

# **O2TML**

## **Temperature Reading Panel with Face and Mask Recognition**

# **User Manual**

Please read this manual carefully before operating the unit and keep it for future reference.

# Important Safeguards and Warnings

## 1. Electrical safety

All installation and operation here should conform to local electrical safety codes.

Use a certified/listed 12VDC 1A or more Class2 power supply only.

Please note: Do not connect two power supplying sources to the device at the same time; it may result in device damage! The product must be grounded to reduce the risk of electric shock.

Improper handling and/or installation could run the risk of fire or electrical shock.

## 2. Environment

Heavy stress, violent vibration or exposure to water is not allowed during transportation, storage and installation.

This product should be installed in a cool, dry place away from direct sunlight and heat sources.

Do not install the product in extreme temperature conditions.

Do not expose the camera to electromagnetic radiation. Otherwise it may result in CMOS sensor failure. Do not block any ventilation openings.

Do not allow water and liquid intrusion into the camera.

## 3. Operation and Daily Maintenance

Do not attempt to disassemble the camera; in order to prevent electric shock, do not remove screws or covers.

There are no user-serviceable parts inside. Please contact the nearest service center as soon as possible if there is any failure.

Avoid from incorrect operation, shock vibration, heavy pressing which can cause damage to product.

Do not use corrosive detergent to clean main body of the camera. If necessary, please use soft dry cloth to wipe dirt; for hard contamination, use neutral detergent. Any cleanser for high grade furniture is applicable.

Avoid aiming the camera directly towards extremely bright objects, such as, sun, as this may damage the image sensor.

Please follow the instructions to install the camera. Do not reverse the camera, or the reversing image will be received.

Do not operate it in case temperature, humidity and power supply are beyond the limited stipulations. Keep away from heat sources such as radiators, heat registers, stove, etc.

Do not expose the product to the direct airflow from an air conditioner.

This manual is for using and managing the product. We may reserve the rights of amending the typographical errors, inconsistencies with the latest version, software upgrades and product improvements, interpretation and modification. These changes will be published in the latest version without special notification.

All pictures, charts, images in this manual are only for description and explanation of our products. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google belong to the above-mentioned companies.

## **Warning**

**This device is not intended for use in the diagnosis of any disease or other conditions or in the cure, mitigation, treatment, or prevention of any disease.**

This camera should be installed by qualified personnel only.

All the examination and repair work should be done by qualified personnel.

Any unauthorized changes or modifications could void the warranty.

## **Statement**

This guide is for reference only.

Product, manuals and specifications may be modified without prior notice. Speco

Technologies reserves the right to modify these without notice and without incurring any obligation.

Speco Technologies is not liable for any loss caused by improper operation.

## **Regulatory Information**

### **FCC conditions:**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

### **FCC compliance:**

This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

### **Note:**

Before installation, check the package and make sure that all components are included.

Contact your rep or Speco customer service department immediately if something is broken or missing in the package.

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# 1. Introduction

## Main Features

- 8-inch LCD screen
- Supports IR high-accuracy temperature measurement
- Can recognize faces with masks
- Triggers voice alarm when abnormal temperature or a mask-less face is detected
- Deep learning algorithm with high face recognition accuracy rate
- Supports remote live view and two-way talk
- Wiegand input/output (26 bit/34 bit formats)
- Stand-alone operation
- Includes wallmount plate

# 2. Network Connection

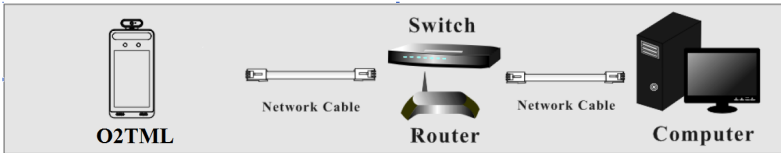
Connect O2TML via LAN or WAN. Here only take IE browser for example. The details are as follows:

## 1.1 LAN

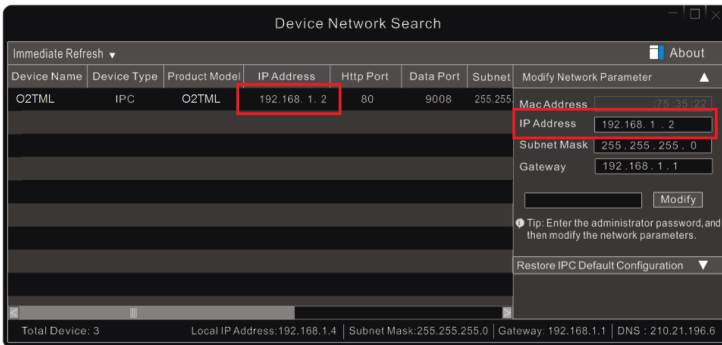
In LAN, there are two ways to access the O2TML : 1. access through Speco Blue Scanner  
2. directly access through IE browser.

### 1.1.1 Access through the Speco Blue Scanner

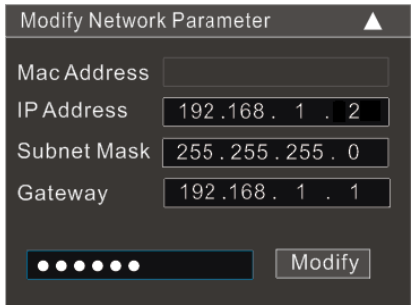
Network connection:



- ① Make sure the PC and O2TML are connected to the LAN and the Speco Blue Scanner is installed in the PC from the CD or via website download.
- ② Double click the Speco Blue Scanner icon on the desktop to run this software as shown below:



- ③ The default IP address setting is set to DHCP. Click the information of the camera listed in the above table to show the network information on the right hand. Please note the IP address of the O2TML (shown in red boxes). If needed, you can modify the IP address to an available static IP address. Make sure and gateway of the camera is in the same local network segment as the computer's address.

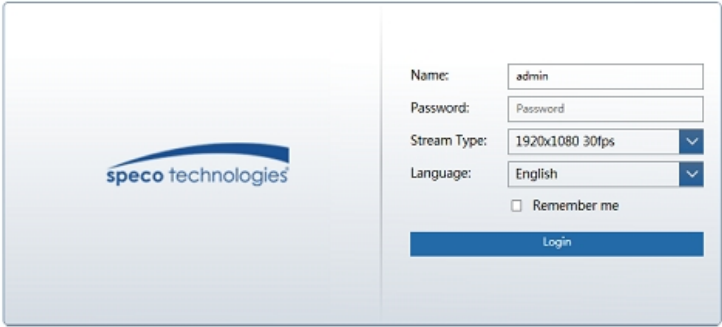


For example, the IP address of your computer is 192.168.1.4. So the IP address of the camera shall be changed to 192.168.1.X. After modification, please enter the password of the administrator and click the “Modify” button to modify the setting.



The default password of the administrator is “1234”.

④ Double click the IP address on the Speco Blue Scanner and then the system will pop up the IE browser to connect the O2TML. If IE is not your default browser, open IE separately and input the IP address into the URL bar. Follow directions to download, install and run the Active X control.

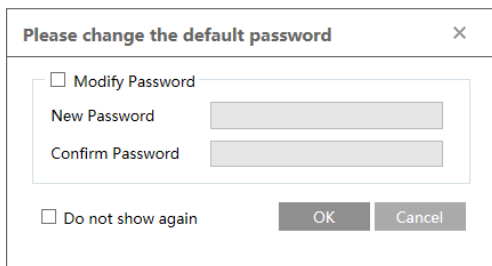


Enter the username and password in the login window to log in.



The default username is “admin”; the default password is "1234".





Please change the default password

Modify Password

New Password

Confirm Password

Do not show again

OK Cancel

The system will pop up the above-mentioned textbox to ask you to change the default password. It is strongly recommended to change the default password for account security. **DO NOT LOSE OR FORGET YOUR PASSWORD.** If “Do not show again” is checked, the textbox will not appear next time.

### 1.1.2 Directly Access through IE

The default network settings are as shown below:

IP address: Obtain from Speco Blue Scanner (ex 192.168.1.2).

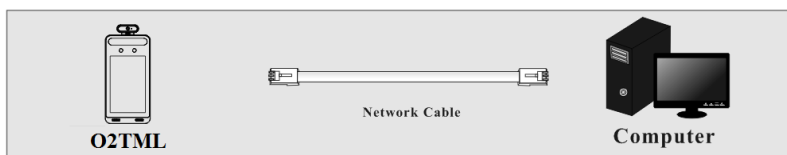
Subnet Mask: **255.255.255.0**

Gateway: This may be the IP address of your router or DHCP server (ex 192.168.1.1)

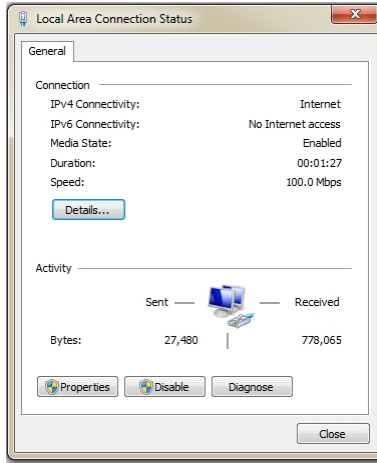
HTTP: **80**

Data port: **9008**

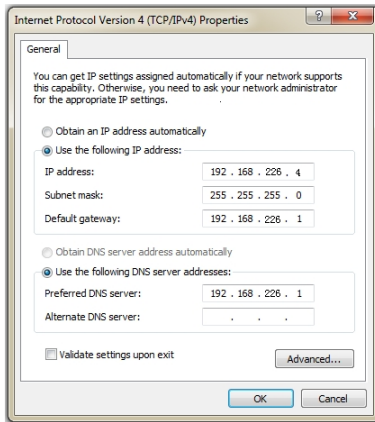
Use the above default settings when logging in the camera for the first time. Directly connect the camera to the computer through network cable.



① Manually set the IP address of the PC and the network segment should be as the same as the default settings of the IP camera. Open the network and share center. Click “Local Area Connection” to pop up the following window.



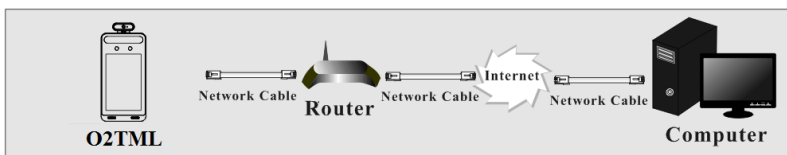
Select “Properties” and then select internet protocol according to the actual situation (for example: IPv4). Next, click the “Properties” button to set the network of the PC.



- ② Open the IE browser and enter the default address of the O2TML and confirm.
- ③ Follow directions to download and install the Active X control.
- ④ Enter the default username and password in the login window and then enter to view.

## 1.2 WAN

- Access through the router or virtual server



- ① Make sure the camera is connected to the local network and then log in the camera via LAN and go to Config→Network→Port menu to set the port number.

HTTP Port	<input type="text" value="80"/>
HTTPS Port	<input type="text" value="443"/>
Data Port	<input type="text" value="9008"/>
RTSP Port	<input type="text" value="554"/>

### Port Setup

- ② Go to Config →Network→TCP/IP menu to modify the IP address.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input type="radio"/> Obtain an IP address automatically			
<input checked="" type="radio"/> Use the following IP address			
IP Address	<input type="text" value="192.168.226.201"/>	<input type="button" value="Test"/>	
Subnet Mask	<input type="text" value="255.255.255.0"/>		
Gateway	<input type="text" value="192.168.226.1"/>		
Preferred DNS Server	<input type="text" value="210.21.196.6"/>		
Alternate DNS Server	<input type="text" value="8.8.8.8"/>		

### IP Setup

- ③ Go to the router's management interface through IE browser to forward the IP address and port of the camera in the "Virtual Server".

