MediChec Dual User Manual

V1.0.0.0

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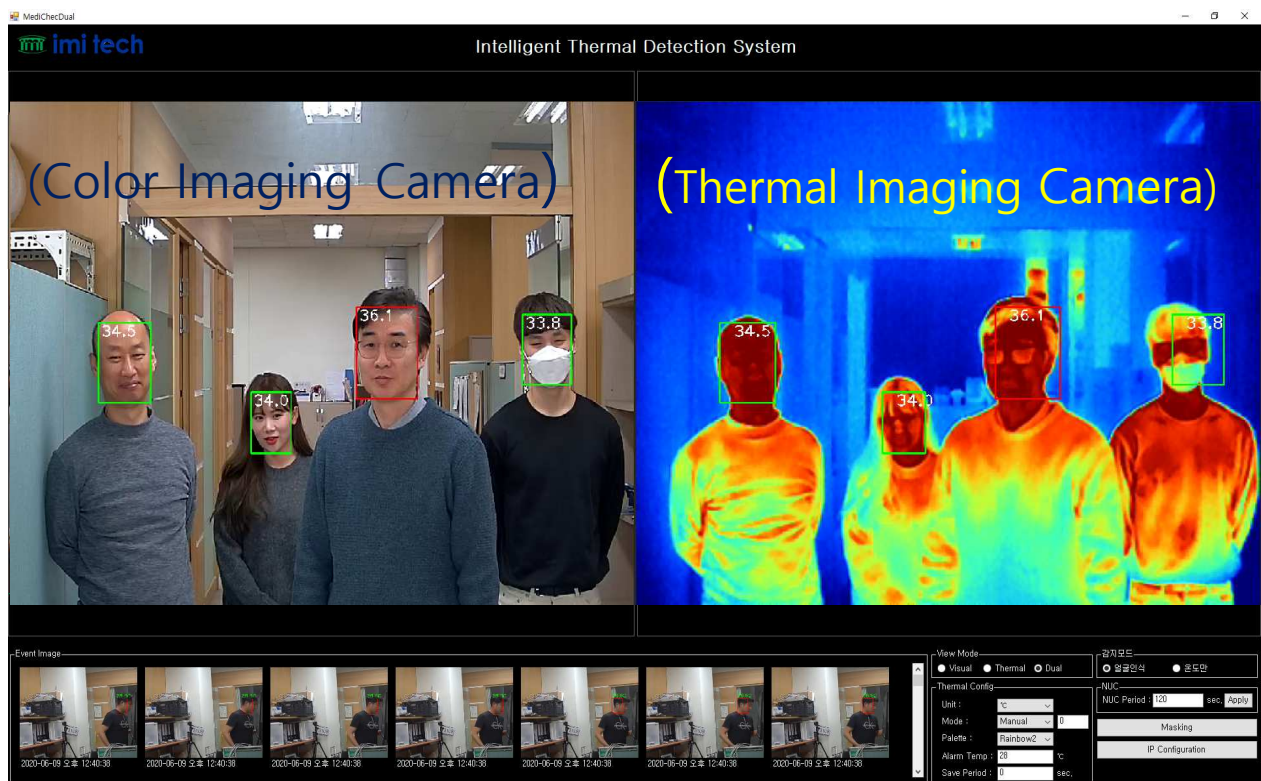**Tel : 82-31-423-9801   www.imi-tech.com**

Thermal Temperature Sensing Program

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1. Introduction

Medichec Dual software uses the high-resolution color imaging camera and the high-precision thermal imaging camera to designed to track and check the information of human temperature in the real time and find febrile suspects on the screen is a dedicated program.

