iMage-M

Multi-Person Fever Detection
With Mobotix M16 Thermal camera

User's Manual

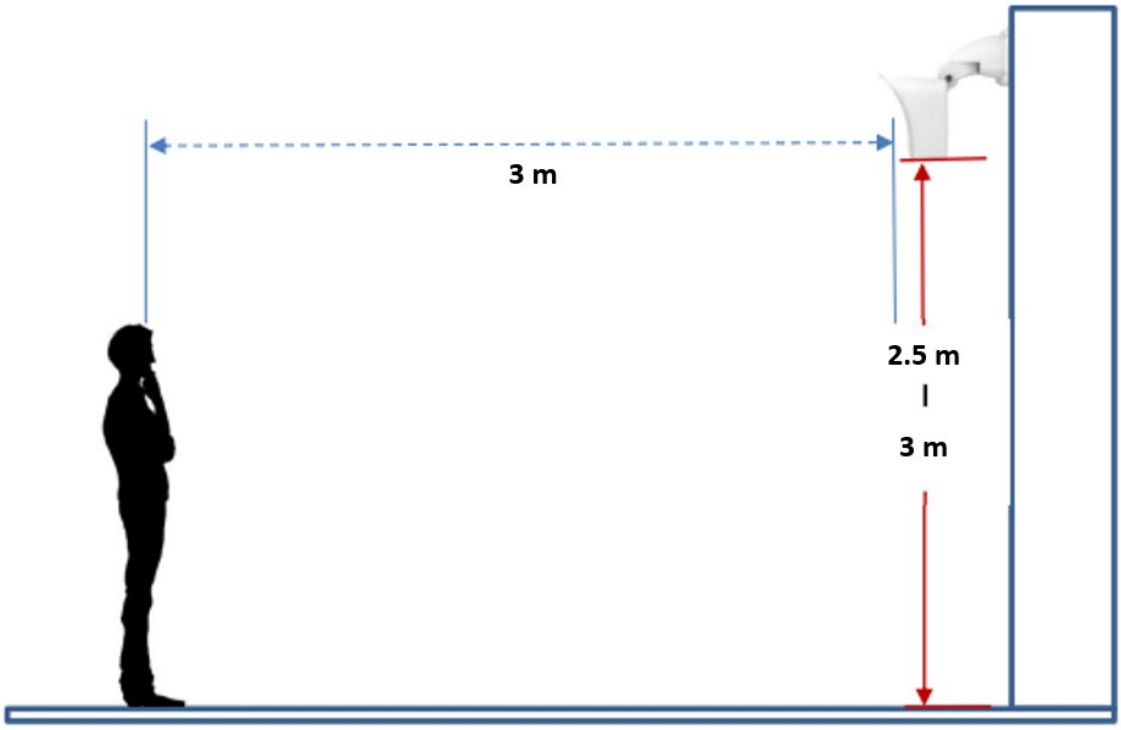
DFI

Version information：

Version	Content	Date
1.0	First release	2020/05

1. Installation

(1) The recommended erection height is 2.5-3 meters
(2) The recommended distance to the subjects is 3 meters
(3) The thermal lens must be adjusted according to the environment.
(4) Avoid strong light in the installation environment.
(5) Outdoor ground temperature would affected by weather, please avoid capturing the outdoor ground.
(6) Thermal camera is unable to capture subjects blocked by glass.
(7) Subjects shouldn't be set under the air-conditioner, and avoid reflective objects, reflective objects, and hot objects around, such as: stainless steel, mirror, glass, electrical appliances, hot food, etc.



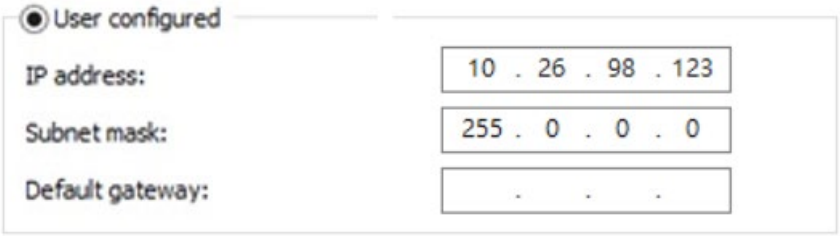
2. Camera Setting

2-1. Initial system setting

(1)Default ip of the camera is posted on the outer box

(2)To search the camera, please check the ip setting of your PC.

