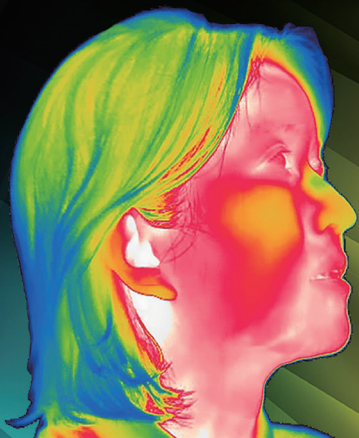


FOTRIC

FAQ

WLIR System
Operating



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Disclaimer

Fotric 226B and 223B are not marketed or intended to be used as a medical device. Fotric 226B and 223B can only be used to measure surface temperature. The devices do not determine the core body temperature of subjects. Actual core body temperature can only be determined by using an approved clinical measurement device.

For proper and effective use of Fotric 226B and 223B, please contact us.

Customer Support

1. Software download and upgrade

To download the newest version software, please visit Fotric's official website download center:

www.fotric.com/support

2. Software License information

Fotric WLIR auto body temperature screening software is the standard configuration for Fotric 226B and 223B.

3. Documentation download

To view the latest operation manuals and FAQ documents, please visit Fotric's official website download center: **www.fotric.com/support**

4. Contact information

For customer support regarding thermal camera failures, software bugs or new feature requests, please send emails to info@fotric.com or visit Fotric official website contact center: **www.fotric.com/contact**

FAQs on WLIR Software

1. Usage & Operation

1.1 What is the recommended computer configuration for WLIR software?

WLIR software uses Artificial Intelligence algorithm for face detection, which has relatively higher requirements for computer configuration.

The recommended configuration is as below:

Operation system: Microsoft Windows 10, 64-bit edition.

CPU: Core i5 equivalent or above. RAM: 8 GB or above.

Please log in the administrator account to use WLIR software. Or click “run as administrator” when the first time to open WLIR software.

2.2 What is the differences between WLIR-DC and WLIR-IR software?

WLIR-DC software uses visual light digital camera’s image for face recognition, while WLIR-IR uses infrared

thermal image for face recognition.

1.3 Where can I download the WLIR software?

It is very important to install the newest version software. Please visit FOTRIC official website:

www.fotric.com/support/WLIR-DC or

www.fotric.com/support/WLIR-IR to download.

1.4 What is Threshold Mode?

The threshold mode directly displays the human body skin (face) temperature, which might be affected by the environment.

In threshold mode, the temperature compensation can be calibrated and set manually up to $\pm 10^{\circ}\text{C}$.

1.5 What is HawkAI Mode?

HawkAI is Fotric technology. In HawkAI mode, WLIR software continuously (in real time) collects human body skin (face) temperature samples, and automatically calculates the compensation temperature through the AI algorithm. It converts the human body skin temperature into the body temperature.

HawkAI mode is designed with caution, for screening out people who has a relatively higher body temperature in the crowd. Body temperature varies from person to person; biggest difference can be as high as 1-2 ° C. With careful consideration, please have the screened person stabilize for 5-10 minutes and then perform a second measurement. If temperature is still high, please use a clinical thermometer for further check.

1.6 When should I resample temperature of the crowd in HawkAI Mode?

When start to use HawkAI mode, the software will

prompt: "You have to resample temperature for 10 sets." It is recommended to sample temperatures of 10 different people with variations so that the temperature compensation value of the AI algorithm can fit most of the crowd.

If the arriving people's body skin temperatures suddenly change because of outdoor temperature or other reasons, it is recommended to start resampling manually, by switch to threshold mode and then switch back to HawkAI mode.

1.7 Why is there no alarm above 45 °C ?

When the measured temperature of the human face exceeds 45 ° C, the software will not emit an alarm.

The software's upper limit of the alarm temperature is 45 ° C. If the temperature of the human body exceeds 45 ° C, the person would feel unmistakably ill and should go to the hospital for treatment immediately.

1.8 How should I design the Crowd walking route?

It is recommended that, the temperature measurement's position is fixed as well as the measurement distance. Because the thermal camera's focus and match are set under this premise.

If the person walks too close or too far to the thermal camera, the measurement result may vary a lot.

Therefore, during thermal camera installation, we recommend that the crowd walk route is designed as an "L" shape. After reaching the determined temperature measurement's position, the channel turns left or right by 90° .

1.9 What is Power saving mode?

Customer can choose to power off the imager camera by either manually or automatically in power saving mode.

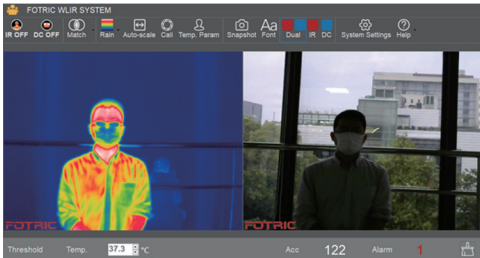
To manually power off, press and hold the power button for about 5 seconds.

In power saving mode, the thermal camera will be automatically powered off after 10 minutes since it is disconnected from the software (software is closed or not connected to IR, or the computer is in sleep mode).

