VITEK

Transcendent IP 5MP Cameras

Transcendent Series 5 Megapixel Indoor/Outdoor WDR IP Cameras with IR Illumination

OPERATION MANUAL

FEATURES

- 1/2.5" 5 Megapixel Progressive Scan CMOS image sensor
- Up to 30fps live view @ 5 MegaPixel (2592x1944)
- Motorized Varifocal & Fixed Lens Options
- Infrared LED Illumination
- 120dB Super Wide Dynamic Range (WDR)
- True Mechanical Day/Night function by ICR
- XD-DNR (2D-DNR & 3D-DNR) Noise Reduction
- Fully Programmable Intelligent Analytics including Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Area Intrusion, People Counting, People Intrusion, Crowd Density Monitoring
- H.265/H.264/MJPEG Triple Streaming
- Secondary Video Output (CVBS)
- Remote Viewing via CMS, Internet Explorer, and iOS & Android Apps
- IP66 Weather Resistance *IK10 Impact Rating on select Dome Units
- ONVIF Compliant
- Charcoal Finish Available on Select Models
- Optional Mounts Available - see page 51 for details
- 12VDC & PoE (Power over Ethernet) Operation

- Please use the specified power supply to connect.
- 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 incorrect operation, shock, and vibration, 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 acceptable.
- Avoid aiming the camera directly towards extremely bright lights or the sun, as this may damage the image sensor.
- Please follow these instructions to install the camera. Do not reverse the camera, or the reversed image will be received.
- Do not operate when temperature, humidity and power supply are beyond limited stipulations.
- Keep away from heat sources such as radiators, heat registers, stove, etc.
- Do not expose the product to direct airflow from an air conditioner.
- These are product instructions only, not a quality warranty. We reserve the rights of amending 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.
- When this product is in use, the relevant contents of Microsoft, Apple and Google will be involved in. The pictures and screenshots in this manual are only used to explain the usage of our product. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google belong to the above-mentioned companies.
- This manual is suitable for IR IP66 and 67 network cameras. All pictures and examples used in the manual are for reference only.

Table of Contents

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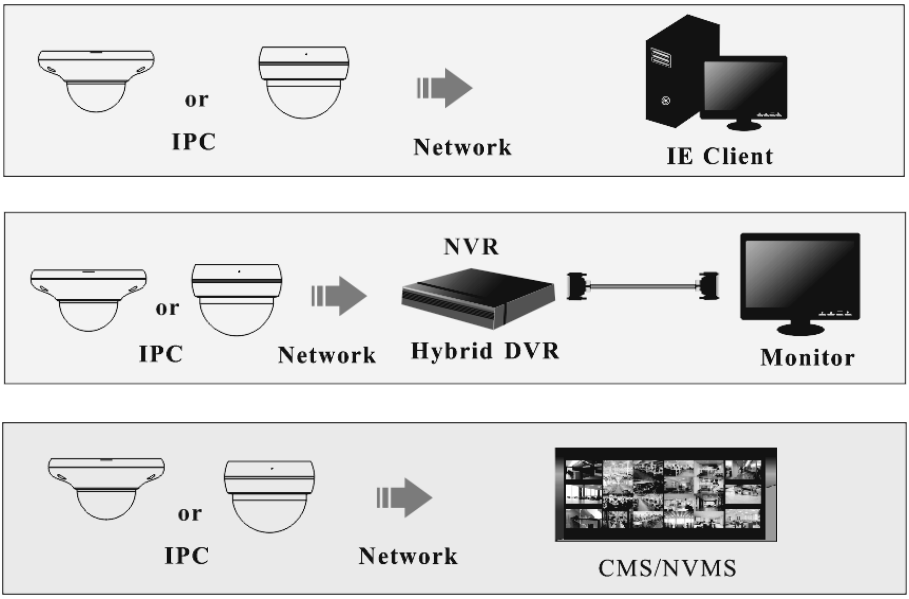
1 Introduction

This IP camera is designed for high performance CCTV solutions. It adopts state of the art video processing chips. It utilizes most advanced technologies, such as video encoding and decoding technology, complies with the TCP/IP protocol, SoC, etc to ensure this system is more stable and reliable.

Main Features

- ICR auto switch, true day/night
- 3D DNR, digital WDR, ROI coding
- Support BLC, HLC, Defog, Anti-flicker
- Supports smart phone, table, remote monitoring
- Supports Face Detection

Surveillance Application



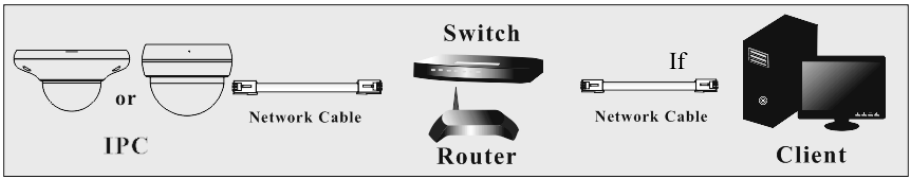
2 IE Remote Access

2.1 LAN

In LAN, there are two ways to access the IP-Cam: 1. access through IP-Tool; 2. directly access through IE browser.

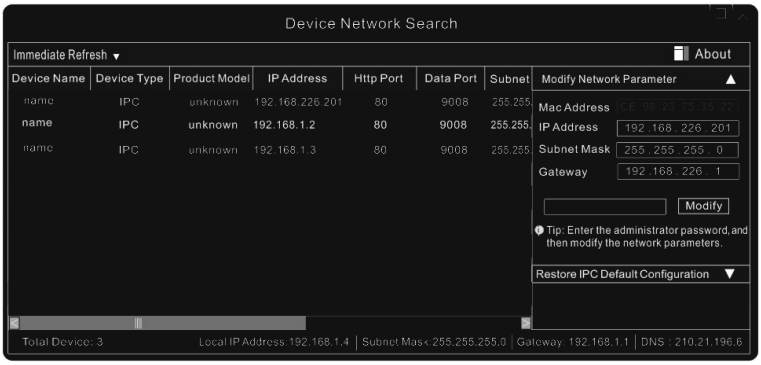
1.1.1 Access through IP-Tool

Network connection:

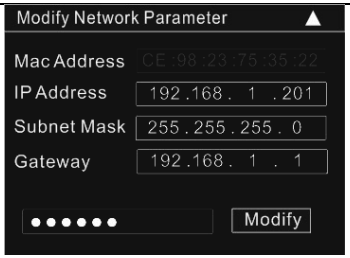


(1) Make sure the PC and IP-Cam are connected to the LAN and the IP-Tool is installed in the PC from the CD.

(2) Double click the IP-Tool icon on the desktop to run this software as shown below:



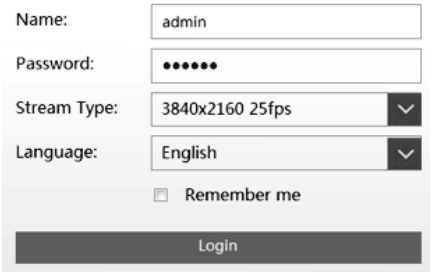
(3) Modify the IP address. The default IP address of this camera is 192.168.226.201. Click the information of the camera listed in the above table to show the network information on the right side. Modify the IP address and gateway of the camera and make sure its network address is in the same local network segment as that of the computer. Please modify the IP address of your device according to the practical situation.



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 input the ADMIN password of the administrator and click "Modify" button to modify the setting.

☞ The default password of the administrator is "***123456***".

(4) Double click the IP address and then the system will pop up IE browser to connect IP-CAM. IE browser will ask to download the Active X control. After downloading, a login window will pop up as shown below.



Input the username and password to log in.

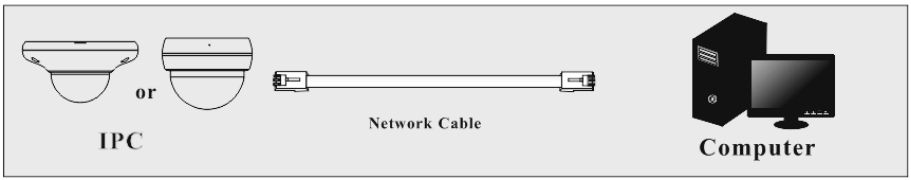
☞ The default username is "***admin***"; the default password is "***123456***".

The system will prompt the above-mentioned textbox to ask you to change the default password. It is strongly recommended to change the default password for account security. If "Do not show again" is checked, the textbox will not be prompted next time.

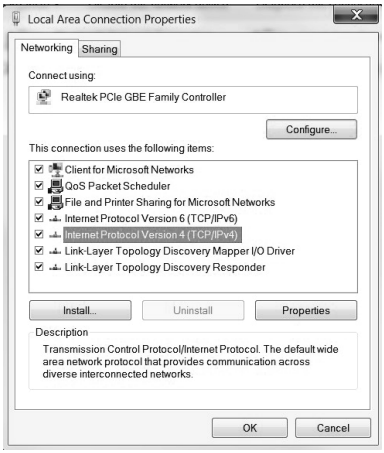
1.1.2 Directly Access through IE

The default network settings are as shown below:
IP address: **192.168.226.201**
Subnet Mask: **255.255.255.0**
Gateway: **192.168.226.1**
HTTP: **80**
Data port: **9008**

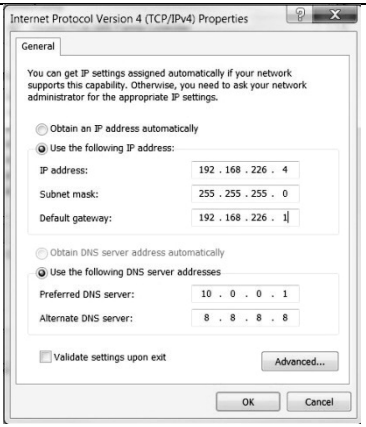
You may use the above default settings when you log in the camera for the first time. You may directly connect the camera to the computer through network cable.



(1) Manually set the IP address of the PC as 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 "Properties" button to set the network of the PC.



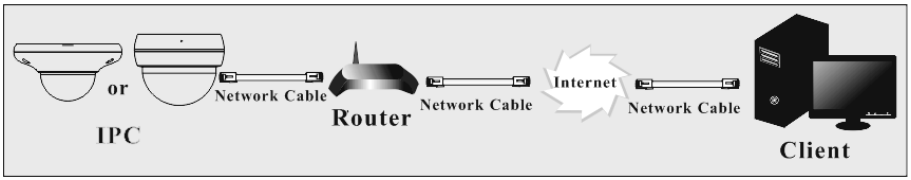
(2) Open IE browser and input the default address of IP-CAM and confirm. IE browser will ask to download the Active X control.

(3) After downloading the Active X control, the login dialog box will pop up.

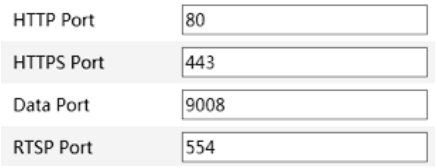
(4) Input the default username and password and then enter to view.

2.2 WAN

- **Access through the router or virtual server**

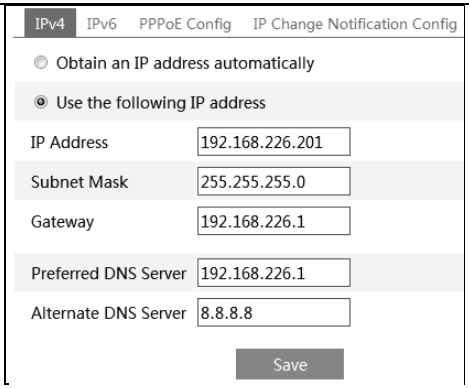


(1) Make sure the camera is connected via LAN and then log into the camera via LAN and go to Config→Network→Port to set the port number.