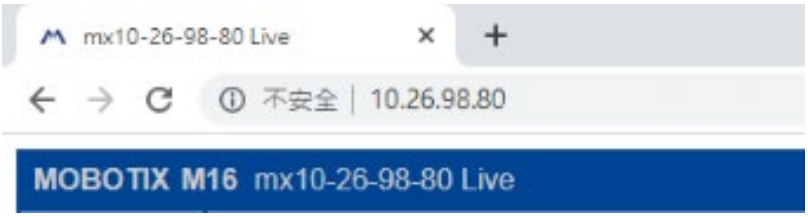
The IP address must be set to 10 network segments, and the subnet mask should be set to 255.0.0.0



(3)To get to the web interface, please enter the default ip of camera

(4)Default login information：

user：admin　password：admin13579

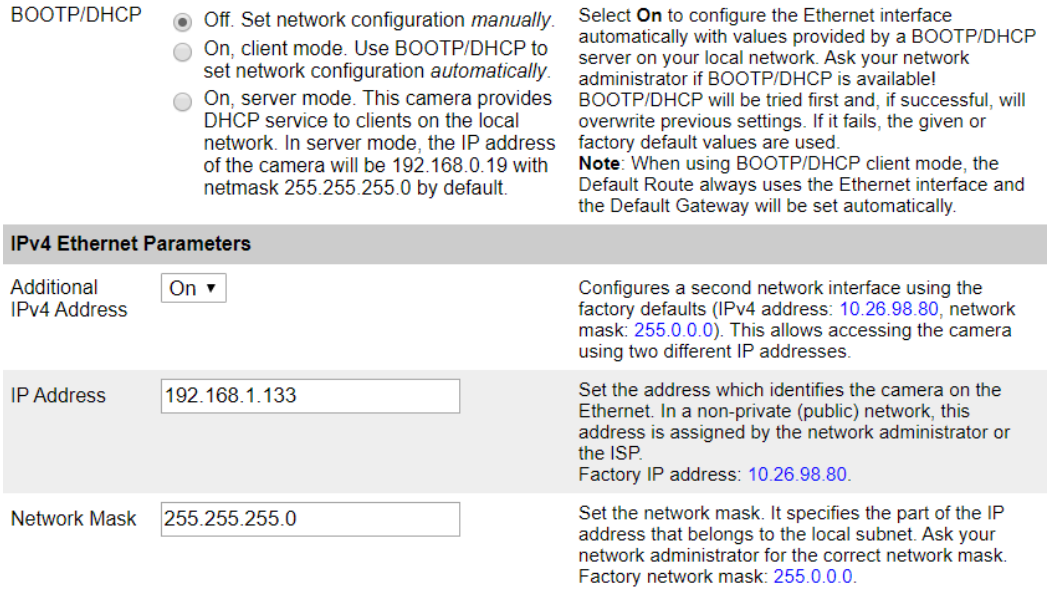


2-2. IP setting

To modify the IP of the camera, please go to the web interface【Admin Menu】>【Network Setup】>【Ethernet Interface】

(1)Turn off BOOTP/DHCP

(2)Set up newIP address and network mask



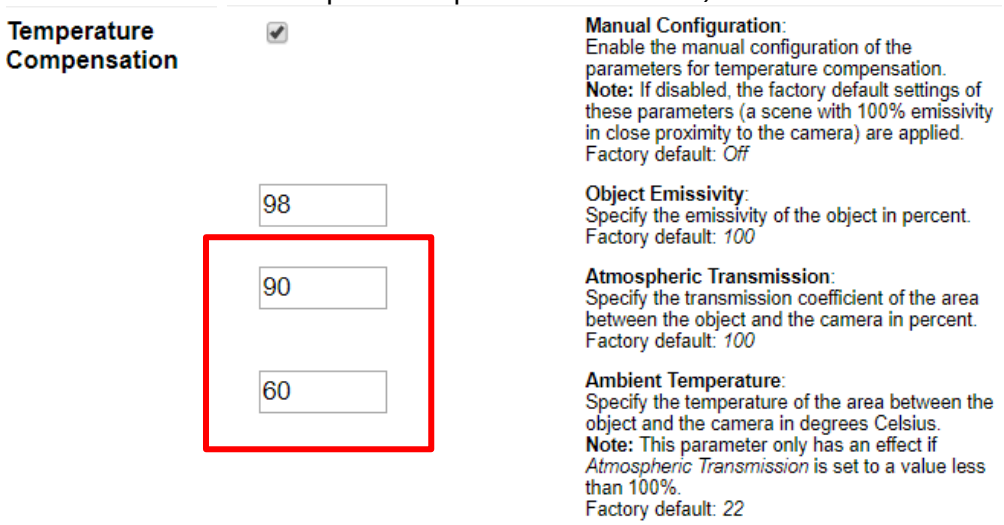
2-3. Temperature Compensation

To do the temperature calibration, please go to the web interface【Setup Menu】>【Image Control】>【Thermal Sensor Settings】>【Temperature Compensation】

Device has been set the temperature compensation before leaving the factory. To ensure the accuracy, please set the temperature compensation before you start to use.

To calibrate the temperature, you need to set a subject with constant temperature. If the temperature measured by is different from the subject, please adjust the atmospheric transmission and ambient temperature.

(* The recommended value of atmospheric transmission is below 98. When the atmospheric transmission be set as 100, it means ther is no air obstruction between device and subject, it makes the ambient temperature parameter invalid.)