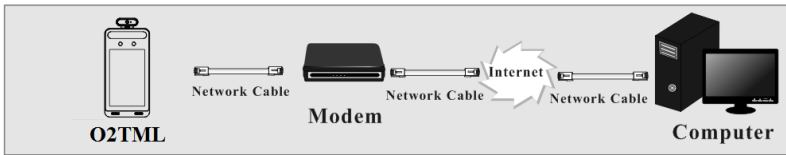
Port Range					
Application	Start	End	Protocol	IP Address	Enable
1	9007	to 9008	Both	192.168.1.201	<input checked="" type="checkbox"/>
2	80	to 81	Both	192.168.1.201	<input checked="" type="checkbox"/>
3	10000	to 10001	Both	192.168.1.166	<input type="checkbox"/>
4	21000	to 21001	Both	192.168.1.166	<input type="checkbox"/>

**Router Setup**

④ Open the IE browser and enter its WAN IP and http port to access. (for example, if the http port is changed to 81, please enter “192.198.1.201:81” in the address bar of web browser to access).

➤ **Access through PPPoE dial-up**

Network connection



Access the camera through PPPoE auto dial-up. The setup steps are as follow:

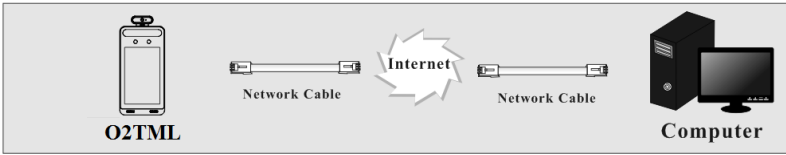
- ① Go to Config → Network → Port menu to set the port number.
- ② Go to Config → Network → TCP/IP → PPPoE Config menu. Enable PPPoE and then enter the user name and password from your internet service provider.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input checked="" type="checkbox"/> Enable			
User Name	<input type="text" value="xxxxxxx"/>		
Password	<input type="password" value="•••••"/>		
<input type="button" value="Save"/>			

- ③ Go to Config → Network → DDNS menu. Before configuring the DDNS, please apply for a domain name first. Please refer to DDNS configuration for detail information.
- ④ Open the IE browser and enter the domain name and http port to access.

➤ **Access through static IP**

Network connection



The setup steps are as follow:

- ① Go to Config→Network→Port menu to set the port number.
- ② Go to Config →Network→TCP/IP menu to set the IP address. Check “Use the following IP address” and then enter the static IP address and other parameters.
- ③ Open the IE browser and enter its WAN IP and http port to access.

# 3. Temperature Reading & Face Recognition Settings

## 3.1 Temperature Reading Settings

After the network is connected, go to the web client. Click Config→ Temperature Screening to go to the following interface.

The screenshot shows the 'Alarm Config' web interface. At the top, there is a tab labeled 'Alarm Config'. Below it, the 'Enable' checkbox is checked. A 'Temperature Switch' dropdown menu is set to '°F'. There are two checked checkboxes: 'High Temperature Alarm' with a value of '99.0' and a range of '(32.0-212.0)°F', and 'Low Temperature Alarm' with a value of '96.0' and a range of '(32.0-212.0)°F'. Below these is the 'Alarm Holding Time' dropdown set to '20 Seconds'. Under 'Trigger Alarm Out', there are two unchecked checkboxes: 'Alarm Out 1' and 'Alarm Out 2'. At the bottom, there are five unchecked checkboxes: 'Trigger Audio Alarm', 'Trigger SD Snap', 'Trigger SD Recording', 'Trigger Email', and 'Trigger FTP'. A 'Save' button is located at the bottom center.

1. Enable “Temperature Screening” and then set the high temperature threshold and the low temperature threshold. When the body temperature measured is higher or lower than the set value, it will trigger alarms.
2. Set the alarm holding time.
3. Set the alarm trigger options.

**Trigger Alarm Out:** If enabled, the alarm output device will be triggered when detecting abnormal temperature.

**Trigger Audio Alarm:** If enabled, the system will broadcast the current body temperature on detecting a body. If the detected body temperature is normal, “Normal Temperature” will be heard. If the detected body temperature is abnormal, “High/Low Temperature” will be heard. If this item is disabled, the detected temperature will be not broadcasted.

**Trigger SD Snap:** If enabled, the system will capture images on detecting abnormal

temperature alarm and save the images on an SD card.

**Trigger SD Recording:** If selected, video will be recorded on an SD card on detecting abnormal temperature alarm.

**Trigger Email:** If “Trigger Email” and “Attach Picture” are checked (email address must be set first in the Email configuration interface), the captured pictures and triggered event will be sent into those addresses.

**Trigger FTP:** If “Trigger FTP” is checked, the captured pictures will be sent into FTP server address. Please refer to FTP configuration chapter for more details.

4. Click “Save” to save the settings.

### 3.2 Face Match Configuration

The setting steps are as follows.

1. Go to Config→Face→Face Match Config interface.

The screenshot shows the 'Face Match Config' interface. It features two tabs: 'Detection Config' and 'Comparison Config'. The 'Detection Config' tab is active. Below the tabs, there is a 'State' indicator showing 'Working'. A list of settings includes: 'Save Source Information' (checked), 'Save Face Information' (checked), 'Holding Time' (set to 3 Seconds), 'Trigger SD Snap' (unchecked), 'Trigger SD Recording' (unchecked), 'Trigger Email' (unchecked), and 'Trigger FTP' (unchecked). A 'Save' button is located at the bottom right of the configuration area.

2. Enable “Save Source Information” or “Save Face Information”.

Save Source Information: if checked, the whole picture will be saved to the SD card when detecting a face.

Save Face Information: if checked, the captured face picture will be saved to the SD card when detecting a face.

**Note:** To save images to the local PC, please enable the local smart snapshot storage first (Config→System→Local Config). To save images to the SD card, please install an SD card first.

3. Set alarm holding time and alarm trigger options.

3. Set face comparison options.

Detection Config Comparison Config

Deduplication Period 4 Seconds

Similarity threshold 75 %

Save

**Deduplication Period:** In the set period, delete the repeated comparison results.

**Similarity threshold:** When the similarity of the captured face picture and the face picture added into the face database exceeds the similarity threshold, alarms will be triggered.

### 3.3 Face Database Management

Click “Face Database Management” tab. This will enter the following interface.

Block and Allow Lists All Types Gender All Types

Name ID number Search Delete

Index	Face	ID	Name	Gender	Type	ID number	Operate
-------	------	----	------	--------	------	-----------	---------

Add User

Format: jpg, Size limit: 70k

List Type Stranger

Name

Gender Male

Age

Tel

ID number

Remark

Entry

There are four ways to add face pictures.

① Adding face pictures one by one

Click to pop up an adding user box. Then click to select a face picture saved on the local PC. Please select the picture according to the specified format and size limit. After that, fill out the relevant information of the face picture and click “Entry” to add.

② Adding face pictures in bulk

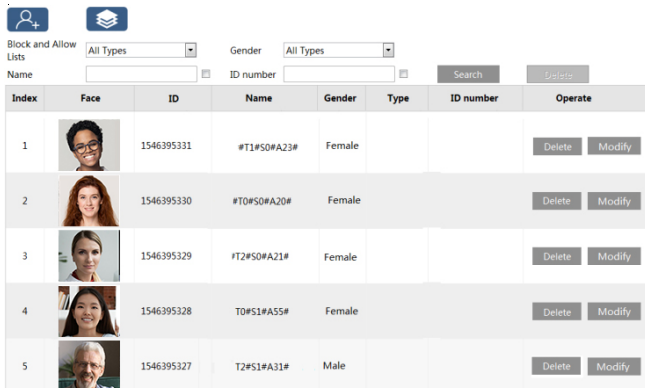
Click and then add multiple face pictures once according to the prompted rules.






③ Add face pictures by using face album management tool

④ Add the captured picture in the live mode (See *Add captured face pictures to the face database*).



After adding face pictures, you can search them by name, gender, ID number and so on.

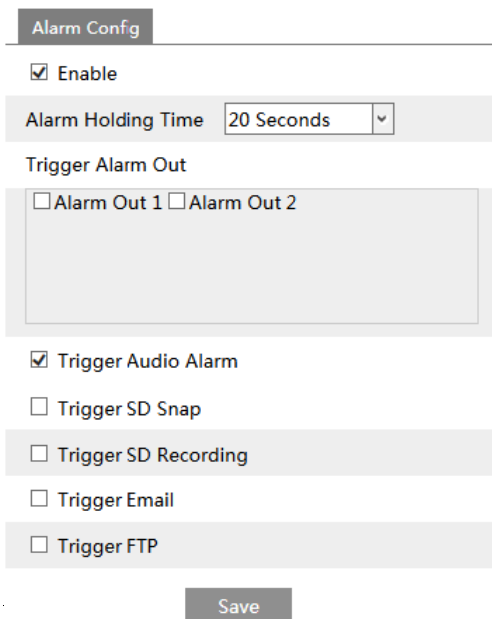


Index	Face	ID	Name	Gender	Type	ID number	Operate
1		1546395331	#T1#S0#A23#	Female			Delete Modify
2		1546395330	#T0#S0#A20#	Female			Delete Modify
3		1546395329	#T2#S0#A21#	Female			Delete Modify
4		1546395328	T0#S1#A55#	Female			Delete Modify
5		1546395327	T2#S1#A31#	Male			Delete Modify

Click “Modify” to change people information and click “Delete” to delete this face picture.

### 3.4 Mask Detection

Click Config→Alarm→Mask Detection to go to the following interface.



**Alarm Config**

Enable

Alarm Holding Time: 20 Seconds

Trigger Alarm Out

Alarm Out 1  Alarm Out 2

Trigger Audio Alarm

Trigger SD Snap

Trigger SD Recording

Trigger Email

Trigger FTP

Save

- ① Enable “Mask Detection” as needed.
- ② Set the alarm holding time.
- ③ Set the alarm trigger options.

**Alarm Out:** If enabled, alarm output will be triggered when the detected person is not wearing a mask.

**Trigger Audio Alarm:** If enabled, the alarm voice will be broadcasted when the detected person is not wearing a mask.

These setup steps of the alarm trigger options are the same as temperature screening settings. Please refer to temperature screening settings chapter for details.

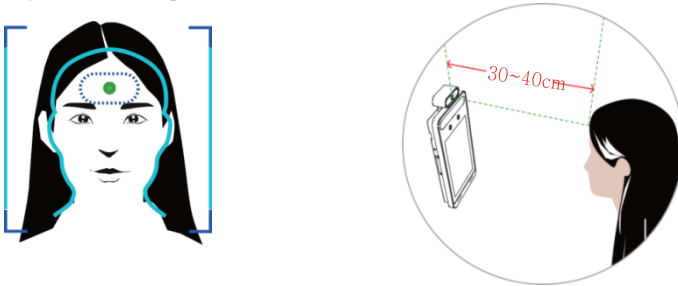
# 4. Live View

## 4.1 Temperature Reading & Face Recognition View

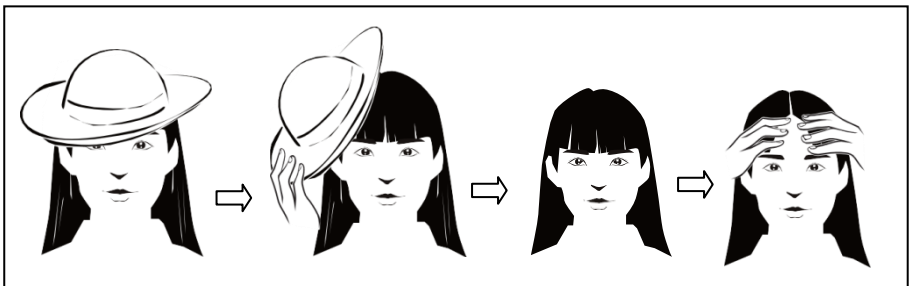
### 4.1.1 Temperature Reading Requirements

For accuracy temperature Reading, here are some recommendations.

1. The detected person should place their face within the pre-defined face detection area.  
The forehead should be in the middle of the “Temp zone” (make the green plus stay in the middle of the "Temp zone"). The detected face should be about 12" to 16" (30cm~40cm) away from the temperature measurement sensor.

