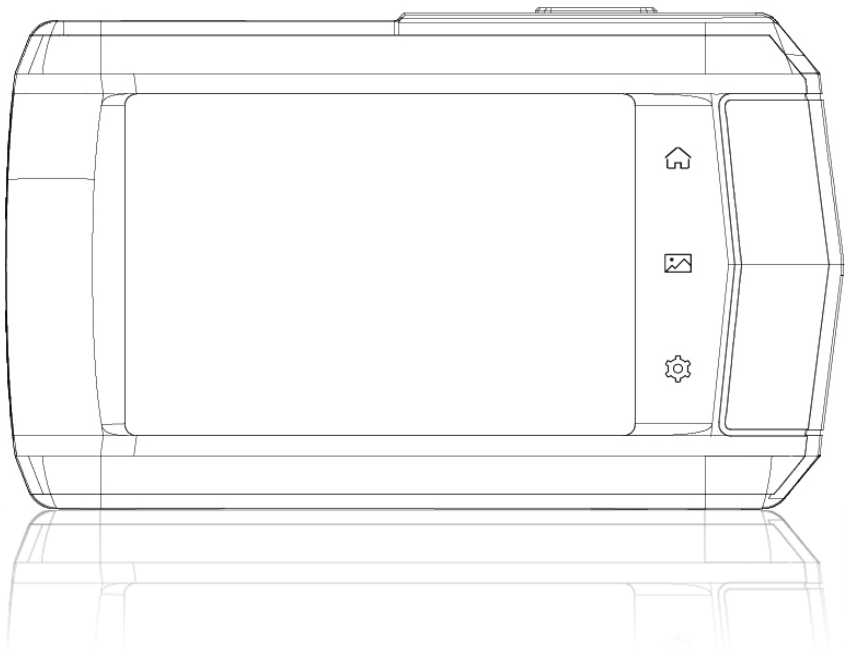
FUTECH

USER MANUAL

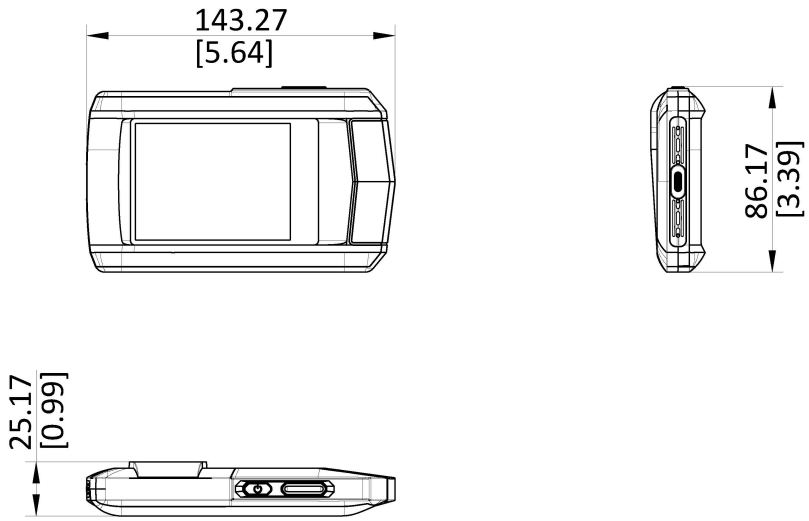
EN / ENGLISH

TEMPVIEWER 50K COMPACT



FUTECH TEMPVIEWER 50K COMPACT is equipped with a high-resolution detector, an 8 MP optical camera, and a 3.5" LCD touch screen. It helps you quickly and efficiently locate the hidden problems and accurately measure abnormal temperature. The wide temperature range of -20°C to 400°C is ideal for building inspection, HVAC, electrical, and mechanical equipment maintenance. The 25 Hz frame rate keeps up with fast inspections. The Tempviewer 50K Compact is a powerful thermography tool in your pocket, so it is always there whenever you need it.

- Thermal resolution: 256 × 192 (49,152 pixels)
- NETD: < 40 mK (@ 25°C, F# = 1.0)
- Accurately measure temperature from -20°C to 400°C (-4°F to 752°F)
- Accuracy: Max. (± 2°C/3.6°F, ± 2%)
- 25 Hz image frequency
- Thermal, fusion, PIP, and optical modes, 8 MP Optical camera
- Manual, automatic, and 1-Tap level and span
- High temperature alarm
- Built-in 16 GB memory
- LED work light
- 1.0x to 4.0x continuous digital zoom
- Up to 4 hours continuous running



Unit: mm [inch]

SPECIFICATIONS

THERMAL MODULE	
IR RESOLUTION	256 × 192 (49, 152 pixels)
SPECTRAL RANGE	8 to 14 µm
NETD	< 0.04°C (40 mK) at 25°C (77°F) ambient temperature, F# = 1.0
FOCAL LENGTH	3.5 mm
FOCUS	Fixed
FOV (FIELD OF VIEW)	50° H × 37.2° V
IFOV (SPATIAL RESOLUTION)	3.43 mrad
IMAGE FREQUENCY	25 Hz
MIN. FOCUSING DISTANCE	0.3 m (0.98 ft)
DETECTOR TYPE	Vanadium Oxide Uncooled Focal Plane Array
DETECTOR PITCH	12 µm
F-NUMBER	F1.1
OPTICAL MODULE	
FOV (FIELD OF VIEW)	64.6° H × 51.5° V
PICTURE RESOLUTION	Configurable: 2 MP, 5 MP, 8 MP
VIDEO RESOLUTION	640 × 480
FOCUS	Fixed
BUILT-IN VISUAL CAMERA	3264 × 2448 (8 MP)
IMAGE DISPLAY	
LEVEL/ SPAN	Auto/Manual/1-Tap Touch-screen
DISPLAY	640 × 480 Resolution, 3.5” LCD Touch Screen
IMAGE MODES	Thermal/Optical/Fusion/PIP
COLOR PALETTES	7: White Hot, Black Hot, Rainbow, Ironbow, Red Hot, Fusion,

