Milestone XProtect - MOBOTIX Thermal Dashboard EN

In many applications, the visualisation of temperature values is an area of application that Milestone provides as a **Plug IN in our XProtect** to prevent damage or disruption of process flows.

With the Thermal Dashboard, we are expanding the Milestone XProtect application to include this function of visualising recorded temperature data.

The Thermal Dashboard in the Milestone XProtect complements the MOBOTIX Thermal Camera functions and has the application focus on:

- Live monitoring and surveillance of temperature critical processes
- Later analysis of the temperature curve

VIDEO:
https://www.youtube.com/watch?time_continue=13&v=GhQyzhXQjoE&embeds_referring_euri=https%3A%2F%2Fcommunity.mobotix.com%2F&source_ve_path=MzY4NDIsMjg2NjY&feature=emb_logo

The following main features are available to the user:

- **Thermal Spot Area** - Visualization of the image area in which the temperature was detected. (Only supported with P6 or P7 camera models for example M16 or M73).
- **Dual Image Support** - Better allocation on the “normal eye” by mirroring the marked area of the detected temperature from the “thermal eye”. (slight deviations are caused by different focal lengths of the system).
- Display of temperature graphs in live and playback mode.
- **Playback navigation** - double click on temperature graph to switch to playback view at the selected time. In the playback view, the player jumps to the clicked points in time on the temperature graph.
- Definition of **several threshold** values with visual alarm possible in case of exceeding and falling below. Including logging in the system log files.
- **Export** of temperature data in CSV format with camera reference image and plot of the selected curve diagram.
- **Free layout design** – combination of camera and thermal graphs.
- **Free definition of the temperature lines** to be displayed in the thermal graph.
- **Free display options** – legend can be shown, free choice of line color and designation.

The customer can set up a multi-stage thermal monitoring system with Milestone XProtect. In the first step, the evaluation of thermal events / thresholds in the camera that are embedded in the fire system for predefined actions such as alarming, emergency shutdown or VDS-compliant.

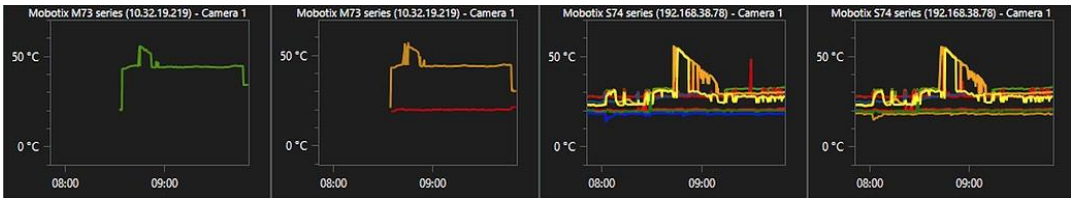
In the second step, the Milestone XProtect visualizes the temperature data of the MOBOTIX thermal cameras in the image stream and draws the corresponding temperature graphs.
The user is provided with a dashboard in the Milestone XProtect with video data as well as with visualization of critical temperature curves. In the dashboard, user-specific thresholds can be set that display a coloured frame around the corresponding temperature graph when a temperature value is exceeded or not reached. These user thresholds are independent of the fixed thresholds in the camera and thus ensure that a **user cannot unknowingly make any changes** to the fixed and, if applicable, VDS-compliant camera setup.

