HIKMICRO SP Series
Handheld Thermal Camera (V5.5.75)

Release Notes

Legal Information

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Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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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 V5.5.75 of SP series cameras.

1.1   Version Information

Item	Description
Firmware Version	V5.5.75 Build 240530
FPGA Version	V1.00.06 Build 20240425
Models	SP40, SP40H, SP60, SP60H

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.

| **i** |

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

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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.

| **i** |

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   Connect Device to HIKMICRO Viewer by Wi-Fi QR code scanning

Before You Start

Download and install HIKMICRO Viewer on your phone.

1. Connect your device to a Wi-Fi network.

2. Connect your phone to the Wi-Fi network that the device is in.

3. Tap **+** > **Add Device** > **Connect** to add the device to HIKMICRO Viewer.

4. Optional: Scan QR code on the device with HIKMICRO Viewer.
   - Connect your phone to the Wi-Fi network that the device is in
   - Tap [icon] on the WLAN interface, and a QR code will pop up.
   - Launch HIKMICRO Viewer to tap **+** -> **Scan QR Code**
   - Scan the QR code on the device with HIKMICRO Viewer.
   - Tap **join** in the pop-up window on your phone to confirm the settings.

2.2 Auto Rotation

Open swipe-down menu and tap ⬡ to enable image auto-rotation function, and the live view will be rotated by 90 degrees automatically.

Auto Rotation Off   Auto Rotation On

Figure 2-1 Image Rotation

2.3 Ambient Temperature

You can set the temperature for the observation environment for temperature measurement accuracy.

1. Select ⚙, and go to **Temp Measurement Settings**.

2. Tap **Ambient Temp.** to enter the setting interface.

3. Swipe up and down to adjust the values.

2.4 Tag Note Templates Import and Management

Tag note templates contains the predefined tag name and options. With the template imported and activated, users can quick add tags to captured snapshots.

Tag note templates are generated on the client software HIKMICRO Analyzer. Copy the templates of json format to the storage of your device, then you can use and manage the templates.

1. Generate tag note templates on HIKMICRO Analyzer.

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- Download HIKMICRO Analyzer client software from our website *www.hikmicrotech.com*
- Click on ⓦ at the upper right corner of the software window to get operation guide.
- Software generated templates are saved in the path of PC: Public\HIKMICRO Analyzer\TextRemarkTemplate.

2. Connect your camera to PC by the supplied cable. Copy and paste the template files to the TextNote folder of the device storage.

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If more than one templates are imported, the last edited template is the active one by default. Up to 10 templates can be imported.

3. Go to **Settings** > **Capture Settings** > **Tag Note Template** to manage templates.
   1) Select a template.
   2) Tap on ••• at the upper right corner of screen.
   3) Set the template as the default template or delete the template.

2.5   Capture Picture

2.5.1   Capture Mode

There are 2 modes available. Each mode requires different operations.

1. Select ⚙, and go to **Capture Settings > Capture Mode**.

2. Select a mode.

Table 2-1 Capture Modes

Capture Mode	Description
Capture One Image	Press 📷 once to capture one image.
Scheduled Capture	Press 📷 once and device takes snapshots according to the set interval and number. ┌─ⓘ─┐ The set interval and number and will be displayed on the top center of live view interface.

3. Press ↩ to return to the live view interface.

2.5.2   Flashlight

If the targets are in poor light condition, enable **Flashlight**. The device turns on the flashlight when capturing images.

1. Tap 　, and go to **Capture Settings** interface.

2. Slide 　 to turn on **Flashlight**.

2.5.3   Filename Header and File Naming

It is available to set the rules for file naming before picture capture and video recording. Tap 　 > **Capture Settings** to set filename header and select file naming modes.