	Rain
FUSION	Thermal image with visual camera details
DIGITAL ZOOM	1.0x to 4.0x continuous
PIP	Resizable and movable infrared area on the visual image
SCREEN BRIGHTNESS	Manual adjustment
MINIMUM TEMP SPAN (MANUAL)	2°C (3.6°F)
MEASUREMENT AND ANALYSIS	
OBJECT TEMPERATURE RANGE	-20°C to 400°C (-4°F to 752°F)
ACCURACY	Max. (± 2°C/3.6°F, ± 2%), for ambient temperature from 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)
MEASUREMENT PRESETS	Center Spot, Hot Spot, Cold Spot, Off
HIGH TEMPERATURE ALARM	Audible/visual alarm of above temperature threshold, user-defined temperature threshold
ON-CAMERA EMISSIVITY CORRECTION	Variable from 0.01 to 1.0 or selected from the materials list
ON-CAMERA REFLECTED TEMPERATURE COMPENSATION	Automatic, based on the input of the reflected temperature
ON-CAMERA TRANSMISSION CORRECTION	Automatic, based on the inputs for distance and humidity
STORAGE	
STORAGE MEDIA	Built-in EMMC (16 GB)
IMAGE STORAGE CAPACITY	Approx. 60,000 images
IMAGE FILE FORMAT	Radiometric.JPEG with measurement data included Thermal.THM.JPEG without measurement data included

VIDEO STORAGE CAPACITY	Approx. 10 h
VIDEO FILE FORMAT	Standard MP4 non-radiometric video
TEXT NOTE	Max. 200 Characters
POWER SYSTEM	
POWER SUPPLY	5 VDC/2 A (Charging via USB), fast charging
POWER CONSUMPTION	1.92 W
BATTERY TYPE	Rechargeable Li-ion battery
BATTERY OPERATING TIME	4 hours continuous running per battery (actual life varies depending on settings and usage)
BATTERY CHARGING TIME	1.5 h to 94%, 2.5h to full charge
BATTERY CHARGING SYSTEM	In-imager charging, fast charging
AC OPERATION	AC operation with included power supply (100 VAC to 240 VAC, 50/60 Hz)
GENERAL	
USB INTERFACE	USB 2.0, USB Type-C
LED LIGHT (TORCH)	Yes
MICROPHONE	Yes
BUZZER	Yes, audible alarm of above temperature threshold
CARRYING POUCH	Yes
WARRANTY	3 years for whole product, 10 years for detector, and 2 years for battery
RECOMMENDED CALIBRATION CYCLE	1 year (Assumes normal operation and normal aging)
SAFETY	IEC 62368-1: Overvoltage category II, Pollution Degree 2
LANGUAGE	21 Languages English, German, French, Spanish (Spain), Portuguese (Portugal), Italian, Czech, Slovak, Polish, Hungarian, Romanian, Dutch, Danish, Norwegian, Finnish, Swedish, Russian, Turkish, Japanese, Korean, Chinese (Traditional)

WORKING TEMPERATURE RANGE	-10°C to 50°C (14°F to 122°F)
PROTECTION LEVEL	IP54 (protected against dust, limited ingress; protection against water spray from all directions)
DROP TEST HEIGHT	2 m (6.56 ft)
WEIGHT	Approx. 218 g (0.481 lb)
DIMENSION	138.5 mm × 85.2 mm × 23.6 mm (5.45″ × 3.35″ × 0.93″)
STORAGE TEMPERATURE RANGE	-20°C to 60°C (-4°F to 140°F)
TRIPOD MOUNTING	UNC ¼″-20
RELATIVE HUMIDITY	< 95% non-condensing
ELECTROMAGNETIC COMPATIBILITY	EN55032: 2015+A11: 2020 EN50130-4: 2011+A1: 2014 EN61000-3-3: 2013
ROHS COMPLIANT	Yes
VIBRATION	0.03 g2/Hz (3.8 g), 2.5 g IEC 60068-2-6
SHOCK	25 g, IEC 68-2-29

SAFETY INSTRUCTION

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. Please read all the safety information carefully before using.

Calibration Service

We recommend you send the device back for calibration once a year, and please contact the local dealer for the information on maintenance points.

Battery

- CAUTION: Risk of explosion if the battery is replaced by an incorrect type. Replace with the same or equivalent type only. Dispose of used batteries in conformance with the instructions provided by the battery manufacturer.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- Dispose of used batteries in conformance with the instructions provided by the battery manufacturer.
- The built-in battery cannot be dismantled. Please contact the manufacture for repair if necessary.
- For long-term storage of the battery, make sure it is fully charged every half year to ensure the battery quality. Otherwise, damage may occur.
- Use the battery provided by a qualified manufacturer. Refer to the product specification for detailed battery requirements.
- DO NOT charge other battery types with the supplied charger. Confirm there is no flammable material within 2 m of the charger during charging.
- DO NOT place the battery near heating or fire source. Avoid direct sunlight.
- DO NOT swallow the battery to avoid chemical burns.
- DO NOT place the battery in the reach of children.
- When the device is powered off and the RTC battery is full, the time settings can be kept for 6 months.
- In the first use, charge the device for more than 2.5 hours in the power-off status.
- The lithium battery voltage is 3.85 V, and the battery capacity is 2100 mAh.
- The battery is certified by UL2054.

Power Supply

- Input voltage should meet the Limited Power Source (3.85 VDC, 570 mA) according to the IEC62368 standard. Please refer to technical specifications for detailed information.
- Make sure the plug is properly connected to the power socket.
- DO NOT connect multiple devices to one power adapter, to avoid over-heating or fire hazards caused by overload.
- Use the power adapter provided by a qualified manufacturer. Refer to the product specification for detailed power requirements.