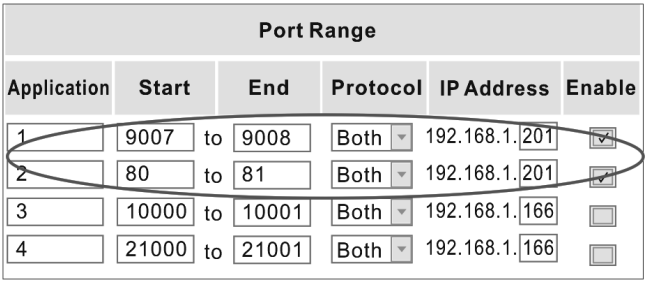
Port Setup

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



IP Setup

(3) Go to the router's management interface through IE browser to forward the IP address and port of the camera. Please check your router manual for instructions on port forwarding.

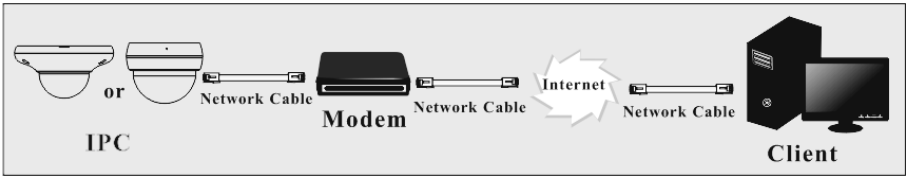


Router Setup

(4) Open IE browser and input its WAN IP and http port to access.

- **Access through PPPoE dial-up**

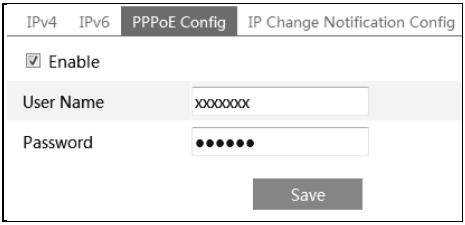
Network connection



You may access the camera through PPPoE auto dial-up. The setting steps are as follow:

(1) Go to Config→Network→Port to set the port number.

(2) Go to Config→Network→TCP/IP→ PPPoE Config menu. Enable PPPoE and then input the user name and password which you can get from your internet service provider.

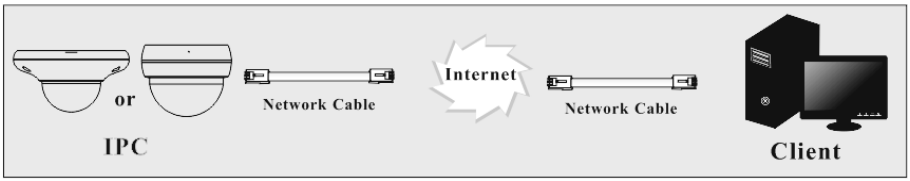


(3) Go to Config→Network→DDNS menu. Before you configure the DDNS, please apply for a domain name first. Please refer to DDNS configuration for detail information.

(4) Open IE browser and input the domain name and http port to access.

➢ **Access through static IP**

Network connection

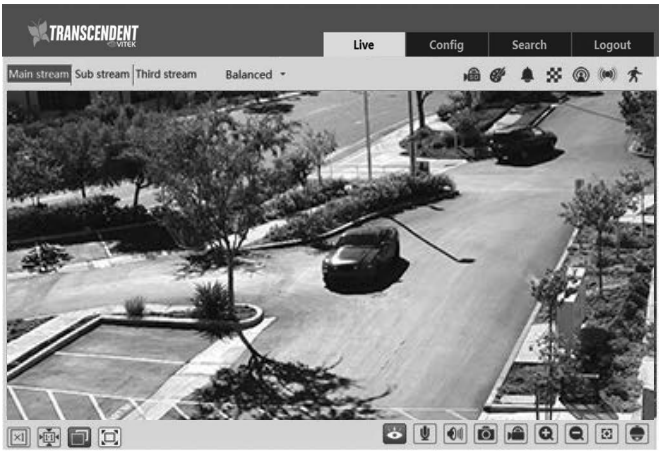


The setting steps are as follow:

1. Go to Config→Network→Port 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 input the static IP address and other parameters.
3. Open IE browser and input its WAN IP and http port to access.

3 Remote Preview

After you log in, you will see the following window.



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

Icon	Description	Icon	Description
	Original size		Scene change indicator icon
	Appropriate size		Abnormal clarity indicator icon
	Auto		Color abnormal indicator icon
	Full screen		Motion alarm indicator icon
	Start/stop live view		Start/stop recording
	Enable/disable audio		Zoom in
	Snap		Zoom out

- When motion detection alarm is triggered, the people icon will turn red.
- In full screen mode, double click to exit.
- icons may not be displayed for some versions without intelligent analysis function.

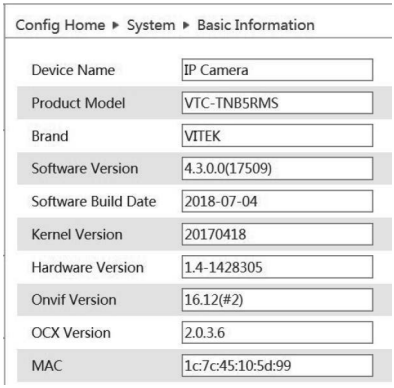
4 Remote Live Surveillance

1.2 System Configuration

The “System” configuration includes four submenus: Basic Information, Date and Time, Local Config and storage.

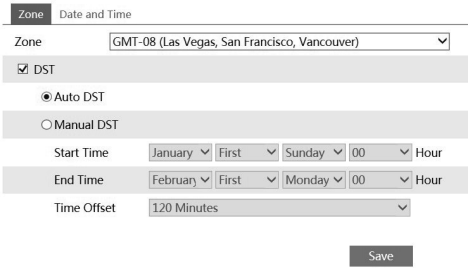
1.2.1 Basic Information

In the “Basic Information” interface, you can check the relative information of the device.



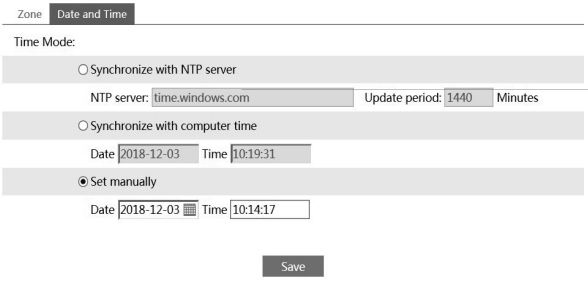
1.2.2 Date and Time

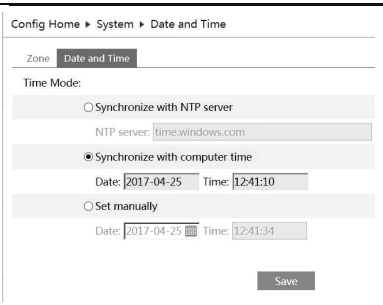
Go to Config→System→Date and Time. Please refer to the following interface.



You can select the time zone and DST as required.

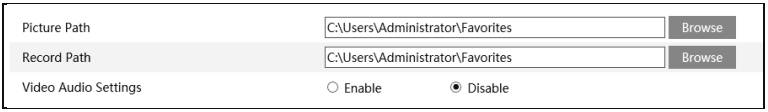
Click “Date and Time” tab to set the time mode.





1.2.3 Local Config

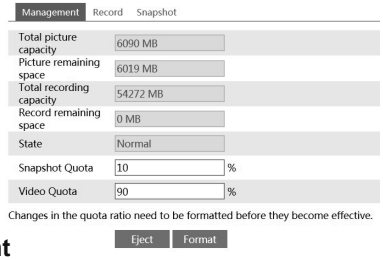
Go to Config(use right arrow)System(use right arrow)Local Config to set up the storage path of captured pictures and recorded videos on the local PC. There is also an option to enable or disable the bitrate display in the recorded files.



Additionally, local face information storage can be enabled here:

1.2.4 Storage

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

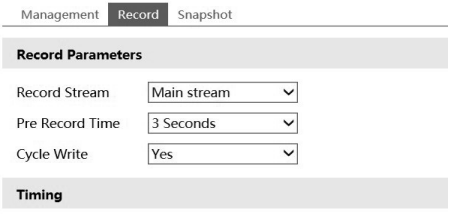


1.2.5 SD Card Management

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

Go to Config→System→Storage→Record to go to the interface as shown below
card record stream. Set the pre record time if you enable pre record. Click “Save” button to save the settings.

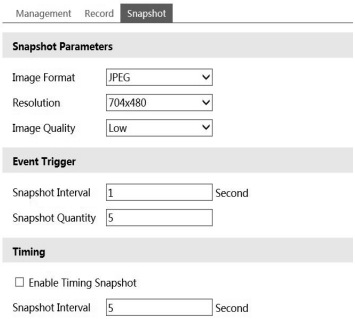
Pre Record Time: Set the time to record before the actual recording begins.



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

1.2.6 Snapshot Settings

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



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.

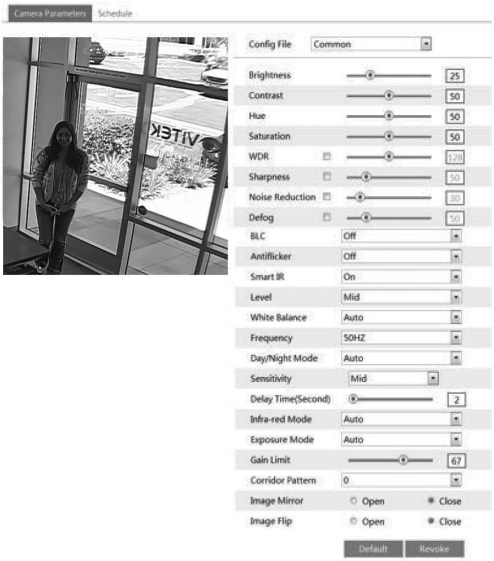
Timing Snapshot: Enable timing snapshot first and then set the snapshot interval and schedule. The setup steps of schedule are the same as the schedule recording (See "Schedule Recording").

1.3 Image Configuration

Image Configuration includes Display, Video/Audio, OSD, Video Mask, ROI Config and Zoom/Focus.

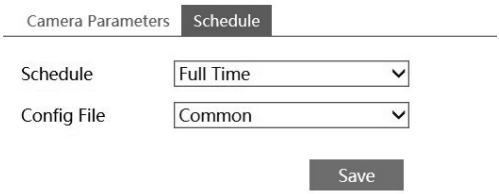
1.3.1 Display Configuration

Go to Image→Display interface as shown below. You can set and adjust the picture's brightness, contrast, hue and saturation, etc.



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.
WDR: WDR can adjust the camera to provide a better image when there are very bright and very dark areas simultaneously in the field of view by lowering the brightness of the bright area and increasing the brightness of the dark area.
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 clearer images.
Backlight Compensation (BLC):
→ Off: disables the backlight compensation function. It is the default 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 better.
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.
Smart IR: This function can effectively avoid image overexposure and underexposure by controlling the brightness of the IR lights according to the actual conditions to make the i mage more realistic. Please enable it as needed.
White Balance: Adjust the color temperature according to the environment automatically.
Frequency: 50Hz and 60Hz can be optional.
Day/night Mode: Please choose the mode as needed.
Auto= will change to Black & White in low light
Day= Camera will be in color all the time
Night= Camera will be in Black & White all the time
Schedule= set a particular time the camera switches to Night mode or Day mode
Exposure Mode: Choose "Auto" or "Manual". If manual is chosen, the digital shutter speed can be adjusted.
Corridor Pattern: Corridor viewing modes can be used for situations such as long hallways. 0, 90, 180 and 270 are available. The default value is 0. The video resolution should be 1080P or below if this function is used.
Image Mirror: Turn the current video image horizontally.
Image Flip: Turn the current video image vertically.