The user now has the possibility to permanently control the temperature course. This offers the following advantages, among others:

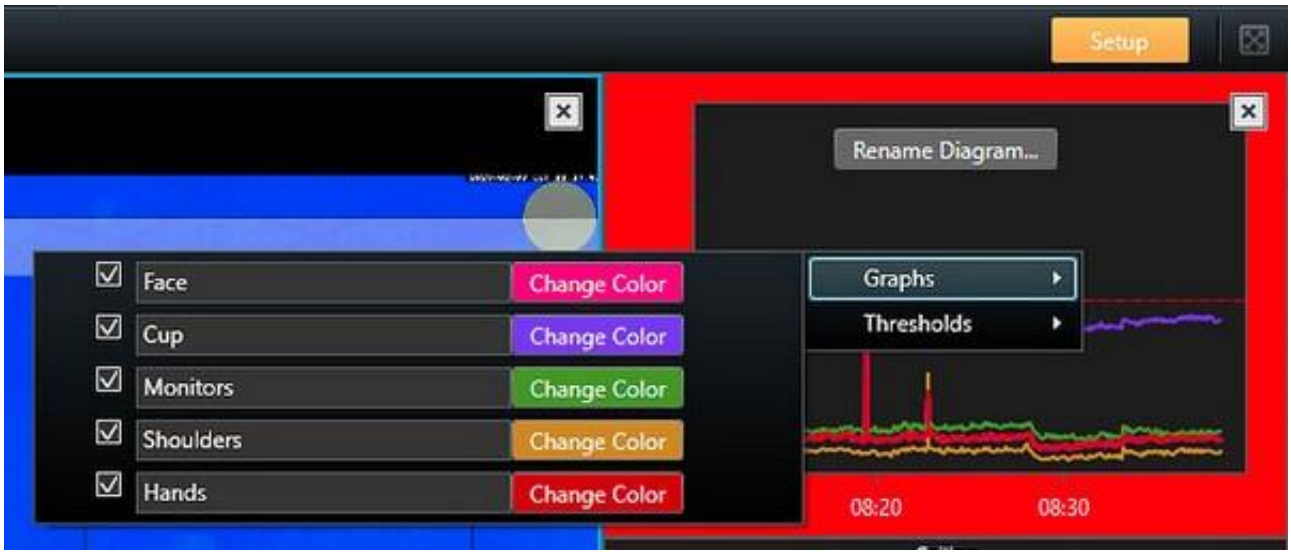
- Take measures before a critical temperature is reached, which can lead to fixed and irrevocable actions such as triggering the extinguishing system and thus to massive effects on the process sequence in operation. Helpful here are the user threshold values that are typically defined below the critical thresholds, which can possibly be throttled or switched off by the user machines before something worse happens.
- Identify and research emergency shutdowns or alarms after the fact with the playback function to prevent future failures such as emergency shutdowns by taking appropriate action.

The Thermal Dashboard is completely embedded in the Milestone XProtect and has the following features that are particularly worth mentioning:

- **Free Layout Design** – combination of camera video data and thermal graphs from different cameras
- Display of temperature curves of the thermal measurement windows and thermal spots of the MOBOTIX cameras (Thermal TR camera models support up to 20 measurement windows per camera)