Maintenance

- If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- Wipe the device gently with a clean cloth and a small quantity of ethanol, if necessary.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the device may be impaired.
- Please notice that the current limit of USB 3.0 PowerShare port may vary with the PC brand, which is likely to result in incompatibility issue. Therefore, it's advised to use regular USB 3.0 or USB 2.0 port if the USB device fails to be recognized by PC via USB 3.0 PowerShare port.
- Your camera will periodically perform a self-calibration to optimize image quality and measurement accuracy. In this process, the image will pause briefly and you will hear a "click" as a shutter moves in front of the detector. The self-calibration will be more frequent during start up or in very cold or hot environments. This is a normal part of operation to ensure optimum performance for your camera.

Using Environment

- Make sure the running environment meets the requirement of the device. The operating temperature shall be -10 °C to 50 °C (14 °F to 122 °F), and the operating humidity shall be 95% or less.
- Place the device in a dry and well-ventilated environment.
- DO NOT expose the device to high electromagnetic radiation or dusty environments.
- DO NOT aim the lens at the sun or any other bright light.
- When any laser equipment is in use, make sure that the device lens is not exposed to the laser beam, or it may burn out.
- DO NOT aim the lens at the sun or any other bright light.
- The device is suitable for indoor and outdoor uses, but do not expose it in wet conditions.
- The level of protection is IP 54.
- The pollution degree is 2.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
Note	Provides additional information to emphasize or supplement important points of the main text.

Laws and Regulations

- Use of the product must be in strict compliance with the local electrical safety regulations.

Transportation

- Keep the device in original or similar packaging while transporting it.
- Keep all wrappers after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.
- DO NOT drop the product or subject it to physical shock. Keep the device away from magnetic interference.

Emergency

- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

COMPLIANCE NOTICE

The thermal series products might be subject to export controls in various countries or regions, including without limitation, the United States, European Union, United Kingdom and/or other member countries of the Wassenaar Arrangement. Please consult your professional legal or compliance expert or local government authorities for any necessary export license requirements if you intend to transfer, export, re-export the thermal series products between different countries.

CONTENTS

CHAPTER 1 OVERVIEW

1.1 Important Notice to User

This manual describes and explains the features for multiple camera models. Because the camera models of a series have different features, this manual may contain descriptions and explanations that do not apply to your particular camera model.

Not all the camera models of a series support the mobile applications, software, and all their functions mentioned (or not mentioned) in this manual. Please refer to the user manuals of the application and software for more detailed information.

This manual is updated on a regular basis. It means that this manual may not contain the information about the new features of the latest firmware, mobile clients, and software.

1.2 Device Description

The pocket thermography camera is a device with both visual images and thermal images. It can do temperature measurement, video recording, snapshot capturing, alarm. The built-in high-sensitivity IR detector and high-performance sensor detects the variation of temperature and measure the real-time temperature.

The device is easy to use, and adopts ergonomic design. It is widely used for building inspection, HVAC, as well as electrical and mechanical equipment maintenance.

1.3 Main Function

Temperature Measurement

The camera detects the real-time temperature, and displays it on the screen.

Fusion

The camera can display fusion of thermal view and visual view.

Palettes

The camera supports multiple color palettes for different targets and user preference.

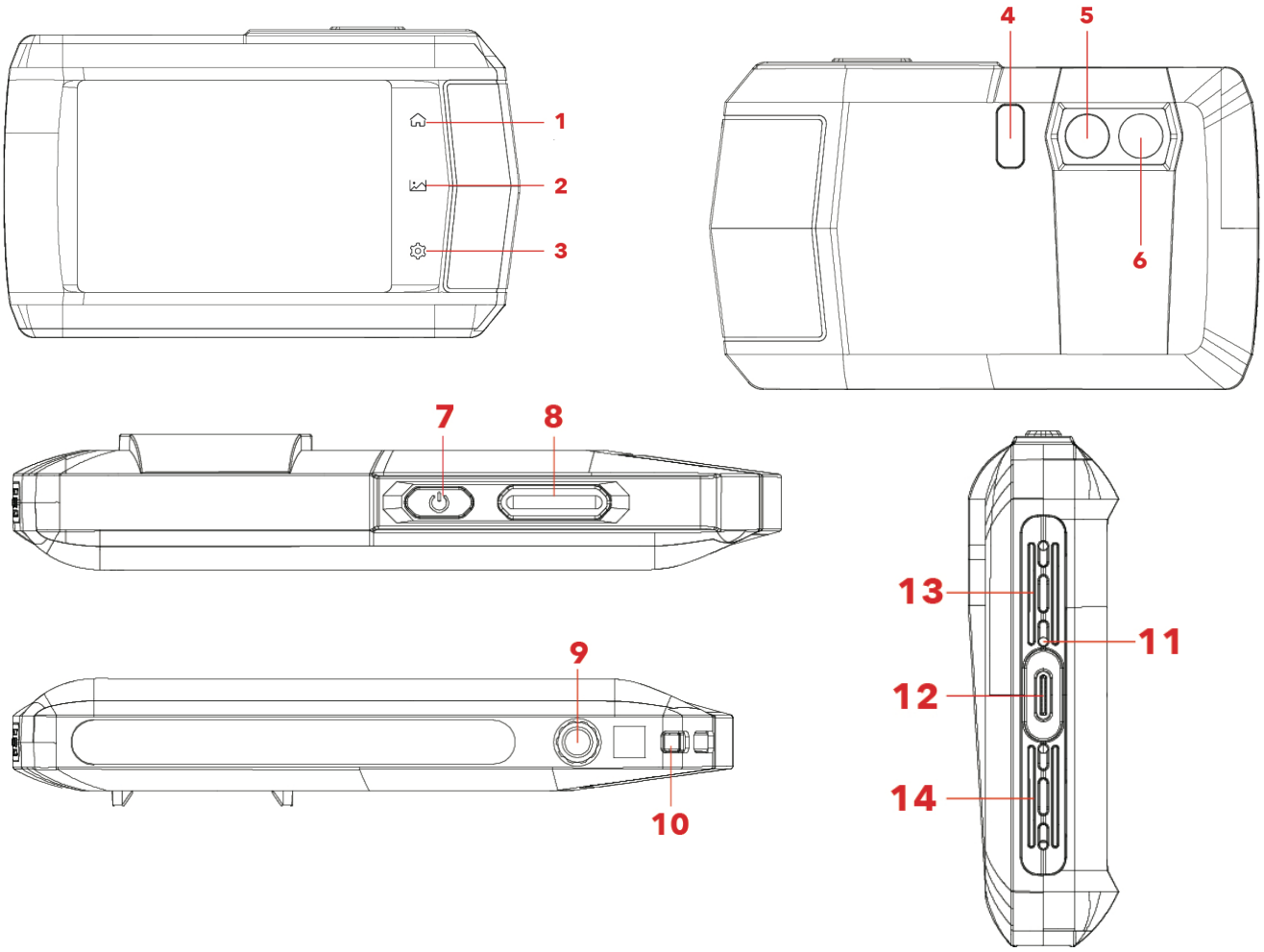
Alarm

The camera supports temperature alarms.