It is installed at the entrance of the public places and used to find a person who is higher than the normal temperature.
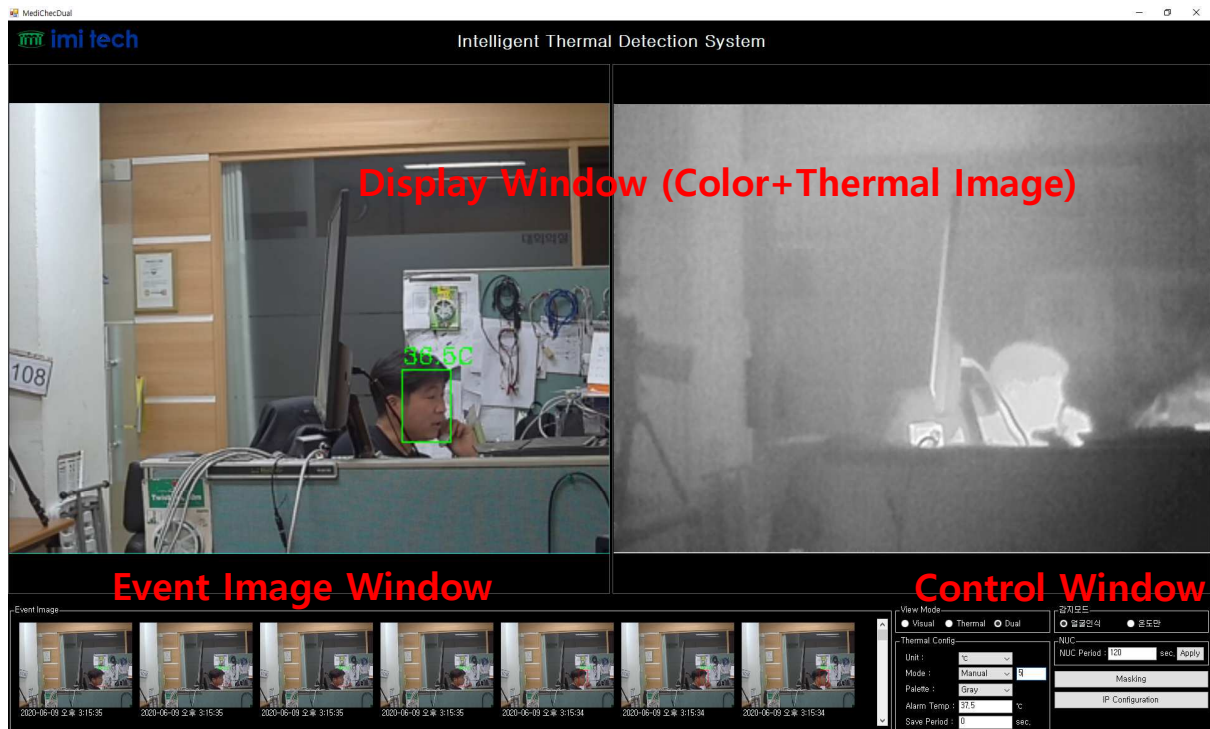

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2. Recommended System Specification

- Over CPU: Intel i7

- Memory: 8GB

- Hard Disk: Over 128GB

- Operating System: Over 64bit Win7
  (Win10 Recommended)

- Lan Port: Gigabit Ethernet (1000Mb)

3. Program Configuration

The programs are separated by the display window, the event image window and the control window.

3.1 Display Window

-The right view: Color camera image View

-The left view: Thermal camera image View

The real-time image is played simultaneously and the real-time detected temperature is displayed on the screen.

You can adjust the size of the screen by moving the center boundary in left and right.

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3.2 Event Image Window

The window that is automatically displayed by storing the image when the higher temperature is detected than set up the alarm temperature. (Jpg Image)
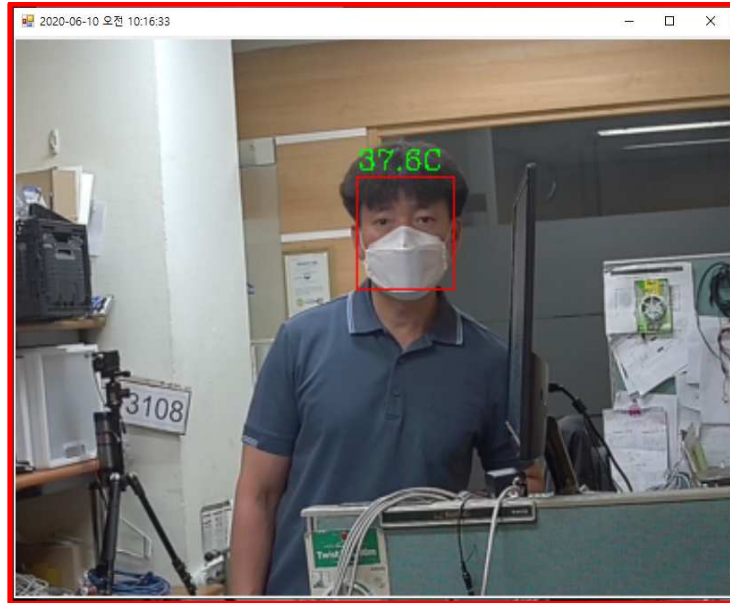
The image and temperature information are stored on the same screen and the user can set the stored time. (Default two seconds)

