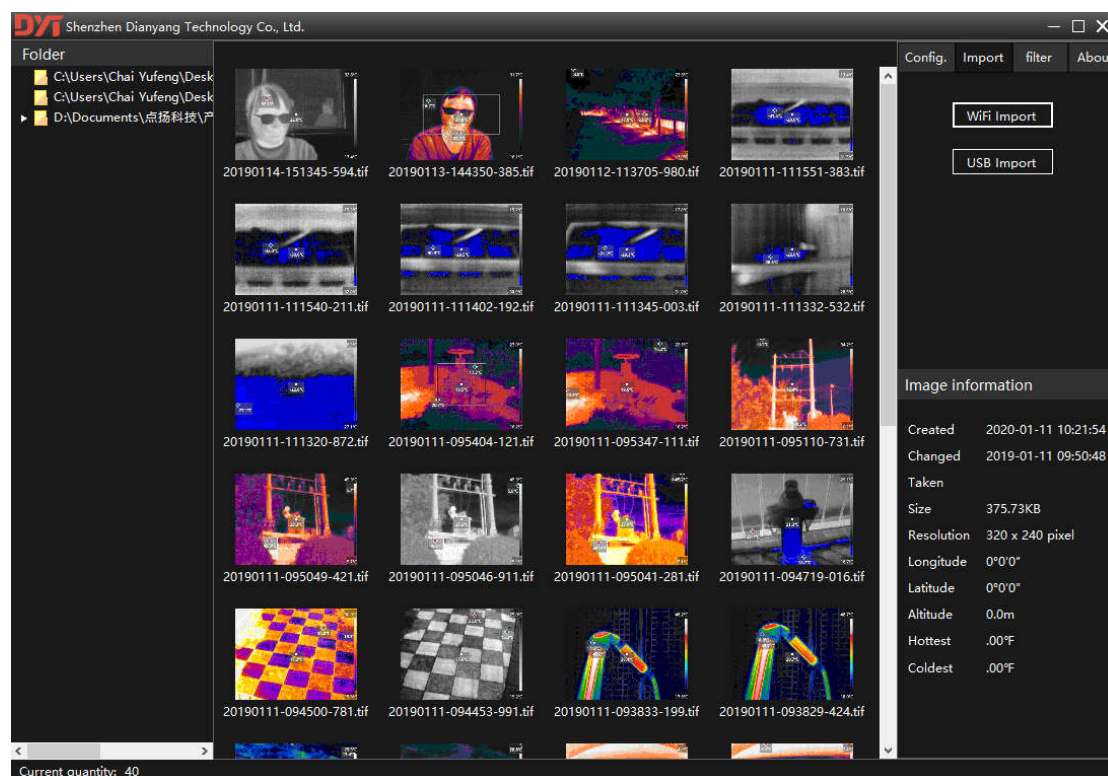
Then click the WiFi import button, the following screen appears, click the refresh button.



The thermal imaging camera WiFi will show here, select the thermal imaging camera to be connected, and then click the connect button. If a password dialog box pops up, check the

password in the thermal imaging camera WiFi settings, then connection of the thermal imaging camera will be successful.

Click the preview button again to preview the photos taken in the thermal imaging camera, as shown below:



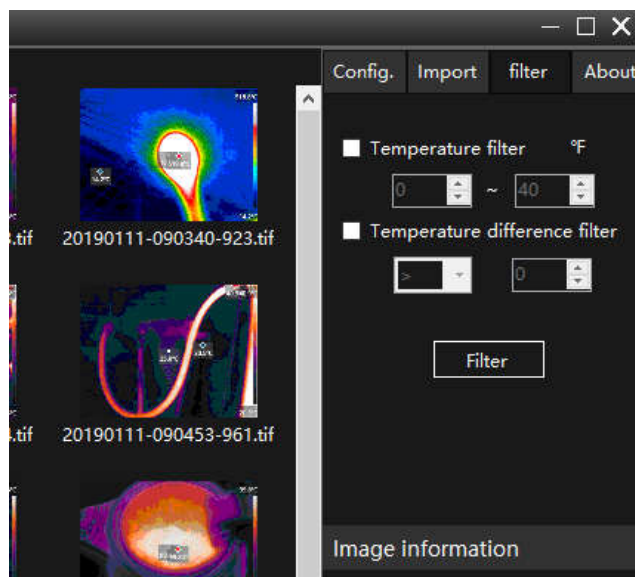
At this time, the pictures in the software image preview area are still in the thermal imaging camera. Select the images, right-click and download, and you can download the thermal imaging to the "Picture" directory of the software installation directory.