SuperIR

The camera supports **SuperIR** to enhance object outlines. Some camera models can display the real-time SuperIR image in live view.

1.4 Appearance



No.	Description	Function
1	Home Key	Tap to return to the live view interface.
2	File Key	Tap to enter albums.
3	Settings Key	Tap to enter settings interface.
4	Flash Light	Fill light on objects and output flashing alarm.
5	Thermal Lens	View the thermal image.
6	Visual Lens	View the visual image.
7	Power Key	◆ Hold: Power on/off the device. ◆ Press: Manual sleep/Wake up the device.

No.	Description	Function
8	Capture Key	In live view: ◆ Press: Capture snapshots/stop recording. ◆ Hold: Start recording. In menu mode: Return to the live view interface.
9	Tripod Mount	Mount the tripod.
10	Strap Attachment Point	Mount the strap.
11	Indicator	Indicate the charging status of the device. ◆ Solid red: charging normally ◆ Flashing red: charging exception ◆ Solid green: fully charged
12	Type-C Interface	Charge the device or export files with the supplied USB cable.
13	Buzzer	Output audible alarm.
14	Microphone	Record audio.

NOTE Your camera will periodically perform a self-calibration to optimize image quality and measurement accuracy. In this process, the image will pause briefly and you'll hear a "click" as a shutter moves in front of the detector. The prompt "Image Calibrating …" appears in the upper center of the screen as the device is calibrating itself. The self-calibration will be more frequent during start up or in very cold or hot environments.

CHAPTER 2 PREPARATION

2.1 Charge Device

The camera is equipped with a built-in battery. It is recommended to charge the camera with the included USB cable in the package and the Type-C interface on camera. Do not use the USB-C to USB-C cable of other manufacturers.

The power adapter (not included) should meet the following standards:

- Output Voltage/Current: 5 VDC/2 A
- Minimum Power Output: 10 W

Check the power indicator for the charging status:

- Solid red: charging normally
- Flashing red: charging exception
- Solid green: fully charged

NOTE

- If the camera is not in use for an extended period and is over-discharged, it is recommended to charge for at least 30 min before powering it on.
- It is recommended to use the USB cable included in the package for both charging and data transfer.

2.2 Power On/Off

Power On

Hold ⏻ for over three seconds to turn on the device. You can observe the target when the interface of the device is stable.

NOTE It may take at least 30 s until the device is ready for using after you power on it.

Power Off

When the device is turned on, hold ⏻ for about three seconds to power off the device.

2.2.1 Manual Sleep

When the device is turned on, press ⏻ once to turn on the sleep mode, and press ⏻ again to wake up the device.

2.2.2 Set Auto Power-Off

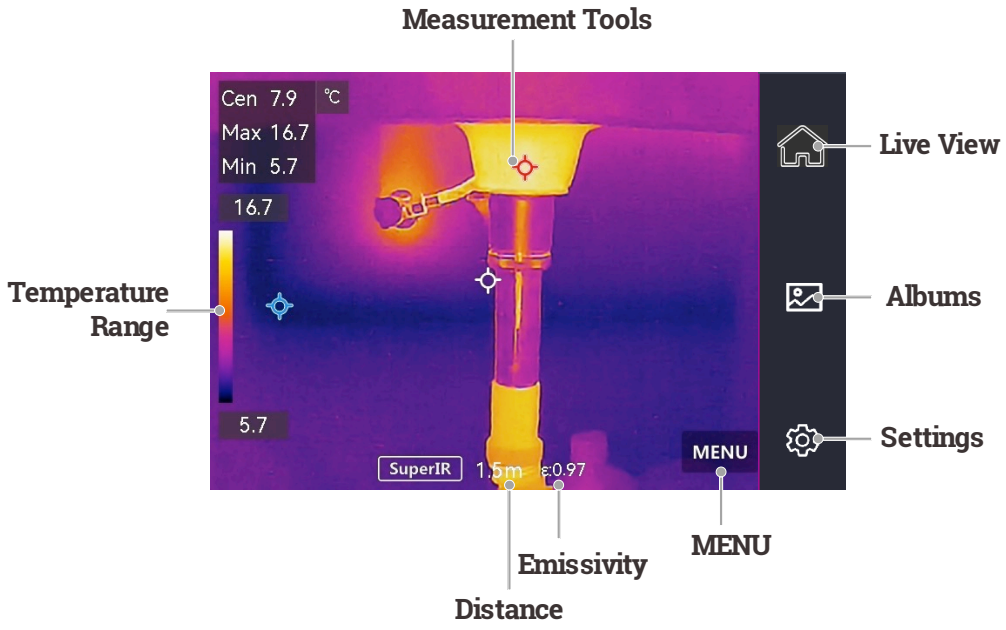
Tap ⚙, and go to **Device Settings** > **Auto Power-off** to set the automatic shutdown time for device as required.