Table 2-2 File Naming Rules

Elements	Description
Filename Header	Set the prefix for files of captured pictures and videos. Input the header and tap 　 to confirm the settings.
File Naming	**Time Stamp** and **Numbering** modes are supported. **Time Stamp** consists "filename header","date and time"and "file format".
	When the file naming is **Numbering**, the maximum number of saved files is 99,999.
	You need to delete some images before saving new ones if saved files is beyond 99,999.

2.5.4   A Shortcut key for Image Capturing

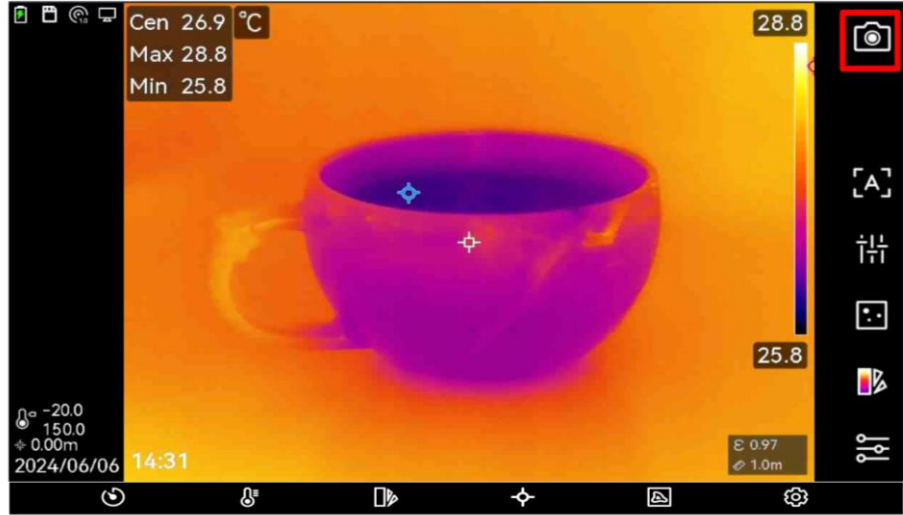In the shortcut bar, tap 　 to take snapshots. 　 is in picture capture progress. Tap 　 to stop.

Figure 2-2 Live View Interface

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[i]

Press and hold 📷 to record videos. ⏺ is in video recording progress. Tap ⏺ to stop.

2.5.5 Captured Image Edition

Add picture notes, tag notes and other types of notes to the captured images for providing more information.

Before You Start

Make sure that you have enabled **Edit before Saving**. Tap ⚙️, and go to **Capture Settings** > **Edit before Saving**.

1. Aim the lens at your target and press 📷 or tap 📷 to capture images.

2. Add notes to the captured images.

Figure 2-3 Edit Image

Table 2-3 Editing Options

No.	Description
1	Text Note. See _Handheld Thermography Camera User Manual_ for detailed information.
2	Voice Note. See _Handheld Thermography Camera User Manual_ for detailed information.

| No.	Description
3	QR Code Note. Scan QR code to add information: 1. Tap **QR Code Note** and the device enters the scanning mode. 1. Aim the scanning frame at a QR code. Device reads the code and save the code information. 2. Optional: Input the QR code. 3. Press OK or tap the screen outside the scanning frame and **Scan Asset ID** interface will pop up. 4. Input the QR code message. 5. Tap ☑ to confirm the settings.
4	Tag Note. Set **Tag Note** to add text for captured pictures. It is a prerequisite to import a template first. Please see 2.4 for more details. 1. Select **Tag Note**. 2. Select a tag and enter the tag settings. 3. Select at least 1 tag, and press OK to save the settings. 4. Optional: Press ◁ or ▷ button to switch between different tags, and press OK to save the settings.
5	Picture Note. Add visual image notes for captured radiometric images: 1. Tap ⚙ in live view to enter **Capture Settings.** 2. Switch on **Edit before Saving**. 3. Press 📷 button or Tap 📷 in the shortcut bar in live view to capture snapshots. An image edition bar will pop up after the captured image freezes. 4. Tap 🖼 to enter **Picture Note** interface. 5. Press 📷 button behind the device to add picture notes. 6. Press OK to save captured visual images to the local album. 7. Repeat step 5 and step 6 to add the next picture note. 8. Optional: Press ☑ on screen to save one captured visual image to the local album, and go back to image edition interface. 📖ℹ The number of visual images will be displayed on the top of the **Picture Note** interface during taking the pictures, eg."1/3". No more than 3 pictures are supported. 9. Tap 🖫 to save and exit.