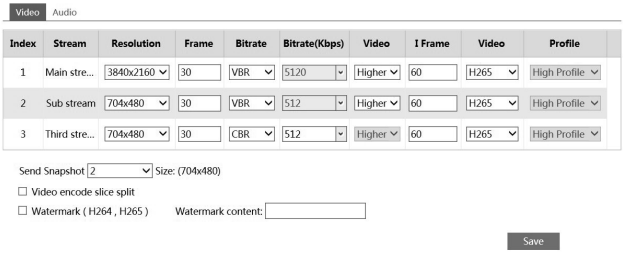
Schedule Settings of Image Parameters:
Click the "Schedule" tab as shown below



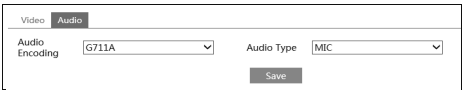
Set full time schedule for common, day, night mode and specified time schedule for day and night. Choose "Timing" in the drop-down box of schedule as shown below.

1.3.2 Video / Audio Configuration

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



Click "Audio" tab to go to the interface shown here.



Three video streams can be adjustable.

Resolution: The higher the resolution is, the clearer the image is.

Frame rate: The higher the frame rate is, the more fluid the video is. However, more storage will be used.

Bitrate type: Including CBR and VBR. CBR means that no matter how the video changes, the compression bitrate keeps constant. This will not only facilitate the image quality better in a constant bitrate but also help to calculate the capacity of the recording. VBR means that the compression bitrate can be adjustable according to the change of the video resources. This will help to optimize the network bandwidth.

Bitrate: Please choose according to the actual network situation.

Video Quality: When VBR is selected, you need to choose image quality. The higher the image quality you choose, the more bitrate will be required.

I Frame interval: It is recommended to use the default value. If the value is to high, the read speed of the group of pictures will be slow resulting in the quality loss of the video.

Video Compression: H264 and H265 are optional. Higher quality of image can be transferred under limited network bandwidth by using H265 video encoding; however, higher quality of the hardware is required.

Profile: Baseline, main/high profiles are optional. Baseline profile is mainly used in interactive application with low complexity and delay. Main/high profile is mainly used for higher coding requirement.

Send Snapshot: Please select according to the actual situation.

Video encode slice split: If enabled, you may get a more fluid image even though using a low-performance PC.

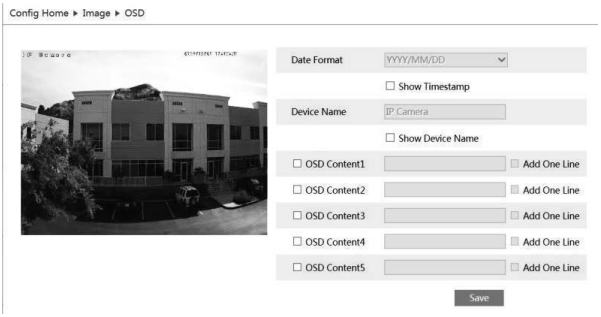
Watermark: If enabled, input the watermark content. You may check the watermark when playing back the local recording in the search interface, unless the recording file has been tampered with.

Audio Encoding: G711A and G711U are selectable.

Audio Type: MIC and LIN are selectable.

1.3.3 OSD Configuration

Go to Image→OSD interface as shown below.



You can set the time stamp, device name and OSD content here. After enabling the corresponding display and entering the content, drag them to change their position. Then click "Save" button to save the settings.

1.3.4 Video Mask

Go to Image→Video Mask interface as shown below. You can set 4 mask areas at most.

To set up video mask:

1. Enable video mask.
2. Click "Draw Area" button and then drag the mouse to draw the video mask area.
3. Click "Save" button to save the settings.
4. Return to live view to see the following picture.

Clear the video mask:
Go to video mask interface and then click "Clear" button to delete the current video mask area.

1.3.5 ROI Configuration

Go to Image→ROI Config interface as shown below.

1. Check “Enable” and then click “Draw Area” button.
2. Drag the mouse to set the ROI area.
3. Set the level.
4. Click “Save” button to save the settings.

Now, you will see the selected ROI area is clearer than other areas especially in a low bitrate condition.

1.3.6 Lens Control

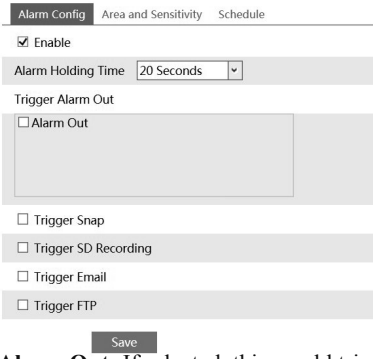
This function is only available for the model with motorized zoom lens. Within this section, zoom and focus can be controlled. If the image is out of focus after a manual adjustment, one key focus can be used to set the focus automatically.

1.4 Alarm Configuration

Alarm configuration includes two submenus: Motion Detection and Alarm Server.

1.4.1 Motion Detection

Go to Alarm→Motion Detection to set motion detection alarm.



1. Check “Enable Alarm” check box to activate motion based alarm, choose alarm holding time and set alarm trigger options.

Alarm Out: If selected, this would trigger an external relay output that is connected to the camera on detecting a motion based alarm.

Trigger Snap: If selected, the system will snap images on an alarm and save them to the SD card.

Trigger SD Recording: If selected, the recording will be triggered and saved to the SD card on an alarm (this function is only available for the models with SD card slot).

Trigger Email: If “Trigger Email” and “Attach Picture” checkbox is checked (email address shall be set first in the Email configuration interface), the captured pictures and triggered event will be sent to those addresses.

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

2. Set motion detection area and sensitivity. Click “Area and Sensitivity” tab to go to the interface as shown below.

Move the “Sensitivity” scroll bar to set the sensitivity.

Select “Add” and click “Draw” button and drag mouse to select the motion detection area; Select “Erase” and drag the mouse to clear motion detection area.

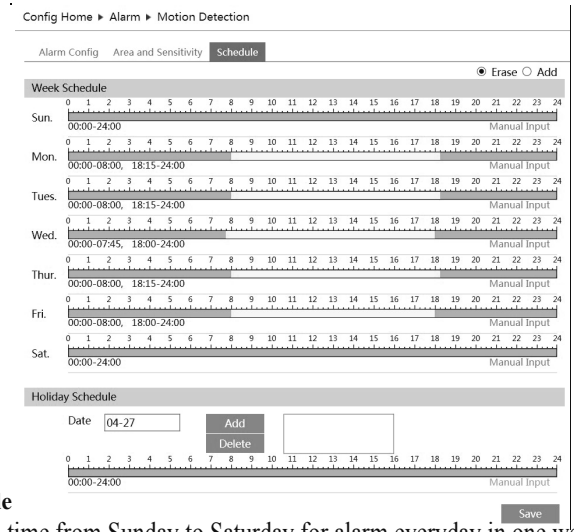
Select “Select All” to select the whole image for motion

Select “Clear All” to undo the whole picture

Select “Invert” to reverse the motion area

After that, click “Save” to save the settings.

3. Set the schedule of the motion detection. Click “Schedule” tab to go to the interface as shown below.



Week schedule

Set the alarm time from Sunday to Saturday for alarm everyday in one week. The lengthwise means one day of a week; the rank means 24 hours of a day. Green means selected area. Blank means unselected area. “Add”: Add the schedule. “Erase”: Delete schedule.

Holiday Schedule

Set time for alarm in Holiday time line.

Set a date in the “Date” box, click “Add” button to add that date to the list box on the right side and then drag the scroll bar to set the schedule of that day.

Select a date in the list box on the right side, and click “Delete” to remove the schedule on that day.

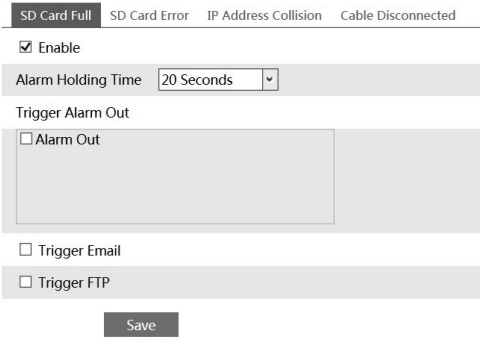
Click “Save” button to save the settings.

SD Card Error

This function is only available for the models with SD card slot.

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

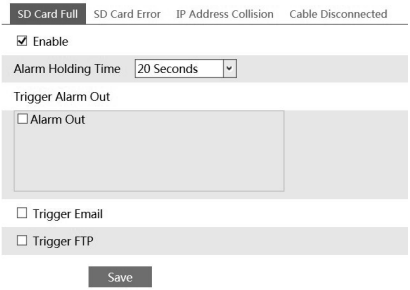
1. Go to Config→Alarm→Anomaly→SD Card Error as shown below.



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 motion detection. Please refer to the motion detection chapter for details.

IP Address Conflict

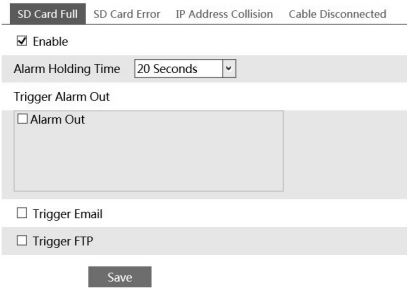
This function is only available for the models with Alarm Out interface.
1. Go to Config→Alarm→Anomaly→IP Address Collision as shown here.



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.

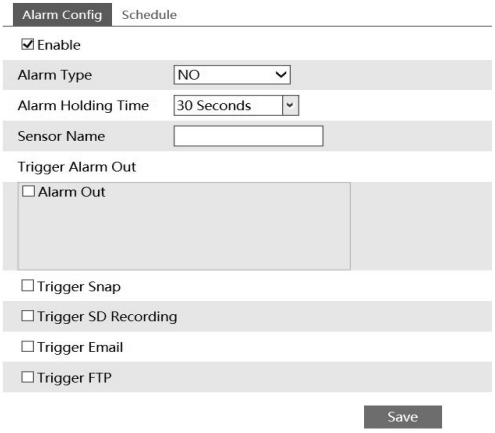
Cable Disconnection

This function is only available for the models with Alarm Out interface.
1. Go to Config→Alarm→Anomaly→Cable Disconnected as shown here:
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



1.4.2 Alarm In

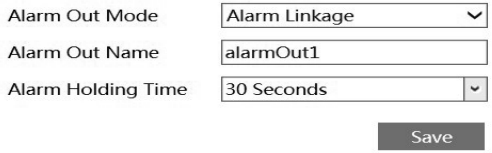
This function is only available for some models. To set sensor alarm (alarm in):
Go to ConfigàAlarmàAlarm In interface as shown below.



1. 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 motion detection. Please refer to motion detection 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).

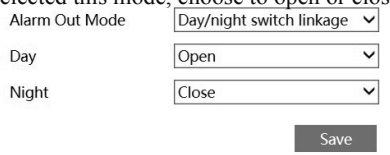
1.4.2 Alarm Out

This function is only available for some models. Go to Config→Alarm→Alarm Out.

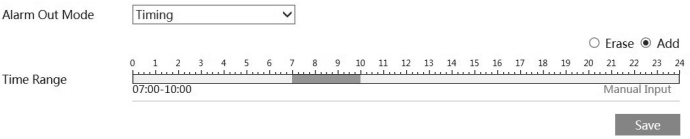


Alarm Out Mode: Alarm linkage, manual operation, day/night switch linkage and schedule are optional.
Alarm Linkage: Having selected this mode, select alarm out name and alarm holding time at the "Alarm Holding Time" pull down list box.
Manual Operation: Having selected this mode, click "Open" to trigger the alarm out immediately; click "Close" to stop alarm.

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

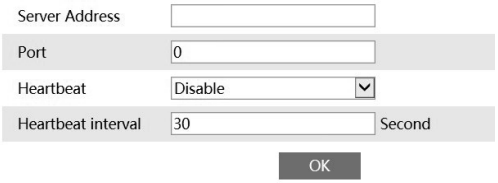


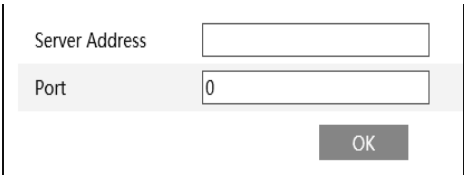
Timing: Click "Add" and drag the mouse on the time line to set the schedule of alarm out; click "Erase" and drag the mouse on the time line to erase the set time schedule. After this schedule is saved, the alarm out will be triggered in the specified time.