2.3 Operation Method

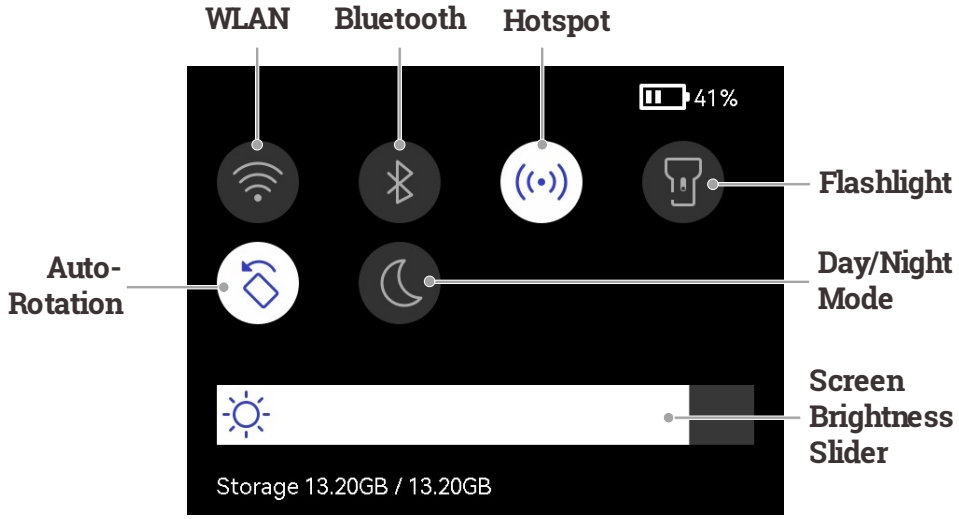
The device supports touch-screen control. You can tap the screen to set parameters and configurations.

2.4 Menu Description

Live View



Swipe-down Menu



NOTE Because this manual is updated on a regular basis, the interfaces might be slightly different from the version of your particular camera model. Please refer to the actual camera.

CHAPTER 3 DISPLAY SETTINGS

3.1 Set Screen Brightness

Go to **Local Settings** > **Device Settings** > **Screen Brightness** to adjust the screen brightness. Or tap , and drag it to adjust the screen brightness.

3.2 Set SuperIR

The device supports **SuperIR** on live view (for some models) and on snapshots. Turn on **SuperIR** to enhance the object outlines for better image display. The actual effect is subject to the actual product.

Go to Local Settings > Capture Settings > SuperIR to turn it on/off.

- On live view: For some models, the object outlines can be enhanced in live view when SuperIR is on.
- On captured images: the object outlines in the image are enhanced after SuperIR is on.

3.3 Set Image Mode

You can set the thermal/visual view of the device. **Thermal**, **Fusion**, **PIP**, **Blending**, and **Visual** are selectable.

1. Tap **MENU**, and select .
2. Tap the icons to select an image mode.

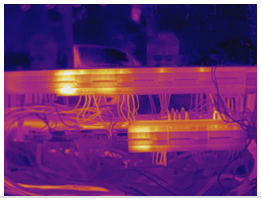
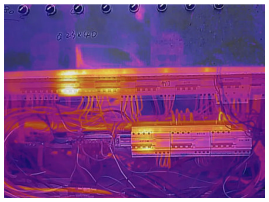
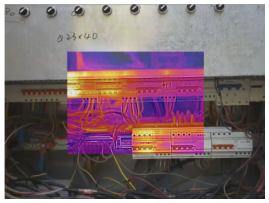
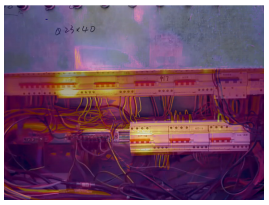
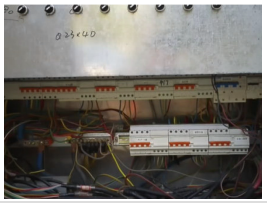
Image Mode	Description	Example
Thermal	In thermal mode, the device displays the thermal view.	

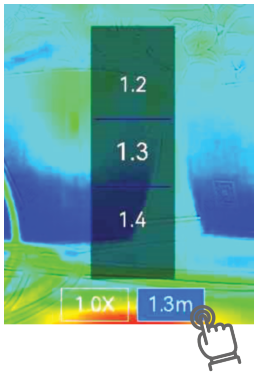
Image Mode	Description	Example
Fusion	Thermal object image with visual outlines. Adjust **Parallax Correction** in live view to improve image alignment.	
PIP	In **PIP** (Picture in Picture) mode, the device displays thermal view inside the visual view. You can adjust the size, parallax correction and digital zoom of the PIP.	
Blending	In **Blending** mode, the device displays the mixture view of thermal channel and visual channel. You can select the visual-thermal **Level** to change the visual-thermal ratio.	
Visual	Visual object image only.	

3. Tap **BACK** to exit.

3.3.1 Set Parallax Correction

You should set the parallax correction after you set the image mode as **Fusion**, **PIP**, or **Blending**, so as to improve the thermal-visual image alignment.

Tap on the screen to show the adjustment interface, select **Parallax Correction** (xx m), and scroll the value wheel to set the value.



3.4 Set Palettes

The palettes allow you to select the desired colors.

1. Tap **MENU**, and select .
2. Tap the icons to select a palette.
3. Tap **BACK** to exit the setting interface.

3.5 Adjust Level & Span

Set a display temperature range and the palette only works for targets within the range. You can adjust the display temperature range.

1. Tap **MENU**, and select .
2. Select auto adjustment or manual adjustment .

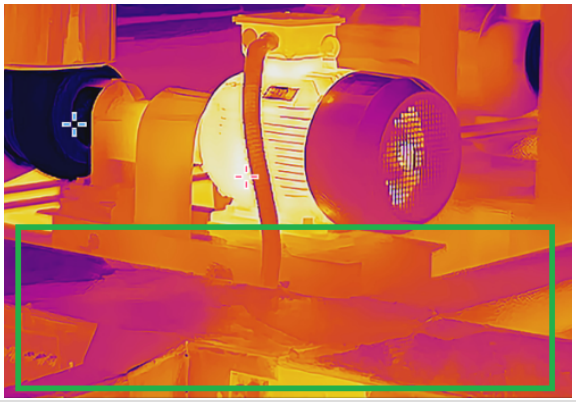
Auto	Select . The device adjusts display temperature range parameters automatically.
Manual	1) Tap on an interest area of the screen. A circle is displayed around the area, and the display temperature range readjusts to show as many details of the area as possible. 2) Tap on the value on screen to lock or unlock a value. 3) Scroll the adjustment wheel on the screen to fine-tune the max. temperature and the min. temperature respectively. 4) Tap **OK** to finish.

