



HIKMICRO SP Series
Handheld Thermal Camera (**V5.5.106**)
Release Notes

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1 Introduction

The handheld Thermal cameras is an ideal solution which provides accurate touch-free temperature measurement and heat distribution image display for electrical predictive maintenance, building inspection, HVAC inspection, manufacturing monitor, etc. HIKMICRO's handheld thermal cameras have been used widely in detecting temperature anomalies before detecting radiator efficiency for HVAC inspection, searching for heat loss in buildings, finding hot spots and invisible defects on mechanical or electrical systems that could indicate a potential problem. They are also used for surveying areas that are hard to reach with conventional measurement tools.

This document introduces new features and optimizations in V5.5.106 of SP series cameras.

1.1 Version Information


Item	Description
Firmware Version	V5.5.106 build 250922
FPGA Version	V1.0.26 build20250922
Models	SP100H, SP120H

1.2 How to Update to New Version

1.2.1 Upgrade with PC

Before upgrading your device, make sure:

- Device battery is fully charged.
- Auto Power-off function is turned off to avoid accidental suspension during upgrading.
- A memory card has been installed to device.

1. Connect the device to your PC with cable.
2. Select USB Drive on the pop-up USB Mode window of the device.  will be displayed on the device status bar, and a notice for detected disk will pop up in your PC.
3. Click the disk on your PC to open it.
4. Select and copy the upgrade file, and paste it to the root directory of the device.



Make sure that the upgrade file pasted to the root directory is extracted.

5. Disconnect the device from your PC.

6. Reboot the device and then it will upgrade automatically. The upgrading process will be displayed in the main interface.



After upgrading, the device reboots automatically. You can view the current version in **Device Settings > Device Information**.

1.2.2 Upgrade with HIKMICRO Viewer APP

Connect your device to HIKMICRO Viewer APP and tap on **Device Upgrade** to check device firmware version and proceed online upgrading.

Download and install HIKMICRO Viewer to your phone. Search the APP name in your APP store, or scan the following QR code.



Make sure that you download and install the latest version of HIKMICRO Viewer.

2 New Features

2.1 SuperScene+ for Smart PCB and Electrical Panel Inspection

SuperScene+ uses device built-in algorithms to recognize critical components on printed circuit boards (PCBs) and electrical terminals, and determines if any temperature anomalies exist.

2.1.1 PCB Inspection

PCB inspection mode is to identify high-temperature anomalies on PCBs. These are typically components experiencing issues such as breakdowns or soldering short circuits.

The function is handy for problematic component locating in PCB manufacturing.

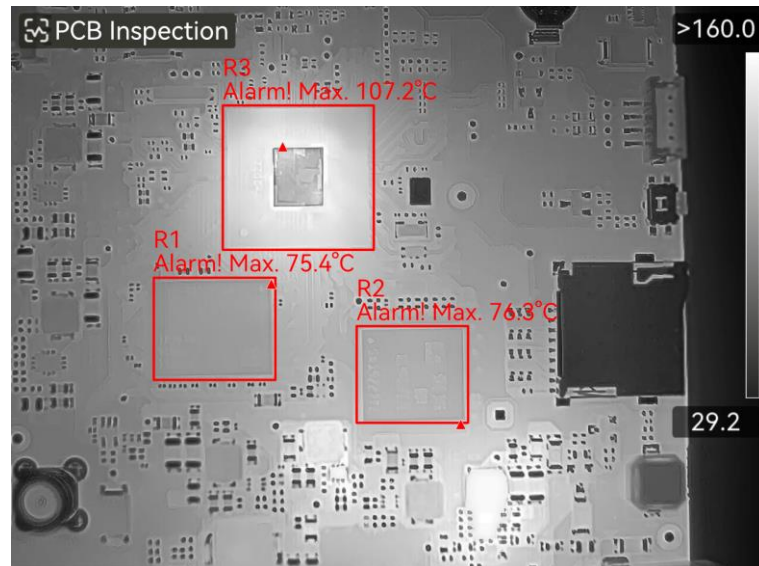


Figure 2-1 An Example of the PCB Inspection

To use this function, users should configure a set of PCB template as the reference for more inspection on similar targets.