2-4. Connect with EZ Pro

To connect with EZ Pro, please go to the web interface【Admin Menu】>【Transfer Profiles】>【IP Notify Profiles】>【Add New Profile】

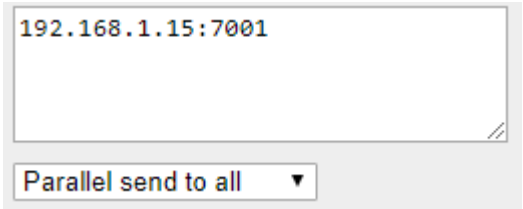
Please set the new profile as below:

(1) IP Notify Type

Choose Custom Configuration

(2) Destination Address

Enter EZ Pro serverIP(and port)



(3) Data Protocol

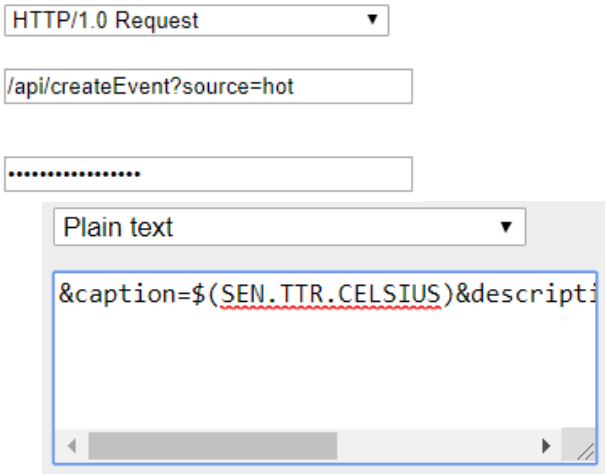
Please choose the item as below and the fill admin:admin13579 in the third field.

(4) Data Type

Choose Plain text

Fill in the string below

&caption=$(SEN.TTR.CELSIUS)&description=$(ID.ET0), $(ID.ETHERNET)

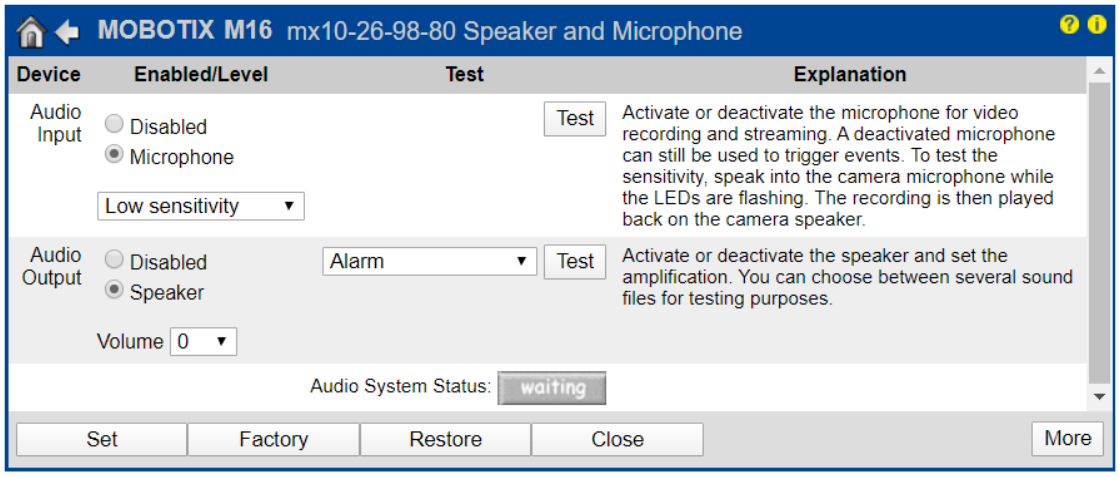


(5) Send Port

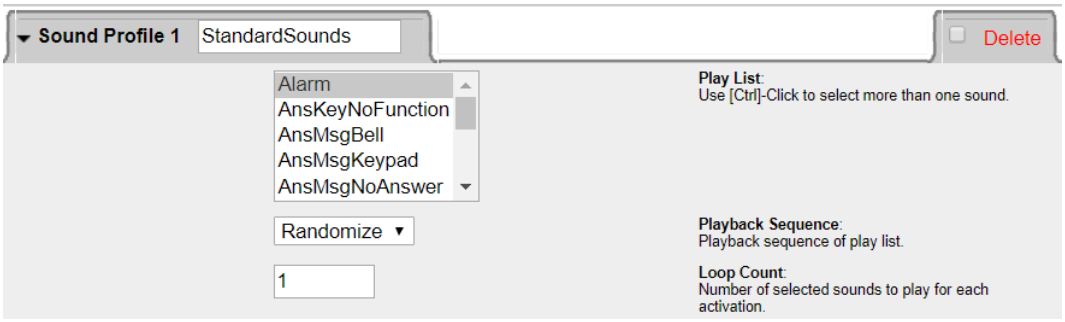
Set 0

2-5. Alarm Sound Setting

- Turn on the Audio Output
  To set the audio input/output, please go to the web interface【Admin Menu】>【Audio and VoIP Telephony】>【Speaker and Microphone】
- Alarm Sound Setting