1.4.3 Alarm Server

Go to Alarm→Alarm Server interface as shown below.
Set the server address, port, heartbeat and heartbeat interval. When an alarm occurs, the camera will transfer the alarm event to the alarm server. If an alarm server is not needed, there is no need to configure this section.





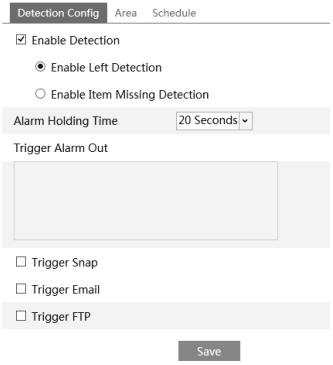
1.5 Event Configuration

Event configuration includes eight submenus:
Object Removal, Exception, Line Crossing, Intrusion, Crowd Density, People Intrusion, People Counting, Face Detection

Note: Some software versions of this series of cameras may not support the following functions.
Please take actual displayed interface as final.

1.5.1 Object Removal

To set object removal:
Go to Config→Event→Object Removal Interface as shown here:



1. Enable object removal detection and then select the detection type.

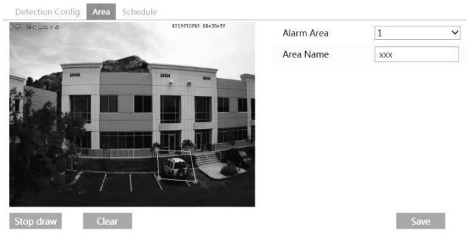
Enable Left Detection: The relevant alarms will be triggered if there are items left in the pre-defined alarm area.

Enable Item Missing Detection: The relevant alarms will be triggered if there are items missing in the pre-defined alarm area.

2. Set the alarm holding time and alarm trigger options. The setting steps are the same as that of motion detection. Refer to motion detection chapter for details.

3. Click "Save" button to save the settings.

4. Set the alarm area of the object removal detection.
Click "Area" tab to go to the interface as shown here:



Set the alarm area number and then input the alarm area name on the right side. You can add 4 alarm areas at most.

Click "Draw Area" button and then click around the area where you want to set as the alarm area in the image on the left side (the alarm area should be a closed area). Click "Stop Draw" button to stop drawing. Click "Clear" button to delete the alarm area. Click "Save" button to save the settings.

5. Set the schedule of the object removal detection. The setting steps of the schedule are the same with that of motion detection. Please refer to motion detection chapter for details.

※ Application Scenario Illustration

1. Object removal detection cannot determine the objects' ownership. For instance, there is an unattended package in the station. Object removal detection can detect the package itself but it cannot determine ownership of the package.

2. Try not to enable object removal detection when light changes dramatically in the scene.

3. Try not to enable object removal detection if there are complex and dynamic environments in the scene.

4. Adequate light and clear scenery are very important to object removal detection.

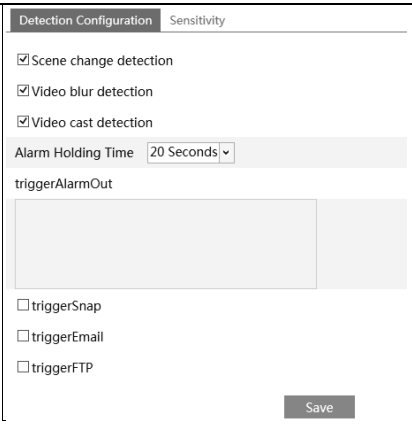
Here we take some improper application scenarios for instance.

→ There are so many trees near the road and cars running on the road, which makes the scene too complex to detect object removal.

1.5.2 Exception

To set exception detection:

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



1. Enable the relevant detection as required.

Scene Change Detection: The relevant alarms will be triggered if the scene of the monitor video has changed.

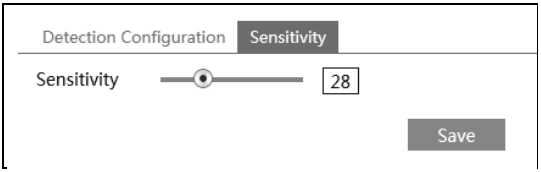
Video Blur Detection: The relevant alarms will be triggered if the monitor video is blurry.

Video Cast Detection: The relevant alarms will be triggered if color cast happens to the monitor video.

2. Set the alarm holding time and alarm trigger options. The setting steps are the same with that of motion detection. Please refer to motion detection 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 input 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 defocus of the device image. You should adjust the value according to the real situation.

The sensitivity value of Video Cast Detection: The higher the value is, the more sensitive the system responds to the color cast of the device image. You should also consider other factors.

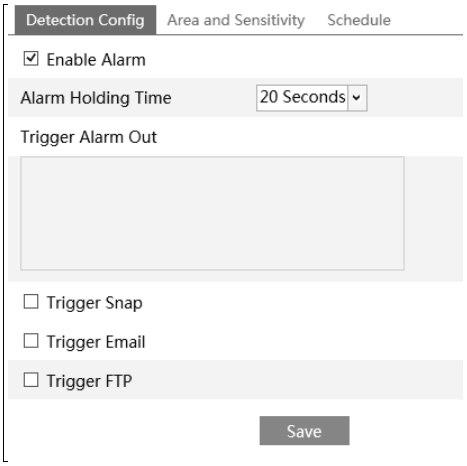
※ Application Scenario Illustration

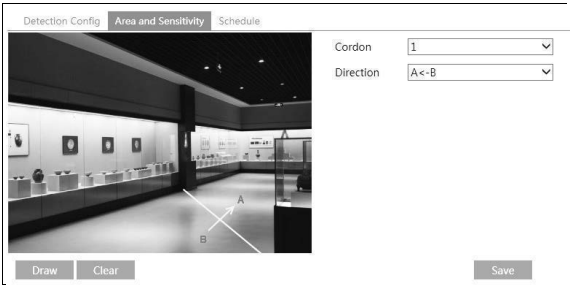
1. Auto-focusing function should not been enabled for exception detection.
2. Try not to enable object removal detection when light changes dramatically in the scene.

1.5.3 Line Crossing

Line Crossing: The relevant alarms will be triggered if someone or something crosses the pre-defined alarm lines.

Go to Config→Event→Line Crossing interface as shown below.





1. Enable line crossing alarm and set the alarm holding time.
2. Set alarm trigger options. The setting steps are the same with that of motion detection. Please refer to motion detection chapter for details.
3. Click “Save” button to save the settings.
4. Set area and sensitivity of the line crossing alarm. Click “Area and Sensitivity” tab to go to the interface as shown above.

Set the cordon number and direction. You can add 4 cordons at most.

Direction：A<->B, A->B and A<-B optional. It is the crossing direction of the intruder who crosses over the alarm line.

A<->B: The alarm will be triggered when the intruder crosses over the alarm line from B to A or from A to B.

A->B: The alarm will be triggered when the intruder crosses over the alarm line from A to B.

A<-B: The alarm will be triggered when the intruder crosses over the alarm line from B to A.

Click “Draw” button and then drag the mouse to draw a cordon in the image on the left side. Click “Stop” button to stop drawing. Click “Clear” button to delete the cordons. Click “Save” button to save the settings.

5. Set the schedule of the line crossing alarm. The setting steps of the schedule are the same with that of motion detection. Please refer to motion detection chapter for details.

※ **Application Scenario Illustration**

1. Auto-focusing function should not been enabled for line crossing detection. If enabled, the video image will change so greatly that the algorithm will stop working temporarily.
2. Try not to enable line crossing detection when light changes dramatically in the scene.
3. Adequate light and clear scenery are very important to line crossing detection.
4. Adjust the camera to make the detection area in the center of the video image. Make sure no obstructions are in the main crossing area. It is strongly recommended to make the obstructions (like trees, bushes, flags, etc.) outside the detection area.

*Shown here are some improper application scenarios for instance

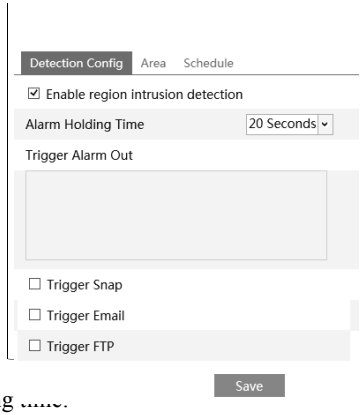
There are so many trees near the road and cars running on the road, which make the scene too complex to detect the crossing objects.

1.5.4 Intrusion

Intrusion

The relevant alarms will be triggered if someone or something intrudes into the alarm areas or moves in the pre-defined alarm areas.

Go to Config→Event→Intrusion interface as shown here.



1. Enable region intrusion detection alarm and set the alarm holding .....
2. Set alarm trigger options. The setting steps are the same with that of motion detection. Please refer to motion detection chapter for details.
3. Click "Save" button to save the settings.
4. Set the alarm area of the intrusion detection. Click "Area" tab to go to the interface as shown below.

Set the alarm area number on the right side. You can add 4 alarm areas at most.

Click "Draw Area" button and then click around the area where you want to set as the alarm area in the image on the left side (the alarm area should be a closed area). Click "Stop Draw" button to stop drawing. Click "Clear" button to delete the alarm area. Click "Save" button to save the settings.

5. Set the schedule of the intrusion detection. The setting steps of the schedule are the same with that of motion detection. Please refer to motion detection chapter for details.

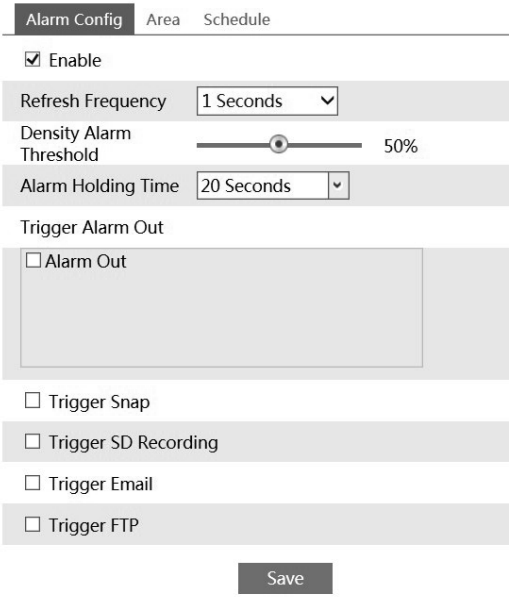
※ **Application Scenario Illustration**

1. Auto-focusing function should not been enabled for intrusion detection. If enabled, the video image will change so greatly that the algorithm will stop working temporarily.
2. Try not to enable intrusion detection when light changes dramatically in the scene.
3. Adequate light and clear scenery are very important to intrusion detection.
4. Adjust the camera to make the detection area in the center of the video image. The detected object should be in the detection area for about two seconds at least. Make sure no obstructions are in the main crossing area. It is strongly recommended to make the obstructions (like trees, bushes, flags, etc.) outside the detection area. Here we take some improper application scenarios for instance.

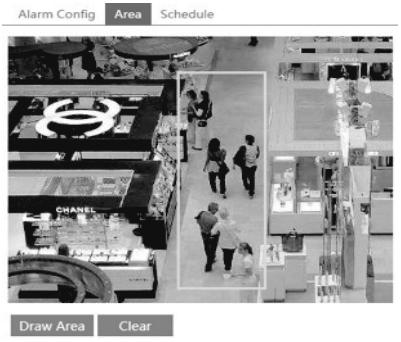
* Here, the camera's angle of view is not wide enough; there are too many trees in the scene. This environment is too complex to detect the intrusion.

1.5.5 Crowd Density Detection

This function can detect the density of the people in a specified area (like square, supermarket).
Go to Config→Event→Crowd Density as shown here.