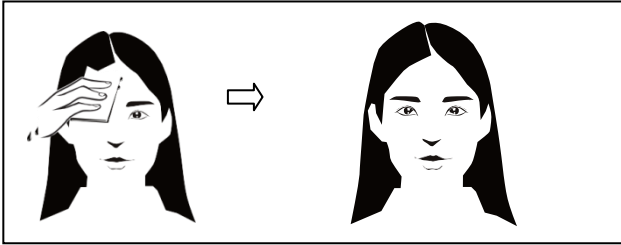


2. To ensure proper and accurate readings, any headgear should be removed so that the sensor can scan the forehead clearly.

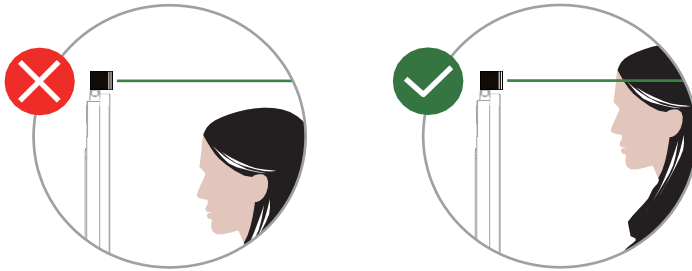


3. Inaccurate temperature may occur if the forehead of the detected person is not within the “Temp zone”.
4. If the temperature is very lower than normal value in the “Temp zone”, please move towards the temperature measurement sensor (2-8 inches or 5cm-20cm away from the temperature sensor) to get the accurate value.

5. Perspiration on the forehead may interfere with the temperature reading. It should be wiped off before scanning.



6. The installation height should accommodate people of different heights. Please note that the sensor should not be higher than the height of the person's head. It should be installed where below average height can still be measured, and above average height can bend down to scan.

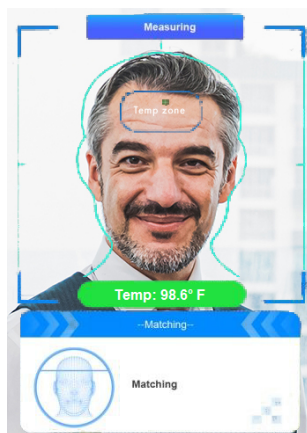


### 4.1.2 Temperature Reading & Face Recognition View

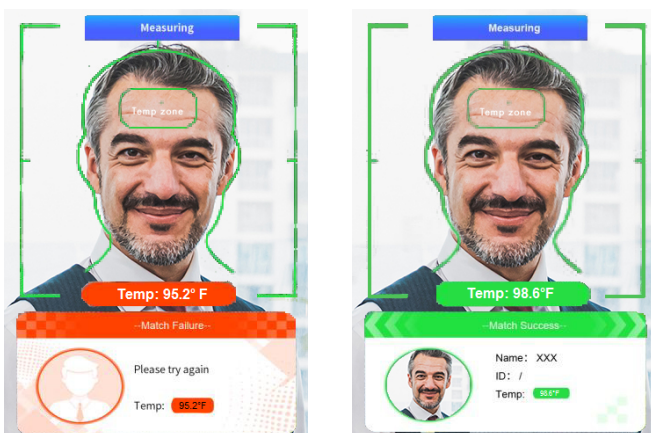
After configuring the temperature Reading and face match criteria, the device can measure the body temperature and compare faces.

When detecting a face, the device will display the following overlays:

- Abnormal temperature: the red block and temperature will be shown.
- Normal temperature: the green block and temperature will be shown.
- If “Trigger Alarm Audio” is selected, you will hear the alarm voice.



The system will measure the temperature and compare the captured face at the same time as shown below.



When the captured face is not added to the face database or the similarity is lower than the pre-defined value, it will display “Match Failure” and the box will turn red. If the mask detection and “Trigger Audio Alarm” are selected, warning voice will be heard if no mask is detected.

## 4.2 Live View via Web

After logging in, the following window will be shown.

In this interface you will see the captured face, match result and body temperature.



The following table is the instructions of the icons on the live view interface.

Icon	Description	Icon	Description
	Original size		Start/stop local recording
	Fit correct scale		Zoom in
	Auto (fill the window)		Zoom out
	Full screen		SD card recording indicator
	Start/stop live view		Sensor alarm indicator
	Start/stop two-way audio		Motion alarm indicator
	Enable/disable audio		Face detection indicator
	Snapshot		Face match

Those smart alarm indicators will flash only when the camera supports those functions and the corresponding events are enabled.

### ➤ Face Match View

After all face comparison settings are set successfully, enter the live view interface. Click



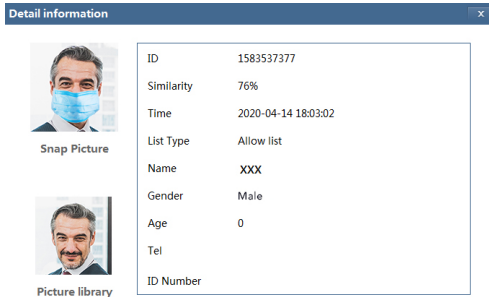
to view the captured face pictures and face comparison information.

Area ①: captured face pictures; area ②: face comparison area



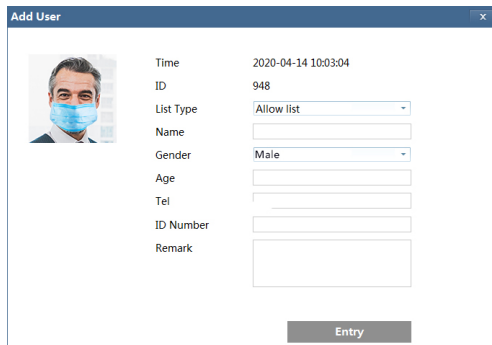
### ● View the comparison details

In area ②, click the compared face picture to bring up the following window. In this interface, you can view the detailed comparison information.



### ● Add captured face pictures to the face database

Click a captured picture in area ①. This will bring a face picture adding box.

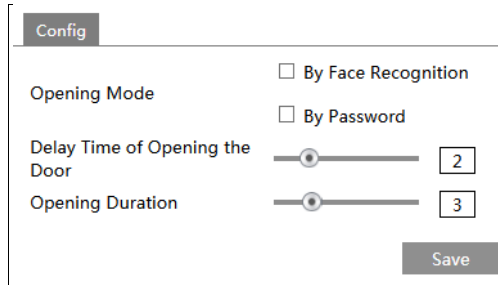


Fill out the relevant information and click “Entry” to add this face picture.

# 5. Access Control Settings

## 5.1 Door Lock Settings

Click Config→Access Control→Door Lock to go to the following interface. After the access control device is connected to the terminal, you can set opening mode in this interface.



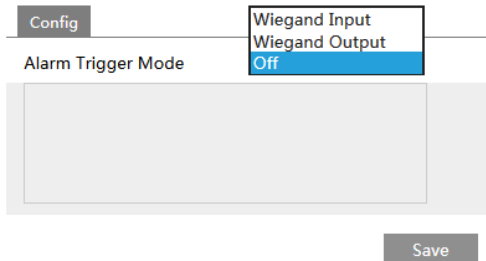
**Opening Mode:** Opening the door by face recognition or by password can be selected.

**Delay Time of Opening the Door:** Set how long the door will be opened after successful face recognition or entering the correct password. The time range is from 0 to 10 seconds. For example, “By Password” is selected and the delay time is set to “2” seconds; the door will be opened 2 seconds later after entering the correct password.

**Opening Duration:** Set the opening duration after successful face recognition or entering the correct password. The time range is from 0 to 10 seconds. For example, “By Password” is selected and the delay time is set to “3” seconds; after the door is opened, it will be closed 3 seconds later.

## 5.2 Wiegand Settings

Click Config→Access Control→Wiegand Config to go to the following interface.



**Alarm Trigger Mode:** Wiegand Input, Wiegand Output or Off can be selected. If the card



reader is connected to the Wiegand interface, please select “Wiegand Input”. If the access controller is connected to the Wiegand interface, please select “Wiegand Output”. You can also select the alarm output as needed.

### 5.3 Tampering Alarm Settings

In order to avoid the removal or damage by the external force, the tampering alarm can be set for the terminal. Click Config→Access Control→Tampering Alarm Setting to go to the following interface.

The screenshot shows a configuration window titled "Config" for "Tampering Alarm Setting". It includes the following elements:

- An "Enable" checkbox that is checked.
- An "Alarm Holding Time" dropdown menu set to "20 Seconds".
- A section titled "Trigger Alarm Out" containing two checkboxes: "Alarm Out 1" and "Alarm Out 2", both of which are unchecked.
- Four additional checkboxes, all unchecked: "Trigger SD Snap", "Trigger SD Recording", "Trigger Email", and "Trigger FTP".
- A "Save" button located at the bottom right of the configuration area.

Enable “Tampering Alarm” and then set the alarm holding time and alarm trigger options. The setup steps of the alarm trigger options are the same as temperature Reading settings. Please refer to temperature screening settings chapter for details.

# 6. Other Configurations

In the Webcam client, choose “Config” to go to the configuration interface.

**Note:** Wherever applicable, click the “Save” button to save the settings.

## 6.1 System Settings

### 6.1.1 Basic Information

In the “Basic Information” interface, the system information of the device is listed.

The screenshot shows the configuration interface for a device. The top navigation bar includes the 'speco technologies' logo and a 'Live' status indicator. The left sidebar contains a 'System' menu with sub-items: 'Basic Information | Date and Time | Local Config | Storage', 'Face' (Face Match Config | Face Database Management), 'Access Control' (Tampering Alarm Setting | Door Lock | Wiegand Config), and 'Image' (Display Settings | Video/Audio | OSD | Screen Brightness | White Light Control | Face Exposure). The main content area shows the breadcrumb 'Config Home > System > Basic Information' and a list of system parameters with their current values in input fields:

Device Name	O2TML
Product Model	O2TML
Brand	Speco
Software Version	5.0.1.0(8352)
Software Build Date	2020-05-22
Kernel Version	20200410
Hardware Version	1.4M2
Onvif Version	19.06
Video Structured Version	1.1.7
Face Detection Version	1.3.0
Face Match Version	2.0.2
OCX Version	2.1.1.6
MAC	

### 6.1.2 Date and Time

Go to Config→System→Date and Time. Please refer to the following interface.

Zone Date and Time

Time Zone: GMT-05 (New York, Toronto, Washington DC)

DST

Auto DST

Manual DST

Start Time May First Tuesday 15 Hour

End Time August First Tuesday 15 Hour

Time Offset 30 Minutes

Select the time zone and DST as required.

Click the “Date and Time” tab to set the time mode. Please note, only 24hr time is supported at this time.

Zone Date and Time

Time Mode:

Synchronize with NTP server

NTP server: time.windows.com Update period: 1440 Minutes

Synchronize with computer time

Date 2018-01-08 Time 14:58:21

Set manually

Date 2018-01-09 Time 15:03:28

## 6.1.3 Local Config

Go to Config→System→Local Config to set up the storage path of captured pictures and recorded videos on the local PC. There is also an option to enable or disable the bitrate display in the recorded files.

Save snapshots to C:\Program Files\NetIPCamera Browse

Save recording files to C:\Program Files\NetIPCamera Browse

Audio Recording  Open  Close

Bitrate Overlay  Open  Close

Local Smart Snapshot Storage  Open  Close

Save

Additionally, the local smart snapshot (face snapshot) storage can be enabled/disable here.

## 6.1.4 Storage

Go to Config→System→Storage to go to the interface as shown below.