The device supports one set of PCB template with up to 10 scene templates. A scene template is a thermal image of a part of a PCB (or a whole one) with marked component rectangles for temperature inspection.

The measurement parameters and the alarming temperature of each component can be set separately.

Go to **Local Settings > Capture Settings > SuperScene+ > SuperScene+ Mode** to select **PCB Inspection** and start configuration. For detailed configuration and using instructions, please refer to the user manual of SP Series products V5.5.106.

2.1.2 Electrical Panel Inspection

Electrical panel inspection mode is to identify and detect temperature anomalies in terminals and fuses on electrical panels.

After users set the detection parameters for electrical panel and temperature alarm rules, the device can automatically identify the detection target and determine if any anomalies exist in relevant electrical panel detection scenarios.

There are two alarm modes serving users' different needs.

- Find the terminals whose temperatures are higher than the set value.
- Find the one terminal whose temperature is alarmingly higher (higher than an allowed temperature difference) than its kind.

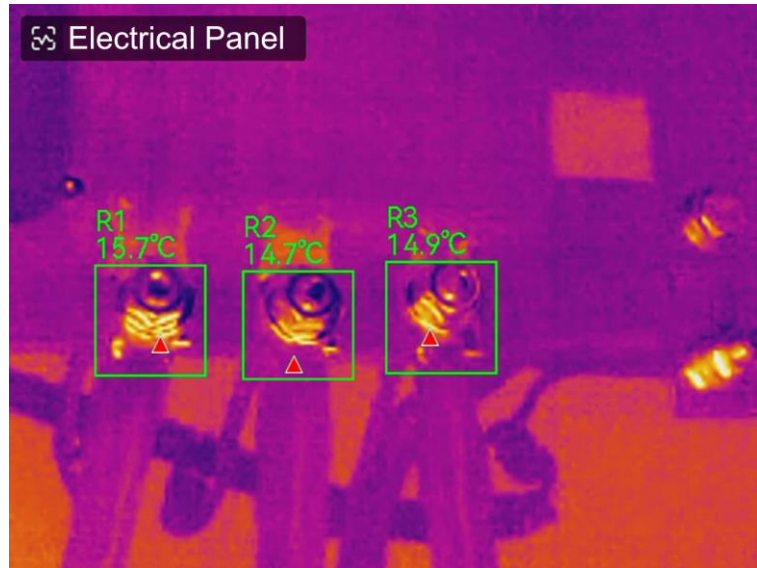





Figure 2-2 An Example of Electrical Panel Inspection

Go to **Local Settings > Capture Settings > SuperScene+ > SuperScene+ Mode** to select **Electrical Panel** and start configuration. For detailed configuration and using instructions, please refer to the user manual of SP Series products V5.5.106.

2.2 Isotherm for Better Observing Temperature Distribution

In this version, after configuring the isotherms and its temperature ranges, pixels within the same temperature range on the image will display the same color. This function enables users to better observe the distribution of different temperature areas.

1. Select  from the main menu.
2. Tap  to get more options.
3. Tap  to set isotherms.
4. Select isotherms and set temperature thresholds.
 - Isotherm 1: Red
 - Isotherm 2: Green
 - Isotherm 3: Blue