1. Enable the crowd density detection.
2. Set "Refresh Frequency", "Density Alarm Threshold" and "Alarm Holding Time".
Refresh Frequency: The refresh frequency of the detection result.
Density Alarm Threshold: Alarms will be triggered once the percentage of the crowd density in a specified area exceeds the pre-defined threshold value.
3. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.
4. Set an alarm area for the crowd density detection. Click the "Area" tab as shown below.
Click "Draw Area" and drag the mouse to draw a rectangle area. Drag the border lines of the rectangle to modify its size and move the rectangle to change its position. Click "Stop Draw" to stop drawing the area. Click "Clear" to clear the area.



5.Set the schedule of the crowd density detection. The setup steps of the schedule are the same as schedule recording setup (See Schedule Recording).

1.5.6 People Intrusion

The setup steps are as follows:
1. Go to Config→Event→People Intrusion. Please refer to the following picture.
2. Enable the people intrusion detection.
3. Set "Alarm Sensitivity" and "Alarm Holding Time".
4. Set alarm trigger options. The setup steps are the same as motion detection setup. Please refer to the motion detection chapter for details.
5. Set the schedule of the people intrusion detection. The setup steps of the schedule are the same as schedule recording setup (SeSchedule Recording).

1.5.7 People Counting

This function is to calculate the number of people entering or exiting from the detection area through tracking and counting the head shapes of the people.
The setup steps are as follows.

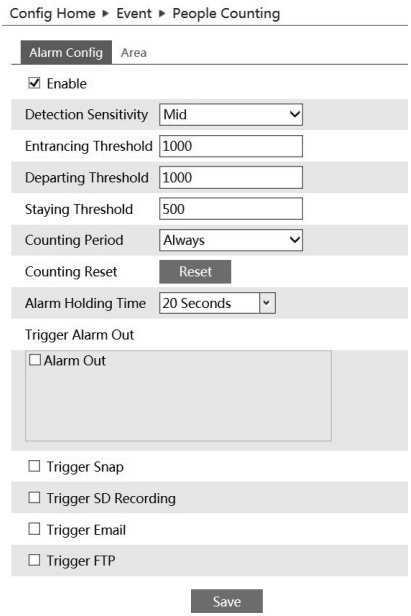
1. Go to Config→Event→People Counting.
Please refer to the reference image.
2. Enable the people counting detection.
3. Set "Detection Sensitivity", "Entrance Threshold", "Departing Threshold", "Staying Threshold", "Counting Period", "Alarm Holding Time" and so on.

Counting Period: All, daily, weekly and monthly are optional.

Counting Reset: The current number of people counting will be cleared and the current counting period will restart by clicking "Reset" button. If the number of people exceeds the pre-defined threshold value (the default value is 500; the maximum value is 655350), alarms will be triggered.

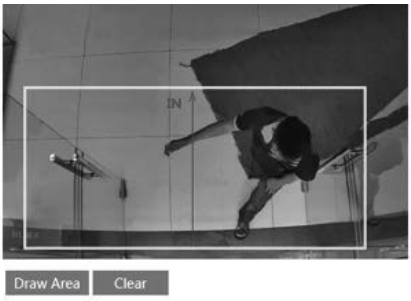
When someone passes the detected area, it will take 1 ~5 seconds to complete the detection of people counting according to different scenes.

4. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.



Set the Area of People Counting

Click the "Area" tab to go to the area setting interface
Click "Draw Area" and drag the mouse to draw a rectangle area. Drag the four border lines or the four corners of the rectangle to modify its size.
Click "Stop Draw" to stop drawing the area. Click "Clear" to clear the area. Click and drag the arrow or the other end of the arrow line to change the people entrance direction.
The area drawn yellow box is the detected area.
The size range of the head image (width or height) shall occupy from 1/5 to 1/2 of the drawn detection area. The direction of the red arrow is entrance.
After the people counting detection is set successfully, go back to the live view interface to view the counting results. Please refer to the following picture.



Configuration requirements of camera and surrounding area

1. Cameras must be installed in the area with stable and adequate light sources.
2. The background color (like floor color) should be light color.
3. The lens of the camera should be adjusted straight down to ensure that the whole head of the people can be captured.
4. The installation height of the camera depends on the actual focal length of the lens. The entrance/exit in the image should take up over a half of the width of the entire image and the head of a single person should account for about 1/5 of the height of the entire image.

Remember to keep a certain space on both sides to let the entrance/exit lie in the center of the entire image.
The recommending height of installation as shown here:

Lens	Mounting height
2.8mm	**2.6 ~ 3.2m**
3.3mm	**3.0 ~ 4.0m**
3.6mm	**3.3 ~ 5.0m**

5. Various changeable lights will disturb the people counting and the dark scenes will reduce the accuracy of counting.
6. If someone is moving at a high speed (passing the detected area within 2 seconds), it may result in detection failure. However, if someone is moving at a low speed, staying more than 15 seconds in the detected area, the camera will give up tracing.
7. If the cloth colors of people are similar with the color of the background, it may cause detection failure.
8. Head wear which conceal the head features will lead to detection failure.

1.5.8 Face Detection

Face detection function is to detect the face appearing in the surveillance scene. Alarms will be triggered when a face is detected. The se up steps are as follows:

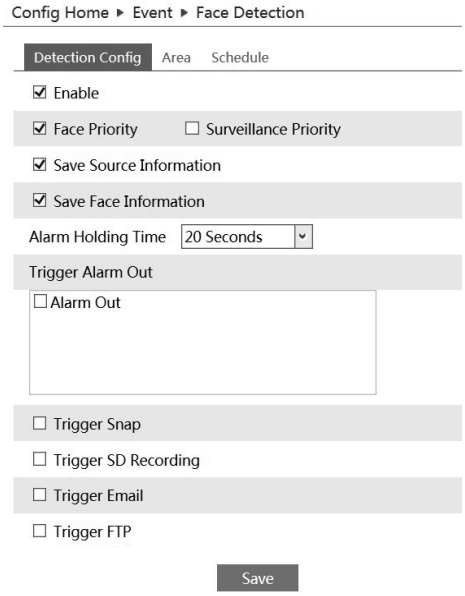
1. Go to Config→Event→Face Detection as shown here.
2. Enable the face detection function. Then select "Face Priority" or "Surveillance Priority" as needed.

Save Source Information: if checked, the whole picture will be saved to a local PC or an SD card (if applicable) when detecting a face.

Save Face Information: if checked, the captured face picture will be saved to a local PC or an SD card (if applicable) when detecting a face.

Note: To save images to a local PC, enable the local face information storage first (Config→System→Local Config). To save images to an SD card, please install an SD card first (available for the models with SD card slot).

3. Set alarm holding time and alarm trigger options. The alarm trigger setup steps are the same as motion detection setup. Please refer to the motion detection chapter for details.



Max. Detection Face

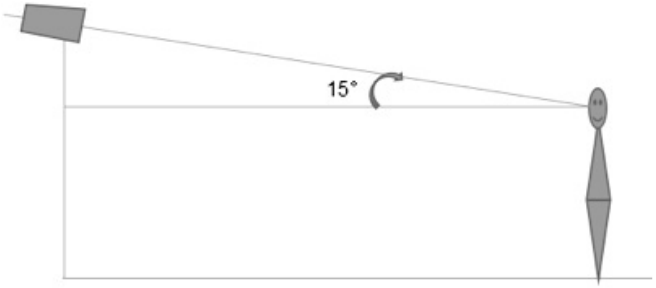
Min. Detection Face. These two face contours will change as the set min. and max. value

Click "Draw Area" and drag the border lines of the rectangle to modify its size. Move the rectangle to change its position. Click "Stop Draw" to stop drawing the area. Click "Clear" to clear the area. Then set the maximum value and the minimum value of the detected face.

1. Set the schedule of the face detection. The setup steps of the schedule are the same as schedule recording setup (SeeSchedule Recording).

Configuration requirements of Camera and Surrounding Area

1. Cameras must be installed in the area with stable and adequate light sources.
2. The installation height ranges from 6 feet to 12 feet, adjustable according to the focal-length of different lenses and object distances.
3. The angle of the camera should be less than or equal to 15°.

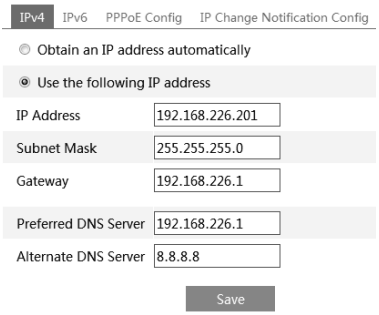


4. The object distance depends on the focal-length of the lens mounted in the camera.
5. To ensure the accuracy of face detection, the captured faces are only allowed to deviate less than 30° left or right or 20° up or down.
6. The following scenes are not applicable, like crowded scenes (airport, railway station, square, etc), back light scenes, crossroads and so on.

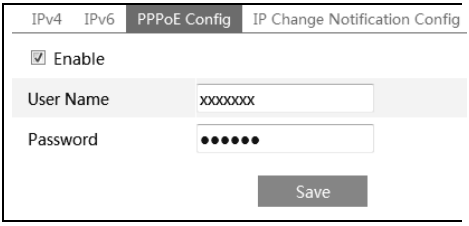
1.6 Network Configuration

1.6.1 TCP/IP

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

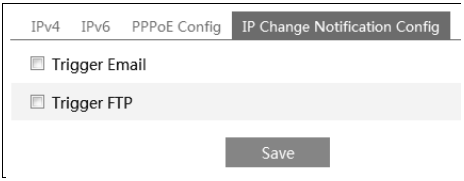


Use IP address (take IPv4 for example) - There are two options for IP setup: obtain an IP address automatically by DHCP protocol and use the following IP address. Please choose one of the options for your requirements.



USE PPPoE-Click "PPPoE Config" tab to go to the interface as shown below. Enable PPPoE and then enter the username and password from your ISP.

You can choose either way for the network conection. If you use PPPoE to connect internet, you will get a dynamic WAN IP address. This IP address will change frequently. You may use the function of IP change notification. Click "IP Change Notification Config" to go to the interface as shown here:

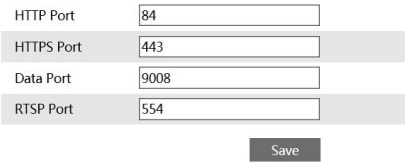


Trigger Email: when the IP address of the device is changed, a new IP address will be sent to the appointed mailbox automatically

Trigger FTP: when the IP address of the device is changed, a new IP address will be sent to FTP server.

1.6.2 Port

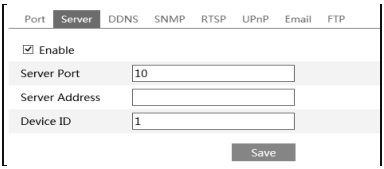
Go to Config→Network→Port interface as shown below. HTTPS port, Data port and RTSP port can be set.



HTTP Port: The default HTTP port is 80. It should 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
RTSP Port: The default port is 554. Please change it as required.

1.6.3 Server Configuration

This function is mainly used for connecting network video management system.

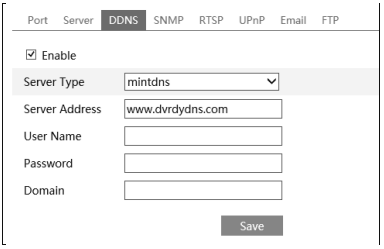


1. Check “Enable”.
2. Check the IP address and port of the transfer media server in the Transcendent VMS. Then enable the auto report in the Transcendent VMS when adding a new device. Next, input the remaining information of the device in the Transcendent VMS. After that, the system will auto allot a device ID. Please check it in the Transcendent VMS.
3. Input the above-mentioned server address, server port and device ID in the responding boxes. Click “Save” button to save the settings.

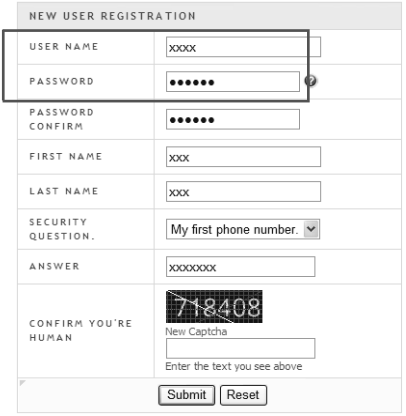
1.6.4 DDNS

If your camera is set to use PPPoE as its default network connection, DDNS should be set for network access. Before you set the DDNS, please make sure you have registered a domain name on the DDNS server.