Please go to the web interface【Admin Menu】>【Audio and VoIP Telephony】



>【Sound Profiles】

2-6. Temperature Alarm Event and Measurement Area

Please go to the web interface【Setup Menu】>【Event Control】>【Event Overview】>【Environment Events】

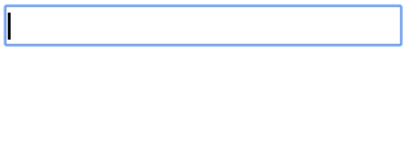
- Set the minimum alarm temperature (ex：alarm when temperature reach 37.5 degree)

(1) Add a new Environment Events, we named as 'Tar'.

(2) Event Dead Time
Delay alarm for few seconds when event occur.

(3) Event Sensor Type
Choose Thermal Radiometry

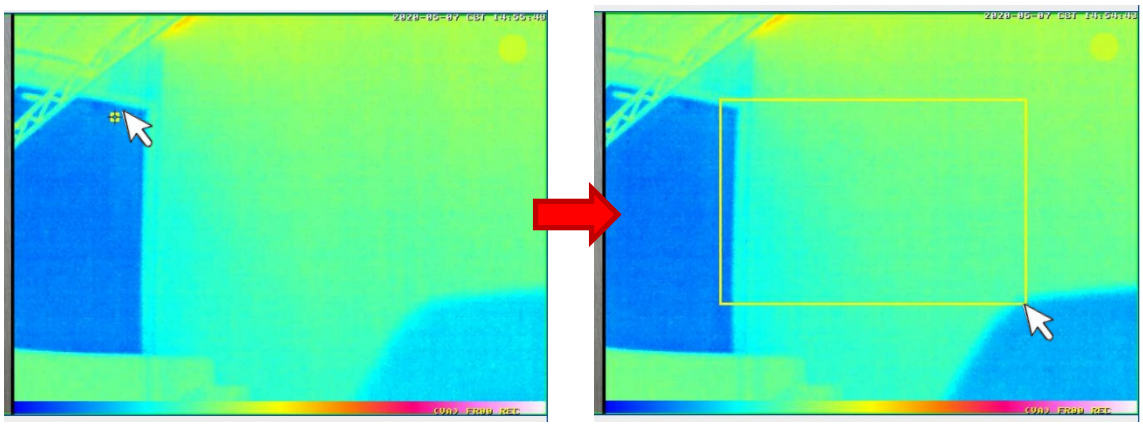
(4) Edit Measurement Area
To set the measurement area, please click the blank setting box first.



Edit Measurement Area:
For a detailed description of window definitions and additional variables, please refer to the help page.

Measurement areas can also be defined by Shift-click+click in the live image and pressing *Set Rectangle*.

Open the live view page (don't close the setting page).
Use shift + left-click on the thermal image, you will see the first set point.
Then release shift, left-click second point in the image.



Two point will be connected into a quad automatically.

After drawing the quad, press Set Rectangle ，system will update the coordinate.

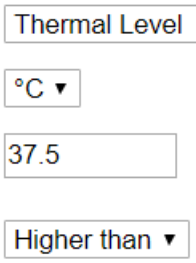
(5) Measurement Mode and Trigger Mode

Measurement Mode:
Select measurement mode.

Trigger Mode:
- *One Pixel*: Trigger event if at least one pixel of the measurement area exceeds or drops below the Thermal Level.
- *Percent*: Trigger event if the specified Area Percentage in the measurement area exceeds or drops below the Thermal Level.

(6) Set the Alarm Condition

Set the minimum alarm temperature, and choose Higher than.
Camera will alarm when the temperature higher than 37.5 degree.



Alarm Type:
Select the alarm type.

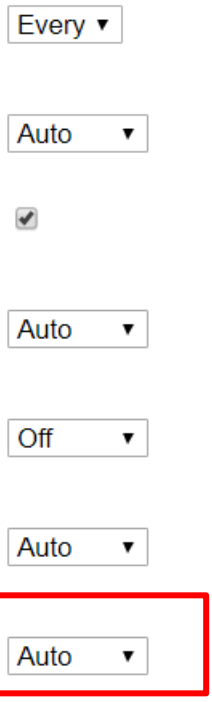
Temperature Unit:
Select the temperature unit.

Thermal Level:
Enter the trigger for thermal level [-40..550 °C] [-40..1022 °F].

Comparison:
- *Higher than*: Trigger event if the temperature in the measurement area is greater than this value.
- *Lower than*: Trigger event if the temperature in the measurement area is lower than this value.