Management	Record	Snapshot	USB disk
Total picture capacity	<input type="text" value="766 MB"/>		
Picture remaining space	<input type="text" value="766 MB"/>		
Total recording capacity	<input type="text" value="0 MB"/>		
Record remaining space	<input type="text" value="0 MB"/>		
State	<input type="text" value="Normal"/>		
Snapshot Quota	<input type="text" value="10"/> %		
Video Quota	<input type="text" value="90"/> %		
Changes in the quota ratio need to be formatted before they become effective.			
<input type="button" value="Eject"/> <input type="button" value="Format"/>			

## ● SD Card Management

Click the “Format” button to format the SD card. All data will be cleared by clicking this button.

Click the “Eject” button to stop writing data to SD card. Then the SD card can be ejected safely.

**Snapshot Quota:** Set the capacity proportion of captured pictures on the SD card.

**Video Quota:** Set the capacity proportion of record files on the SD card.

## ● Schedule Recording Settings

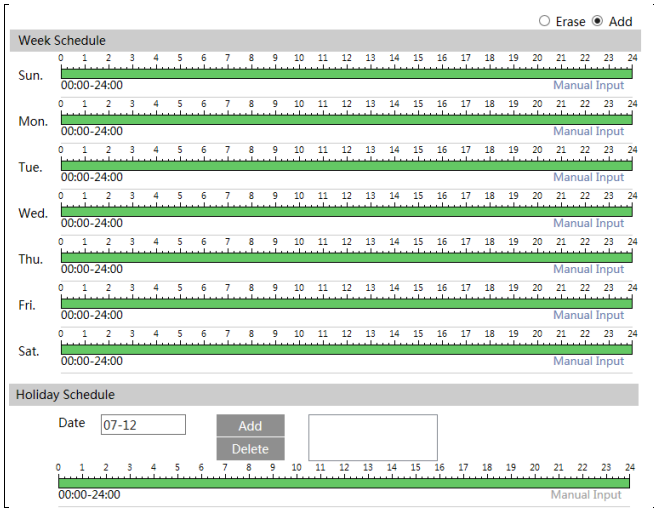
1. Go to Config→System→Storage→Record to go to the interface as shown below.

Management	Record	Snapshot
<b>Record Parameters</b>		
Record Stream	<input type="text" value="Main"/>	▼
Pre Record Time	<input type="text" value="No Pre Record"/>	▼ ( H264,H265,MJPEG )
Cycle Write	<input type="text" value="Yes"/>	▼
<b>Timing</b>		
<input checked="" type="checkbox"/> Enable Schedule Record		

2. Set record stream, pre-record time, cycle writing.

**Pre Record Time:** Set the time to record before the actual recording begins.

3. Set schedule recording. Check “Enable Schedule Record” and set the schedule.



## Weekly schedule

Set the alarm time from Monday to Sunday for a single week. Each day is divided in one hour increments. Green means scheduled. Blank means unscheduled.

“Add”: Add the schedule for a special day. Drag the mouse to set the time on the timeline.

“Erase”: Delete the schedule. Drag the mouse to erase the time on the timeline.

Manual Input: Click it for a specific day to enter specific start and end times. This adds more granularities (minutes).

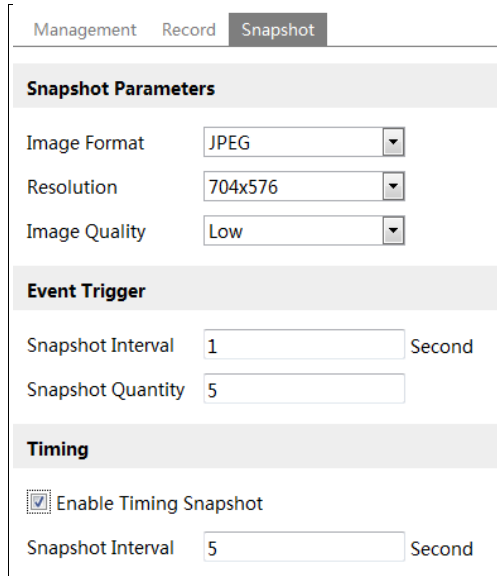
## Day schedule

Set the alarm time for alarm a special day, such as a holiday.

**Note: Holiday schedule takes priority over weekly schedule.**

## ● Snapshot Settings

Go to Config→System→Storage→Snapshot to go to the interface as shown below.



Management		Record		Snapshot	
<b>Snapshot Parameters</b>					
Image Format		JPEG			
Resolution		704x576			
Image Quality		Low			
<b>Event Trigger</b>					
Snapshot Interval		1		Second	
Snapshot Quantity		5			
<b>Timing</b>					
<input checked="" type="checkbox"/>		Enable Timing Snapshot			
Snapshot Interval		5		Second	

Set the format, resolution and quality of the image saved on the SD card and the snapshot interval and quantity and the timing snapshot here.

**Snapshot Quantity:** The number you set here is the maximum quantity of snapshots. The actual quantity of snapshots may be less than this number. Supposing the occurrence time of an alarm event is less than the time of capturing pictures, the actual quantity of snapshots is less than the set quantity of snapshots.

**Timing Snapshot:** Enable timing snapshot first and then set the snapshot interval and schedule. The setup steps of schedule are the same as the schedule recording (See [Schedule Recording](#)).

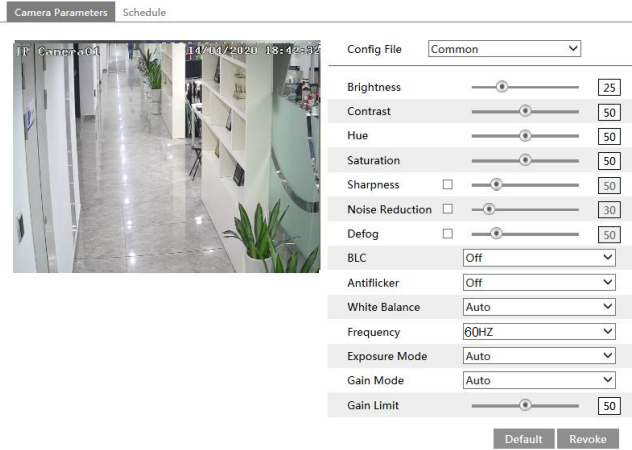
- **USB disk**

This function is only available for the model with USB interface. In this interface, you can view the state and capacity of the USB flash disk.

## 6.2 Image Configuration

### 6.2.1 Display Configuration

Go to Image→Display interface as shown below. The image’s brightness, contrast, hue and saturation and so on for common, day and night mode can be set up separately. The image effect can be quickly seen by switching the configuration file.



**Brightness:** Set the brightness level of the camera's image.

**Contrast:** Set the color difference between the brightest and darkest parts.

**Hue:** Set the total color degree of the image.

**Saturation:** Set the degree of color purity. The purer the color, the brighter the image is.

**Sharpness:** Set the resolution level of the image plane and the sharpness level of the image edge.

**Noise Reduction:** Decrease the noise and make the image more thorough. Increasing the value will make the noise reduction effect better but it will reduce the image resolution.

**Defog:** Activating this function and setting an appropriate value as needed in foggy, dusty, smoggy or rainy environment to get clear images.

**Backlight Compensation (BLC):**

- Off: disables the backlight compensation function. It is the default mode.
- HWDR: WDR can adjust the camera to provide a better image when there are both very bright and very dark areas simultaneously in the field of the view by lowering the brightness of the bright area and increasing the brightness of the dark area.

Recording will be stopped for a few seconds while the mode is changing from non-WDR to WDR mode.

- HLC: lowers the brightness of the entire image by suppressing the brightness of the image's bright area and reducing the size of the halo area.
- BLC: If enabled, the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.

**Antiflicker:**

- Off: disables the anti-flicker function. This is used mostly in outdoor installations.
- 50Hz: reduces flicker in 50Hz lighting conditions.
- 60Hz: reduces flicker in 60Hz lighting conditions.

**White Balance:** Adjust the color temperature according to the environment automatically.

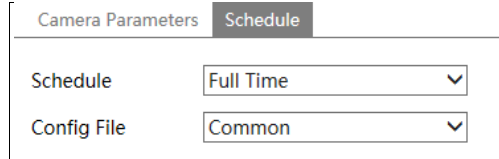
**Frequency:** 50Hz and 60Hz can be optional.

**Exposure Mode:** Choose "Auto" or "Manual". If manual is chosen, the digital shutter speed

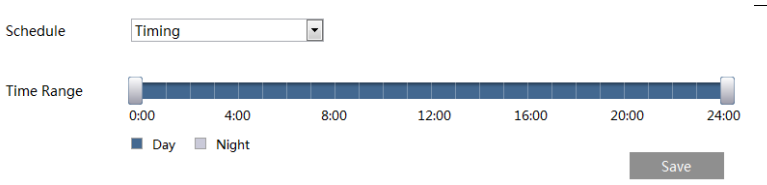
can be adjusted.

**Gain Mode:** Choose “Auto” or “Manual”. If “Auto” is selected, the gain value will be automatically adjusted according to the actual situation. If “Manual” is selected, the gain value shall be set manually. The higher the value is, the brighter the image is.

Schedule Settings of Image Parameters:  
Click the “Schedule” tab as shown below.



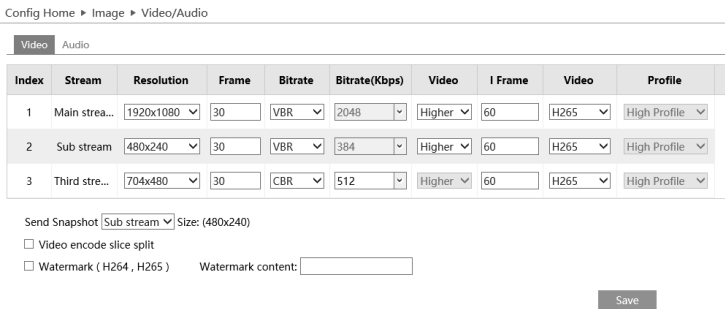
Set full time schedule for common, day, night mode and specified time schedule for day and night. Choose “Timing” in the drop-down box of schedule as shown below.



Drag “” icons to set the time of day and night. Blue means day time and blank means night time. If the current mode of camera parameters is set to schedule, the image configuration mode will automatically switch between day and night according to the schedule.

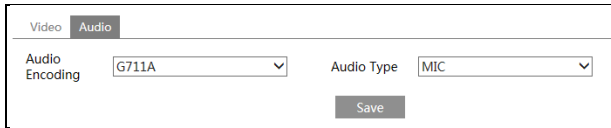
## 6.2.2 Video / Audio Configuration

Go to Image→Video / Audio interface as shown below. In this interface, set the resolution, frame rate, bitrate type, video quality and so on subject to the actual network condition.



Click the “Audio” tab to go to the interface as shown below.





The screenshot shows a configuration window with two tabs: 'Video' and 'Audio'. The 'Audio' tab is active. Below the tabs, there are two dropdown menus. The first is labeled 'Audio Encoding' and has 'G711A' selected. The second is labeled 'Audio Type' and has 'MIC' selected. A 'Save' button is positioned at the bottom right of the configuration area.

Three video streams can be adjustable.

**Resolution:** The size of image.

**Frame rate:** The higher the frame rate, the video is smoother.

**Bitrate type:** CBR and VBR are optional. Bitrate is related to image quality. CBR means that no matter how much change is seen in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according to scene changes. For example, for scenes that do not have much movement, the bitrate will be kept at a lower value. This can help optimize the network bandwidth usage.

**Bitrate:** it can be adjusted when the mode is set to CBR. The higher the bitrate, the better the image quality will be.

**Video Quality:** It can be adjusted when the mode is set to VBR. The higher the image quality, the more bitrate will be required.

**I Frame interval:** It determines how many frames are allowed between a “group of pictures”. When a new scene begins in a video, until that scene ends, the entire group of frames (or pictures) can be considered as a group of pictures. If there is not much movement in the scene, setting the value higher than the frame rate is fine, potentially resulting in less bandwidth usage. However, if the value is set too high, and there is a high frequency of movement in the video, there is a risk of frame skipping.

**Video Compression:** MJPEG, H264+, H264, H265, H265+ can be optional. If H.265/H.265+ is chosen, make sure the client system is able to decode H.265/H.265+.