3.2.3.2.2 USB Import

There are two methods for USB import:

- Connect the thermal imaging camera's USB cable to the thermal imaging camera's USB port and the computer's USB port. Click USB Import to view the pictures, select the pictures, select cut or copy, and copy the pictures in the required directory.
- After connecting the camera and the computer with a USB cable, the computer will generate a new USB drive as the thermal imaging camera internal memory. You can also copy the pictures directly from windows to the required directory for analysis.

3.2.3.3 Filter



3.2.3.3.1 Temperature Filter

You can filter out unwanted pictures by selecting the temperature range. After setting the temperature range, each picture in the gallery must meet the following conditions before it can be displayed:

- All temperatures pixels in the picture need to be higher than the lowest temperature of the set range.
- All temperatures pixels in the picture need to be lower than the highest temperature of the set range.

If the above conditions are not met, the pictures will be filtered and not displayed.

3.2.3.3.2 Temperature Difference Filter

You can filter out unwanted pictures by selecting the temperature difference. The temperature difference means the highest and lowest temperature of one picture, if the highest and lowest temperature of one picture match the filter, then the picture can be displayed, otherwise they will not be displayed after filtering.

3.2.3.4 About

The basic information of the software is introduced.

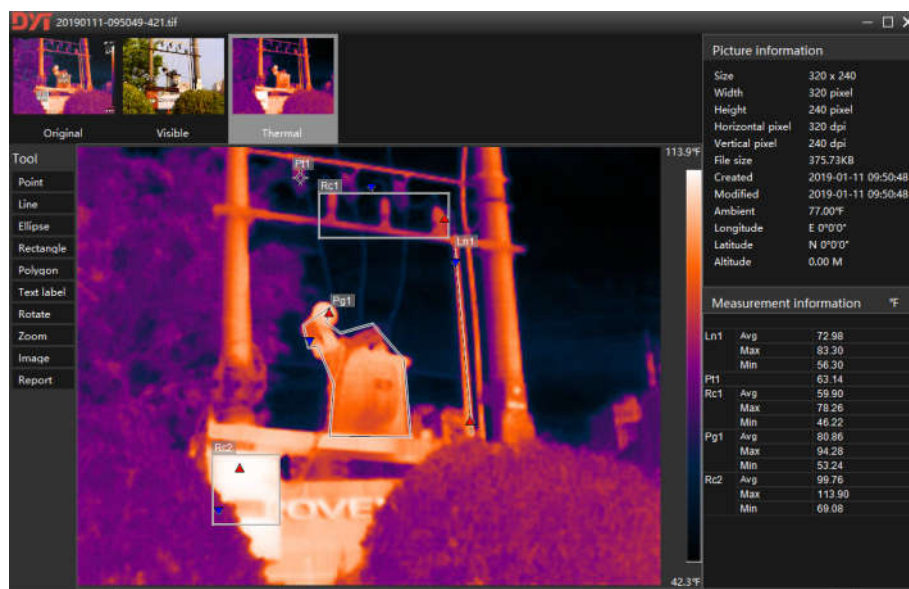
3.2.4 Picture Information

The picture information area is an introduction to the basic information of the picture and contains the following:

- Picture creation time of Windows
- Picture modification time of Windows
- Thermal camera shooting time
- File size
- Pixel resolution
- ...

3.2.5 Infrared thermal imaging analysis

After double-clicking the selected picture, the following analysis interface will display,



Above is the corresponding 3 frames of images inside each picture file, where:

- The first frame is the original shooting picture and cannot be edited.
- The second frame is the original image in visible light and can be edited.

- The third frame is the original infrared image, which can be edited.

Select the image to be edited, and then click the tool on the left to analyze it. In the bottom right corner, the highest temperature, lowest temperature and average temperature of the corresponding name will be displayed. The red upward arrow in the picture indicates the highest temperature in the selected area, the blue down arrow indicates the lowest temperature in the selected area, the analysis tools on the right are:

- Point
- Line
- Ellipse
- Rectangle
- Polygon (double-click or right-click to complete polygon drawing)
- Text labels, you can add text labels to the picture.
- Rotate
- Zoom
- Output images, which can be converted to other formats.
- Output report, customers can output the corresponding report according to the report template.

After the analysis is complete, the customers can choose to save the edited mark for viewing next time.