No.	Description
6	Editing thermal parameters. See *Handheld Thermography Camera User Manual* for detailed information
7	After all information added to the image, select **Save** to exit. See *Handheld Thermography Camera User Manual* for detailed information

2.5.6 Filename and Saved Folder Information

For quick positioning, the thumbnail of captured images will display its filename and saved folder.

Figure 2-4 Filename and Saved Folder

3 Optimization

HIKMICRO SP series handheld thermal cameras have been optimized to improve your experience.

3.1 Live View Interface

3.1.1 Status Bar

- The function layout on live view interface is optimized shifted from horizontal direction to vertical direction.
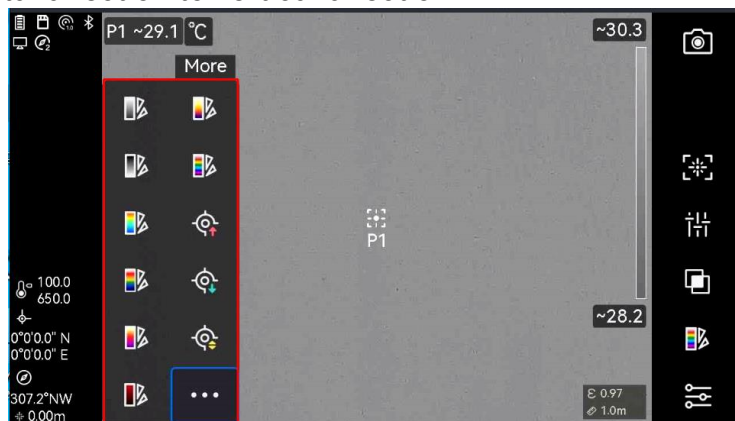
Figure 3-1 Vertical Layout in New Version

- The icon and value of **Temperature Range** is displayed on the bottom left of the status bar in live view.

3.1.2 Manual Level & Span

- It is available to change display modes and palettes in manual level & span setting interface.
- It is available to change color distribution in manual level & span mode.

3.1.3 Palettes

- **Rain**, **Rainbow** and **Blue Red** are optimized to improve thermal image display.
- It is selectable to set common palettes and hide palettes that are not frequently used.

Figure 3-2 Palettes Management

3.1.4 Insulation Alarm

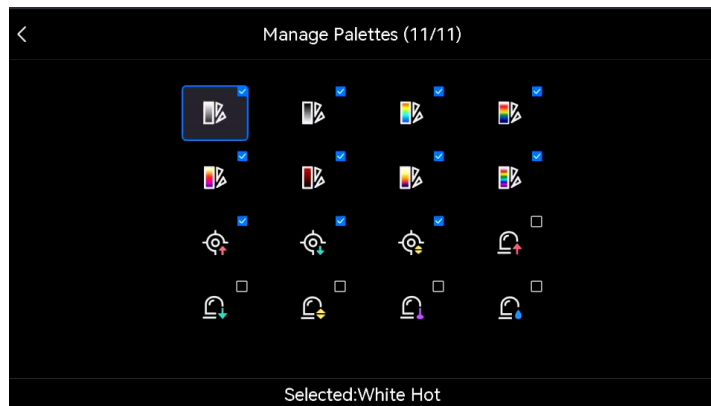In this version, users should set indoor temperature, outdoor temperature and insulation level to find suspected insulation weak area in a building or a room.