3. Tap **BACK** to exit.

3.6 Color Distribution

Color distribution function provides different image display effects in auto level & span. Linear and histogram color distribution modes can be selected for different application scenes.

1. Go to **Local Settings** > **Temp Measurement Settings** >**Color Distribution**.
2. Select a color distribution mode.

Mode	Description	Example
Linear	Linear mode is used to detect small high temperature targets in low temperature background. Linear color distribution enhances and displays more details of high temperature targets, which is good for checking small high temperature defective areas such as cable connectors.	
Histogram	Histogram mode is used to detect temperature distribution in large areas. Histogram color distribution enhances high temperature targets and remains some details of low temperature objects in the area, which is good for discovering small low temperature targets such as cracks.	

3. Tap 〈 to save and exit.

NOTE This function is only supported in auto level & span.

3.7 Adjust Digital Zoom

1. Tap the live view interface to call the digital zoom frame.
2. Tap the digital zoom frame.
3. Select the digital zoom value as required
4. Tap the screen to save and exit.

3.8 Display On-Screen Info

Go to **Local Settings** > **Display Settings** to enable the information on-screen display.

- **Time and Date**: Device time and date.
- **Parameters**: Temperature measurement parameters, for example, target emissivity, temperature unit, etc.
- **Brand Logo**: The brand logo is a manufacturer logo overlapped on images.

CHAPTER 4 TEMPERATURE MEASUREMENT

The temperature measurement function provides the real-time temperature of the scene. The device displays the measurement results on the left of your screen.

4.1 Set Temperature Measurement Parameters

You can set temperature measurement parameters to improve the accuracy of temperature measurement.

1. Go to **Local Settings** > **Temp Measurement Settings**.
2. Set the Temperature Range, Emissivity, etc.
   - **Temperature Range**: Select the temperature measurement range. The device can detect the temperature and switch temperature measurement range automatically in Auto Switch mode.
   - **Emissivity**: Set the emissivity according to your target. You can customize it or select a recommended value.
   - **Refl. Temp.**: Reflected temperature. If any object (not the target) of high temperature is in the scene, and the target emissivity is low, set the reflection temperature as the high temperature to correct the temperature measurement effect.
   - **Distance**: The distance between the target and the device. You can customize the target distance or select the target distance as **Near**, **Middle**, or **Far**.
   - **Humidity**: Set the relative humidity of current environment.
3. Return to previous menu to save the settings.

NOTE You can go to **Local Settings** > **Device Settings** > **Device Initialization** > **Remove All Measurement Tools** to initialize the temperature measurement parameters.

4.2 Set Measurement Tools

You can set measurement tools to measure the min., max., and center temperatures of the current scene.

1. Tap **MENU**, and select .
2. Tap to select the temperature measurement tool as required. **Hot** , **Cold** , and **Center** are selectable.
3. Tap **BACK** to save and exit.

NOTE The min., max., and center temperatures are displayed on the left top of the screen. Tap the tool again to delete.

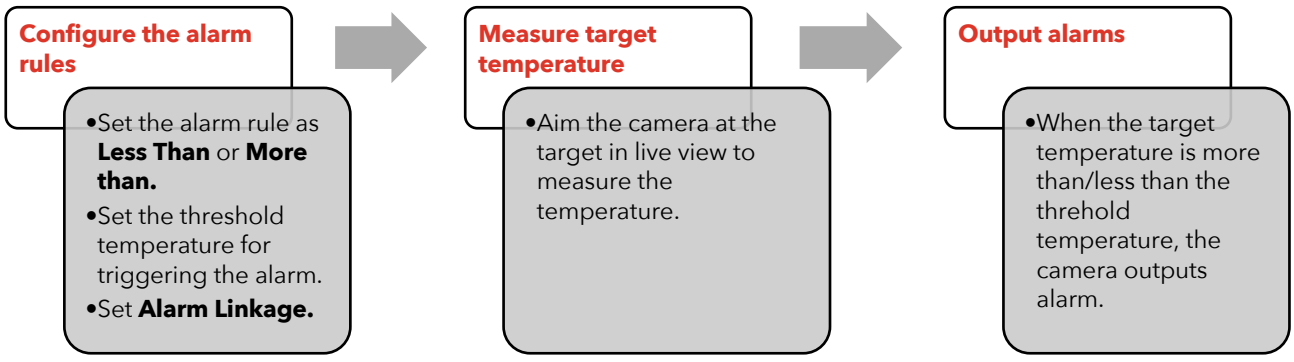
4.3 Set Temperature Alarm

When the temperature of targets triggers the set alarm rule, the device will perform configured actions, such as making audible warning and flash alarm.

1. Go to **Local Settings** > **Temp Measurement Settings** > **Alarm Settings**.
2. Enable **Temperature Alarm** and set the alarm parameters.

Alarm Threshold	When the tested temperature exceeds the threshold, the device sends alarm notification to the client software. The device will buzz if the audible warning is enabled, and the flashlight will flash if the flashing alarm is enabled.
Alarm Linkage	◆ **Audible Warning**: The device beeps when target temperature exceeds the alarm threshold. ◆ **Flashing Alarm**: The flash light flashes when target temperature exceeds the alarm threshold.

3. Tap 〈 to save and exit.



CHAPTER 5 PICTURE AND VIDEO

The device can record videos and capture snapshots. The files are saved in the local albums.

NOTE

- The device does not support capturing or recording when the menu is shown.
- When the device is connected to your PC, it does not support capturing or recording.
- Tap and go to Local Settings > Capture Settings > Filename Header, you can set the filename header for capturing or recording to distinguish the files recorded in a specific scene.
- Tap and go to Local Settings > Device Settings > Device Initialization to initialize the storage as needed.