**Profile:** For H.264. Baseline, main and high profiles are selectable.

**Send Snapshot:** How many snapshots to generate for an event.

**Video encode slice split:** If this function is enabled, smooth image can be gotten even though using the low-performance PC.

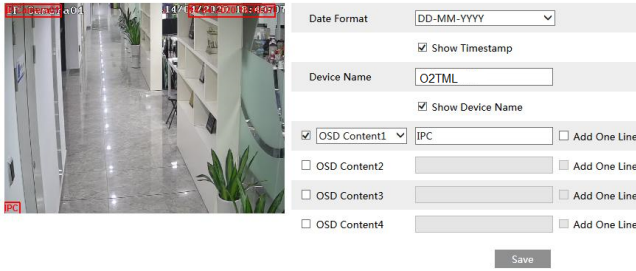
**Watermark:** When playing back the local recorded video in the search interface, the watermark can be displayed. To enable it, check the watermark box and enter the watermark text.

**Audio Encoding:** G711A and G711U are selectable.

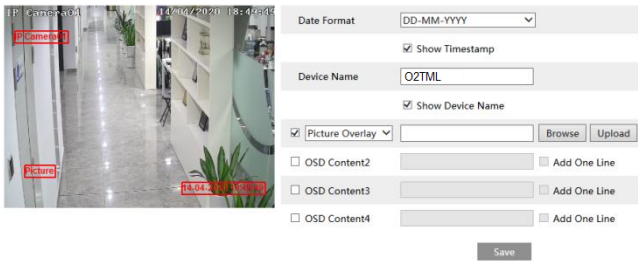
**Audio Type:** MIC.

### 6.2.3 OSD Configuration

Go to Image→OSD interface as shown below.



Set time stamp, device name, OSD content and picture overlap here. After enabling the corresponding display and entering the content, drag them to change their position. Then click the “Save” button to save the settings.

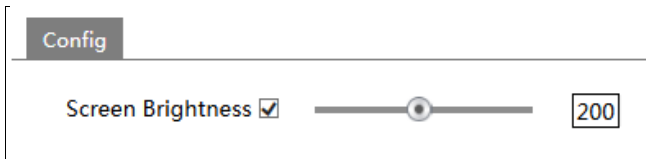


Picture Overlap Settings:

Check “OSD Content1”, choose “Picture Overlay” and click “Browse” to select the overlap picture. Then click “Upload” to upload the overlap picture. The pixel of the image shall not exceed 200\*200, or it cannot be uploaded.

### 6.2.4 Screen Brightness

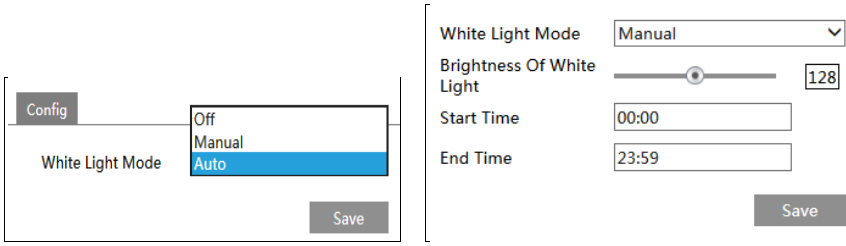
Click Config→Image→Screen Brightness to go to the following interface.



In this interface, you can set the brightness of the screen of the terminal. The adjustable range is from 150 to 255.

### 6.2.5 White Light Control

Click Config→Image→White Light Control to go to the following interface.



**White Light Mode:** “OFF”, “Manual” or “Auto” is optional. In low illumination condition, this mode can be enabled.

### 6.2.6 Face Exposure

To enable and set face exposure, please go to Config→Image→Face Exposure interface.



When the brightness of the captured face is not enough, it can be enabled.

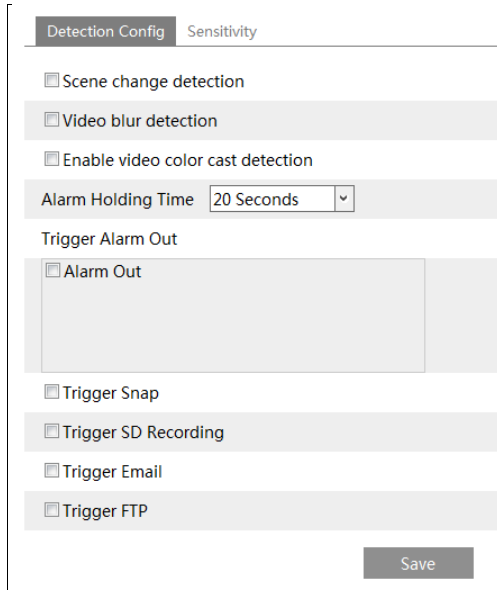
## 6.3 Alarm Configuration

### 6.3.1 Exception

This function can detect changes in the surveillance environment affected by the external factors.

To set exception detection:

Go to Config→Event→Exception interface as shown below.



1. Enable the applicable detection that’s desired.

**Scene Change Detection:** Alarms will be triggered if the scene of the monitor video has changed.

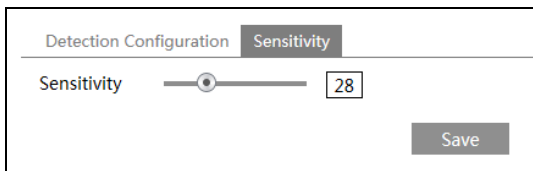
**Video Blur Detection:** Alarms will be triggered if the video becomes blurry.

**Enable Video Color Cast Detection:** Alarms will be triggered if the video becomes obscured.

2. Set the alarm holding time and alarm trigger options. The setup steps of alarm trigger options are the same as temperature screening settings. Please refer to temperature screening settings chapter for details.

3. Click “Save” button to save the settings.

4. Set the sensitivity of the exception detection. Click “Sensitivity” tab to go to the interface as shown below.



Drag the slider to set the sensitivity value or directly enter the sensitivity value in the textbox. Click “Save” button to save the settings.

**The sensitivity value of Scene Change Detection:** The higher the value is, the more sensitive the system responds to the amplitude of the scene change.

**The sensitivity value of Video Blur Detection:** The higher the value is, the more sensitive

the system responds to the blurriness of the image.

**The sensitivity value of Video Color Cast Detection:** The higher the value is, the more sensitive the system responds to the obscuring of the image.

### 6.3.2 SD Card Full

1. Go to Config→Alarm→Anomaly→SD Card Full.

SD Card Full SD Card Error IP Address Collision Cable Disconnected

Enable

Alarm Holding Time 20 Seconds

Trigger Alarm Out

Alarm Out1  Alarm Out 2

Trigger Email

Trigger FTP

Save

2. Click “Enable” and set the alarm holding time.

3. Set alarm trigger options. The setup steps are the same as temperature screening settings. Please refer to temperature screening settings chapter for details.

### 6.3.3 SD Card Error

When there are some errors in writing to the SD card, the corresponding alarms will be triggered.

1. Go to Config→Alarm→Anomaly→SD Card Error as shown below.

SD Card Full SD Card Error IP Address Collision Cable Disconnected

Enable

Alarm Holding Time 20 Seconds

Trigger Alarm Out

Alarm Out1  Alarm Out 2

Trigger Email

Trigger FTP

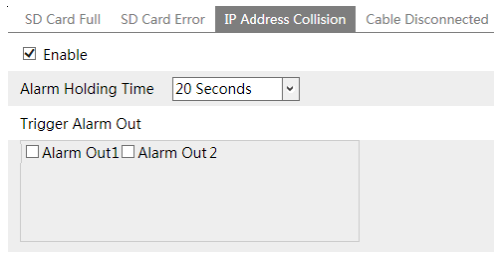
Save

2. Click “Enable” and set the alarm holding time.

3. Set alarm trigger options. Trigger alarm out, Email and FTP. The setup steps are the same as temperature screening settings. Please refer to temperature screening settings chapter for details.

### 6.3.4 IP Address Conflict

1. Go to Config→Alarm→Anomaly→IP Address Collision as shown below.



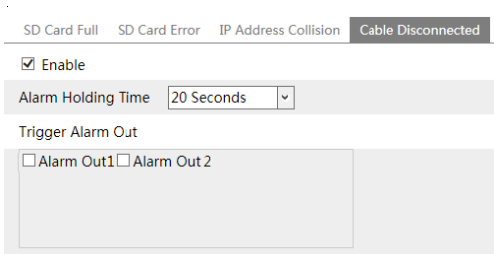
The screenshot shows a configuration interface for 'IP Address Collision'. At the top, there are four tabs: 'SD Card Full', 'SD Card Error', 'IP Address Collision' (which is selected and highlighted), and 'Cable Disconnected'. Below the tabs, there is a section with a checked checkbox labeled 'Enable'. Underneath, there is a field for 'Alarm Holding Time' set to '20 Seconds' with a dropdown arrow. Below that, there is a section titled 'Trigger Alarm Out' containing two unchecked checkboxes: 'Alarm Out1' and 'Alarm Out2'.

2. Click “Enable alarm” and set the alarm holding time.

3. Trigger alarm out. When the IP address of the camera is in conflict with the IP address of other devices, the system will trigger the alarm out.

### 6.3.5 Cable Disconnection

1. Go to Config→Alarm→Anomaly→Cable Disconnected as shown below.



The screenshot shows a configuration interface for 'Cable Disconnected'. At the top, there are four tabs: 'SD Card Full', 'SD Card Error', 'IP Address Collision', and 'Cable Disconnected' (which is selected and highlighted). Below the tabs, there is a section with a checked checkbox labeled 'Enable'. Underneath, there is a field for 'Alarm Holding Time' set to '20 Seconds' with a dropdown arrow. Below that, there is a section titled 'Trigger Alarm Out' containing two unchecked checkboxes: 'Alarm Out1' and 'Alarm Out2'.

2. Click “Enable” and set the alarm holding time.

3. Trigger alarm out. When the camera is disconnected, the system will trigger the alarm out.

### 6.3.6 Alarm In

To set sensor alarm (alarm in):

Go to Config→Alarm→Alarm In interface as shown below.

Alarm Config Schedule

Sensor ID Alarm In1 Apply settings to Alarm In2

Enable

Alarm Type NO

Alarm Holding Time 20 Seconds

Sensor Name

Trigger Alarm Out

Alarm Out1  Alarm Out 2

Trigger SD Snap

Trigger SD Recording

Trigger Email

Trigger FTP

Save

1. Select the sensor ID, click “Enable” and set the alarm type, alarm holding time and sensor name.
  2. Set alarm trigger options. The setup steps are the same as temperature screening settings. Please refer to temperature screening settings chapter for details.
  3. Click “Save” button to save the settings.
  4. Set the schedule of the sensor alarm. The setup steps of the schedule are the same as the schedule recording setup. (See [Schedule Recording](#)).
- Click “Apply settings to” to quickly apply the settings to the other alarm input.

### 6.3.7 Alarm Out

Go to Config→Alarm→Alarm Out.

Alarm Out ID Alarm Out 1

Alarm Out Mode Alarm Linkage

Alarm Out Name alarmOut1

Alarm Holding Time 20 Seconds

Alarm Type NC

Save

**Alarm Out ID:** Select the alarm out ID.

**Alarm Out Mode:** Alarm linkage, manual operation, day/night switch linkage and timing are optional.

**Alarm Linkage:** Having selected this mode, select alarm out name, alarm holding time at the “Alarm Holding Time” pull down list box and alarm type.

**Manual Operation:** Having selected this mode, select the alarm type and click “Open” to trigger the alarm out immediately; click “Close” to stop alarm.

Alarm Out ID

Alarm Out Mode

Alarm Type

Manual Operation

**Day/Night Switch Linkage:** Having selected this mode, select the alarm type and then choose to open or close alarm out when the camera switches to day mode or night mode.