In practice, the **Insulation Level** is recommended to set in 60 to 80. Larger number means higher insulation demand.

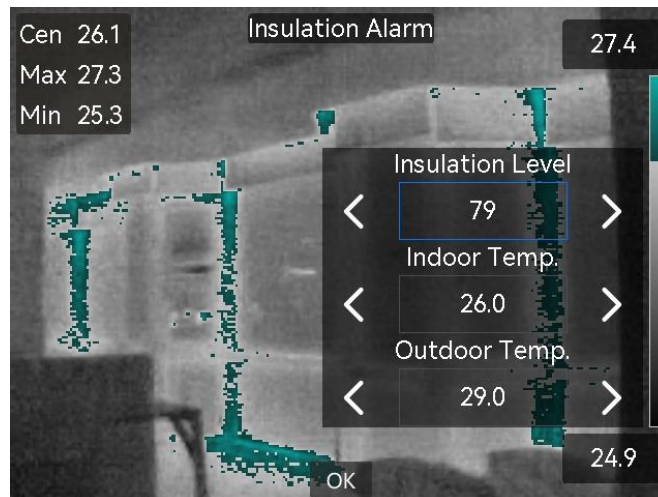The insulation inspections should be carried out indoors.

Figure 3-3 Insulation Alarm

3.1.5 Temperature Measurement

- When setting temperature measurement tools, it is selectable to hide or display **Maximum Temperature**, **Minimum Temperature** and **Average Temperature**.
- "~" will appear when the device is not well prepared for accurate temperature measurement right after being powered on.

- Temperature values will be displayed in live view when conducting temperature measurement by spot tools.

3.1.6 Capture Image

- When taking snapshots in poor light condition, it is available to enable **Flashlight** to make it clear.
- The thumbnail of captured snapshots is zoomed in with higher resolution.

3.2 More

- Reset: It is necessary to set system language and time when the device is restored and powered on for the first time.
- Connection Device to PC: Connect the device to PC via USB-A/USB-C, and user can choose either **UDB Drive** (by default) or **USB Cast Screen** in the pop-up window on the device.
- The prompt **Image calibrating…** is in one line when tapping the shutter and starting image calibration.
- Radiometric video: The device allows radiometric video recording until the storage is full or it is powered off. Long-time video recording will be separated into short-time pieces automatically. The size of each clip is no more than 4G.
- The number of captured images and videos can be viewed on the top of device **Albums**.
- Icons: Icons of **GPS** and **Compass** are updated.

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.
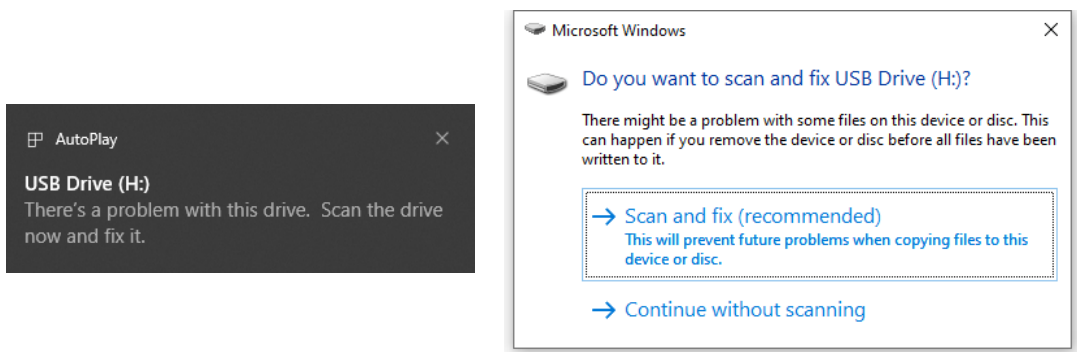- If you are using a built-in USB PowerShare port in your PC, please try another port.

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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