5.1 Capture Picture

In live view, press to capture a snapshot. Enable the flashlight via the swipe-down menu in dark environment.

You can also set the following parameters in **Local Settings** > **Capture Settings** as needed.

Parameters	*Description*
Capture Mode	◆ **Capture One Image**: Press once to capture one image. ◆ **Scheduled Capture**: Set **Interval** (the time interval of each snapshot to be taken) and **Number** (the number of snapshots to be taken in a roll, ranging from 1 to 10,000) for scheduled capture. Press in live view, and the camera captures the set number of images according to the set interval. Press again to stop capturing.
Edit before Saving	In **Capture One Image** mode, if you need to edit the captured image immediately, enable **Edit before Saving**. ◆ Text Note: Select text note and enter the editing page. Tap on screen to input content and press ✓ to save. ◆ Scan QR Code: *1)* Select QR code and the device enters the scanning mode.

Parameters	Description
	2) Aim the scanning frame at a QR code. Device reads the code and save the code information. 3) **Optional**: If the scanning fails, you can enter the code information (Asset ID) using on-screen keyboard according to the prompt.
Filename Header	Set the naming rule for the saved files. The default image naming is filename header + saving time. **Filename Header** is configurable. Saving time is the device system time when the saving occurs.
SuperIR	Enable **SuperIR** before capturing to enhance the object outlines of the captured images.
File Naming	The files can be named after **Time Stamp** or **Numbering** (filename header + sequence number).
Save Visual Image	If a visual image is needed to be saved separately, enable **Save Visual Image** and set **Visual Image Resolution**.

NOTE

- For **Capture One Image**, if **Edit before Saving** is NOT enabled, the live image freezes and is saved in the default saving album. If **Edit before Saving** is enabled, the device enters the image editing interface.
- For **Scheduled Capture**, a counter displays in live view showing the completed amounts of capturing.

What to do next

- Tap  to enter albums to view and manage files and albums. See 5.3 Manage Albums and 5.5 Manage Files for operation instructions.
- You can connect your device to PC to export local files in albums for further use. See 5.6 Export Files.

5.2 Record Video

1. In the live view interface, hold  to start recording. The recording icon and count down number display in the interface.
2. When you finish, press  once to stop recording. The recording video will be saved automatically.

3. **Optional**: Go to **Local Settings** > **Capture Settings**, you can choose a video type from MP4 (.mp4) and radiometric video (.hrv).

5.3 Manage Albums

The recorded image/video files are saved in the albums. You can create new albums, rename an album, change the default album, move files between the albums, and delete albums.

Task	*Operations*
Create a New Album	*1)* Tap to enter **Albums**. *2)* Tap + to add a new album. *3)* A soft keyboard is displayed, where you can enter the name of the album by touching the screen. *4)* Tap ✓ to finish. NOTE The newly created album becomes the default saving album and appears at the top of the album list.
Rename an Album	*1)* Tap to enter **Albums**. *2)* Select the album to rename. *3)* Tap ···, and select **Rename**. A soft keyboard is displayed. *4)* Tap ⊗ to delete the old name, and enter the new name for the album by touching the screen. *5)* Tap ✓ to finish.
Change the Default Saving Album	*1)* Tap to enter **Albums**. *2)* Select the album you want to use as the default saving album. *3)* Tap ···, and select **Set as Default Saving Album**. NOTE Default saving album appears at the top of the album list.

Delete an Album	1) Tap to enter **Albums**. 2) Select the album you want to delete. 3) Tap ···, and select **Delete**. A prompt box appears on the interface. 4) Tap **OK** to delete the album. NOTE: The files in an album are deleted as well when deleting the album. Move the files to other albums if they are still needed. See ***5.5 Manage Files*** for instructions.

5.4 View Recorded Files

1. Tap to enter **Albums**.
2. Tap to select the target album.
3. Tap to select a video or snapshot to open it.
4. Tap the image or video, and tap ⓘ to view more information.

NOTE
- Files are arranged in chronological order, with the most recent at the top. If you fails to find the most recently taken snapshots or videos, please check the time and date settings of your device. See **6.2 Set Time and Date** for instructions. When you are viewing files, you can switch to other files by tapping < or >.
- For more information contained in capture snapshots or videos, you can download and install the PC analyzing tool to analyze them.

5.5 Manage Files

You can move, delete, edit the recorded files, and add text notes to the files.

Task	*Operations*
Delete a File	1) Tap to enter **Albums**. 2) Tap to select the album storing the file to be deleted. 3) In the album, tap to view the file to be deleted. 4) Tap the screen to show the menu bar below, and tap 🗑. A prompt box appears on the interface. 5) Tap **OK** to delete the file.
Delete Multiple Files	1) Tap to enter **Albums**. 2) Tap to select the album storing the files to be deleted.

Task	Operations
	3) In the album, tap , and tap the files to be deleted. 4) Tap . A prompt box appears on the interface. 5) Tap **OK** to delete the files.
Move a File	1) Tap to enter **Albums**. 2) Tap to select the album storing the file to be moved. 3) In the album, tap to view the file to be moved. 4) Tap the file to show the menu bar below, and select . The album list is displayed. 5) Tap to select the album to move to.
Move Multiple Files	1) Tap to enter **Albums**. 2) Tap to select the album storing the files to be moved. 3) In the album, tap to select the files to be moved. 4) Tap . The album list is displayed. 5) Tap to select the album to move to.
Add Text Note on File	1) Tap to enter **Albums**. 2) Tap to select the album storing the file to be edited. 3) In the album, tap to view the file to be edited. 4) Tap the screen to show the menu bar below, and tap . A soft keyboard is displayed. 5) Enter the text note by touching the screen. 6) Tap to finish. ***What to do next*** You can open the edited photo to view the text note.

NOTE You can tap to select all files, and tap to cancel the selection.