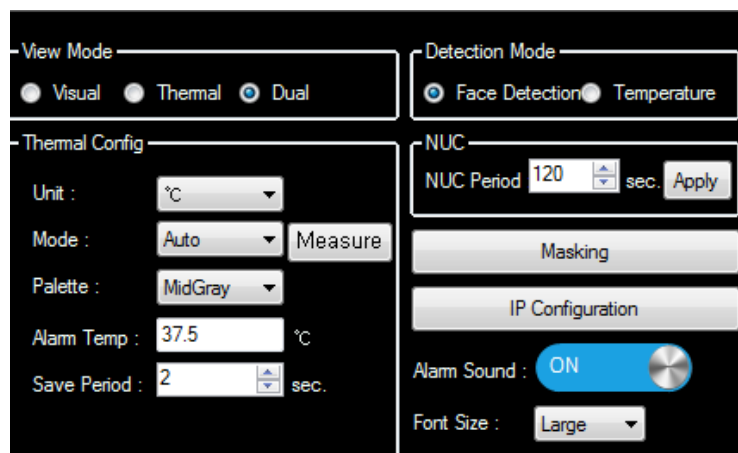The stored date and time displayed in the bottom of the image.

The date and time are displayed that stored in the bottom of the image.

The general stored image is displayed as the green window and the alarm temperature is displayed as the red window.

When you double –click image, appears saved image pop-up and the image on display screen.

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3.1 Control View

-Viewer Mode

>Color Image: Show only actual camera images (Including temperature)

>Thermal Image: Show only thermal imaging camera images

>Color+ Thermal: Show divided into color image and thermal image

-Detection Mode

>Face Recognition: Using artificial intelligence software, the camera can detect the temperature of a person's face in the video, mark the temperature of the face, and even if there are hot cups or hot objects around the face, it can accurately detect the temperature of a person.

>Temperature: The mode that is able to display temperature is shown everyplace on the screen. Beside human temperature, the temperature of all objects are displayed.

-Set up

>Unit: You can either select Celsius (℃) / Fahrenheit (℉).

>Mode: General: Display sense temperature in actual camera

Auto Calibration: When we stand a person about 3 meters, person's temperature automatically calibrated as 36.5 ℃.

Manual Calibration: Adjust the displayed temperature value as +, -

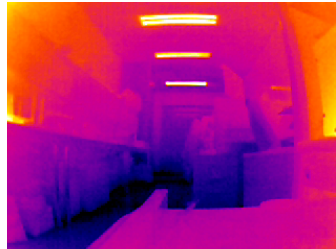Using plus and minus with the offset temperature adjust the temperature value.

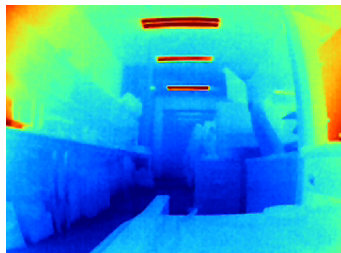>Palette Color: You can display the temperature in 16 colors.

Gray

IRON

BlueRed

>Alarm Temperature

To detect fever, if the minimum temperature or the temperature above the set value is generated, the red window will be displayed and the warning alarm will be emitted.

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>Storage Cycle

Set the image files save cycle when the alarm occurs

Save image once per two seconds when set up two seconds

The saved image is located where the executable file exists and is in the thermal alarm.

-NUC Cycle

As the camera's internal function, the self-calibration is doing one time at the setting up time. If the value has changed, you have to press "install".

-Masking

If there are the other objects with high temperatures other than the humans in the installation place, the alarm may go off, it is function to prevent the temperature output.

If it has shown the high temperature in the screen, it can select 4 places from zero to three. After that it is able to block the indication of the temperature on the screen

If there is an object with the high temperature on the left side that is rather than the human temperature,

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Drag "0" in the mouse to cover the area and select the Enable on the left side and then press the Apply.