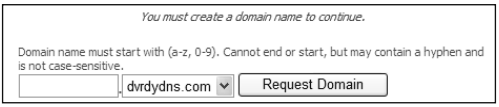
1. Go to Config→Network→ DDNS.



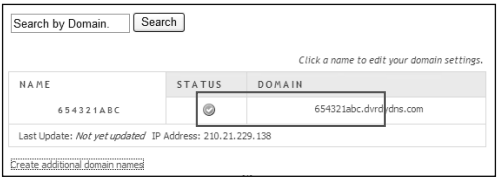
2. Apply for a domain name. Take www.dvrdynds.com for example. Input www.dvrdydns.com in the IE address bar to visit its website. Then click “Registration” button.



Create domain name.



After you successfully request your domain name, you will see your domain in the list.



3. Input the username, password, domain you apply for in the DDNS configuration interface.
4. Click “Save” button to save the settings.

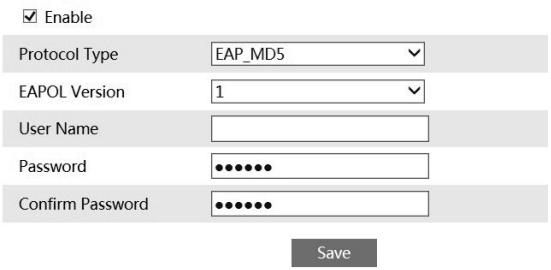
1.6.5 SNMP

To get camera status, parameters and alarm information and remotely manage the camera, you can set the SNMP function. Before using the SNMP, please download the SNMP software and set the parameters of the SNMP, such as SNMP port, trap address.

1. Go to Config→Network→SNMP.
2. Check the corresponding version checkbox (Enable SNMPv1, Enable SNMPv2, Enable SNMPv3)
3. Set the “Read SNMP Community”, “Write SNMP Community”, “Trap Address”, “Trap Port” and so on. Please make sure the settings are the same as that of your SNMP software. **NOTE:** Please use the different version in accordance with the security level required. Higher versions have higher security levels.

1.6.6 802.1x

IEEE802.X is an access control protocol which manages devices in connection with the local network by authentication. The setup steps are as follows:

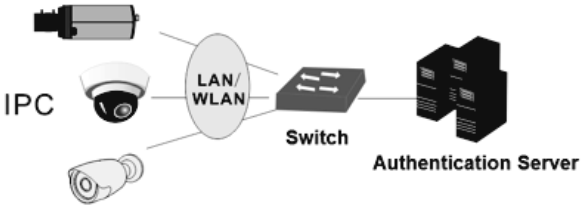


To use this function, the camera sould be connected to a switch supporting 802.1x protocol. The switch can be reckoned as an authentication system to identify the device in a local network. If the camera connected to the network interface of the switch has passed the authentication of the switch, it can be accessed via the local network.

Protocol type and EAPOL version: Please use the default settings.
User name and password: The user name and password must be the same with the user name and password applied for and registered in the authentication server.

The structure of 802.1x

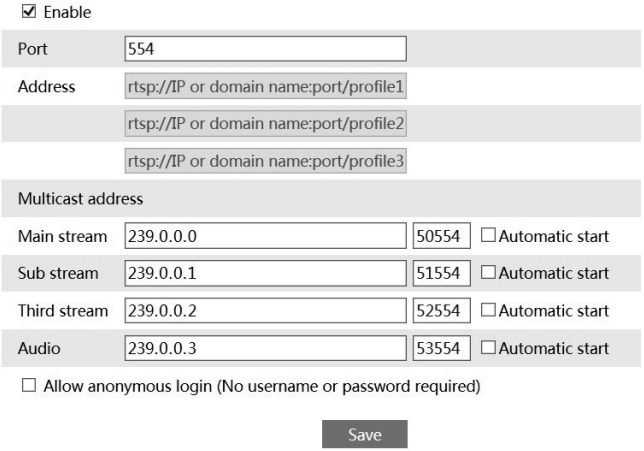
① The network camera initiates the authentication of 802.1x protocol via web client and then the authentication is received by the switch supporting 802.1x protocol.



② The switch provides the camera with a physical or logic local network interface and verifies the camera.
③ Authentication server provides the entity of authentication service for the switch, stored the relative information of web client, realizing the authentication of web client.
Please refer to the user manual of the connected switch for more details.

1.6.7 RTSP

Go to Config→Network→RTSP.
1. Select "Enable".
2. RTSP Port: Access port of the streaming media. The default number is 554.
3. RTSP Address: The RTSP address you need to input in the media player.
4. Check "Allow anonymous login…".



1.6.8 Multicast Address

Main stream: The address format is "rtsp://IP address: rtsp port/profile1?transportmode=mcast".
Sub stream: The address format is "rtsp://IP address: rtsp port/profile2?transportmode=mcast".
Third stream: The address format is "rtsp://IP address: rtsp port/profile3?transportmode=mcast".
Audio: Having entered the main/sub stream in 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.

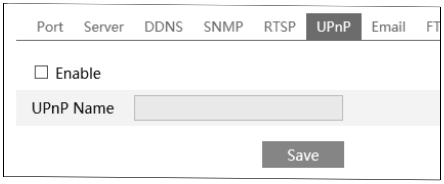
Notes:
1.This camera support local play through VLC player. Enter the RTSP address (unicast or multicast, eg. rtsp://192.168.226.201:554/profile1?transportmode=mcast) in VLC player to realize the simultaneous play with the web client.
2. The IP address mentioned above cannot be the address of IPv6.
3. Avoid using the same multicast address in the same local network.
4. When playing the video through the multicast streams in 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.

1.6.9 UPNP

If you enable this function, you can quickly access the camera via LAN and you don't need to configure the port mapping when the camera is connected to the WAN via the router.

Go to Config→Network→UPnP. Enable UPNP and then input UPnP name.

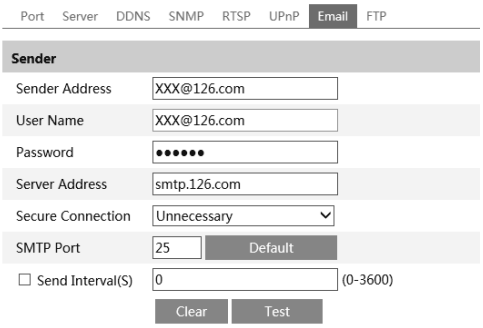
After you enable it and set up the UPnP name, you will see the UPnP name by clicking the "Network" on the desktop of your computer which is in the same local area network. Then double click this name to access the camera quickly.

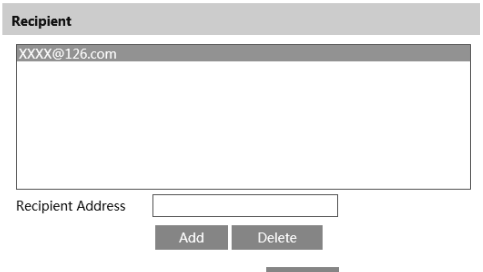


1.6.10 Email

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.

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 actual needs.
SMTP Port: The SMTP port.
Send Interval(S): Set it as needed.
Click "Test" button to test the effectiveness of the account.
Recipient Address: Receiver's e-mail address.

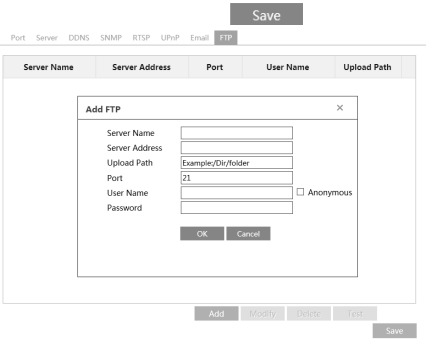




1.6.11 FTP

After you set the FTP server, the captured pictures on an alarm will be uploaded to the FTP server.

Go to Config→Network →FTP.

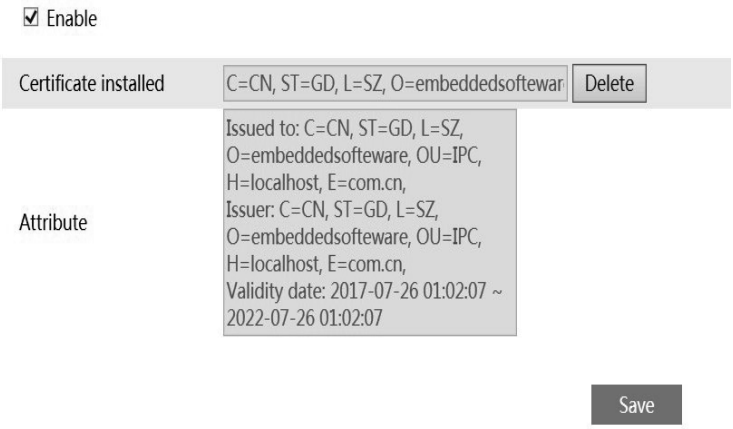


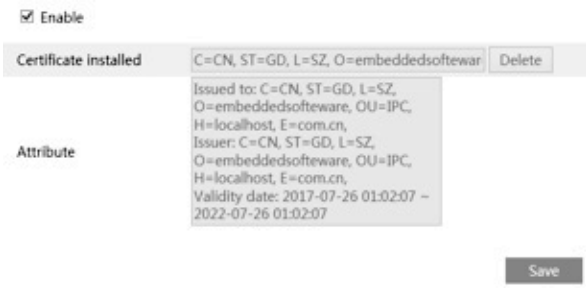
To Add FTP:
Server Name: The name of the FTP.
Server Address: The IP address or FTP domain name
Upload Path: The path of uploading the files.
Port: The port of the FTP.
Use Name and Password: The username and password are used to login the FTP.

1.6.12 HTTPS

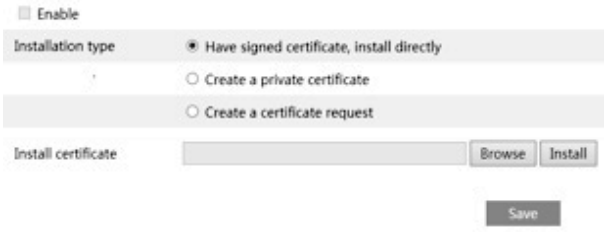
HTTPs provides authentication of the web site and protects user privacy.
Go to Config Config→Network→HTTPS as shown below.

There is a certificate installed by default as shown above. Enable this function and save it. Then the camera can be accessed by entering https://IP: https port via the web browser (eg. https://192.168.226.201:443).
A private certificate can be created if users don't want to use the default one.
Click "Delete" to cancel the default certificate. Then the following interface will be displayed.

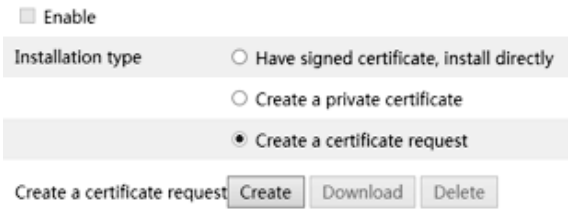




* If there is a signed certificate, click "Browse" to select it and then click "Install" to install it.
* Click "Create a private certificate" to enter the following creation interface.



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.

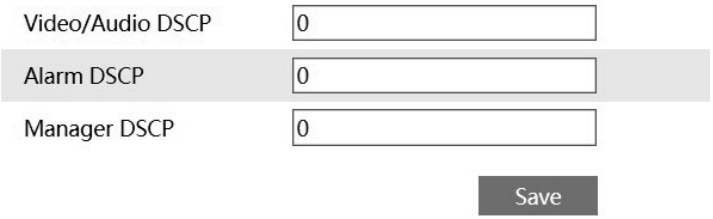


Click "Create" to create the certificate request. Then download the certificate request and submit it to the trusted certificate authority for signature. After receiving the signed certificate, import the certificate to the device.