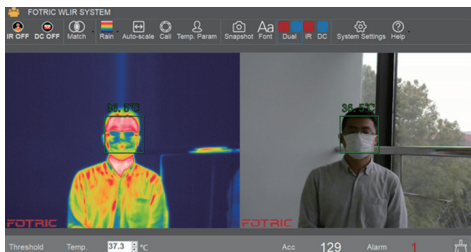
1.10 Backlight issues on WLIR-DC

With WLIR-DC software, it requires great effort to set up a stable test environment at outdoors. So the recommended installation environment for the FOTRIC 226B and 223B is indoors without backlight.

When the thermal camera lens is towards to an open door or window, the face recognition may fail, as shown in the figure below.



Change the orientation of the thermal camera lens or turn on the indoor lamps to reduce the influence of backlight, so the face recognition will succeed.

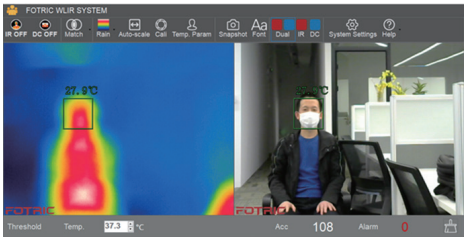


1.11 Focus distance issues on WLIR-DC & IR

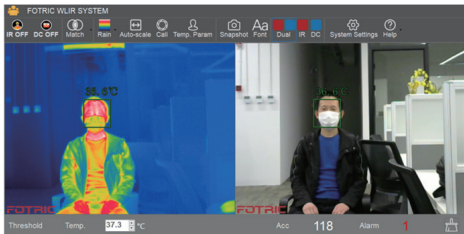
The FOTRIC 226B and 223B use manual focus adjustment lens, and can only measure temperature correctly when its focus distance is accurate. If the focus distance is not accurate, the thermal image will be blurred, and the measured temperature will be wrong.

For WLIR-DC software, Blurred thermal image and inaccurate temperature due to inaccurate focus

distance, as shown in the figure below:



Clear thermal image and accurate temperature by adjusting lens focus, as shown in the figure below:



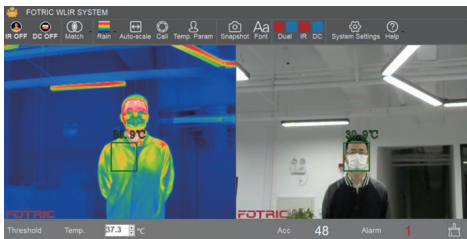
IR focus distance range is smaller than the DC's.

For WLIR-IR software, if the infrared camera lens is out of focus, the face recognition will fail, so the temperature measurement will not be performed.

1.12 Match issues on WLIR-DC

To use the thermal camera correctly, the visible and thermal images must be matched well.

The figure below shows an example of unmatched image. The visible light image's detection frame (right side) is on the face position, while the thermal image's detection frame (left side) is not and the measured result is wrong.



After images match, the face detection frames of the visible light and thermal are in the same position, so the measured result is correct.



2 . Troubleshooting

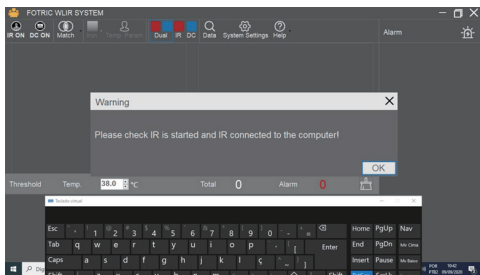
2.1 Abnormal thermal image issues on WLIR



If the situation in the figure upon appears, please perform diagnose procedures as below:

1. Check if the USB cable is not well connected, stained or broken. Test with a new qualified USB cable.
2. After confirmed the USB cable is well functioned, please change to another USB port of the computer, or test with a new computer.

2.2 No thermal image on WLIR



If there are no thermal image in WLIR software, Please perform diagnose procedures as below:

1. Check if the thermal camera is powered on, and the status light is green.
2. Check if the thermal camera driver is installed correctly or not.
3. Check if the USB connection between the thermal camera and the computer is in good condition
4. If these upon operations can't fix your problem, please contact Fotric directly.

2.3 No visible light image issues, on WLIR-DC

There are several possible reasons to cause visible light (DC) image connection failure:

1. The USB cable connection of the visible light camera is faulty. Please reconnect cable or try again with a different USB port on the computer.
2. The computer may not have a camera driver installed. Please go online (Logitech official website: <https://www.logitech.com>) to download and install the relevant driver.
3. Please check if the network is disabled. For older version software, disabling the network sometimes may cause the visible light image to fail.

2.4 Unable to detect faces, on WLIR-DC

The face detection rate of the software cannot always be completely accurate. It is necessary to pay attention to the situations as below:

- People with black masks
- People with long hair covering their foreheads

- People with hats
- People with less hair
- People walking too fast
- Etc.

Additionally, misrecognition may occur where other objects are considered as human faces for temperature measurement.

2.5 Unable to detect faces, on WLIR-IR

If there are objects with too high or too low temperature in the camera's field of view (background), it might affect the face recognition.

Innovation Excellence Integrity

Company Disclaimer

Equipment described herein may require EU, US and UNSC authorization for export purposes.

Imagery for illustration purposes only.

Specifications are subject to change without notice.

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FOTRIC INC.

info@fotric.com
www.fotric.com