(7) Thermal Radiation Setting

The are some thermal radiation parameters down below, please choose the suggested options.



Action Type:
Select if the trigger remains true *while* the conditior is fulfilled, or if it is only true when the condition *becomes* fulfilled.

Show Measurement Area:
Show measurement area of selected profile in the live image.

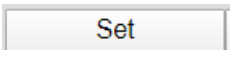
Show Thermal Radiometry Level Meter:
Show a Level Meter with the current temperature within the measurement area according to the specified comparison conditions.

Show Thermal Radiometry Level Temperature:
Show the current temperature within the measurement area according to the specified comparison conditions.

Show Thermal Radiometry Level Coordinates:
Show the coordinates of the highest/lowest measured temperature within the measurement area, depending on the comparison condition.

Show Thermal Radiometry Level Crosshairs:
Show crosshairs indicating the position of the highest/lowest measured temperature, depending on the comparison condition.

Show Thermal Radiometry Profile Name:
Show the Radiometry profile name within the measurement area.

(8) Press 

to save the configuration.

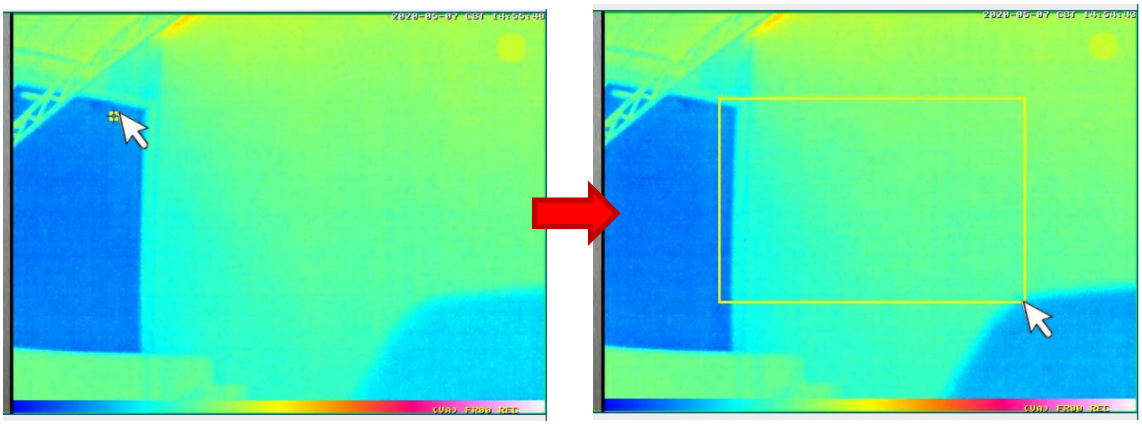
- Set the maximum alarm temperature (ex：alarm when temperature lower than 40 degree)
  (1) Add a new Environment Events, we named as 'Limit'
  (2) Event Dead Time
  Delay alarm for few seconds when event occur.
  (3) Event Sensor Type
  Choose Thermal Radiometry.
  (4) Edit Measurement Area
  To set the measurement area, please click the blank setting box first.

Edit Measurement Area:
For a detailed description of window definitions and additional variables, please refer to the help page.

Measurement areas can also be defined by Shift-click+click in the live image and pressing *Set Rectangle*.

Open the live view page (don't close the setting page).
Use shift + left-click on the thermal image, you will see the first set point.
Then release shift, left-click second point in the image.
Two point will be connected into a quad automatically.

After drawing the quad, press Set Rectangle ，system will update



the coordinate.

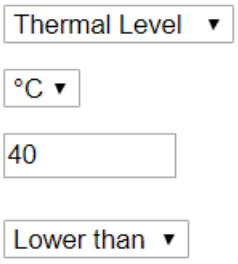
(5) Measurement Mode and Trigger Mode

Measurement Mode:
Select measurement mode.

Trigger Mode:
- *One Pixel*: Trigger event if at least one pixel of the measurement area exceeds or drops below the Thermal Level.
- *Percent*: Trigger event if the specified Area Percentage in the measurement area exceeds or drops below the Thermal Level.

(6) Set the Alarm Condition

Set the maximum alarm temperature, and choose lower than.
Camera will alarm when the temperature lower than 40



Alarm Type:
Select the alarm type.

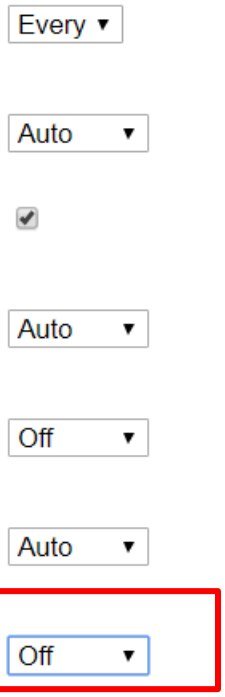
Temperature Unit:
Select the temperature unit.