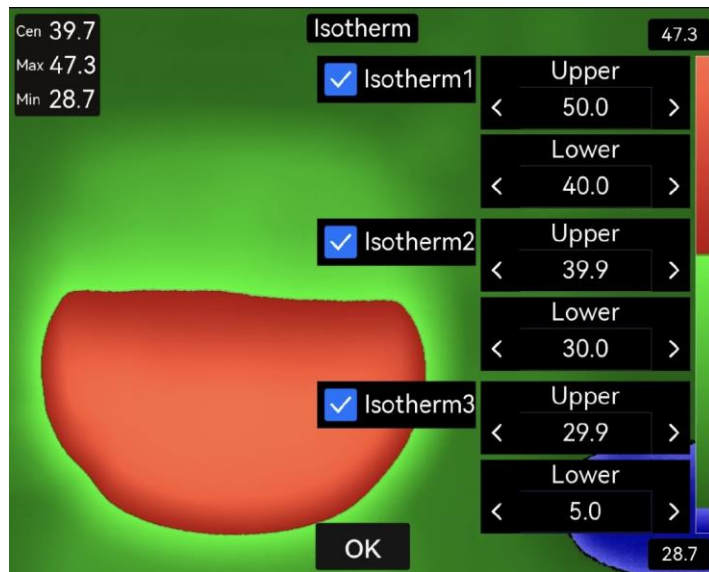


Figure 2-3 An Example of Isotherm Settings



Figure 2-4 An Example of Isotherm in Live-view



- A maximum of three isotherms can be set.
- Temperature ranges between isotherms may overlap. The display priority of isotherms is $3 > 2 > 1$. The overlapping temperature areas displayed according to the priority order.
- Regions outside all isotherm ranges will be displayed in White Hot.
- When configuring thresholds, the upper limit of an isotherm must be at least **0.1 higher** than the lower limit.

2.3 Temperature Measurement Results is Displayed with Measurement Tools

After enabling the function, temperature values will be displayed alongside measurement points. This allows users to directly view the values of the highest and lowest temperature points within the set rules.

1. Select , and go to **Temp Measurement Settings**.
2. Turn on **Display with Measurement Tools**.

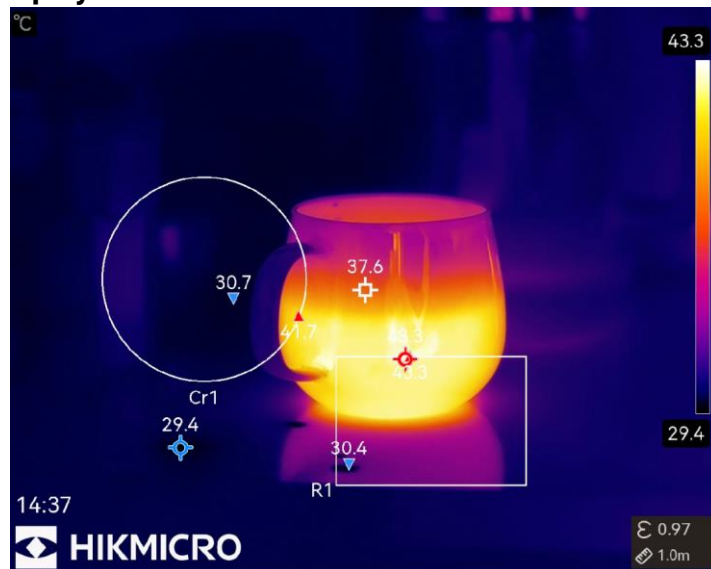





Figure 2-5 An Example of Turn on Display with Measurement Tools

2.4 More Powerful Albums

The album system is redesigned to provide better experience:

-  **Delete** folder to save deleted files which can be recovered.
-  **Favorite** folder to save favorited files.

2.4.1 Recoverable Deleted Files

Files deleted from the regular folder are saved in the Delete folder . They can be recovered to their original folders.

Enter the Delete folder, and tap  in the upper right corner to start file selection and further recovering or deleting completely.

Up to 1000 images and videos are allowed in the folder. Once it reaches the limit, users have to clean up the folder manually. Otherwise, newly deleted files will not be saved in this folder.