Alarm Out ID

Alarm Out Mode

Alarm Type

Day

Night

**Timing:** Select the alarm type. Then click “Add” and drag the mouse on the timeline to set the schedule of alarm out; click “Erase” and drag the mouse on the timeline to erase the set time schedule. After this schedule is saved, the alarm out will be triggered in the specified time.

Alarm Out ID

Alarm Out Mode

Alarm Type

Time Range

Erase  Add

Manual Input

## 6.4 Network Configuration

### 6.4.1 TCP/IP

Go to Config→Network→TCP/IP interface as shown below. There are two ways for network connection.



IPv4 IPv6 PPPoE Config IP Change Notification Config

Obtain an IP address automatically

Use the following IP address

IP Address

Subnet Mask

Gateway

Preferred DNS Server

Alternate DNS Server

**Use IP address (take IPv4 for example)**—There are two options for IP setup: obtain an IP address automatically by DHCP and use the following IP address. Please choose one of the options as needed.

Test: Test the effectiveness of the IP address by clicking this button.

**Use PPPoE**—Click the “PPPoE Config” tab to go to the interface as shown below. Enable PPPoE and then enter the user name and password from your ISP.

IPv4 IPv6 PPPoE Config IP Change Notification Config

Enable

User Name

Password

Either method of network connection can be used. If PPPoE is used to connect internet, the camera will get a dynamic WAN IP address. This IP address will change frequently. To be notified, the IP change notification function can be used.

Click “IP Change Notification Config” to go to the interface as shown below.

IPv4 IPv6 PPPoE Config IP Change Notification Config

Trigger Email

Trigger FTP

**Trigger Email:** when the IP address of the device is changed, the new IP address will be sent to the email address that has been set up.

**Trigger FTP:** when the IP address of the device is changed, the new IP address will be sent to FTP server that has been set up.

### 6.4.2 Port

Go to Config→Network→Port interface as shown below. HTTP port, Data port and RTSP port can be set.

HTTP Port	<input type="text" value="80"/>
HTTPS Port	<input type="text" value="443"/>
Data Port	<input type="text" value="9008"/>
RTSP Port	<input type="text" value="554"/>

**HTTP Port:** The default HTTP port is 80. It can be changed to any port which is not occupied.

**HTTPS Port:** The default HTTPS port is 443. It can be changed to any port which is not occupied.

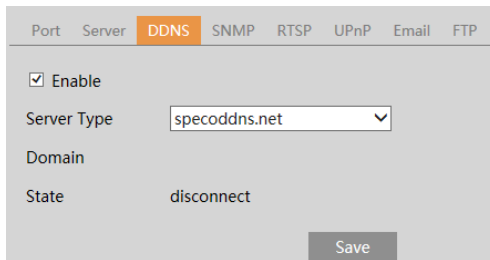
**Data Port:** The default data port is 9008. Please change it as necessary.

**RTSP Port:** The default port is 554. Please change it as necessary.

## 6.4.4 DDNS

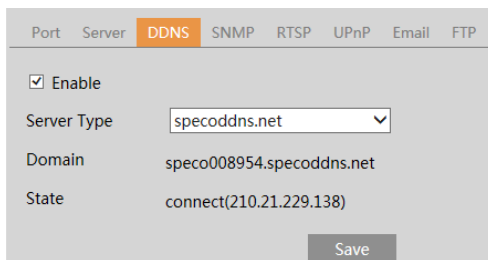
If the camera is set up with a DHCP connection, DDNS should be set for accessing the camera from the internet.

1. Go to the DDNS tab.



The screenshot shows a web interface with a navigation bar at the top containing tabs: Port, Server, DDNS (highlighted in orange), SNMP, RTSP, UPnP, Email, and FTP. Below the tabs, the DDNS configuration is shown. It includes a checked checkbox for 'Enable', a 'Server Type' dropdown menu set to 'specoddns.net', a 'Domain' field which is currently empty, and a 'State' field set to 'disconnect'. A 'Save' button is located at the bottom right of the configuration area.

2. Enable, save and use DDNS to log in.



This screenshot shows the DDNS configuration after saving. The 'Enable' checkbox is checked. The 'Server Type' dropdown is still 'specoddns.net'. The 'Domain' field now contains 'speco008954.specoddns.net'. The 'State' field has changed to 'connect(210.21.229.138)'. The 'Save' button is still present at the bottom right.

### 6.4.5 RTSP

Go to Config→Network→RTSP.

<input checked="" type="checkbox"/> Enable	
Port	<input type="text" value="554"/>
Address	<input type="text" value="rtsp://IP or domain name:port/profile1"/>
	<input type="text" value="rtsp://IP or domain name:port/profile2"/>
	<input type="text" value="rtsp://IP or domain name:port/profile3"/>
Multicast address	
Main stream	<input type="text" value="239.0.0.0"/> <input type="text" value="50554"/> <input type="checkbox"/> Automatic start
Sub stream	<input type="text" value="239.0.0.1"/> <input type="text" value="51554"/> <input type="checkbox"/> Automatic start
Third stream	<input type="text" value="239.0.0.2"/> <input type="text" value="52554"/> <input type="checkbox"/> Automatic start
Audio	<input type="text" value="239.0.0.3"/> <input type="text" value="53554"/> <input type="checkbox"/> Automatic start
<input type="checkbox"/> Allow anonymous login (No username or password required)	
<input type="button" value="Save"/>	

Select “Enable” to enable the RTSP function.

**Port:** Access port of the streaming media. The default number is 554.

**RTSP Address:** The RTSP address (unicast) format that can be used to play the stream in a media player.

#### Multicast Address

**Main stream:** The address format is

“rtsp://IP address: rtsp port/profile1?transportmode=mcst”.

**Sub stream:** The address format is

“rtsp://IP address: rtsp port/profile2?transportmode=mcst”.

**Third stream:** The address format is

“rtsp://IP address: rtsp port/profile3?transportmode=mcst”.

**Audio:** Having entered the main/sub stream in a VLC player, the video and audio will play automatically.

If “Allow anonymous login...” is checked, there is no need to enter the username and password to view the video.

If “auto start” is enabled, the multicast received data should be added into a VLC player to play the video.

**Note:**1. This camera support local play through a VLC player. Enter the RTSP address (unicast or multicast, eg. rtsp://192.168.226.201:554/profile1?transportmode=mcst) in a VLC player to realize the simultaneous play with the web client.

2. The IP address mentioned above cannot be the address of IPv6.

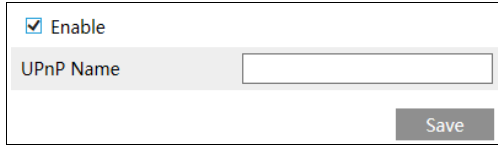
3. Avoid the use of the same multicast address in the same local network.

4. When playing the video through the multicast streams in a VLC player, please pay attention to the mode of the VLC player. If it is set to TCP mode, the video cannot be played.

5. If the coding format of the video of the main stream is MJPEG, the video may be disordered at some resolutions.

### 6.4.6 UPnP

If this function is enabled, the camera can be quickly accessed through the LAN. Go to Config→Network→UPnP. Enable UPNP and then enter UPnP name.

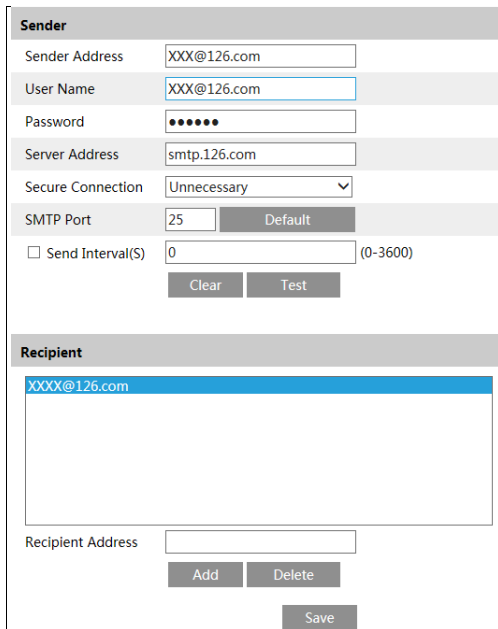


The form contains a checked checkbox labeled "Enable". Below it is a text input field labeled "UPnP Name" which is currently empty. At the bottom right of the form is a "Save" button.

### 6.4.7 Email

If you need to trigger Email when an alarm happens or IP address is changed, please set the Email here first.

Go to Config→Network →Email.



The form is divided into two sections: "Sender" and "Recipient".

**Sender section:**

- Sender Address: XXX@126.com
- User Name: XXX@126.com
- Password: ••••••
- Server Address: smtp.126.com
- Secure Connection: Unnecessary (dropdown menu)
- SMTP Port: 25 (with a "Default" button)
- Send Interval(S): 0 (with a range of 0-3600 and a checkbox)
- Buttons: Clear, Test

**Recipient section:**

- A list of recipient addresses with "XXX@126.com" selected and highlighted in blue.
- Recipient Address: (empty text input field)
- Buttons: Add, Delete
- Save button at the bottom.

**Sender Address:** sender's e-mail address.

**User name and password:** sender's user name and password.

**Server Address:** The SMTP IP address or host name.

Select the secure connection type at the "Secure Connection" pull-down list according to

what's required.

**SMTP Port:** The SMTP port.

**Send Interval(S):** The time interval of sending email. For example, if it is set to 60 seconds and multiple motion detection alarms are triggered within 60 seconds, they will be considered as only one alarm event and only one email will be sent. If one motion alarm event is triggered and then another motion detection alarm event is triggered after 60 seconds, two emails will be sent. When different alarms are triggered at the same time, multiple emails will be sent separately.

Click the “Test” button to test the connection of the account.

**Recipient Address:** receiver's e-mail address.

### 6.4.8 FTP

After an FTP server is set up, captured pictures from events will be uploaded to the FTP server.

Go to Config→Network →FTP.

Server Name	Server Address	Port	User Name	Upload Path

**Add FTP** [X]

Server Name: [ ]

Server Address: [ ]

Upload Path: [ Example/Dir/folder ]

Port: [ 21 ]

User Name: [ ]

Password: [ ]

Anonymous

[ OK ] [ Cancel ]

[ Add ] [ Modify ] [ Delete ] [ Test ] [ Save ]

**Server Name:** The name of the FTP server.

**Server Address:** The IP address or domain name of the FTP.

**Upload Path:** The directory where files will be uploaded to.

**Port:** The port of the FTP server.

**User Name and Password:** The username and password that are used to login to the FTP server.

### 6.4.9 HTTPS

HTTPS provides authentication of the web site and protects user privacy.

Go to Config →Network→HTTPS as shown below.

example

Enable

Certificate installed: C=CN, ST=GD, L=SZ, O=embeddedsoftware Delete

Attribute: Issued to: C=CN, ST=GD, L=SZ, O=embeddedsoftware, OU=IPC, H=localhost, E=com.cn, Issuer: C=CN, ST=GD, L=SZ, O=embeddedsoftware, OU=IPC, H=localhost, E=com.cn, Validity date: 2017-07-26 01:02:07 - 2022-07-26 01:02:07

Save

A private certificate can be created to enable HTTPS. Click “Delete” to cancel the example certificate. Then the following interface will be displayed.

Enable

Installation type:  Have signed certificate, install directly  
 Create a private certificate  
 Create a certificate request

Install certificate:  Browse Install

Save

- \* If there is a signed certificate, click “Browse” to select it and then click “Install” to install it.
- \* Click “Create a private certificate” to enter the following creation interface.

Enable

Installation type:  Have signed certificate, install directly  
 Create a private certificate  
 Create a certificate request

Create a private certificate: Create

Save

Click the “Create” button to create a private certificate. Enter the country (only two letters available), domain (camera’s IP address/domain), validity date, password, province/state, region and so on. Then click “OK” to save the settings.

- \* Click “Create a certificate request” to enter the following interface.

Enable

Installation type:  Have signed certificate, install directly  
 Create a private certificate  
 Create a certificate request

Create a certificate request: Create Download Delete

Click “Create” to create the certificate request. Then download the certificate request and submit it to the trusted certificate authority for signature. After receiving the signed certificate, import the certificate to the device.