QoS

QoS (Quality of Service) function is used to provide different quality of services for different network applications. If there is not enough network bandwidth, the router or switch will sort the data streams and transfer them according to their priority to solve the network delay and network congestion by using this function.

Go to Config→Network→QoS.

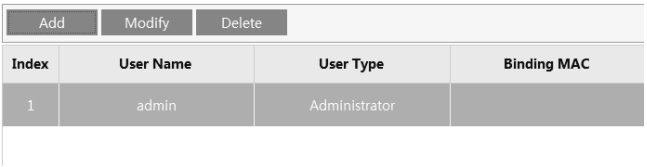


Video/Audio DSCP: The range is from 0 to 63.
Alarm DSCP: The range is from 0 to 63.
Manager DSCP: The range is from 0 to 63.
Generally speaking, the larger the number is, the higher the priority is.

4.1 Security Configuration

1.6.13 User Configuration

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

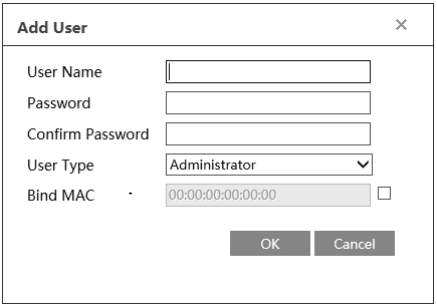


Add User:

1. Click “Add” button to pop up the following textbox
2. Input user name in “User Name” textbox.
3. Input letters or numbers in “Password” and “Confirm Password” textbox.
4. Choose the use type.
5. Input the MAC address of the PC in “Bind MAC” textbox.

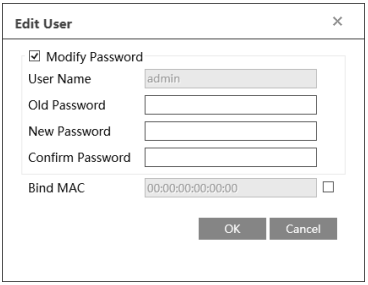
After binding physical address to the IP-CAM, you can access the device on this PC only. If the MAC address was “00:00:00:00:00:00” which means it can be connected to any computers.

6. Click “OK” button and then the new added user will display in the user list.



Modify User:

1. Select the user you need to modify password and physical address in the user configuration list box.
2. The “Edit user” dialog box pops up by clicking “Modify
3. Input old password of this user in the “Old Password” text box.
4. Input new password in the “New password” and “Confirm Password” text box.
5. Input computer’s MAC address as required.
6. Click “OK” button to save the settings.



Delete User:

1. Select the user you want to delete in the user configuration list box.
2. Click “Delete” button to delete the user.

Note: The default super administrator cannot be deleted.

1.6.14 Online User

Go to Config→Security→Online User. You can view the user who is viewing the camera.

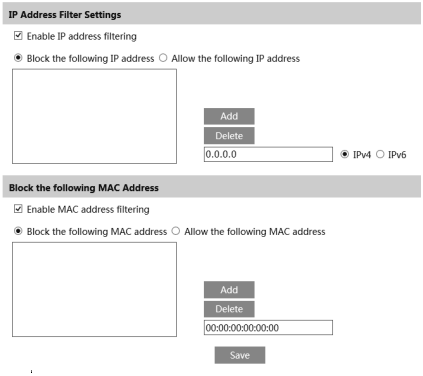
1.6.15 Block and Allow Lists

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

Setting steps are as follows:

Check “Enable IP address filtering” check box.

Select “”Block the following IP address”, input IP address in the IP address list box and click Add” button. The operation step of “Allowing the following IP addres” and MAC address filter settings are the same with “Block the following IP address”.

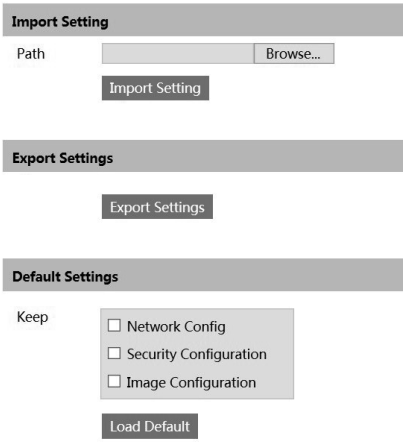


After you set the IP address or MAC address, the system will block or allow the user using the added IP address or MAC address to access the camera.

4.2 Maintenance Configuration

1.6.16 Backup and Restore

Go to Config→Maintenance→Backup & Restore.



- **Import & Export Settings**

You can import or export the setting information from PC or to PC.

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

- **Default Settings**

Click “Load Default” button to restore all system settings to default status.

1.6.17 Reboot

Go to Config→Maintenance→Reboot.

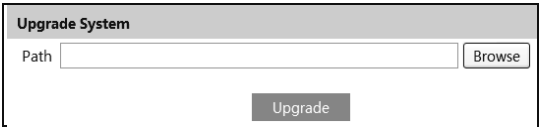
Click “Reboot” button to reboot the device.

Timed Reboot Setting:

Enable “Time Settings”, set the date and time and then click “Save” button to save the settings.

1.6.18 Upgrade

Go to Config→Maintenance→Upgrade. In this interface, you can upgrade the system.



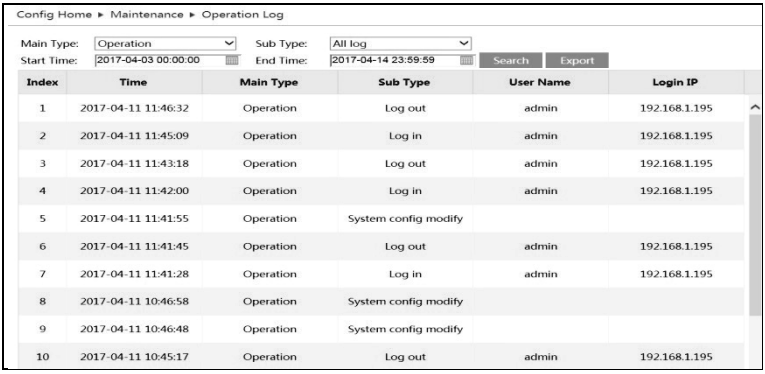
1. Click “Browse” button to select the save path of the upgrade file
2. Click “Upgrade” button to start upgrading the application program.
3. The device will restart automatically
4. After you successfully update the software, click “OK” button to close IE and then re-open IE to connect IP-Cam.

Caution! You can’t disconnect the PC or close the IP-CAM during upgrade.

1.6.19 Operation Log

To query and export log:

1. Go to Config→Maintenance→Operation Log.



Index	Time	Main Type	Sub Type	User Name	Login IP
1	2017-04-11 11:46:32	Operation	Log out	admin	192.168.1.195
2	2017-04-11 11:45:09	Operation	Log in	admin	192.168.1.195
3	2017-04-11 11:43:18	Operation	Log out	admin	192.168.1.195
4	2017-04-11 11:42:00	Operation	Log in	admin	192.168.1.195
5	2017-04-11 11:41:55	Operation	System config modify		
6	2017-04-11 11:41:45	Operation	Log out	admin	192.168.1.195
7	2017-04-11 11:41:28	Operation	Log in	admin	192.168.1.195
8	2017-04-11 10:46:58	Operation	System config modify		
9	2017-04-11 10:46:48	Operation	System config modify		
10	2017-04-11 10:45:17	Operation	Log out	admin	192.168.1.195

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.

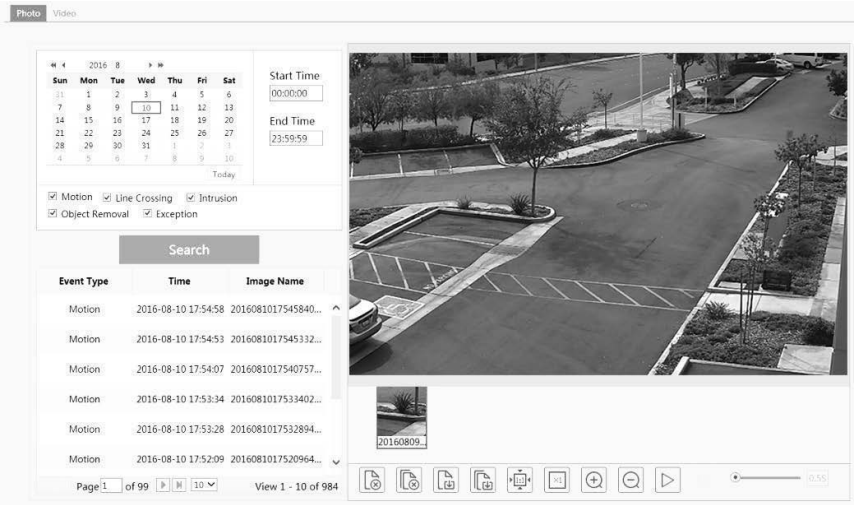
5 Record Search

5.1 Photo Search

Click Search→Photo to go to the interface as shown below. You can search the images saved in the SD card. This feature is camera dependent; some cameras do not have an SD card slot.

5.2 Photo Search

Click Search→Photo to go to the interface as shown below. You can search the images saved in the SD card.



1. Set time: Select date and choose the start and end time in the top left corner.
2. Chose events.
3. Click “Search” button to search the photos.
4. Click a file name in the list to view captured photos as shown above.

The descriptions of the buttons are shown as follows.

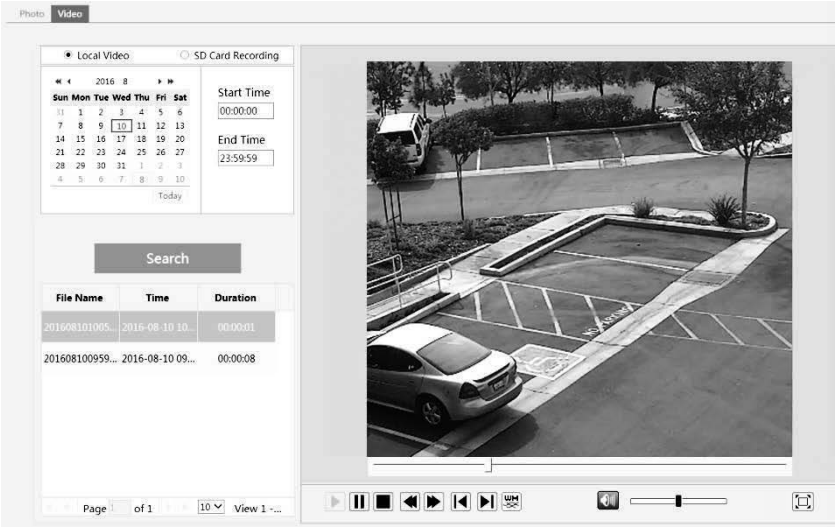
Icon	Description	Icon	Description
	Close: Select a picture and click this button to close this picture.		Close all: Click this button to close all pictures viewing.

Icon	Description	Icon	Description
	Save: Click this button to select the save path of the picture on the PC for saving the current picture.		Save all: Click this button to select the save path of the pictures to the PC for saving all pictures.
	Fit size: The picture will fit on screen by clicking this button.		Actual size: Click this button to display the actual size of the picture.
	Zoom in: Click this button to zoom in to the picture.		Zoom out: Click this button to zoom out of the picture.
	Slide show play: Click this button to play the picture in slide show mode.		Stop: Click this button to stop slide show.
5.5S	Play speed: Play speed of the slide show.		

5.3 Video Search

1.6.20 Local Video Search

Click Search→Video→Local Video to go to the interface as shown below. You can play the local video recording. Before playing, please set the storage path of the video recording in the local configuration interface and make sure there are record files.



Choose the date and the start time and end time and then click “Search” button to search the recorded files. Double click the recorded file to play the recording. The descriptions of the buttons on the playback interface are as follows.