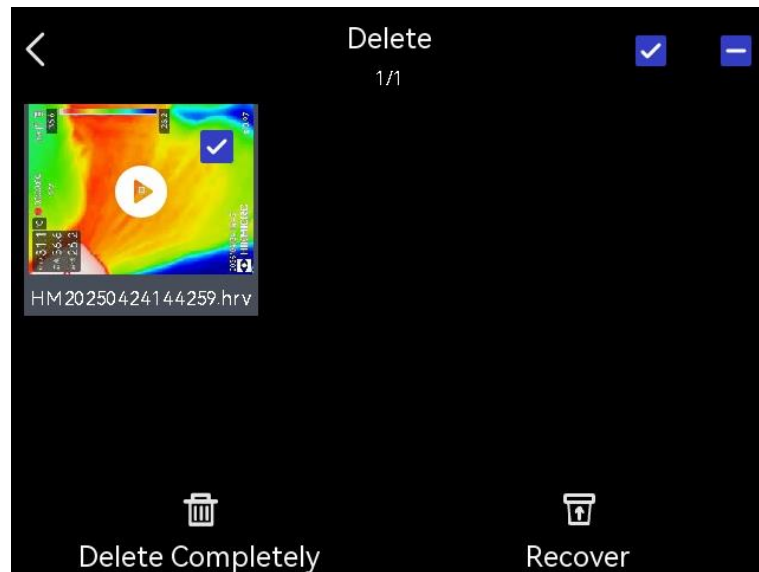


Figure 2-6 Delete Folder Operation

2.4.2 Favorite Files

You can mark favorite images and videos from regular folders, and then you can see them in the Favorite folder.

Up to 1000 files are allowed. Beyond this limit, no more files can be added to favorites until the user manually cleans up.

Note that the modification you make to the files in the Favorite folder also takes effect to the files in the original folders.

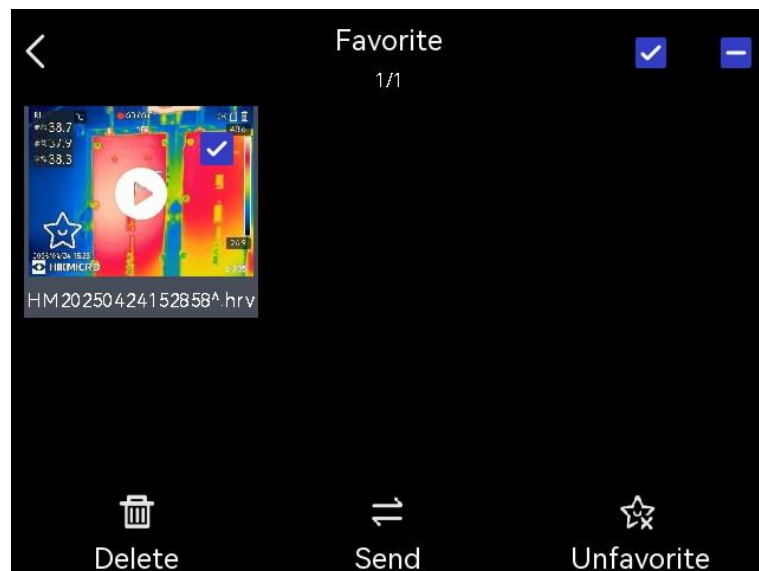


Figure 2-7 Favorite Folder Operation

2.5 Localization: Added Korean and Spanish Keyboard

- Korean keyboard is supported when the system language is set to Korean.

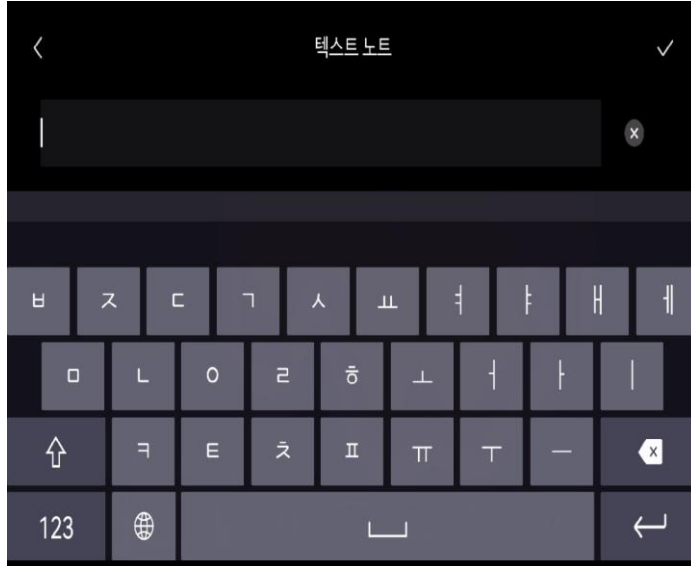


Figure 2-8 Korean Keyboard

- Spanish keyboard is supported when the system language is set to Spanish.