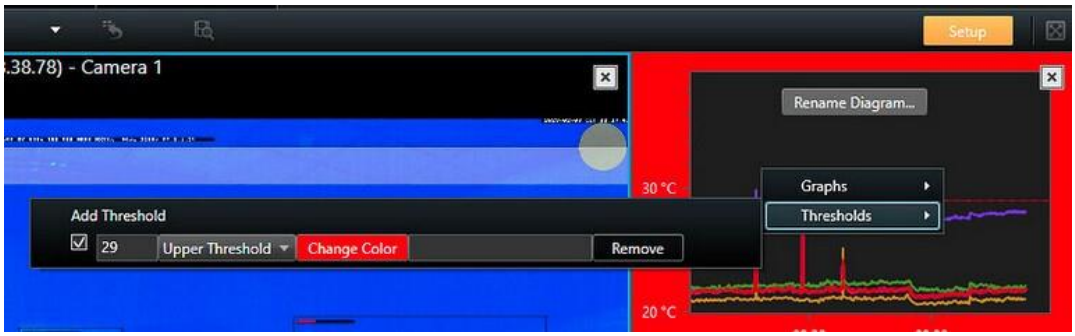


- Free selection of which temperature curves can be displayed

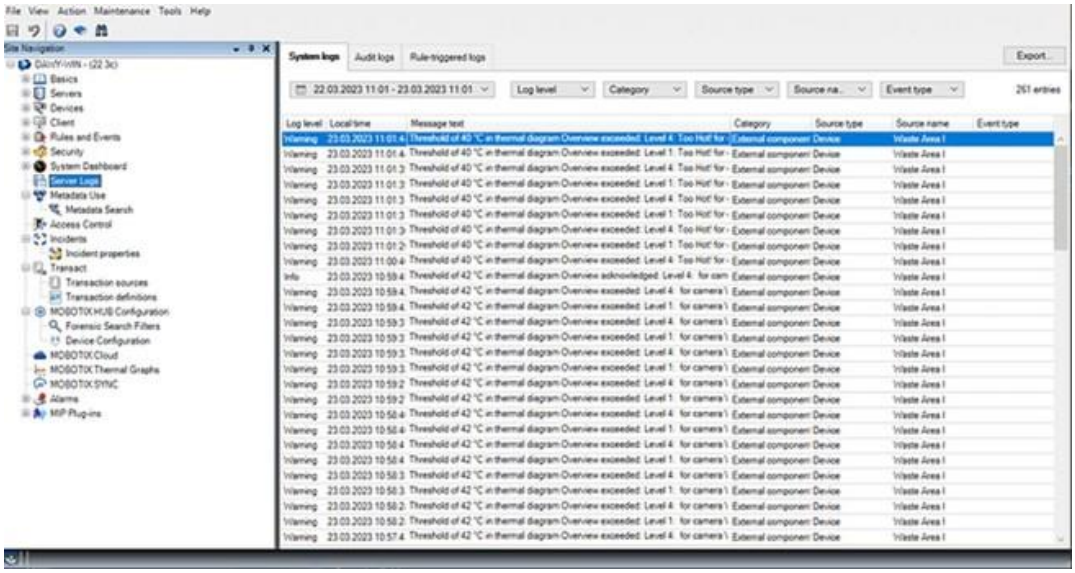


- User-specific thresholds per thermal graph element (up to 20 thresholds per thermal graph possible)

- Detection of exceeding thresholds

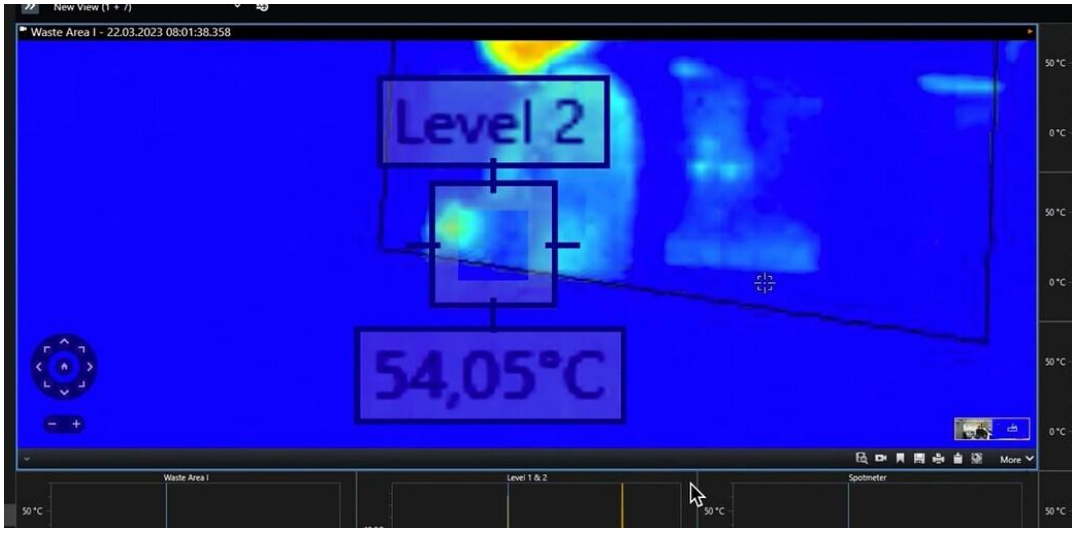


- Detection of falling below thresholds
- Detection of leaving temperature ranges (supports camera temperature range method)
- Logging of threshold events