Thermal Level:
Enter the trigger for thermal level [-40..550 °C] [-40..1022 °F].

Comparison:
- *Higher than*: Trigger event if the temperature in the measurement area is greater than this value.
- *Lower than*: Trigger event if the temperature in the measurement area is lower than this value.

(7) Thermal Radiation Setting

The are some thermal radiation parameters down below, please choose the suggested options.



Action Type:
Select if the trigger remains true *while* the condition is fulfilled, or if it is only true when the condition *becomes* fulfilled.

Show Measurement Area:
Show measurement area of selected profile in the live image.

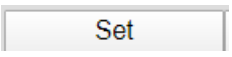
Show Thermal Radiometry Level Meter:
Show a Level Meter with the current temperature within the measurement area according to the specified comparison conditions.

Show Thermal Radiometry Level Temperature:
Show the current temperature within the measurement area according to the specified comparison conditions.

Show Thermal Radiometry Level Coordinates:
Show the coordinates of the highest/lowest measured temperature within the measurement area, depending on the comparison condition.

Show Thermal Radiometry Level Crosshairs:
Show crosshairs indicating the position of the highest/lowest measured temperature, depending on the comparison condition.

Show Thermal Radiometry Profile Name:
Show the Radiometry profile name within the measurement area.

(8) Press 

to save the configuration.

2-7. Alarm event setting

Please go to the web interface【Setup Menu】>【Event Control】>【Event Overview】>【Meta Events】

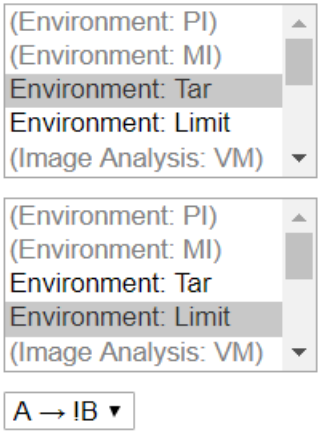
Press Edit... to enter the edit page.

(1) Add a new event Add new profile

(2) Event Sensor Type

- Event Counter
- Event Logical And
- Event Logic

(3) Logic event need to set two logic condition, please set the event 'Tar' and 'Limit' we just set, and set the order of occurrence.



Event Set A:
The event set is *true*, if one of the selected events occurs.
Use [Ctrl]-Click to select more than one event.
Events in parentheses need to be activated first.

Event Set B:
The event set is *true*, if one of the selected events occurs.
Use [Ctrl]-Click to select more than one event.
Events in parentheses need to be activated first.

Order of Occurrence:
Order of occurrence between *Event Set A* and *Event Set B*.

(4) Minimum Delay

Set the time delay between two events.

Minimum Delay:
Minimum time between two separately processed source events [0..3600 s]

(5) Maximum Delay

Set the time limit between two events.

Maximum Delay:
Maximum time between first and last source event [1..3600 s]

2-8. Alarm Output

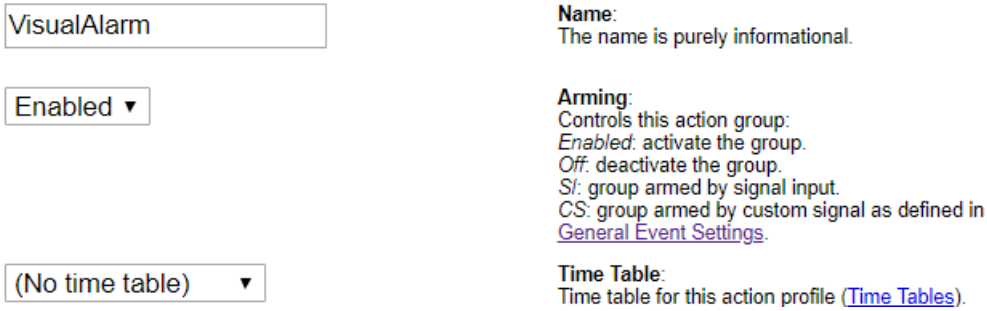
Please go to the web interface【Setup Menu】>【Event Control】>【Event Overview】>【Action Group Overview】

(1) Edit the alarm setting

(2) Action Group

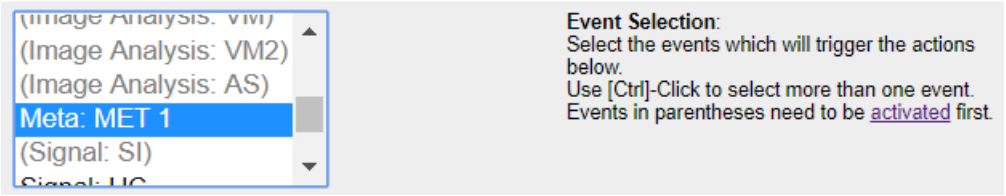
Here user can name a alarm, turn on the alarm, and set time table.

(*Choose No time table to enable the alarm whole day.)