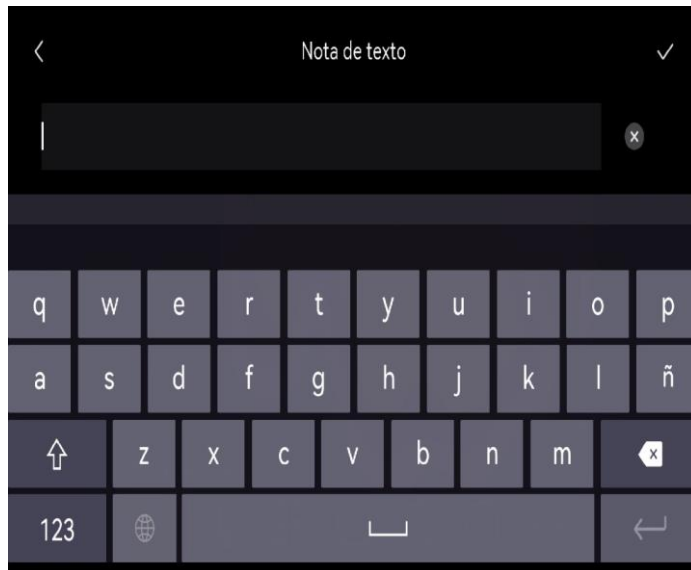


Figure 2-9 Spanish Keyboard

3 Optimizations

HIKMICRO SP series handheld thermal cameras optimize to improve your experience.

- Optimized keyboard input: the touchscreen toolbar is disabled to prevent accidental touches during typing.
- Added prompt when lens is mismatched.
- Improved manual focusing through a more responsive focus ring rotation.

4 FAQ on Upgrade

4.1 Why my PC failed to detect the camera as a USB drive?

Check the following items:

- Use the supplied USB cable to connect your PC to your camera. The supplied cable is recommended. Normally, a cable should be able to charge a camera and transfer data.
- Keep USB Cast Screen function off.
- Keep the SD card inserted and do not remove it during connection.
- Keep the camera powered on.

4.2 What should I do when my PC notifies power surge on the USB port?



Check the following items:

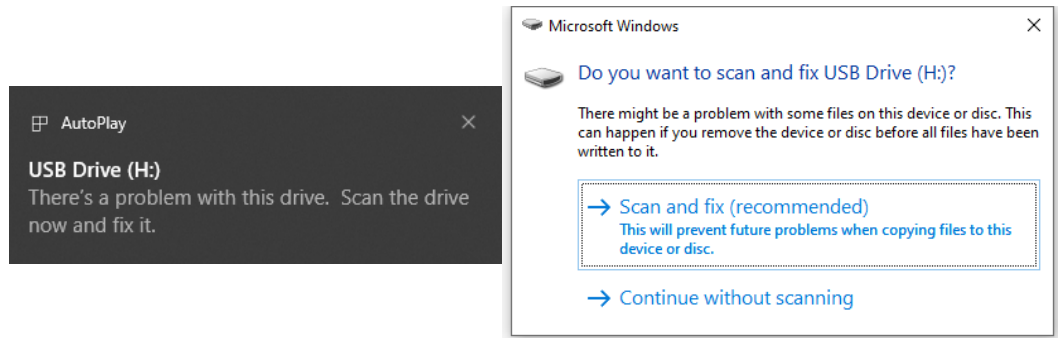
- When you are looking for an adapter of the supplied USB cable, please choose an unpowered hub. A powered hub such as Surface Dock Station is not compatible.
- If you are using a built-in USB PowerShare port in your PC, please try another port.

4.3 What should I do when my PC notifies USB device not recognized?



In most cases, it does not affect use. You can just ignore the prompt and find the detected USB drive in **This PC**.

4.4 What should I do if my PC notifies the USB drive has a problem to be fixed?



Some Windows computers will scan a USB drive when it is connected, and show the error. Click scan and fix, Windows will confirm the drive is fine and connect to it. You can also skip scanning and find the detected USB drive in **This PC**, which does not affect use in most cases.



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