## 6.5 Security Configuration

### 6.5.1 User Configuration

Go to Config→Security→User interface as shown below.

Add    Modify    Delete			
Index	User Name	User Type	Binding MAC
1	admin	Administrator	

#### Add user:

1. Click the “Add” button to pop up the following textbox.

**Add User** ×

User Name

Password

Level

9~15 characters, including at least two of the following categories: numbers, special characters, upper case letters, lower case letters.

Confirm Password

User Type

Bind MAC



2. Enter user name in “User Name” textbox.
3. Enter the password in the “Password” and “Confirm Password” textbox. Please set the password according to the requirement of the password security level (Go to Config→Security→Security Management→Password Security interface to set the security level).  
It is recommended to set a high level password that shall be composed of numbers, special characters, upper or lower case letters for your account security.
4. Choose the user type. Administrator has all permissions. Normal user can only view the live video. Advanced user has the same permissions as an Administrator except for; user, backup settings, factory reset, and upgrading the firmware.
5. Enter the MAC address of the PC in the “Bind MAC” textbox.  
If this option is enabled, only the PC with the specified MAC address can access the camera for that user.
6. Click the “OK” button and then the newly added user will be displayed in the user list.

### Modify user:

1. Select a user to modify password and MAC address if necessary in the user configuration list box.
2. The “Edit user” dialog box pops up by clicking the “Modify” button.

**Edit User** [X]

Modify Password

User Name: admin

Old Password: [ ]

New Password: [ ]

Confirm Password: [ ]

Level: [ ]

9~15 characters, including at least two of the following categories:  
numbers, special characters, upper case letters, lower case letters.

Bind MAC: 00:00:00:00:00:00

OK Cancel

3. Enter the old password of the user in the “Old Password” text box.
4. Enter the new password in the “New password” and “Confirm Password” text box.
5. Enter computer’s MAC address as necessary.
6. Click the “OK” button to save the settings.

**Note:** To change the access level of a user, the user must be deleted and added again with the new access level.

### Delete user:

1. Select the user to be deleted in the user configuration list box.

2. Click the “Delete” button to delete the user.

**Note:** The default administrator account cannot be deleted.

### 6.5.2 Online User

Go to Config→Security→Online User to view the user who is viewing the live video.

Index	Client Address	Port	User Name	User Type	
1	192.168.17.232	55760	admin	Administrator	<input type="button" value="Kick Out"/>

An administrator user can kick out all the other users (including other administrators).

### 6.5.3 Block and Allow Lists

Go to Config→Security→Block and Allow Lists as shown below.

The screenshot shows the 'IP/MAC Address Filter Settings' window. It has a title bar and a main area with the following elements: a checked checkbox for 'Enable address filtering'; two radio buttons, 'Block the following address' (selected) and 'Allow the following address'; a large empty text box for entering addresses; an 'Add' button; a 'Delete' button; a text input field containing '0.0.0.0'; radio buttons for 'IPv4' (selected), 'IPv6', and 'MAC'; and a 'Save' button.

The setup steps are as follows:

Check the “Enable address filtering” check box.

Select “Block/Allow the following address”, IPv4/IPv6/MAC and then enter IP address or MAC address in the address box and click the “Add” button.

### 6.5.4 Security Management

Go to Config→Security→Security Management as shown below.

The screenshot shows the 'Security Service' configuration window. It has a title bar with 'Security Service' and 'Password Security' tabs. The main area contains a checked checkbox for 'Enable "locking once illegal login" function' and a 'Save' button.

In order to prevent against malicious password unlocking, “locking once illegal login” function can be enabled here. If this function is enabled, login failure after trying six times will make the login interface locked. The camera can be logged in again after a half hour or after the camera reboots.

- Password Security

Security Service	Password Security
Password Level	Weak ▼
Expiration Time	Never ▼

Please set the password level and expiration time as needed.

Password Level: Weak, Medium or Strong.

Weak level: Numbers, special characters, upper or lower case letters can be used. You can choose one of them or any combination of them when setting the password.

Medium Level: 9~15 characters, including at least two of the following categories: numbers, special characters, upper case letters, lower case letters.

Strong Level: 9~15 characters. Numbers, special characters, upper case letters and lower case letters must be included.

For your account security, it is recommended to set a strong password and change your password regularly.

## 6.6 Maintenance Configuration

### 6.6.1 Backup and Restore

Go to Config→Maintenance→Backup & Restore.

The screenshot displays a configuration interface with three main sections:

- Import Setting:** Contains a text input field labeled "Path" with a "Browse" button to its right, and a dark grey button labeled "Import Setting" below it.
- Export Settings:** Contains a dark grey button labeled "Export Settings" centered in the section.
- Default Settings:** Contains a "Keep" label followed by a list of three items, each with an unchecked checkbox:
  - Network Config
  - Security Configuration
  - Image ConfigurationBelow this list is a dark grey button labeled "Load Default".

- **Import & Export Settings**

Configuration settings of the camera can be exported from a camera into another camera.

1. Click "Browse" to select the save path for import or export information on the PC.
2. Click the "Import Setting" or "Export Setting" button.

- **Default Settings**

Click the "Load Default" button to restore all system settings to the default factory settings except those you want to keep.

## 6.6.2 Reboot

Go to Config→Maintenance→Reboot.

Click the "Reboot" button to reboot the device.

### Timed Reboot Setting:

If necessary, the camera can be set up to reboot on a time interval. Enable "Time Settings", set the date and time and then click the "Save" button to save the settings.

## 6.6.3 Upgrade

Go to Config→Maintenance→Upgrade. In this interface, the camera firmware can be updated.

**Local upgrade**

Path

1. Click the “Browse” button to select the save path of the upgrade file
2. Click the “Upgrade” button to start upgrading the firmware.
3. The device will restart automatically

**Caution!** Do not close the browser or disconnect the camera from the network during the upgrade.

### 6.6.4 Operation Log

To query and export log:

1. Go to Config→Maintenance→Operation Log.

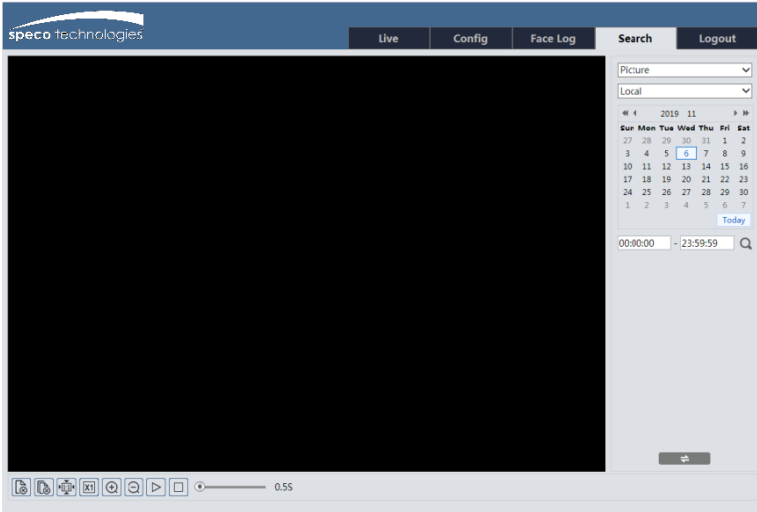
Main Type: <input style="width: 80px;" type="text" value="All log"/>		Sub Type: <input style="width: 80px;" type="text" value="All log"/>			
Start Time: <input style="width: 120px;" type="text" value="2015-07-14 00:00:00"/>		End Time: <input style="width: 120px;" type="text" value="2015-07-14 23:59:59"/>		<input type="button" value="Search"/> <input type="button" value="Export"/>	
Index	Time	Main Type	Sub Type	User Name	Login IP
1	2015-07-14 11:15:18	Operation	Log in	admin	192.168.12.53
2	2015-07-14 11:12:02	Exception	Disconnected		192.168.12.53
3	2015-07-14 19:12:17	Exception	Disconnected		192.168.12.52

2. Select the main type, sub type, start and end time.
3. Click “Search” to view the operation log.
4. Click “Export” to export the operation log.


# 7. Search

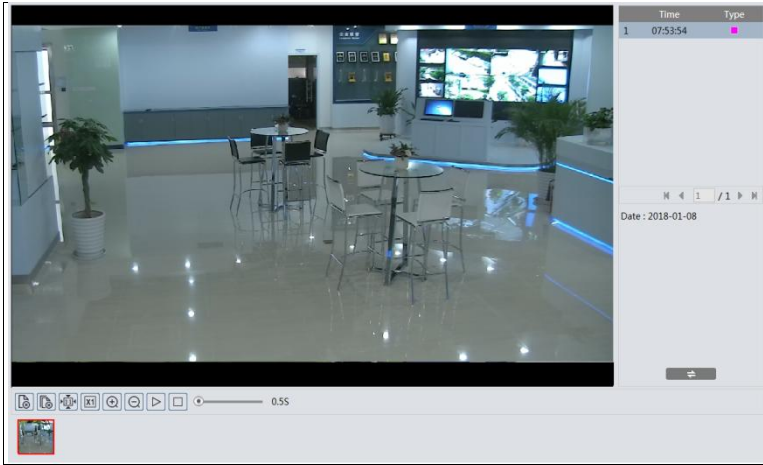
## 7.1 Image Search


Click Search to go to the interface as shown below. Images that are saved on the SD card can be found here.



### ● Local Image Search

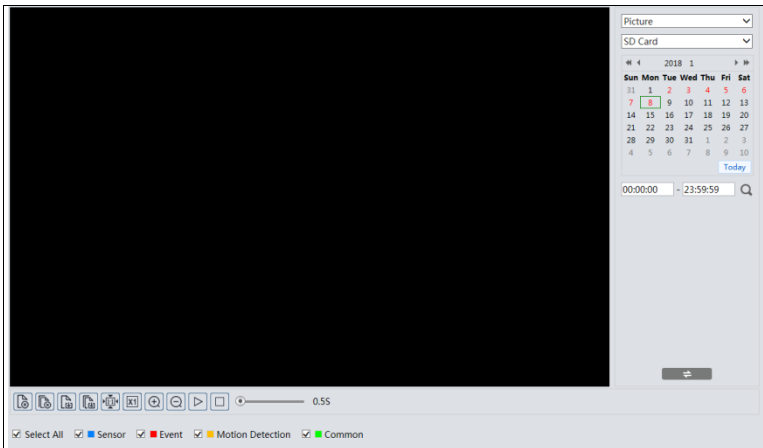
1. Choose “Picture”—“Local”.
2. Set time: Select date and choose the start and end time.
3. Click  to search the images.
4. Double click a file name in the list to view the captured photos as shown above.





Click  to return to the previous interface.












### ● SD Card Image Search

1. Choose “Picture”—“SD Card”.



2. Set time: Select date and choose the start and end time.
  3. Choose the alarm events at the bottom of the interface.
  4. Click  to search the images.
  5. Double click a file name in the list to view the captured photos.
- Click  to return to the previous interface.

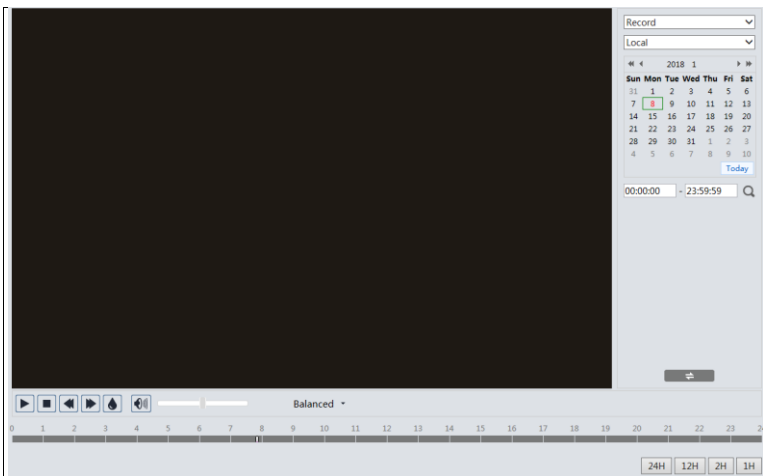
The descriptions of the buttons are shown as follows.