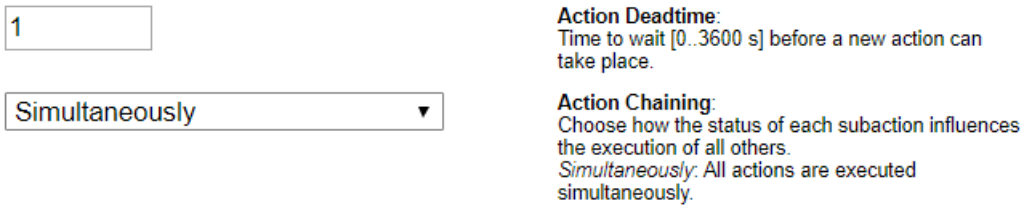
(3) Event Selection

Please choose the alarm event we have set.



(4) Action Details

(*For real-time, multi-object detection, it is recommended to select the action chain Simultaneously)



(5) Actions

Do the actions below when event occur.

(*Commonly actions like: Visual Alarm: Red Frame, Play Sound...)

Actions	Value	Explanation
Action 1	Visual Alarm: Red Frame ▾	**Action Type and Profile**: Select the Action Profile to be executed.
Delete	1	**Action Timeout or Duration**: If this action runs longer than the time specified [0..3600 s], it is aborted and returns an error; 0 to deactivate. For *Image Profile* action, this is the duration and no error returns.
Action 2	Play Sound: StandardSounds ▾	**Action Type and Profile**: Select the Action Profile to be executed.
Delete	1	**Action Timeout or Duration**: If this action runs longer than the time specified [0..3600 s], it is aborted and returns an error; 0 to deactivate. For *Image Profile* action, this is the duration and no error returns.

2-9. Save the Configuration

Please go to the web interface【Admin Menu】->【Configuration】

After setting all the parameters and event, must save the configuration into the camera flash .

Store：store current configuration to camera flash permanently. Need to restart the camera after save it.

Reset：reset all configuration.

Restore：restore last stored configuration.

Load：import cfg file from local server. It is necessary to'store' to the camera flash after import it.

Save：export cfg file with current configuration.

- **Store** current configuration permanently (to flash)
- Reset configuration to factory defaults
- Restore last stored configuration from flash
- Load configuration from local computer
- Save current configuration to local computer
- Show current configuration (raw version)
- Edit configuration file (for experts)
- Backup and Restore system configuration to/from SD card
- Manage other cameras