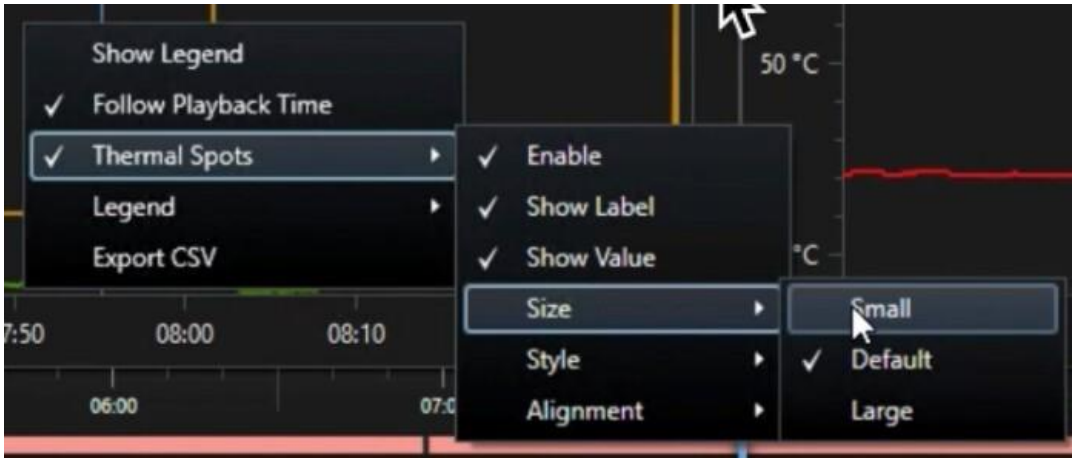


- Support of MOBOTIX Dual Cameras (one thermal sensor and one CMOS sensor)

- Highlighting of the area in the camera image:
  ➔ Live marking of the area with the highest or lowest temperature value of the measurement window

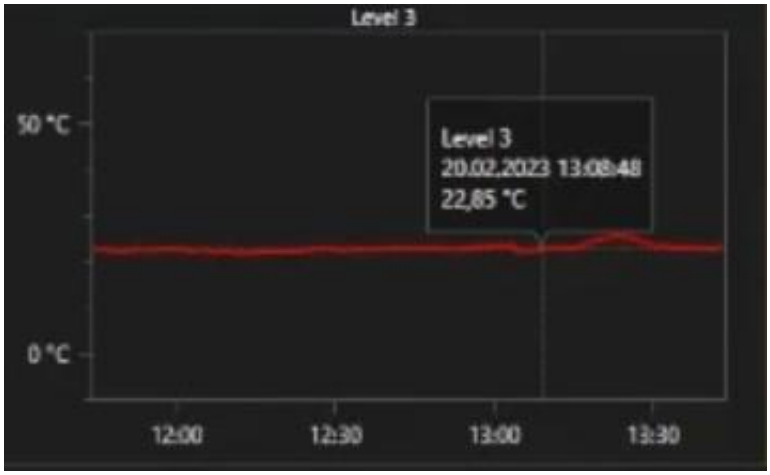


- **Hot Spot Area** - Thermal Spot Settings are possible as shown below (**Not support by P3 cameras** for example M15):



- Marking of the area of the selected temperature value in the thermal graph where the corresponding temperature was measured in the past (live and playback mode).
- Mirroring of the thermal senor mark on the CMOS sensor to show where the temperature occurred in the “natural image”.

- Temperature value display in live/playback image or as mouse over in the temperature graph.