Icon	Description	Icon	Description
	Close: Select an image and click this button to close the image.		Close all: Click this button to close all images.
	Save: Click this button to select the path for saving the image on the PC.		Save all: Click this button to select the path for saving all pictures on the PC.
	Fit size: Click to fit the image on the screen.		Actual size: Click this button to display the actual size of the image.
	Zoom in: Click this button to digitally zoom in.		Zoom out: Click this button to digitally zoom out.
	Slide show play: Click this button to start the slide show mode.		Stop: Click this button to stop the slide show.
	Play speed: Play speed of the slide show.		

## 7.2 Video Search

### 7.2.1 Local Video Search







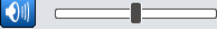
Click Search to go to the interface as shown below. Videos were recorded locally to the PC can be played in this interface.



1. Choose “Record”—“Local”.
2. Set search time: Select the date and choose the start and end time.
3. Click  to search the images.
4. Double click on a file name in the list to start playback.




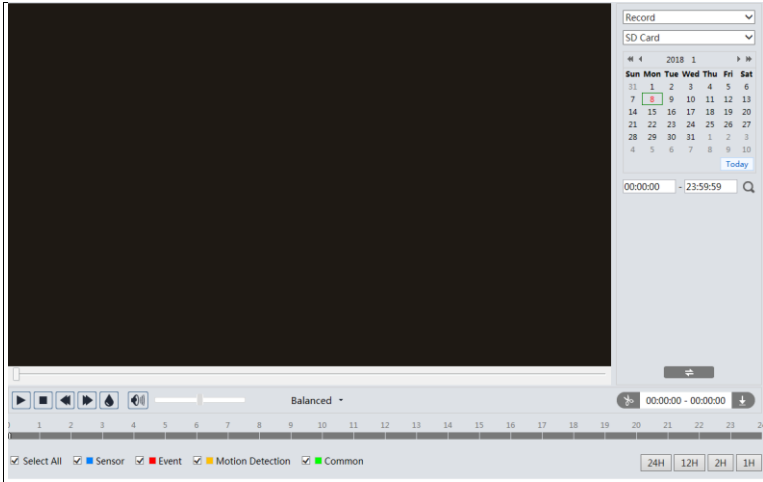


Icon	Description	Icon	Description
	Play button. After pausing the video, click this button to continue playing.		Pause button
	Stop button		Speed down
	Speed up		Watermark display
	Enable / disable audio; drag the slider to adjust the volume after enabling audio.		

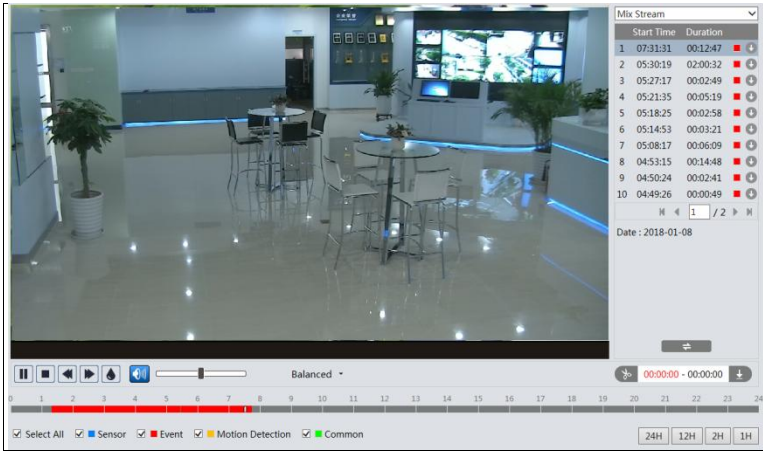
### 7.2.2 SD Card Video Search

Click Search to go to the interface as shown below. Videos that were recorded on the SD card can be played in this interface.

1. Choose “Record”—“SD Card”.
2. Set search time: Select the date and choose the start and end time.
3. Click  to search the images.







4. Select the alarm events at the bottom of the interface.
5. Select mix stream (video and audio stream) or video stream as needed.
6. Double click on a file name in the list to start playback.



The time table can be shown in 24H/12H/2H/1H format by clicking the corresponding buttons.

### Video clip and downloading

1. Search the video files according to the above mentioned steps.
2. Select the start time by clicking on the time table.
3. Click  to set the start time and then this button turns blue ().
4. Select the end time by clicking on the time table. Then click  to set the end time.
5. Click  to download the video file in the PC.

Index	Process	Record	Start Time	End Time	Path	Operate
1	100%	Cut	2018-01-16 01:1...	2018-01-16 01:1...	Favorites	Open

Set up D:\Favorites Clear List Close

Click “Set up” to set the storage directory of the video files.

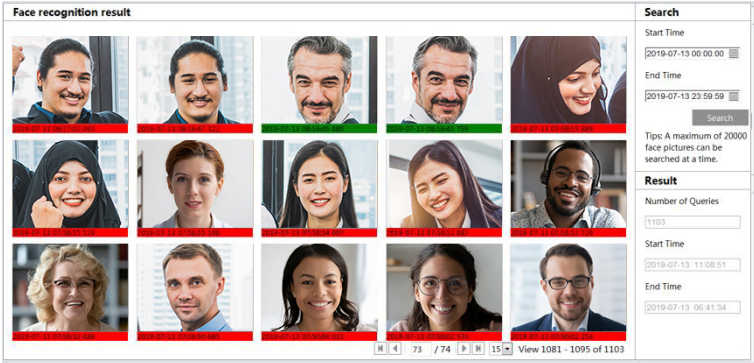
Click “Open” to play the video.

Click “Clear List” to clear the downloading list.

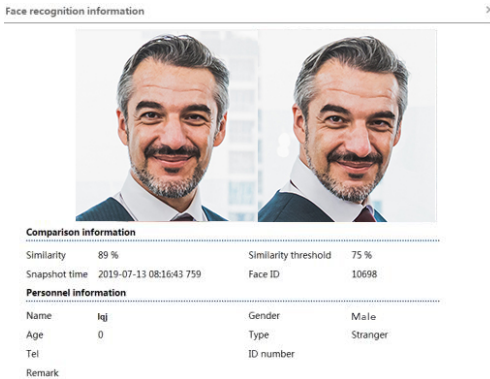
Click “Close” to close the downloading window.

# 8. Face Match Results / Search

Click “Face Log” tab to go to the face recognition result search interface.  
Set the start time and end time and click “Search” to view the face recognition result.



Red time tag means no comparison result. Green time tag means there is a comparison result.  
Click the picture with green time tag and then the face comparison information can be viewed as shown below.



## Appendix 1 Troubleshooting

### How to find the password?

A: Reset the device to the default factory settings.

Default IP: 192.168.226.201; User name: admin; Password: 1234

### Fail to connect devices through IE browser.

A: Network is not well connected. Check the connection and make sure it is connected well.

B: IP address is not available. Reset the IP address.

C: Web port number has been changed: contact administrator to get the correct port number.

D: Exclude the above reasons. Restore to default setting by using the Speco Blue Scanner.

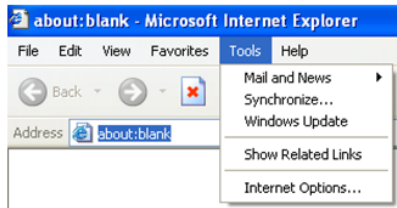
### Speco Blue Scanner cannot search devices.

It may be caused by the anti-virus software in your computer. Please exit it and try to search device again.

### IE cannot download ActiveX control.

A. IE browser may be set up to block ActiveX. Follow the steps below.

① Open IE browser and then click Tools-----Internet Options.

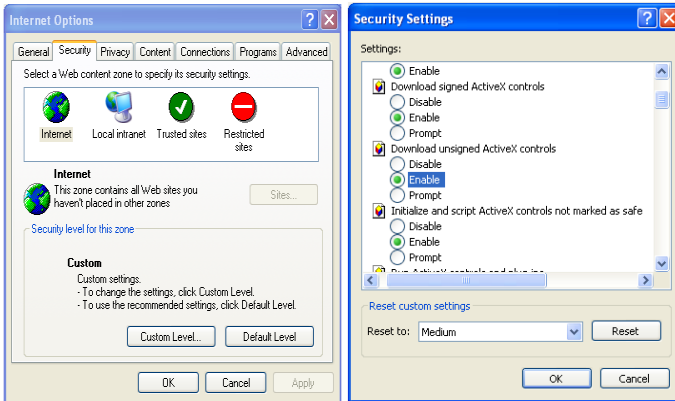


② Select Security-----Custom Level....

③ Enable all the options under “ActiveX controls and plug-ins”.

④ Click OK to finish setup.

B. Other plug-ins or anti-virus blocks ActiveX. Please uninstall or close them.



### No sound can be heard.

A: Audio input device is not connected. Please connect and try again.

B: Audio function is not enabled at the corresponding channel. Please enable this function.

## Appendix 2 Specifications

<b>Model:</b> O2TML	<b>Temperature Reading Panel with Face and Mask Recognition</b>
<b>Performance</b>	
OS	Embedded Linux
Storage	8GB DDR3 +16GB EMMC
<b>Screen</b>	
Display Screen	8-inch LCD screen; resolution: 1280x800; contrast: 500:1
Brightness	500 lux
Control Interface	I2C
<b>Temperature Measurement</b>	
Temperature Measuring Range	32 ~ 122°F (0 ~ 50°C)
Accuracy	±0.5°F
Measuring Distance	0.5ft ~ 1.6ft (0.3 ~ 0.5m)
<b>Face Recognition</b>	
Sensor	1/2.7
Lens	2MP dual-lens, f=3.97mm @ F1.6
Lens Mount	M12
WDR	120db
Height Range of Face Recognition	4ft ~ 7.2ft (1.2m-2.2m), the recommended installation height is 4.75 ft or 1.45m
Face Recognition Distance	0.5ft ~ 6.5ft (0.3m ~ 2m)
Recognition Mode	Face: 1 : N
Recognition Duration	≤ 0.5 s per person
Face Capacity	20,000
Recognition Accuracy	99.7%
<b>Supplementary Light</b>	
Fill-in Light	Soft white light, IR light
White Light Distance	3.3ft ~ 10ft (1m~ 3m)
<b>Smart Linkage</b>	
Screen Wakeup	Yes
Light Adjustment	Yes
Snapshot	Yes
<b>Audio</b>	
Two-way Talk	Yes (noise reduction and echo cancellation)
Audio Input	1CH built-in MIC
Audio Output	Built-in speaker
<b>Interface</b>	
Network Interface	10/100Mbps self-adaptive Ethernet port x1

## Temperature Reading Panel with Face and Mask Recognition

Alarm Input	2 CH
Alarm Output	2 CH
Wiegand Interface	Wiegand input/output ( 26/34 )
RS485	RS485x1 (half duplex)
Door Lock Output	Relay output, NO/NC(optional), delay setting supported
SD Card Interface	1 micro SD card slot, up to 128GB (card not included)
USB Interface	USB x1
Anti-Tamper Interface	1 button
Exit Button	1
Reset Button	1
<b>Others</b>	
Power Requirements	12VDC @1A
Power Management	Screen sleep, screen protection
Power Consumption	<12W
Weight	Approx. 2.6lbs or 1.2kg
Installation	Wall Mounting , Pole Mounting, Embedded Installation, Desktop
Certificates	FCC
Protection	IP66, Surge Protection and Voltage Transient Protection
Working Environment	-4 ~ 140°F (-20 ~ 60°C), <95% (non-condensing)
Dimensions	11.9"(H) x 5.4"(W) x 1.3"(D) ; 301.8mm(H) x 138.6mm(W) x 34.2mm(D)