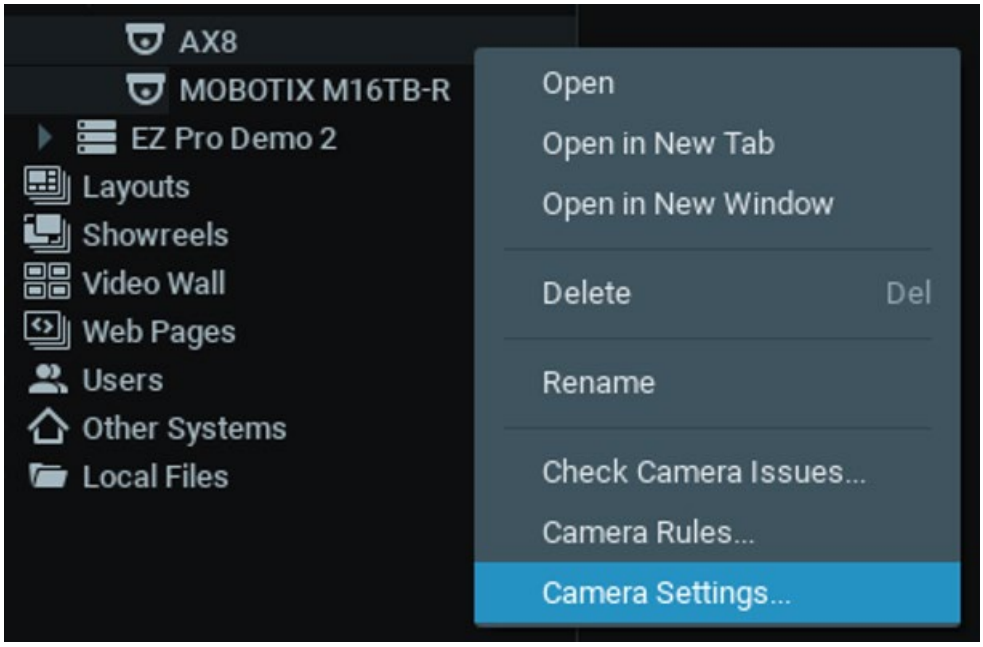
3. EZ Pro Setting

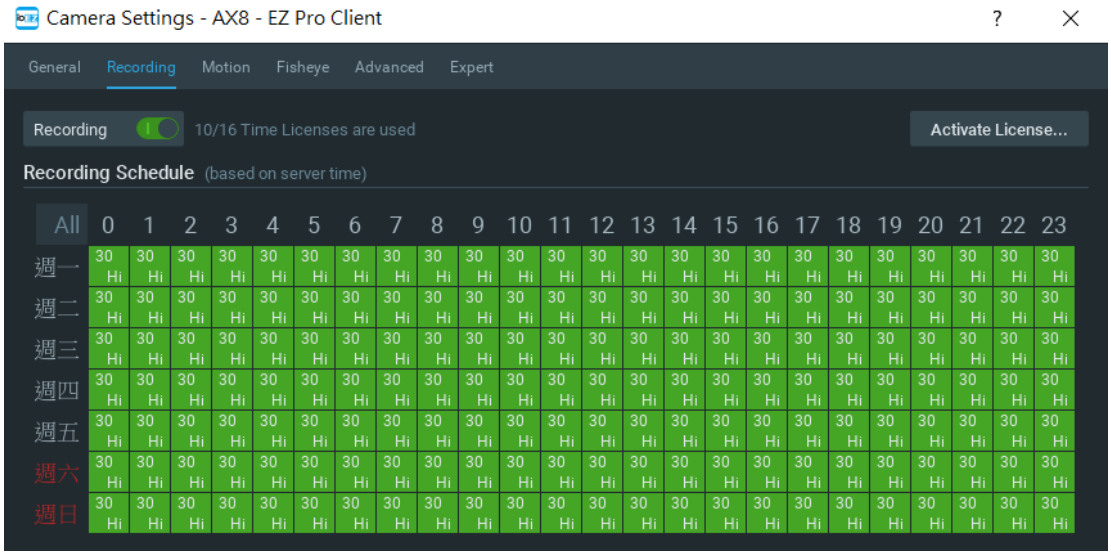
3-1. EZ Pro event setting

【Set camera recording】

To use the broadcast function of EZ Pro (including: sound alarm, record events, etc.), it is necessary to turn on the camera recording.

(1) Right-click on the camera name, choose 'Camera Setting'.





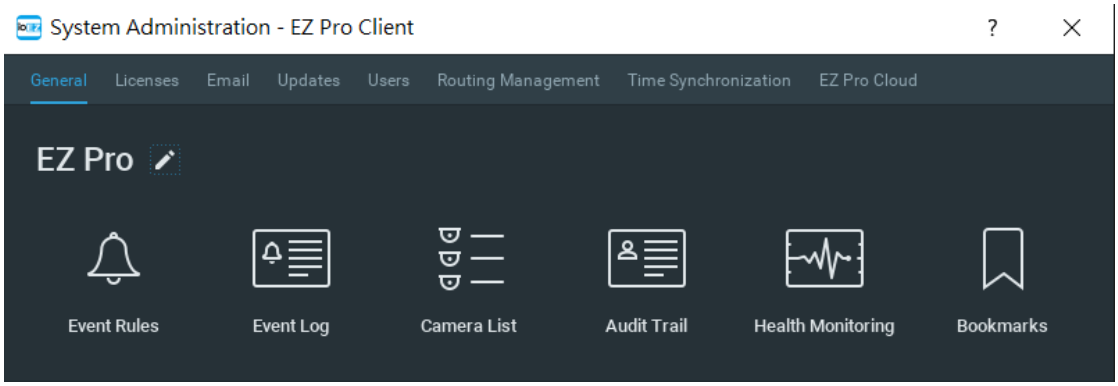
(2) Turn on the 'recordming' in the Recording page.

(3) There will be a red point on the left side of camera icon when the camera is recording.

【Add an alarm event】

(1) New an event rule

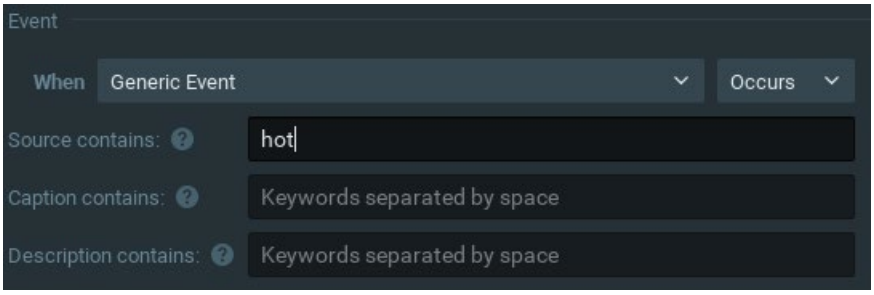
【Main Menu】 > 【System Sdministration】 > 【Event Rules】 > 【Add new event rule】



(2) Set the event rule

Press + Add he right side.

Choose Generic Event, and enter the source contains hot.



(3) Set action

When event occurs, do the action on EZ Pro. (ex：play sound, write bookmark, etc. One event rule can only do one action, if you need to do more than one action, please add new event rule.)

(4) Interval of action
An interval between events. If immediate report is required, please cancel.
(5) Press save.