Icon	Description	Icon	Description
	Play button. After pausing the video, click this button to continue playing.		Pause button.
	Stop button.		Speed down.
	Speed up.		Click it to play the previous recording.
	Click it to play the next recording.		Open/close watermark.
	Click it to enable / disable audio; drag the slider to adjust the volume after enabling audio.		Full screen. Click it to display full screen. Double click to exit full screen.

1.6.21 SD Card Video Search

1.6.22 This feature is camera dependent; some cameras do not have an SD card slot.

Click Search→Video→SD Card Recording to go to the interface as shown below. You can search the recording saved in the SD card.

Before you search the SD record, you should trigger the SD recording in motion detection alarm (see Motion Detection Trigger for detail information).

Set the date and the start and end time, select the recording type and then click “Search” button to search the recordings. Double click the searched file name to play the recording.

Please refer to Local Video Search for the descriptions of the buttons on the playback interface.

5. Set time: Select date and choose the start and end time in the top left corner.
6. Check events.
7. Click “Search” button to search the files.
8. Click a file name in the list to view captured video as shown above.

6 Specifications

VTD-TNMD5RFS-2 Specifications	
Image Sensor	1/2.5” 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x 1944) 4 MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	2.8mm Fixed Iris Len
Day/Night	True Day/Night by ICR
IR LEDs	10
IR Distance	65'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1～30fps: 5 MP, 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Smart Intrusion, People Intrusion, People Counting, Crowd Density
Smart Alarm	Motion Alarm / Sensor Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN & 1 x OUT (Two-Way Audio) (Built-In Microphone*)
Storage Card	MicroSD up to 128GB
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance Rating	IP66 / IK10
Power Input	12VDC / PoE
Power Consumption (12VDC)	188mA (IR Off) / 292mA (IR On)
Power Consumption (PoE)	3.5W (IR's off) / 4.5W (IR's on)
Working Environment	-22～140 / 10%～90% Humidity
Weight	12.31 oz. / 0.77 lbs. / 349g
Dimensions	4.33” x 2.28” (110 × 58mm) Dia x H

**Please research local, state and federal laws regarding the implementation of audio surveillance.*

VTC-TNB5RFS, VTC-TNB5RFS-2 Specifications

Image Sensor	1/2.5" 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x1944) 4 MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	3.6mm or 2.8mm Fixed Iris Lens Options
Day/Night	True Day/Night by ICR
IR LEDs	36
IR Distance	120'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1~30fps: 5 MP, 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Smart Intrusion, People Intrusion, People Counting, Crowd Density
Smart Alarm	Motion Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN (One-way Audio)
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance	IP66 Weather Resistance
Power Input	12VDC / PoE
Power Consumption (12VDC)	210mA (IR Off) / 500mA (IR On)
Power Consumption (PoE)	4W (IR's off) / 7.8W (IR's on)
Working Environment	-22~140 / 10%~90% Humidity
Weight	21.16 oz / 1.322 lbs. / 600 g
Dimensions	3.43 x 8.62" (87 mm x 219 mm) Dia x L

VTC-TNB5RMS Specifications

Image Sensor	1/2.5" 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x1944) 4 MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	Motorized 3.3-12mm
Day/Night	True Day/Night by ICR
IR LEDs	48
IR Distance	160'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1~30fps: 5 MP, 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Smart Intrusion, People Intrusion, People Counting, Crowd Density
Smart Alarm	Motion Alarm / Sensor Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN & 1 x OUT (Two-Way Audio)
Storage Card	MicroSD up to 128GB
RS485	x 1
Alarm Input	x 1
Alarm Output	x 1
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance	IP66 Weather Resistance
Power Input	12VDC / PoE
Power Consumption (12VDC)	210mA (IR Off) / 545mA (IR On)
Power Consumption (PoE)	4W (IR's off) / 7.8W (IR's on)
Working Environment	-4~122 / 10%~90% Humidity
Weight	39.15 Oz / 2.45 lbs. / 1110 g
Dimensions	4.29" x 11.18" (109 mm x 284 mm) Dia x L

VTC-TNT5RFS, VTC-TNT5RFS-2, VTC-TNT5RFSB (Charcoal), VTC-TNT5RFSB-2 (Charcoal) Specifications	
Image Sensor	1/2.5" 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x1944) 4 MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	3.6mm or 2.8mm Fixed Iris Lens Options
Day/Night	True Day/Night by ICR
IR LEDs	10 (3.6mm) / 14 (2.8mm)
IR Distance	65'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1~30fps: 5 MP, 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Smart Intrusion, People Intrusion, People Counting, Crowd Density
Smart Alarm	Motion Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN (One-way Audio)
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance	IP66 Weather Resistance
Power Input	12VDC / PoE
Power Consumption (12VDC)	210mA (IR Off) / 420mA (IR On)
Power Consumption (PoE)	4W (IR's off) / 6.7W (IR's on)
Working Environment	-4~122 / 10%~90% Humidity
Weight	15.17 oz / .95 lbs. / 430g
Dimensions	4.25" x 3.60" (108 mm x 91.4 mm) Dia x H

VTC-TNT5RMS, VTC-TNT5RMSB (Charcoal) Specifications

Image Sensor	1/2.5" 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x1944) 4 MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	Motorized 3.3-12mm
Day/Night	True Day/Night by ICR
IR LEDs	2 x High Power
IR Distance	100'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1~30fps: 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Smart Intrusion, People Intrusion, People Counting, Crowd Density
Smart Alarm	Motion Alarm / Sensor Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN (One-way Audio)
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance	IP66 Weather Resistance
Power Input	12VDC / PoE
Power Consumption (12VDC)	210mA (IR Off) / 460mA (IR On)
Power Consumption (PoE)	4W (IR's off) / 6.7W (IR's on)
Working Environment	-4~122 / 10%~90% Humidity
Weight	24.69 oz. / 1.54 lbs. / 700g
Dimensions	5.13" x 4.33" (130.3 mm x 110 mm) Dia x H

VTD-TND5RFS, VTD-TND5RFS-2 Specifications

Image Sensor	1/2.5" 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x1944) MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	3.6 mm or 2.8mm
Day/Night	True Day/Night by ICR
IR LEDs	16
IR Distance	65'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1~30fps: 5 MP, 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Face Detection, Object Removal/Museum Search, Exception, Line Crossing, Smart Intrusion, People Intrusion, People Counting, Crowd Density
Smart Alarm	Motion Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN (One-way Audio)
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance Rating	IP66 / IK10
Power Input	12VDC / PoE
Power Consumption (12VDC)	210mA (IR Off) / 335mA (IR On)
Power Consumption (PoE)	4W (IR's off) / 6.7W (IR's on)
Working Environment	-4~122 / 10%~90% Humidity
Weight	21.16 oz / 1.322 lbs. / 600 g
Dimensions	4.61" x 3.54" (117 x 90mm) Dia x H

VTD-TND5RMS, VTD-TND5RMSB (Charcoal) Specifications

Image Sensor	1/2.5" 5.0 Megapixel Progressive Scan CMOS
Image Size	5 MegaPixel 2592x1944
Resolution	5 MP (2592x1944) 4 MP (2592x1520) / 3 MP (2304x1296) / 1080P (1920x1080) / 720P (1280x720) / D1/CIF (480x240)
Min. Illumination	0 Lux (IR LED ON)
Lens	Motorized 3.3-12mm
Day/Night	True Day/Night by ICR
IR LEDs	30
IR Distance	100'
Video Compression	H.265 / H.264 / MJPEG
Audio Compression	G.711A / G.711U
Multi-Stream	1~30fps: 5 MP, 4 MP, 3 MP, 1080P, 720P, D1, CIF, 480x240
WDR	120dB Super WDR
DNR	XD-DNR (2D-DNR & 3D-DNR)
Quality	VBR (Five Levels of Adjustment) / CBR (Adjustable)
Image Setting	Saturation, Brightness, Contrast, WDR, Noise reduction
Intelligent Analytics	Object Removal/Museum Search, Line Crossing, and Area Intrusion Detection
Smart Alarm	Motion Alarm / Sensor Alarm
ROI	Max 8 detailed areas can be viewed
Network	RJ45
Video Output	1 x BNC (CVBS)
Audio	1 x IN & 1 x OUT (Two-Way Audio)
Storage Card	MicroSD up to 128GB
RS485	x 1
Alarm Input	x 1
Alarm Output	x 1
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
Supported Browsers	Chrome and Firefox with IE Tab
Connection Protocol	ONVIF
Resistance Rating	IP66 / IK10
Power Input	12VDC / PoE
Power Consumption (12VDC)	210mA (IR Off) / 420mA (IR On)
Power Consumption (PoE)	4W (IR's off) / 6.7W (IR's on)
Working Environment	-4~122 / 10%~90% Humidity
Weight	36.33 oz. / 2.27 lbs. / 1030 g
Dimensions	5.91" x 4.49" (150 x 114mm) Dia x H

OPTIONAL ACCESSORIES FOR TRANSCENDENT IP CAMERAS

VT-TJB01/B

Junction Box for Cable Management for use with all Transcendent Bullet and Turret Cameras

VT-TJB02A/B

Junction Box for Cable Management for use with Transcendent Motorized IP Dome Cameras

VT-TJB03/B

Junction Box for Cable Management for use with Transcendent Motorized Bullet and Fixed Dome Cameras

VT-TJB03A

Junction Box for Cable Management for use with Transcendent Fixed IP Dome Cameras

VT-TWM03/B

Wall Mount for Transcendent Motorized Vandal Dome and Turret Cameras

VT-TWMT3/B

Optional Wall Mount for use with Transcendent Fixed Vandal Dome and Turret Cameras

VT-TWMT-A1/B

Universal 10” Wall Mount Post Adapter - Requires VT-TJB02A or VT-TJB03

VT-TPDMT-A1/B

Universal 10” Pedestal Mount Post Adapter - Requires VT-TJB02A or VT-TJB03

/B Indicates Black (Charcoal) Finish Availability

MODEL	MOUNTS	J BOX
VTC-TNB5RFS	Included Wall/Ceiling	VT-TJB01
VTC-TNB5RFS-2	Included Wall/Ceiling	VT-TJB01
VTD-TND5RFS	VT-TWMT-A1/PDMT-A1 w/VT-TJB03A	VT-TJB03A
VTD-TND5RFS-2	VT-TWMT-A1/PDMT-A1 w/VT-TJB03A	VT-TJB03A
VTC-TNT5RFS	VT-TWMT-3	VT-TJB01/B
VTC-TNT5RFS-2	VT-TWMT-3	VT-TJB01/B
VTC-TNT5RMS	VT-TWM03	VT-TJB01B
VTC-TNB5RMS	Included Wall/Ceiling	VT-TJB01/B/TJB03
VTD-TND5RMS	VT-TWM03/VT-TWMT-A1/PDMT-A1 w/TJB02A	VT-TJB02A/B
VTD-TNMD5RFS	VT-TWMT-3	N/A
VTC-TNB8RFS	Included Wall/Ceiling	VT-TJB01
VTC-TNB8RFS-2	Included Wall/Ceiling	VT-TJB01
VTC-TNB8RMS	Included Wall/Ceiling	VT-TJB01/TJB03
VTD-TND8RFS	VT-TWMT-3	VT-TJB03A
VTD-TND8RFS-2	VT-TWMT-3	VT-TJB03A
VTD-TND8RMS	VT-TWM03/VT-TWMT-A1/PDMT-A1 w/TJB02A	VT-TJB02A/B
VTC-TNT8RMS	VT-TWM03	VT-TJB01B
VTC-TNT8RFS	VT-TWMT-3	VT-TJB01/B
VTC-TNT8RFS-2	VT-TWMT-3	VT-TJB01/B

LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is nontransferable and extends only to the original buyer or end user customer of a VITEK Authorized Reseller.

The product must have been used only for its intended purpose, and not been subjected to damage by misuse, willful or accidental damage, caused by excessive voltage or lightning.

The product must not have been tampered with in any way or the guarantee will be considered null and void.

This guarantee does not affect your statutory rights.

Contact your local VITEK Reseller should servicing become necessary.

VITEK makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a VITEK Authorized Reseller.

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