5.6 Export Files

5.6.1 Export via PC

1. Connect the device to your PC with the supplied USB cable, and select **USB Drive** mode in the prompt on device. In **USB Drive** mode, casting screen is not supported.
2. Open the detected disk, copy and paste the videos or snapshots to PC to view the files.
3. Disconnect the device from your PC.

NOTE For the first connection, the driver will be installed automatically.

CHAPTER 6 SYSTEM SETTINGS

6.1 Set Macro Mode

In the macro mode, you can focus extremely close on a very small object, and the object appears much larger in the view (and in the final image) compared to the standard lens.

Before You Start

- Install the macro lens before using this function. Refer to the quick start guide of the macro lens for detailed operation.
- The macro lens is not included in the package. Please purchase it separately.

1. Go to **Local Settings** > **Capture Settings** > **Macro Mode**.
2. Tap  to enable the function.

NOTE

- After the macro mode is enabled, only the emissivity can be modified. Parameters such as distance, image mode, parallax correction, and measurement range cannot be modified.
- After this function is turned off, the parameters will be restored to the previous set values, and the measurement range will be set to auto switch.

6.2 Set Time and Date

1. Go to **Local Settings** > **Device Settings** > **Time and Date**.
2. Set the date and time.
3. Tap 〈 to save and exit.

NOTE Go to **Local Settings** > **Device Settings** > **Display Settings** to turn on/off time and date display.

6.3 Set Unit

Go to **Local Settings** > **Display Settings** > **Unit** to set the temperature unit and distance unit.

6.4 Set Language

Go to **Local Settings** > **Device Settings** > **Language** to select a required language.

6.5 Set Auto-Rotation

Turn on auto-rotation in swipe-down menu.

Or go to Local Settings > Device Settings > Auto-Rotation to turn on this function.

CHAPTER 7 MAINTENANCE

7.1 View Device Information

Go to Local Settings > Device Settings > Device Information to view the device information.

7.2 Upgrade Device

Before You Start

- Please download the upgrade file from the official website or contact the custom service and technical support to get the upgrade file first.
- Make sure that the device battery is fully charged.
- Make sure that Auto Power-off function is turned-off to avoid accidental suspension during upgrading.

1. Connect the device to your PC via the included USB cable, and select **USB Drive** as the USB mode in the prompt on the device.
2. Unzip the upgrade file and copy it to the root directory of the device.
3. Disconnect the device from your PC.
4. Reboot the device and then it will upgrade automatically. The upgrading process will be displayed in the main interface.

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

7.3 Restore Device

Go to **Device Settings** > **Device Initialization** > **Restore Device** to initialize the device and restore default settings.

7.4 Save Operation logs

The device can collect its operation logs and save in the storage only for troubleshooting. You can turn on/off this function in **Local Settings** > **Device Settings** > **Save Logs**.

You can connect the camera to PC using the supplied USB cable, and select USB Drive as the USB mode on camera to export the operation logs (.log files) in the root directory

of the camera, if necessary.

7.5 Format Storage

Format storage before first use of it.

Tap , and go to **Device Settings** > **Device Initialization**> **Format Storage** to initialize the device memory.

7.6 About Calibration

We recommend you send the device back for calibration once a year, and please contact the local dealer for the information on maintenance points.

CHAPTER 8 LEGAL INFORMATION

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the company website.

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

Trademarks

Trademarks and logos mentioned are the properties of their respective owners.

Disclaimer

To the maximum extent permitted by applicable law, this manual and the product described, with its hardware, software and firmware, are provided "as is" and "with all faults and errors". Our company makes no warranties, express or implied, including without limitation, merchantability, satisfactory quality, or fitness for a particular purpose. The use of the product by you is at your own risk. In no event will our company be liable to you for any special, consequential, incidental, or indirect damages, including, among others, damages for loss of business profits, business interruption, or loss of data, corruption of systems, or loss of documentation, whether based on breach of contract, tort (including negligence), product liability, or otherwise, in connection with the use of the product, even if our company has been advised of the possibility of such damages or loss.

You acknowledge that the nature of the internet provides for inherent security risks, and our company shall not take any responsibilities for abnormal operation, privacy leakage or other damages resulting from cyber-attack, hacker attack, virus infection, or other internet security risks; however, our company will provide timely technical support if required.

You agree to use this product in compliance with all applicable laws, and you are solely responsible for ensuring that your use conforms to the applicable law. Especially, you are responsible, for using this product in a manner that does not infringe on the rights of third parties, including without limitation, rights of publicity, intellectual property rights, or data protection and other privacy rights. You shall not use this product for any prohibited end-uses, including the development or production of weapons of mass destruction, the development or production of chemical or biological weapons, any activities in the context related to any nuclear explosive or unsafe nuclear fuel-cycle, or

in support of human rights abuses.

In the event of any conflicts between this manual and the applicable law, the latter prevails.

CHAPTER 9 DECLARATION OF CONFORMITY

CE

FUTECH declares under its own responsibility that this device:
- 335.049 - TEMPVIEWER 50K COMPACT
is in conformity with the standards:

DIRECTIVE 2014/30/EU
- EN 55032:2015 / A11:2020 + A1:2020
- EN 55035:2017 / A11:2020
- EN IEC 61000-3-2:2019 / A1:2021
- EN 61000-3-3:2013 /A1:2019 + A2:2021

GENERAL PRODUCT SAFETY DIRECTIVE 2001/95/EC
- EN IEC 62368-1:2020 + A11:2020

RADIO EQUIPMENT DIRECTIVE 2015/53/EU
Article 3.1(a) – Health / Article 3.1 (b) Electromagnetic compatibility / Article 3.2 Radio
- EN 300 328 V2.2.2
- EN 301 893 V2.1.1
- EN 300 440 V2.1.1
- EN 50566:2017
- EN 62479:2010

ROHS DIRECTIVE 2011/65/EU
and subsequent updates

Lier, Belgium,
June 27, 2025
Patrick Waûters

Futech is brand of Laseto NV, Kelderveld 37, 2500 Lier, Belgium.