The size can be changed with the mouse.

Removed the temperature value

발열체 제거 후 영상

4 The Method of Operation

4.2 Set the viewer mode

- Select color +thermal images to see both images together.

4.3 Set the Detection Mode

When the face recognition mode uses, the PC recommends over Intel i7 specification with the high CPU performance.

The face of the object shown on the screen is automatically recognized and displayed the temperature information.

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Can sort the mask, glasses out and recognize the face and displays the temperature. However, it cannot distinguish from some of invisible side face and back of the head.

Temperature sensing mode can analyze and display all of the temperature shown on the screen.

If you want to know all of the surrounding temperatures, you can use it.

It also can display the temperature of the human body.

The user is able to select and set the desired detection mode.

4.4   Setup

The correspond temperature unit can be selected by separating degrees Celsius and Fahrenheit.

The modes can check temperature information in a convenient way for user through normal, automatic and manual calibration.

> General: This is how to display the camera detected temperature without correction.

>Auto Calibration: As human temperature measurement, the target temperature is forced to set 36.5 degrees up to adjust for the overall temperature.

Measurement is recommended at the distance of three meters. Other distances may cause many errors.

Once you have selected "Measured", the phrase displayed at the top disappears and then completed.

>Manual Calibration: The user is the way to adjusts plus & minus offset to the desired temperature.

The adjustments of camera are recommended at the distance of three meters.

-Select automatic calibration and start to measure.

-Palette Color: This function shows the colors in the thermal camera image.

The thermal camera can support 16 colors and the user selects the colors.

 -Alarm temperature is able to set value of the temperature that you want to detect.

The alarm sound and the related image are automatically saved as Jpeg and show the red border when the detecting

temperature is higher rather than the set temperature.

- Save period sets the interval for the saving Jepg images.

- NUC has a function that that camera self-calibrates automatically. It performs self-calibration periodically every specified second.

You can select "apply" to set the time. (Default 12o seconds)

Caution: The product life might be shortened if the time may set under 120 seconds

4.5   Sense Mode

-Face recognition and temperature mode are supported.

- When use the face recognition, the face on the screen is only recognized and the temperature is displayed.

It is not display besides the face temperature. (Recommended the high performance PC)

When selecting the temperature mode, it tracks all of the temperature displayed on the screen and displays the

temperature.

4.6   Masking

- When using temperature mode, the camera detects and shows temperature in case of objects similar or higher temperature than near human temperature.

  If there is no person, the alarm may be sounded by a hot object.

  In the above case, the object uses the masking about the object.

  This function prevents the temperature from appearing on the screen.

5 Camera Specification

Thermal Imaging Camera

Features	
Image Sensor Type	u-Bolometer, pixel size: 17μm, spectral range: 8~14μm
Total pixels	384(H) x 288(V) Pixels
NETD	50mK
Detector time constant	< 15ms
Frame Frequency	MAX 30 FPS
Heat Threshold	Temperature Measurement Range : 0 °C ~ 60°C
Color / Material	Black / Aluminum.
Operation Temp.	-10°C to 50°C (Humidity: 0%RH ~ 80%RH)

Color Imaging Camera

Features	
Image Sensor Type	CMOS Full-HD 1/2.7"
Max Resolution	1920(H) x 1080(V)
Compression Method	H.264, Mjpeg
Support	Auto Exposure, Auto White Balance
Frame Frequency	MAX 30 FPS
Operation Temp.	-10°C to 50°C (Humidity: 0%RH ~ 80%RH)

6 Corrective Measure

6-1. Cannot see the screen?

- Please check the camera power connection and LAN cable

- The computer LAN port should be connected that is able to
   support GigE. (1000M)

6-2. Cannot see the temperature?

- When setting the face recognition mode, the temperature
information is displayed in case of the human face is visible.

- Please check the temperature after using automatic calibration.

6-3. Does the screen move slowly?

- If you use the face recognition, you need the high-
   performance PC.

Please check the computer's CPU is higher than Intel i7.

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Update History

Date	Version	Update History	Writer	Approver
2020-08-11	1.0.0.0	Newly updated	Sung Nam Kim	