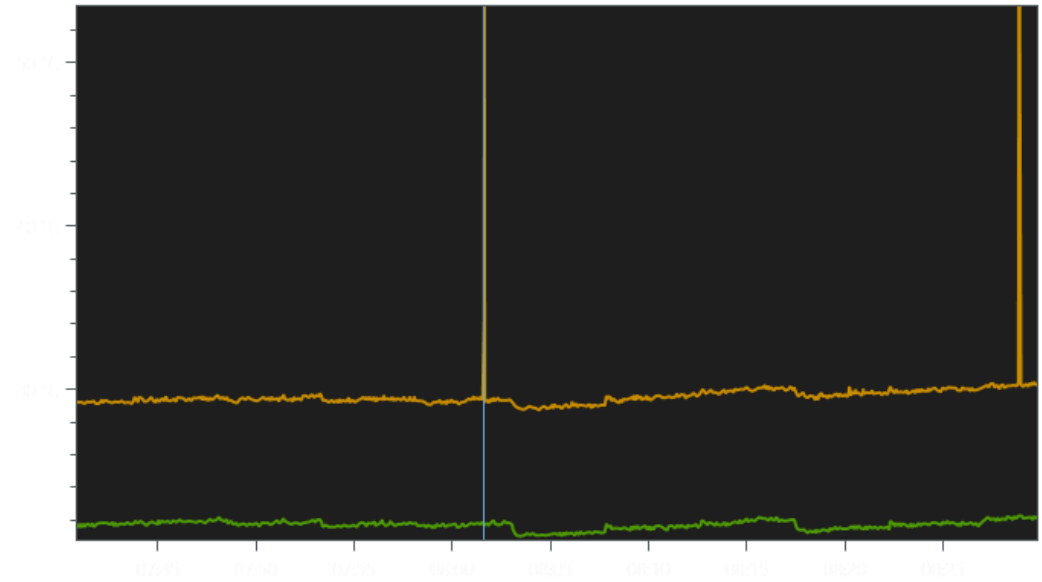


- Playback synchronization between video recording and graph.
- Full playback control over the thermal graphs (click on the graph to position the recording at the desired time).
- Export per graph provides:

  ➔ CSV file with the desired temperature values

	A	B	C	D	E	F	G
1	Date;Level 1;Level 2;Level 3;Level 4;Right Spotmeter						
2	3/22/2023 7:40	110;21	73;29	21;22	05;25	41;21	0
3	3/22/2023 7:40	186;21	57;29	13;21	93;25	41;21	0
4	3/22/2023 7:40	278;21	65;29	17;22	05;25	53;21	0
5	3/22/2023 7:40	345;21	77;29	33;22	13;25	45;21	0
6	3/22/2023 7:40	441;21	65;29	21;22	01;25	45;21	0
7	3/22/2023 7:40	514;21	61;29	21;22	21;25	45;21	0
8	3/22/2023 7:40	590;21	57;29	21;22	01;25	49;21	0
9	3/22/2023 7:40	669;21	53;29	21;22	05;25	49;21	0
10	3/22/2023 7:40	764;21	53;29	09;21	93;25	61;21	0
11	3/22/2023 7:40	839;21	57;29	17;22	05;25	49;21	0
12	3/22/2023 7:41	913;21	69;29	17;22	01;25	57;21	0
13	3/22/2023 7:41	011;21	77;29	21;22	21;25	53;21	0
14	3/22/2023 7:41	107;21	65;29	29;22	21;25	61;21	0
15	3/22/2023 7:41	170;21	61;29	25;22	17;25	37;21	0

- Temperature Graph History



- Snapshot of the current camera image as reference image

In **Milestone XProtect**, basic settings for the Thermal Dashboard can be made. These include:

- **Temperature unit**: Fahrenheit or Celcius
- **Scaling range** of the temperature graphics

Milestone XProtect Management Client Settings: