

IndigoVision

**BX and GX Range
Cameras**

Web Configuration Guide



IndigoVision

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Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in moderate injury, damage the product, or lead to loss of data.

Notice

Indicates a hazardous situation which, if not avoided, may seriously impair operations.



Additional information relating to the current section.

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1 INTRODUCTION

This Web Configuration Guide contains information about the BX or GX Range Cameras Web Configuration pages.

Notice *The following functions are for reference only. Some BX or GX Range Cameras may not support all functions.*

Cameras

This guide describes web configuration for the following BX or GX Range Cameras:

- BX420 4MP Minidome Camera
- BX420 4MP Environmental Minidome Camera
- BX420 HD Minidome Camera
- BX420 HD Environmental Minidome Camera
- BX620 4K Bullet Camera
- BX420 4K Environmental Minidome Camera
- BX620 4K Fixed Camera
- BX520 HD Adaptive IR PTZ Dome Camera
- BX520 4MP In-ceiling PTZ Dome Cameras
- BX520 4MP Pendant PTZ Dome Cameras
- BX620 4MP Bullet Camera
- BX620 4MP Fixed Camera
- BX620 HD Fixed Camera
- BX620 HD Bullet Camera
- BX620 320 Thermal Bullet Camera
- BX620 640 Thermal Bullet Camera
- BX720 6MP Fisheye Camera
- BX720 12MP Fisheye Camera
- GX420 Minidome Camera
- GX620 Bullet Camera
- GX420 HD Pan/Tilt Camera
- BX720 8MP Panoramic Dome Camera
- BX 30x HD Fixed Camera
- BX630 Bullet Camera
- BX630 Fixed camera
- BX430 HD Minidome Camera

- BX430 4MP Microdome Camera

Requirements

The BX or GX Range Cameras support Web configuration and management using a PC.

Web configuration involves the following modules:

- Monitor channel preview
- PTZ control
- System configuration
- Alarms

Before starting configuration, establish a network connection:

1. Ensure that the BX or GX Range Cameras is correctly connected to the network.
2. Ensure that the BX or GX Range Cameras IP address and the PC IP address are in the same network segment.
3. If there is router, set the corresponding gateway and subnet mask.
4. Use the command `ping <IP address>` to check the connection.

2 OPERATIONS

This chapter describes common tasks required for the operation of the BX or GX Range Cameras.

Logging in

1. In a standard web browser, navigate to the BX and GX Range 's IP address.
For example, if your device IP is 10.5.1.10, enter `http:// 10.5.1.10` in the address bar.
The login interface is displayed.
2. Enter your user name and password.
The default user name is `Admin` and the default password is `1234`.
On your first login, an install dialog is displayed with details for installing `control`
`webrec.cab`.
3. Click **OK** in the install dialog.
The system automatically installs the control.
If you cannot download the file, ensure that you have installed the plug-in to enable download. Alternatively, lower your browser security levels.

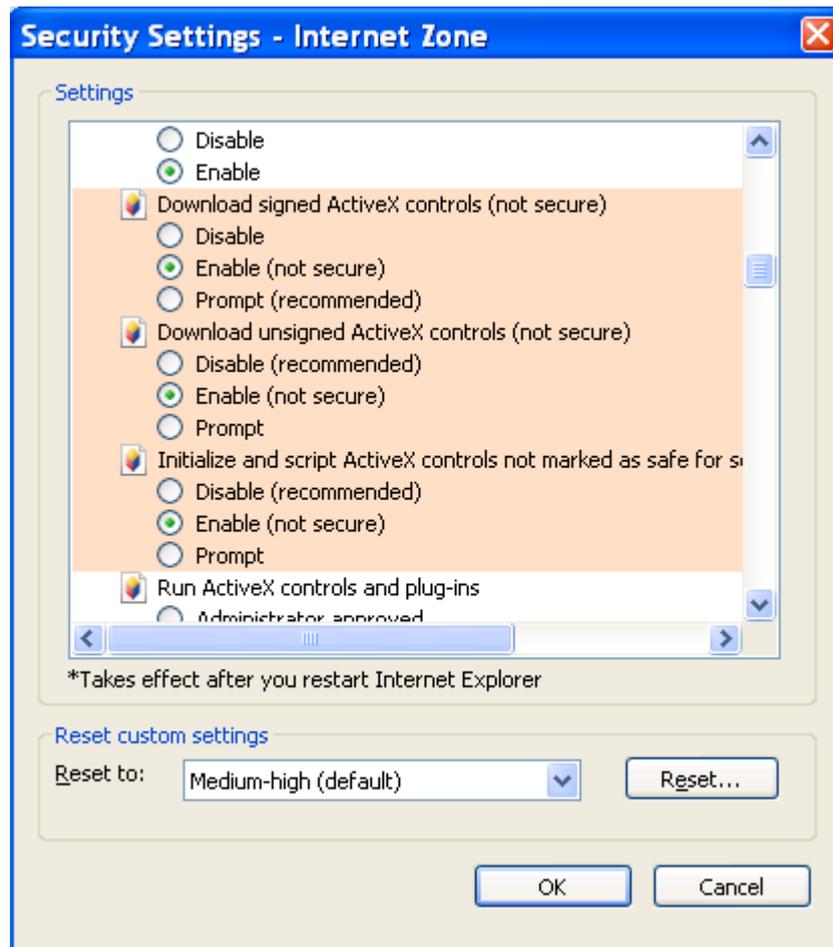


Figure 1: Security Settings dialog for Internet Explorer

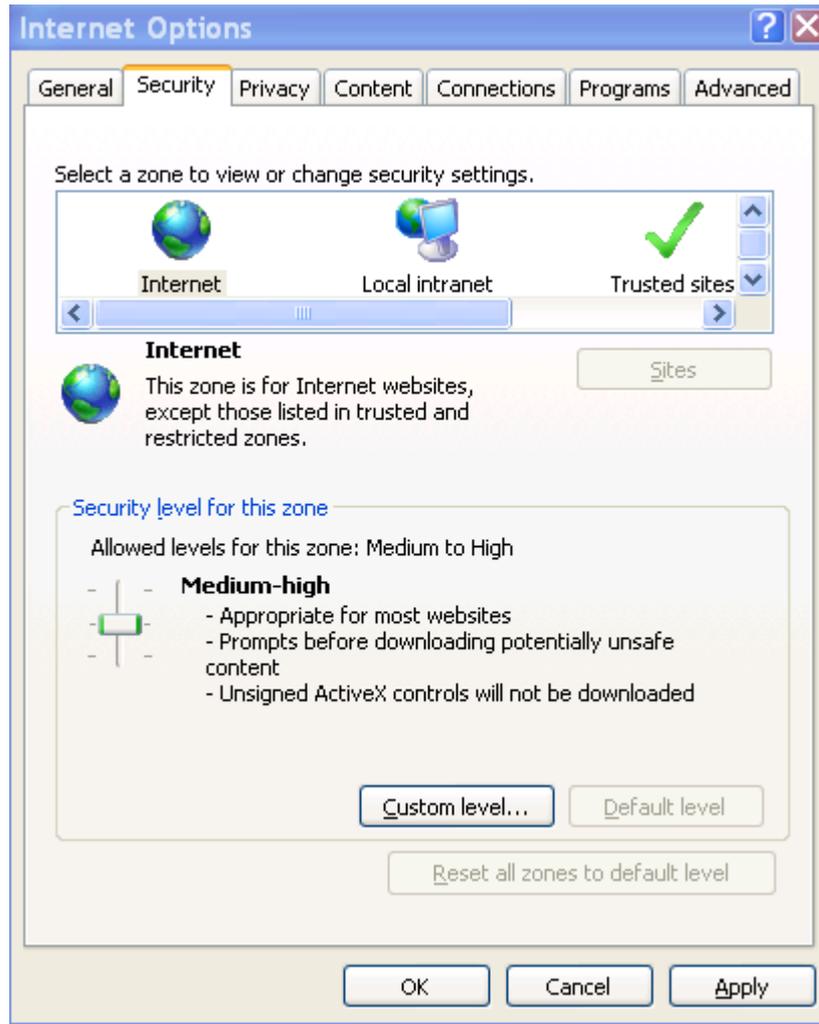


Figure 2: Internet Options dialog

3

WEB CONFIGURATION PAGES

This section explains the configuration options provided by the Web Configuration pages for BX or GX Range Cameras.

Live Interface

Log in to view the live monitor window. Operate the BX or GX Range Cameras using the Web interface.

Encode Setup

The encode setup interface elements are defined below.

Table 1: Encode setup interface options

Parameter	Function
Main stream	In normal network width environment, main stream can record audio/video files and monitor the network.
Sub Stream	Connected to the Protocol, monitor or close the video under sub stream configuration. Sub-streams can be used for network monitoring instead of the main stream when network bandwidth is not sufficient.
Protocol	Select video monitor protocol from the dropdown list. There are three options: TCP/UDP/Multicast.

Video Window Setup

The Video Window setup interface elements are defined below.

Table 2: Video Window setup interface parameters

Parameter	Function
Image adjustment	Click to show or hide the picture setup interface in the top right pane.
Original size	Click to restore the video to its original size. This option depends on the resolution of the video.
Full screen	Click to go to full-screen mode. Double-click press Esc to exit full-screen.
Width and height ratio	Click to restore the original ratio or suitable window.
Fluency setup	Select the fluency type: <i>real-time</i> , <i>normal</i> or <i>fluency</i> .
Rules info	Click to enable the live interface to display intelligent rules. The default setting is <i>enabled</i> .
Open/close PTZ interface	Left click to display or hide the PTZ control interface.
Open/close Zoom and Focus interface	Left click to display or hide the Zoom and Focus interface.

The picture setup interface is shown in the top-right pane when selected.

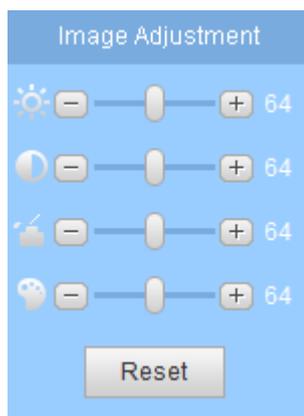


Figure 3: Picture setup interface

The picture setup interface elements are defined below.

Notice *All the operations listed here apply to the Web Configuration pages only. Other options, including brightness, contrast, hue and saturation, can be adjusted using the following menu path: **Setup > Camera > Conditions***

Table 3: Picture setup interface parameters

Parameter	Function
	Adjust monitor video brightness.
	Adjust monitor video contrastness.
	Adjust monitor video saturation.
	Adjust monitor video hue.
Reset	Restore brightness, contrastness saturation and hue to system default setup.

Video Window Function Option

The Video Window function option interface elements are described below.

Table 4: Vide Window function options interface elements

Option	Parameter	Function
	Remark	Click and select pen color. Add mark information to the preview interface.
	Gesture control	On the preview interface, click to control the PTZ and use the middle button to zoom in/zoom out.
	Alarm output	Click to generate an alarm output. The button becomes red. Click again to stop alarm output. There are two alarm output icons because this series product supports two relay output. The alarm output interface may vary for different series products.

Option	Parameter	Function
	Digital zoom	When video is in original status, click this button to select any zone to zoom in. After zooming in, drag the zoom-in area to the specified area. Right-click to restore the original status. Use the wheel to zoom out of the video.
	Snapshot	Snapshot important video. Navigate to Setup > Camera > Video > Path to modify the local record save path.
	Triple snap	Click to take a snapshot at 1f/s for three times. All images are saved in the system storage folder.
	Record	When you click the local Record button, the system begins recording. Navigate to Setup > Camera > Video > Path to modify the local record save path.
	Manual Track	Click, then click and drag in the video window to select any zone. Enable the BX or GX Range Cameras to auto-track the object in the specified area. Navigate to Setup > IVS setup > Global setup interface to enable IVS auto-tracking.
	Easy Focus	Click to refocus the camera.
	Audio output	Turn on or off audio when you are monitoring. Navigate to Setup > Camera > Audio to set.
	Bidirectional talk	Click to begin audio talk. Navigate to Setup > Camera > Audio to set bidirectional talk mode.
	Help	Click to open the help file.

PTZ Control

Before PTZ operation, ensure that you have correctly set PTZ protocol using the following menu path: **Setup > System > PTZ**.

View direction keys, speed, zoom, focus and the iris button.

- PTZ direction: PTZ supports the following directions:
 - Left
 - Right
 - Up
 - Down
 - Upper left
 - Upper right
 - Bottom left
 - Bottom right
 - Fast positioning
- Speed: Select a speed from 1 to 8.



Figure 4: PTZ control interface

Joystick



Figure 5: PTZ Joystick

Drag the button in the middle of the joystick to control device rotation.

PTZ Setup/Menu

Click **Set** to display the PTZ Settings interface. Use this interface to select scan, preset, tour pattern, assistant function and so on.

The options in the PTZ Settings interface are described below.

Table 5:

Parameter	Function
Scan	Control the PTZ to set the scan left limit and right limit. Click Start to begin the scan operation. Default SN is 1.
Preset	Input the preset value and click Add , to save the current position as one preset. Click View and the camera turns to the corresponding position of the preset.
Tour	Input the tour value and click Add to add one preset from the tour. Click Start to begin the tour.
Pattern	Click Add to operate the PTZ. Click Stop to stop the memory pattern process. Click Start to begin PTZ movement.
Assistant	Input the assistant value and click AUX on to enable the corresponding assistant value.
Goto	Accurate positioning function. Input the corresponding horizontal angle, tilt angle, and dome zoom speed and click Goto to go to a specified position. One unit of the horizontal angle or tile angle stands for 0.1 degree.
Pan	Click Start to turn the PTZ.

Zoom and Focus

Adjust the camera zoom and focus.

Table 6: Zoom and Focus parameters

Parameter	Function
Zoom speed	Select 1, 5, or 20.
Zoom	Use the slider to adjust the zoom.
Focus speed	Select 1, 5, or 20.
Focus	Use the slider to adjust the focus.
Auto Focus	Adjust the focus automatically.
Restore All	Restore zoom and focus to the default values.
Refresh	Restore zoom and focus to the last saved values.

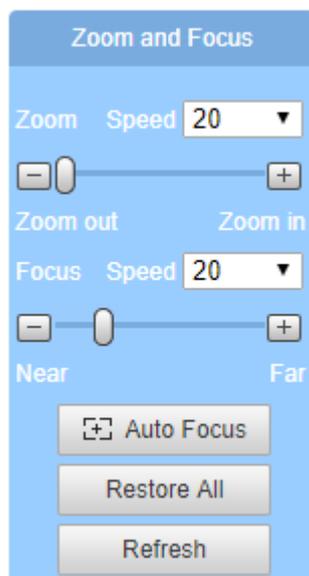


Figure 6: Zoom and Focus interface

Playback

Web client playback supports the following modes:

- Video playback
- Picture playback

Notice *You must set 3.5 Storage Management before operating playback.*

Video Playback

The video playback interface includes the following functions:

- Play function
- Playback file
- Playback clip
- Record type
- Progress bar
- Aux function

Play Function

Table 7: Play Function parameters

Parameter	Note
Play	Click to play video.
Stop	Click to stop playing current video.
Next frame	Click to play next frame. You must pause playback when using next frame function.
Slow	Click to slow down playback.
Fast	Click to speed up playback.
Quiet	When this button is displayed, playback is mute. Click to restore audio function.
Volume	Click the to adjust the playback volume.

Playback File

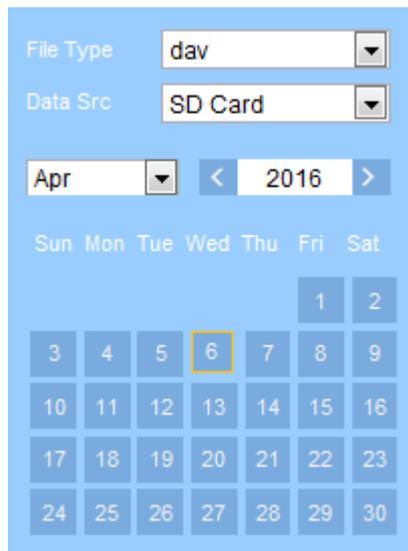


Figure 7: Playback calendar

The blue dates in the calendar indicate that there is video or a snapshot file on the day indicated.

Table 8: Playback file parameters

Parameter	Note
File type	Select day to playback video. Select jpg to view an image.
Data source	The default is SD card.

1. Click the blue date.
The timeline displays the record file progress bar with colors:
 - Green: general record.
 - Yellow: motion record.
 - Red: alarm record.
 - Blue: manual record.
2. Click a certain time location of the record file progress bar area
The playback interface plays the record file from that time.
3. Click file list 
The record file for the selected date is displayed in the file list.

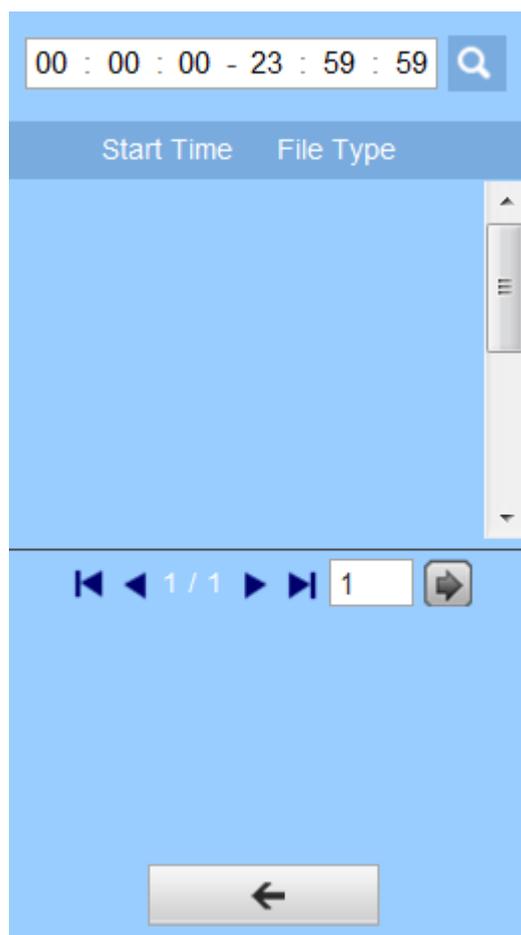


Figure 8: File list

4. Double-click the file in the list.

The file is played. File size, start time and end time are also displayed.

Table 9: Search and download options

Parameter	Note
 Search	Search all the record files between the start time and end time of the selected date.
Download Format	Select the format: .dav or .mp4.
 Download	When record type is "dav", click to download the file to local. When record type is "mp4", click to download file to 3.1.15. Storage path. The system does not support download and playback record of MP4 format at the same time.
 Back	Click to go back to calendar interface to select date again.

Playback Cut

When using playback cut, the record file which is being played back stops playing automatically.

1. Click the start time of playback cut on the timeline.
The time must be within the range of the progress bar area for the record file.
2. Click **Cut**  to set the start time for the playback clip.

3. Click the end time of the playback cut on the timeline.
The time must be within the range of the progress bar area for the record file.
4. Click **Cut**  to set the end time for the playback clip.
5. Click **Save** to edit the file to 3.1.1.5 storage path.

Record Type

Select the Record Type to display only the selected type of file in the progress bar and file list.



Figure 9: Record Type selection

Progress Bar Time Format

Parameter	Note
 24hr	Click to display the progress bar in 24-hour mode.
 2hr	Click to display the progress bar within 2 hours range of the record file.
 1hr	Click to display the progress bar within 1 hour range of the record file.
 30min	Click to display the progress bar with 30 minutes range of the record file.

Assistant Function

Table 10: Assistant Function parameters

Parameter	Note
 Regional Zoom	Click to select any area to zoom in to when the playback video is in its original state. When the video is not in its original state, click to drag and zoom the area within a certain range. Right-click to restore the video to its original state. Zoom by rolling the mouse wheel.
 Snapshot	Click to snapshot the playback video. The image is stored in the path 3.1.1.5.

Picture Playback

The picture playback interface of WEB client includes following three functions.

The picture playback interface includes the following functions:

- Play function
- Playback file
- Snapshot type

Play Function

- : Click to play pictures.

- : Click to pause playback.

Playback File

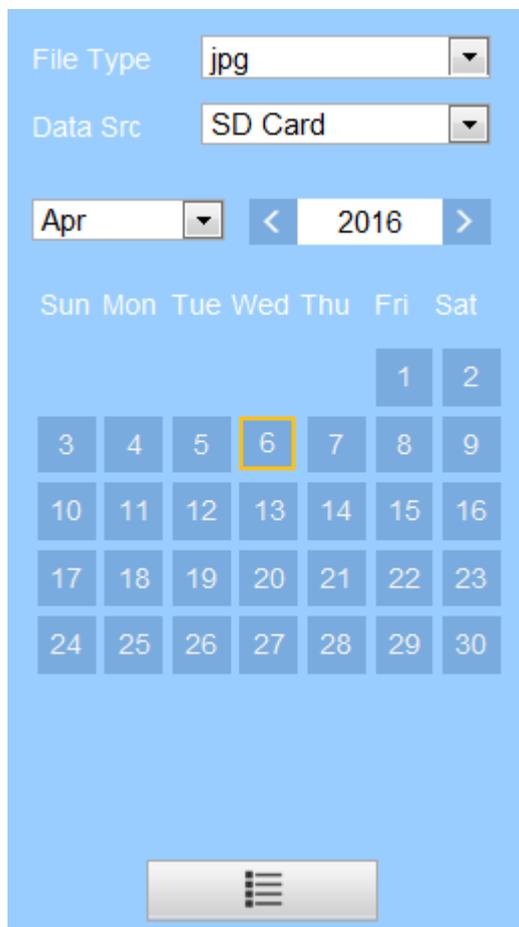


Figure 10: Playback calendar

The blue dates in the calendar indicate that there is an image file on the day indicated.

1. Click file list 
 - The snapshot file for the selected date is displayed in the file list.
2. Double-click the file in the list.
 - The snapshot file is played. File size, start time and end time are also displayed.

Table 11: Download and search parameters

Parameter	Note
 Search	Search all the record files between the start time and end time of the selected date.
 Download	When record type is “dav”, click to download the file to local. When record type is “mp4”, click to download file to 3.1.15. Storage path. The system does not support download and playback record of MP4 format at the same time.
 Back	Click to go back to calendar interface to select date again.

Snapshot Type

Select the Snapshot Type to display only the selected type of file in the file list.

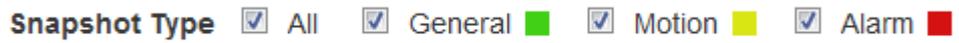


Figure 11: Snapshot Type selection

Setup

Use the setup menu to configure cameras.

Camera

Conditions

The Conditions interface screen is made up of the following sub-screens:

- Conditions interface
- Profile Management interface
- Zoom and Focus interface

The **Conditions** interface is made up of the following fields:

Table 12: Conditions parameters

Parameter	Function
Profile	You may select the following profiles: <ul style="list-style-type: none"> • Normal • Day • Night
Brightness	Adjust the monitor window brightness.
Contrast	Adjust the monitor window contrast.
Saturation	Adjust the monitor window saturation.
Sharpness	Adjust the video sharpness. The higher the value, the clearer the edge of images.
Gamma	Changes image brightness and improves dynamic display range.
Mirror	Invert the camera image on a vertical axis.
Flip	Invert the camera image on a horizontal axis, and rotate the image to one of the following: <ul style="list-style-type: none"> • 0° • 90° • 180° • 270°
Anti-flicker	Select from the following: <ul style="list-style-type: none"> • Outdoor: allows you to select the Gain priority and Shutter priority exposure modes. • 50Hz: sets the system to auto-adjust the exposure when the frequency is 50Hz. • 60Hz: sets the system to auto-adjust the exposure when the frequency is 60Hz. Depending on the anti-flicker setting, you can select from the following exposure modes:
Exposure mode	<ul style="list-style-type: none"> • Auto: the video brightness changes automatically within the proper exposure range according to the different environments.

Parameter	Function
	<ul style="list-style-type: none"> • Gain priority: allows you to set the gain. • Shutter priority: allows you to set the shutter speed. • Manual: set the video brightness manually.
Auto Iris	Enable the camera to automatically adjust the iris when the light level changes.
3D NR	Enable 3-dimensional noise reduction.
Grade	Adjust the image grade.
Backlight mode	Select one of the following modes: <ul style="list-style-type: none"> • OFF • BLC • HLC • WDR
White Balance mode	The white balance affects the general hue of the video. Select from the following options to match the camera's operating environment: <ul style="list-style-type: none"> • Auto • Natural • Street Lamp • Outdoor • Manual • Regional Custom
Day & Night mode	Set the output color.
Day & Night sensitivity	Set the sensitivity of the color and black/white switches.
Day & Night delay	Set the delay value of the color and black/white switches.
IR light mode	Select one of the following modes: <ul style="list-style-type: none"> • Manual • SmartIR • OFF
Default	Set the device default setup.
Refresh	Cancel the operation in current interface and restore previously saved operation.
Save	Save the configuration.

The **Profile Management** interface is made up of the following fields:

Table 13: Profile Management parameters

Parameter	Function
Profile Management	You may select the following profile management modes: <ul style="list-style-type: none"> • Normal • Full Time • Schedule
Always Enable	Select from the following: <ul style="list-style-type: none"> • Day • Night
Default	Set the device default setup.
Refresh	Cancel the operation in current interface and restore previously saved operation.
Save	Save the configuration.

The **Zoom and Focus** interface is made up of the following fields:

Table 14: Zoom and Focus parameters

Parameter	Function
Zoom speed	Select 1, 5, or 20.
Zoom	Use the slider to adjust the zoom.
Focus speed	Select 1, 5, or 20.
Focus	Use the slider to adjust the focus.
Auto Focus	Adjust the focus automatically.
Restore All	Restore zoom and focus to the default values.
Refresh	Restore zoom and focus to the last saved values.

Video

The video interface screen is made up of the following sub-screens:

- Video bit stream interface
- Snapshot interface
- Overlay interface
- ROI interface
- Path interface

The **Video bit stream** interface is made up of the following fields:

Table 15: Video bit stream parameters

Parameter	Function
Sub Stream Enable	Check the box to enable extra stream function. This function is enabled by default.
Encode mode	Select an encode mode: H.264 : main profile standard. H264 bit stream H.264H : high profile standard. H264 bit stream H.264B : baseline profile MJPEG : encode. The video needs a large bit stream to ensure video definition. Use the maximum bit stream value. To monitor the system using a Blackberry mobile phone, enable the sub stream function in your camera and set the resolution as CIF.
Resolution	Select a resolution level from the dropdown list. The recommended bit stream value differs for each resolution level. When video is under rotating status, you cannot set resolution at or higher than 1080P.
Frame Rate (FPS)	PAL: 1~25f/s, 1-50f/s NTSC: 1~30f/s or 1~60f/s. The frame rate may vary for different resolutions.
Bit Rate Type	Select either VBR or CBR. You can set video quality in VBR mode. Under MJPEG mode, only CBR is available.
Quality	Set the image quality from 1 to 6.
Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.
Bit Rate	In CBR, this bit rate is the maximum value. In dynamic video, the system must have a low frame rate or video quality to guarantee the

Parameter	Function
	value. The value is null in VBR mode. Please refer to recommend bit rate for the detailed information.
SVC	Frame rate can be encoded by layer. It is a flexible encoding method. By default, it is 1 as 1 layer. You also can set 2/3/4 layers.
I Frame	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50. Recommended value is frame rate *2.
Watermark Settings	By calibrating watermark, to see if video is modified. Select Watermark function. Default watermark is Digital CCTV. Watermark character can only be number, letter, _, - within 128 characters.

The Snapshot interface is made up of the following fields:

Table 16: Snapshot parameters

Parameter	Function
Snapshot type	Select either General (schedule) or Event (activation).
Image size	Resolution of snapshot (main stream or sub stream).
Quality	Set the image quality from 1 to 6.
Interval	Set snapshot frequency.

The Overlay interface is made up of the following fields:

Table 17: Video overlay parameters

Parameter	Note
Privacy Masking	Check Enable to display black boxes over preset areas of the the video monitoring window.
Channel Title	Check Enable to display the Channel title in the video monitoring window. Use the mouse to drag the Channel Title box to adjust its position.
Time Title	Check Enable to display time title in the video monitoring window. Use the mouse to drag the Time Title box to adjust its position.
OSD Info	Check Enable to display OSD in the video monitoring window. Use the mouse to drag the OSD Info box to adjust its position. Alignment mode includes left align and right align.
Text Overlay	Check Enable to display text overlay in the video monitoring window. Enter the text which you want to display. Select Left or Right text alignment.
Picture Overlay	Check Enable to display picture overlay in the video monitoring window. Click to upload an image. Thi image is overlaid onto the video monitoring window. Drag the yellow box to adjust the position of overlaid pictures. OSD Info and Picture Overlay cannot be enabled at the same time.
Refresh	After setting Channel Title, Time Title, OSD Info and Picture Overlay and saving successfully, check the results by clicking Refresh .

The ROI interface is made up of the following fields:

Table 18: ROI parameters

Parameter	Note
Enable	Check Enable to display the ROI in the video monitoring window.
Image Quality	Set the image quality of the ROI from 1 to 6.

Use record linkage in the **Live** interface to set the storage path for monitoring snapshot and monitoring recordings.

Storage path is linked to the snapshot, download or clip in the playback interface. Use the Storage interface to set the storage path for playback snapshot, record download and playback clip respectively.

- Default Live Snapshot path: **C:\Documents and Settings\Administrator\WebDownload\LivePicture**
- Default Live Record path: **C:\Documents and Settings\Administrator\WebDownload\LiveRecord**
- Default Playback Snapshot path: **C:\Documents and Settings\Administrator\WebDownload\PlayBackPicture**
- Default Playback Download path: **C:\Documents and Settings\Administrator\WebDownload\PlayBackRecord**
- Default Playback Clip path: **C:\Documents and Settings\Administrator\WebDownload\PlayBackRecordCut**

Notice *The Administrator is the login account currently being used.*

Audio

The audio interface is made up of the following fields:

Notice *Ensure that you have enabled the video function, otherwise you can not enable the audio function.*

Table 19: Audio interface parameters

Parameter	Function
Audio enable	Recorded files in the main stream or sub (extra) streams only contain video by default. Check the audio box to enable the audio function so that the main stream that the network has transmitted is audio/video composite stream.
Encode mode	The encode mode of the main stream and extra stream include PCM, G.711A and G.711Mu. The setup here is for audio encode mode and the bidirectional talk encode both.
Sampling frequency	Select the sampling frequency.
AudioIn Type	Select the Audio input type.
Microphone volume	Adjust the microphone volume.
Speaker Volume	Adjust the speaker volume.

IVS Setup

Global Setup

The Global Setup interface is made up of the following fields:

Table 20: Global Setup interface parameters

Parameter	Function
IVS enable	Check the box to enable IVS function.
Panorama PTZ enable	Click to enable panorama PTZ. IVS function and panorama PTZ cannot be enabled at the same time.
Scene type	Panorama: Intelligent analytics of the current monitor video with the preview function enabled. Single scene: Intelligent analytics for one scene. Multiple-scene: Intelligent analytics for several scenes, which support tour function.
Apply scene	The default setting is Normal.
Alarm track enable	The system enables auto-tracking when a rule is activated. The alarm track function is null if you do not check the box. This does not affect other alarm output when this function is null.
De-jitter	Set device de-jitter rate.
De-jitter enable	Check the box to enable de-jitter module.

Scene Setup

The Scene setup interface is made up of the following fields:

Table 21: Scene setup parameters

Parameter	Function
Add scene	Click to add a scene.
Scene setup	Click to set current monitor video as the corresponding scene and get a number.
Preview scene	Click to preview the selected scene.
Limit Track	Check the box to set up/down/left/right limit at the bottom of the interface.
Zoom	Click  to zoom in and click  to zoom out.
PTZ	Click PTZ button  to adjust scene position.
Speed	Set PTZ movement speed. The value ranges from 1 to 8.

Use the **Single Scene** sub-screen to select which single scene to view.

Use the **Multiple Scene** sub-screen to set up Tours and Stay times.

Rule Setup

Set up rules using the individual rule type interfaces.

► *For more information, see "Capabilities" on page 55*

The rule setup interface is made up of the following fields:

Table 22: Rule setup interface parameters

Parameter	Function
Select scene	Select the scene from the drop-down to add the corresponding rule.
Add rule	Click to add a rule to the selected scene.
Rule enable	Check the box to enable the rule.
Rule name	Set a rule name.
Rule type	Set the rule type.
Draw rule	Click  to draw current rule.
Delete rule	Click  to delete current rule.

The Tripwire interface is made up of the following fields:

Table 23: Tripwire interface parameters

Parameter	Function
Object type supported	Select an object type here. The default setup is all types.
Direction	Set tripwire direction. A->B 、 B->A 、 A<->B .
Target filter	Check the box to enable this function, then click Draw to set the target filter model in this scene for this rule. Click Clear to remove the selected target filter model.

The Cross warning zone interface is made up of the following fields:

Table 24: Cross warning zone parameters

Parameter	Function
Object type supported	Select an object type. The default setting is All types.
Detect action list	In area: When the tracked object is in the detect zone and the stay time is more than the time threshold set here, the system activates an alarm. Through area: The system generates an alarm when the tracking object crosses the limit set here.
Direction	Set the cross direction for Through area Detect actions.
Max target No.	Set the alarm activation amount in the zone. The system will not generate an alarm when the object amount in the zone is more than the threshold set here.
Min target No.	Set the alarm activation amount in the zone. The system will not generate an alarm when the object amount in the zone is less than the threshold set here.
Min last time	Set the minimum time between the target being in the zone and an alarm activation occurrence.
Report interval	Set the alarm period. If this value is 0, the system sounds the alarm only once.
Target filter	Check the box to enable this function and click Draw to set the target filter model in this scene.

The abandoned object detection interface is made up of the following fields:

Table 25: Abandoned object detection interface parameters

Parameter	Function
Object type	Select an object type. The default setting is All types.

Parameter	Function
supported	
Min last time	Set the minimum time between the abandoned object occurrence and alarm activation.
Target filter	Check the box to enable this function and click Draw to set the target filter model in this scene.

The loitering detection interface is made up of the following fields:

Table 26: Loitering detection interface parameters

Parameter	Function
Object type supported	Select an object type. The default setup is all types.
Alarm activation number (Person)	Set the alarm activation threshold. The default setup is 0.
Min last time	Set the minimum time between the target being in the zone and an alarm activation occurrence.
Report interval	Set the alarm period. If this value is 0, the system triggers the alarm just once.
Target filter	Check the box to enable this function and click Draw to set the target filter model in this scene.

The fast moving interface is made up of the following fields:

Table 27: Fast moving interface parameters

Parameter	Function
Object type supported	Select an object type. The default setup is all types.
Detect type	Set the detection type. The default setup is "Fast move". The rule is to detect the fast moving object in the warning zone.
Sensitivity	Set the alarm activation sensitivity.
Min last time	Set the minimum time between the object moving and alarm activation.
Activation speed	Set the minimum speed at which an object can activate an alarm.
Target filter	Check the box to enable this function and click Draw to set the target filter model in the scene.

The perimeter protection interface is made up of the following fields:

Table 28: Perimeter protection interface parameters

Parameter	Function
Object type supported	Select an object type. The default setup is all types.
Direction	Set cross perimeter direction. The option includes: A->B, B->A, A<->B.
Target filter	Check the box to enable this function and click Draw to set the target filter model in this scene.

The missing object detection interface is made up of the following fields:

Table 29: Please refer to the following sheet for detailed information.

Parameter	Function
Object type supported	Select an object type. The default setup is all types.

Parameter	Function
Min last time	Set the minimum time between the missing object occurrence and alarm activation.
Target filter	Check the box to enable this function and click Draw to set the target filter model in this scene.

The illegal parking interface is made up of the following fields:

Table 30: Illegal parking interface parameters

Parameter	Function
Object type supported	Select an object type. The default setup is all types.
Min last time	Set the minimum time between the illegal parking occurrence and alarm activation.
Target filter	Check the box to enable this function and click Draw to set the target filter model in this scene.

Alarm activation setup is made up of the following fields:

Table 31: Alarm activation setup parameters

Parameter	Function
Rule Working period	Set rule arm and disarm period. Click Setup to set.
Record	Check the box to record when alarm activation occurred.
Relay output	Check the box to output an alarm when alarm activation occurred.
Send e-mail	Check the box to send out an email when alarm activation occurred. Please note current function is null when the device is offline, or IP conflict occurred.
Snapshot	Check the box to snapshot when alarm activation occurred.
Copy	Select a rule name from the dropdown list and click Copy to copy the alarm activation setup of current rule to the selected rule.

Parameter

The parameter interface is made up of the following fields:

Table 32: Parameters interface parameters

Parameter	Function
Scene	Select a scene from the drop-down.
Detect balance	Select a detect balance mode: Compromise mode, Omission detect less or Error detect less.
Sensitivity	Set the sensitivity level from 1 to 10. The default setting is 5. The higher the sensitivity is, the easier it is for the device to detect low-contrast and small objects. More errors may also be detected.
Anti-disturbance mode	Control random disturbance in the scene.
Backlight scene enable	Check the box to set higher recognition capability in backlit scenes.
Shadow scene enable	Check the box to set higher recognition capability in shadow scenes.

Parameter	Function
Target filter	Click Draw to set the target filter model in this scene.
Add detect region	Click Add Detect Region to draw a detection zone.
Add excluded region	Click Add Exclude to draw a privacy mask (shield) zone.

Network

TCP/IP

The TCP/IP interface is made up of the following fields:

Table 33: TCP/IP interface parameters

Parameter	Function
Host Name	Set the current host device name.
Ethernet Card	If the device has several network cards, select the Ethernet port.
Mode	Static mode: Set the IP/subnet mask/gateway manually. DHCP mode: The IP/subnet mask/gateway are null. IP/subnet mask/gateway and DHCP are read-only when the PPPoE dial is OK.
Mac Address	Display host Mac address. This field is read-only.
IP Version	Select either IPV4 or IPV6. You can access the IP address of these two versions. The system must check the validity of all IPV6 addresses. The IP address and the default gateway must be in the same IP section. When PPPoE function is enabled, the IP/subnet mask/default gateway is read-only. You can not set or restore default setup.
IP Address	Enter the IP address.
Subnet Mask	Enter the subnet mask for the IPv4. This field must not be left blank.
Default Gateway	Enter the corresponding default gateway for the IPv4. This field must not be left blank.
Preferred DNS	DNS IP address for the IPv4. This field must not be left blank.
Alternate DNS	Alternate DNS IP address for the IPv4. This field must not be left blank.
Enable ARP/Ping set device IP address service.	If the device MAC address is known, use an ARP/Ping command to modify or set the device IP address. For more information, see "ARP/Ping set device IP address" on page 30.

ARP/Ping set device IP address

1. Ensure that the BX or GX Range Cameras and the PC are on the same LAN.
2. Get the required IP address.
3. Set the BX or GX Range Cameras and the PC on the same LAN.
4. Get the physical address from the label of the BX or GX Range Cameras.
5. Go to the **Run** interface and input the following commands.

```
arp -s <IP Address> <MAC>
ping -l 480 -t <IP Address>
```

For example:

```
arp -s 192.168.0.125 11-40-8c-18-10-11
ping -l 480 -t 192.168.0.125
```

6. Reboot the device.
If the setup is successful, a Reply from output message is displayed.
7. Close the command line.
8. Open a standard web browser and enter `http://<IP address>`.
9. Press **Enter** to access the IP.

Port

The port interface is made up of the following fields:

Table 34: Port interface parameters

Parameter	Function
Max connection	Maximum Web connection for the BX or GX Range Cameras between 1 and 20. The default setting is 10.
TCP port	Select a value from 1025 to 65535. The default value is 37777. Input the actual port number if necessary.
UDP port	Select a value from 1025 to 65535. The default value is 37778. Input the actual port number if necessary.
HTTP port	Select a value from 1025 to 65535. The default value is 80. Input the actual port number if necessary.
RTSP port	The default value is 554. If using QuickTime, a Blackberry phone or VLC play real-time video, you can use a real-time monitor bit stream Url format to play. When using a Blackberry phone, the bit stream mode is H.264B, resolution is CIF and audio is disabled. If requesting a real-time monitor bit stream RTSP stream media service, specify the channel number and bit stream type in the Url. The Url format is shown as below: <pre>rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0</pre> Input the username, password, port and subtype following items manually. Username/password/IP/port/subtype. The IP is device IP and the port default value is 554. The channel number begins with 1. subtype: bit stream type, main stream is 0(subtype=0) and extra stream is 1(subtype=1) . You do not need to input the user name and password if you do not need the verification. For example: Main stream: <code>rtsp://ip:port/cam/realmonitor?channel=1&subtype=0</code>
HTTPS Enable	Enable HTTPs communication service control. If you enable this function, use <code>https://<ip>:<port></code> to log in the device. If you are using the default port in data encryption protection mode, use <code>https://<ip></code> to log in.
HTTPS Port	Select a HTTPs communication port value from 1025 to 65535.

HTTPS

Use the HTTPS interface to create and manage authentication certificates.

ONVIF

ONVIF (Open Network Video Interface Forum) describes the model, interface, data type of network video and the mode of data interaction.

The target of the ONVIF standard is to realize a network video frame protocol, which makes the network video products, including front end and record device, produced by different manufacturers completely compatible.

PPPoE

1. Enter the PPPoE user name and password from your ISP (internet service provider) and the enable PPPoE function in the PPPoE interface.
2. Save the current settings.
3. Reboot the device.
The current settings are applied.
The device connects to the internet using PPPoE after reboot.
4. Note the IP address in the WAN from the IP address column.

PPPoE is set to connect to the internet. Acquire an account from your ISP, and set here to dial to the interface. The registered IP address is displayed in the interface.

Navigate to the IP address item to view the current device information and access the client-end.

DDNS

Use the DDNS interface to set the DDNS. This connects the various servers so that you can access the system using the server.

Navigate to the corresponding service website to apply a domain name and then access the system using the domain.

Table 35: DDNS interface parameters

Parameter	Function
Server Type	Select DDNS protocol from the drop-down and enable DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.
Mode	Select the default Domain Name, or use a custom Domain Name.
Domain Name	The self-defined domain name.
User	The user name input to log in to the server.
Password	The password input to log in to the server.
Update period	Device IP and service connection refresh period. The default setup is 10 minutes.

IP filter

The IP filter interface is shown used to enable IP filter function so that a specified IP user can access the BX or GX Range Cameras.

Add IP address or the IP address section.

If you do not check the box, there is no access limit.

SMTP

The SMTP (email) interface is made up of the following fields:

Table 36: SMTP interface parameters

Parameter	Function
SMTP Server	Input the server address then enable this function.
Port	The default value is 25.
Anonymity	A user can auto login anonymously. Do not input the user name, password or the sender information.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Authentication (Encryption mode)	Select SSL or none.
Title (Subject)	Email subject.
Attachment	Check the box to send a snapshot picture in the email.
Mail receiver	Enter a maximum of three receiver addresses.
Interval	Set the send interval from 0 to 3600 seconds. 0 means there is no interval. The system does not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormality event activates the email, the system sends out the email according to the interval specified here. This function is very useful when there are too many emails activated by the abnormality events, which may result in heavy load for the email server.
Health mail enable	Check the box to enable this function.
Update period (interval)	This function allows the system to send out the test email to check the connection is OK. Check the box to enable this function and set the corresponding interval.
Email test	The system automatically sends out an email to test the connection is OK . Before the email test, save the email setup information.

UPnP

UPnP allows the user to establish the mapping relationship between the LAN and the public network, and to add, modify or remove UPnP item.

1. In the Windows OS, navigate to **Start > Control Panel > Add or remove programs**.
2. Click **Add/Remove Windows Components** then select **Network Services** from the Windows Components Wizard.
3. Click **Details** and then enable the **Internet Gateway Device Discovery and Control client** and **UPnP User Interface** features.
4. Click **OK** to begin installation.

If your UPnP is enabled in the Windows OS, the BX or GX Range Cameras auto detects it through **My Network Places**.

SNMP

The SNMP allows communication between the network management work station software and the proxy of the managed device. Before you use this function, install software such as MG MibBrowser 8.0c software or establish the SNMP service. You must reboot the device to activate the new setup.

Table 37: SNMP interface parameters

Parameter	Function
SNMP Port	Listening UDP port of the device's proxy program. Set the port value from 1 to 65535. The default value is 161
Read Community	A string command between the manage process and the proxy process which defines authentication, access control and the management relationship between one proxy and one group of managers. Ensure that the device and the proxy are the same. The read community reads all the objects the SNMP supported in the specified name. The default setup is public.
Write Community	A string command between the manage process and the proxy process which defines authentication, access control and the management relationship between one proxy and one group of managers. Ensure that the device and the proxy are the same. The write community reads, writes or accesses all the objects the SNMP supported in the specified name. The default setup is write.
Trap address	The destination address of the Trap information from the device's proxy program.
Trap port	The destination port of the Trap information from the device's proxy program. Used for the gateway device and the client-end PC in the LAN to exchange the information. This is a non-protocol UDP connection port with no effect on the network applications. Set the port value from 1 to 165535. The default value is 162.
SNMP version	Check SNMP v1, system only processes the information of V1. Check SNMP v2, system only processes the information of V2. Check SNMP v3, you can set account and password. Set the corresponding account and password for security verification. The V1 and V2 option is null.

Bonjour

The Bonjour interface is based on the multicast DNS service from the Apple. The Bonjour device can automatically broadcast its service information and listen to the service information from other devices.

If BX or GX Range Cameras information is unknown, browse for the BX or GX Range Cameras using the Bonjour service in the same LAN to access the relevant records.

View the server name when the BX or GX Range Cameras is detected by Bonjour. Note the safari browser supports this function.

Click **Display All Bookmarks** and open Bonjour. The system can auto-detect the BX or GX Range Cameras in the Bonjour function in the LAN.

Multicast

The multicast interface is a transmission mode of data packet. When there are multiple hosts to receive the same data packet, multiple-cast is the best option to reduce the broad width and the CPU load. The source host can just send out one data to transit. This function also depends on the relationship of the group member and group of the outer.

Set the multicast address and port. You also need to go to Live interface to set the protocol as Multicast.

IEEE802

IEEE802.1X works for local and metropolitan area networks and port based network access control protocol. It supports manual operation of the client to choose the means of authenticating by which to control it to access to the Local Area Networks or not. It supports the ability to authenticate, to calculate fees, to ensure security and to maintain requirements.

Table 38: IEEE802 interface parameters

Parameter	Function
Authentication	PEAP (protected EAP protocol).
Username	It needs the username to login, which is authenticated by the server.
Password	Please input password here.

QoS

The QoS (Quality of Service) interface is used to define the network security mechanism. This is a technology to fix network delay and jam problem and so on.

For the network service, the QoS includes the transmission bandwidth, delay and the packet loss. We guarantee the transmission bandwidth, lower the delay, and reduce the loss of the data packet and anti-dither to enhance the quality.

Set the DSCP (Differentiated Services Code Point) of the IP to distinguish the data packet so that the router or the hub can provide different services for various data packets. It can select the different queues according to the priority of the packets and select the bandwidth of each queue. It can also discard at a different ratio when the broad bandwidth is jam.

Table 39: QoS interface parameters

Parameter	Function
Real-time monitor	The data packet of the network video monitor.
Command	The non-monitor packet such as device setup and search.

Event

Video detect

Motion Detect

The motion detect interface is made up of the following fields:

Table 40: Motion Detect interface parameters

Parameter	Function
Enable	Check the box to enable motion detection function.
Enable video mask detection	Check the box to enable video mask detection alarm.
Enable defocus detection	Check the box to enable defocus detection alarm.
Working Period	Set the arm/disarm period. Click Set to open the Period setup menu. Check the box in front of each period to enable it. Period setup can be done by dragging and dropping the working period.
Anti-dither	The system only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.

Parameter	Function
Area	Set motion detection region and its sensitivity and area. The higher the sensitivity is, the easier it is to trigger motion detection. The smaller the area, the easier to trigger motion detect. The default covers all regions. Click on Save to enable the setup.
Record	Check to enable auto record when an alarm. Set the record period in Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay the recording for a specified time after alarm has ended. The value ranges from 10s to 300s.
Relay out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when an alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after an alarm has ended. The value ranges from 10s to 300s.
Send Email	If you enable this function, the System can send out an email to alert you when an alarm occurs and ends. Set the email address in Network > SMTP
PTZ	Set PTZ movement when an alarm occurs. For example, go to preset x when there is an alarm. The event type includes: Preset, Tour and Pattern.
Snapshot	Check the to enable the system to backup a motion detection snapshot file. Set the snapshot period in Storage > Schedule

Different colors represent different areas. Each area can set different detection zones. The detection zone can be irregular and discontinuous.

The **Area** interface is made up of the following fields:

Table 41: Area interface parameters

Parameter	Function
Name	The default area name includes Region1, Region2, Region3, Region4 and Custom.
Sensitivity	Brightness sensitivity. Motion detection is triggered more easily with higher sensitivity. Set up different sensitivities from 0 to 100. The recommended value is 30 to 70.
Area threshold	Used to check the relationship between an object and its area. The lower the area threshold, the easier it is to trigger motion detection. Set up different threshold for each area from 0 to 100. The recommended value is 0 to 10.
Waveform	Red means motion detect is triggered. Green means motion detect is not triggered.
Delete all	Clear all the detection areas with color.
Delete	Delete the selected area.

Video Tamper

The Video Tamper interface is made up of the following fields:

Table 42: Video Tamper interface parameters

Parameter	Function
Enable Video Tampering	Check the box to enable the Video Tamper function.
Enable Defocus Detection	Check the box to enable the Defocus Detection function.

Parameter	Function
Working Period	The Video Tamper function becomes activated in the specified periods. You can specify up to six periods in one day. Select Setup to specify working periods. Select the dates to which you want to apply the setup, then set the start and end times for each period. Click Save and the system goes back to the motion detection interface.
Record	Enable recording.
Record Delay	The system can delay recording for a specified time after the video tampering alarm has ended. Enter a delay in seconds between 10 and 300.
Relay out	Enable alarm activation.
Alarm Delay	The system can delay the alarm output for a specified time after video tampering alarm ended. Enter a delay in seconds between 10 and 300.
Email	Enable this function to send an email when the video tampering alarm is triggered.
PTZ	Set a PTZ movement to be activated when the video tampering alarm is triggered. Select the Activation type, which can be Preset , Tour , or Pattern , then select the number of the movement.
Snapshot	Enable the snapshot function.

Scene Changing

The Scene Changing interface is made up of the following fields:

Table 43: Scene Changing interface parameters

Parameter	Function
Enable	Check the box to enable the Scene Changing function.
Working Period	The Scene Changing function becomes activated in the specified periods. You can specify up to six periods in one day. Select Setup to specify working periods. Select the dates to which you want to apply the setup, then set the start and end times for each period. Click Save and the system goes back to the motion detection interface.
Record	Enable recording.
Record Delay	The system can delay recording for a specified time after the Scene Changing alarm has ended. Enter a delay in seconds between 10 and 300.
Relay out	Enable alarm activation.
Alarm Delay	The system can delay the alarm output for a specified time after Scene Changing alarm ended. Enter a delay in seconds between 10 and 300.
Email	Enable this function to send an email when the Scene Changing alarm is triggered.
PTZ	Set a PTZ movement to be activated when the Scene Changing alarm is triggered. Select the Activation type, which can be Preset , Tour , or Pattern , then select the number of the movement.
Snapshot	Enable the snapshot function.

Audio detect

The Audio detect interface is made up of the following fields:

Table 44: Audio detect interface parameters

Parameter	Note
Enable Input Abnormal	Check to trigger an alarm when the system detects abnormal audio input.
Enable Intensity Change	Check to trigger an alarm when the system detects the audio intensity change exceeds the threshold.
Sensitivity	Set the sensitivity level from 1 to 100. When the volume of the input sound is greater than the volume of the continuous environment, it can be judged as audio abnormality. Adjust this setting according to the actual environmental test.
Threshold	Set the threshold level from 1 to 100. Used to set the intensity of filtered environmental sound. If the environmental noise is louder, set the value higher. Adjust this setting according to the actual environmental test.
Working Period	This function becomes activated in the periods specified. Click Setup to open the working period menu. There are six periods in one day. Draw a circle to enable the corresponding period. Select the date. If you do not select, the current setup applies to today only. Select All week to apply to the whole week. Click OK and the system goes back to the motion detection interface. Click Save to exit.
Anti-Dither	The system only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Record	Check the box so that when an alarm occurs, the system auto records. Set the recording period in Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay recording for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Relay-out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when the alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Send Email	Enable this function to allow the system to send out an email to alert you when an alarm occurs and ends.
PTZ	Set PTZ movement when an alarm occurs. For example, go to preset x when there is an alarm. The event type includes: Preset, Tour and Pattern.
Snapshot	Activate the snapshot function.

Smart plan

Select from the following options:

- Face detection
- Heat map
- IVS
- People counting

IVS

The IVS interface is made up of the following fields:

Table 45: IVS parameters

Parameter	Function
Rule	Select the rule to apply.
Working Period	Click Setup to open the Period setup menu. Check the box in front of each period to enable it. Period setup can be done by dragging and dropping the working period.
Direction	Select A > B or B > A.
Record	Check to enable auto record when an alarm. Set the record period in Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay the recording for a specified time after alarm has ended. The value ranges from 10s to 300s.
Relay out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when an alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after an alarm has ended. The value ranges from 10s to 300s.
Send Email	If you enable this function, the System can send out an email to alert you when an alarm occurs and ends. Set the email address in Network > SMTP
Snapshot	Check the to enable the system to backup a motion detection snapshot file. Set the snapshot period in Storage > Schedule
Draw Rule	Draw a rule in the video monitoring window.
Target Filter	Set the maximum and minimum size, or draw the target.

Face detection

The Face detection interface is made up of the following fields:

Table 46: Face detection parameters

Parameter	Function
Enable	Check the box to enable Face detection function.
Working Period	Set the arm/disarm period. Click Set to open the Period setup menu. Check the box in front of each period to enable it. Period setup can be done by dragging and dropping the working period.
Enable face enhancement	Check the box to enable face enhancement function.
Record	Check to enable auto record when an alarm. Set the record period in Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay the recording for a specified time after alarm has ended. The value ranges from 10s to 300s.
Relay out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when an alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after an alarm has ended. The value ranges from 10s to 300s.
Send Email	If you enable this function, the System can send out an email to alert you when an alarm occurs and ends. Set the email address in Network > SMTP
Snapshot	Check the to enable the system to backup a motion detection snapshot file. Set the snapshot period in Storage > Schedule

Parameter	Function
Enable Face Exposure	Check the box to enable face exposure.
Face Target Brightness	Set the Face Target Brightness.
Face Exposure Detection Interval	Set the Face Exposure Detection Interval.
Target Filter	Set the maximum and minimum size, or draw the target.

People counting

The People counting interface is made up of the following fields:

Table 47: People counting parameters

Parameter	Function
Enable	Check the box to enable people counting function.
Enable OSD	Check the box to enable OSD function.
Working Period	Set the arm/disarm period. Click Set to open the Period setup menu. Check the box in front of each period to enable it. Period setup can be done by dragging and dropping the working period.
Lens Direction	Select Vertical or Inclined.
Rule Name	Enter the name of the rule you are creating.
Direction	Select A > B or B > A.
Enter number	Set a maximum limit to the number of people entering an area. An alarm is triggered when this number is exceeded.
Leave Number	Set a maximum limit to the number of people leaving an area. An alarm is triggered when this number is exceeded.
Stranded Number	Set a maximum limit to the number of people remaining in an area. An alarm is triggered when this number is exceeded.
Record	Check to enable auto record when an alarm. Set the record period in Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay the recording for a specified time after alarm has ended. The value ranges from 10s to 300s.
Relay out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when an alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after an alarm has ended. The value ranges from 10s to 300s.
Send Email	If you enable this function, the System can send out an email to alert you when an alarm occurs and ends. Set the email address in Network > SMTP
Snapshot	Check the to enable the system to backup a motion detection snapshot file. Set the snapshot period in Storage > Schedule
Draw Rule	

People counting report

The People counting report interface is made up of the following fields.

Table 48: Report parameters

Parameter	Function
Report Type	Report types include: Day, Month, Year.
Start time	Set the start time of the requested report.
End time	Set the end time of the requested report.
Flow direction	Select values to appear in the report.
Search	Generate the report.
Export	Export the report.

Heat map

The Heat Map interface is made up of the following fields:

Table 49: Heat map parameters

Parameter	Function
Enable	Check the box to enable heat map function.
Working Period	Set the arm/disarm period. Click Set to open the Period setup menu. Check the box in front of each period to enable it. Period setup can be done by dragging and dropping the working period.

Heat Map Report

The Heat Map Report interface is made up of the following fields.

Table 50: Report parameters

Parameter	Function
Start time	Set the start time of the requested report.
End time	Set the end time of the requested report.
Search	Generate the report.
Export	Export the report.

Temperature Alarm

Notice *Only the BX Thermal Bullet Camera supports this alarm function.*

The Temperature Alarm interface is made up of the following fields:

Table 51: Temperature Alarm interface parameters

Parameter	Note
Enable	Check to enable temperature alarm activation.
Working Period	Set the alarm period by checking the box for a specified time period and day. The alarm is only activated within a set time range.
Anti-dither	The system only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Record	Check the box so that when an alarm occurs, the system auto records. Set the recording period in

Parameter	Note
	Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay recording for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Relay-out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when the alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Send Email	Enable this function to allow the system to send out an email to alert you when an alarm occurs and ends.
Snapshot	Activate the snapshot function.

Fire Warning

Notice *Only the BX Thermal Bullet Camera supports this alarm function.*

The Fire Warning interface is made up of the following fields:

Table 52: Fire Warning interface parameters

Parameter	Note
Enable	Check to enable fire warning activation.
Target Size	Set the minimum target size which can be recognized by the fire warning. An alarm is generated when the target pixel size is exceeded.
Sensitivity	Set the alarm sensitivity, from 1 to 100. The higher the sensitivity is, the more alarms are generated. This may result in false alarms.
Redraw Rule	Click Redraw Rule to redraw the corresponding rules.
Measurement Items	Click + to add a new alarm area. Click the corresponding trash icon to delete a measurement item.
Working Period	Set the alarm period by checking the box for a specified time period and day. The alarm is only activated within a set time range.
Anti-dither	The system only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Record	Check the box so that when an alarm occurs, the system auto records. Set the recording period in Storage > Schedule and select auto record in the record control interface.
Record Delay	The system can delay recording for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Relay-out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when the alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Send Email	Enable this function to allow the system to send out an email to alert you when an alarm occurs and ends.
Snapshot	Activate the snapshot function.

Alarm

The Alarm interface is made up of the following fields:

Table 53: Alarm interface parameters

Parameter	Function
Enable	Check the box to enable this function.
Relay in	Select the incoming alarm relay.
Working Period	This function becomes activated in the periods specified. There are six periods in one day. Draw a circle to enable the corresponding period. Select the date. If you do not select, the current setup applies to today only. Select All week to apply to the whole week. Click OK and the system goes back to the motion detection interface. Click Save to exit.
Anti-dither	The system only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Sensor type	Select either NO or NC. From NO to NC, system enables alarm. From NC to NO, system disables alarm.
Relay out	Enable the alarm activation function. Select the alarm output port so that the system can activate the corresponding alarm device when the alarm occurs. Please note the relay output number here is for reference only. The alarm output number may vary due to different series products.
Alarm Delay	The system can delay the alarm output for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Record Channel	The system auto activates the motion detection channel to record once an alarm occurs (working with motion detection function). Navigate to Storage > Schedule to set the current channel as a general record.
Record Delay	The system can delay recording for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Send Email	Enable this function to allow the system to send out an email to alert you when an alarm occurs and ends.
PTZ	Set PTZ movement when an alarm occurs. For example, go to preset x when there is an alarm. The event type includes: Preset, Tour and Pattern.
Snapshot	Input the capture channel number so that the system can backup a motion detection snapshot file.

Abnormality

Abnormality includes the following statuses:

- No SD card
- Capacity warning
- SD card error
- Disconnection or IP conflict
- Illegal access

Devices which support the SD card have following the abnormality functions:

- No SD Card
- Capacity Warning
- SD card error

The abnormality interface is made up of the following fields:

Table 54: Abnormality interface parameters

Parameter	Note
Event Type	SD card abnormality alarm event type.

Parameter	Note
Enable	Check to enable SD card abnormality alarm.
Record	Enable recording.
Record Delay	The system can delay the recording for a specified time after the alarm has ended. The value ranges from 10s to 300s.
Relay out	Check to enable the alarm activation output interface. This can activate the corresponding alarm output device when an alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after the alarm has ended. The value ranges from 10s to 300s. No SD card, capacity warning, SD card error, alarm delay starts from the beginning of alarm.
Send email	Enable this function to allow the system to send out an email to alert you when an alarm occurs and ends. Users can set email address in Network > SMTP
SD Card Capacity Limit	Set the remaining capacity of an SD card. An alarm will occur when the remaining capacity of SD card is less than this percentage.
Enable Login Error	Set the maximum number of failed login attempts a user can make before an alarm is activated.

When the device is offline or has IP conflicts, the abnormal alarm is similar to the case of an SD card error.

When the login password has been entered incorrectly multiple times, the illegal access alarm occurs. This operation is similar to the SD card error. Allow login error times, as when it exceeds this limit, the user account will be locked.

Storage

Schedule

Use the Record Schedule and Snapshot Schedule interfaces to add or remove the recording schedule and snapshot schedule setup.

There are six periods in one day, and the different recording modes scheduled are indicated with different colours. You can view the current time period setup from the color bar.

- **Green:** general (auto) record/snapshot.
- **Yellow:** motion detect record/snapshot.
- **Red:** alarm record/snapshot.

Use the Holiday Schedule interface to disable recording and snapshot scheduling for specific days.

Please make sure you have enabled the corresponding record mode in the **Setup > Storage > Conditions**

Destination

The destination interface is used to set the storage mode of the BX or GX Range Cameras record file or snapshot pictures.

The system can save according to the event types. This corresponds to the three modes (general/motion/alarm) in the Schedule interface. Check the box to enable the save functions.

You can select one of the following storage options:

- Local
- FTP

- NAS

The destination interface is made up of the following fields:

Table 55: Destination interface parameters

Parameter	Function
Event Type	General, Motion detect or Alarm.
Local	Save in the SD card.
FTP	Save in the FTP server.
NAS	Save in the NAS server.

The local interface is used to view local SD card information. You can also operate the read-only, write-only, hot swap and format operation.

The FTP interface is used to enable the FTP function. When network disconnect has occurred, or there is malfunction, emergency storage can save the record/snapshot picture to the local SD card.

The NAS interface is used to enable the NAS function.

Record control

The record control interface is made up of the following fields:

Table 56: Record control interface parameters

Parameter	Function
Pack Duration	Select file size. Default setup is 60 minutes.
Pre-record	Enter the pre-record value here. For example, enter 4 so that system can read the previous four seconds' video before the alarm occurrence from the buffer and record the 4 seconds video in the file. If there is no record when the alarm record or motion detect record occurred, the system can record the N seconds' video before the event occurrence in the file.
Disk Full	Stop: Current working HDD is overwriting or current HDD is full, it will stop record. Overwrite: Current working HDD is full; it will overwrite the previous file.
Record Mode	There are three modes: Auto/manual/close.
Record Bit Stream	Select main stream or extra stream.

System

General

The general interface includes the general setup and the date/time setup.

The general setup section is made up of the following fields:

Table 57: General interface parameters

Parameter	Function
Device Name	Set the device name.
Video Standard	Display the video standard.

Parameter	Function
Language	Select the language from the drop-down list. The device must reboot to get the modification activated.
Location	Set the device location.
TV Out	Enable video to be viewed on an analog monitor/encoder.

Date and time

The date and time interface is made up of the following fields:

Table 58: Date and time interface parameters

Parameter	Function
Date format	Select the date format from the drop-down.
Time Format	There are two options: 24-H and 12-H.
Time zone	The time zone of the device.
System time	Set system time. This field becomes valid after you set.
Sync PC	Click to save the system time as your PC current time.
DST	Enable Daylight Saving Time.
DST type	Select the format in which you want to enter the Daylight Saving Time start and end times: <ul style="list-style-type: none"> • By date • By week
DST Start and End Times	Demarcate the period when Daylight Saving Time applies.
NTP	Check the box to enable NTP function.
NTP server	Set the time server address.
Port	Set the time server port.
Update period	Set the sync periods between the device and the time server. The update function is null if the value is 0.

Splicing

Notice *Only the BX720 8MP Panoramic Dome Camera supports this function.*

For the BX 8MP Panoramic Dome camera, the panoramic view is composed of 4 spliced images. If any splicing artifacts are seen in the camera view, performing the splicing calibration can improve image quality.

Account

- User name or user group name can have a maximum of 15 characters. The space at the beginning or end of the string is null. The valid string includes: character, number, space and underline.
- The maximum amount of users permitted is 20.
- The maximum amount of groups permitted is 8.

- The factory default setup includes two levels: user and admin. User management adopts group/user modes. The user name and the group name must be unique. One user must be included in only one group.

User name

Use the user name interface to add/remove user and modify user name.

1. Check the box to enable anonymous login function.
2. Enter the address for the preview interface into a standard browser and log in.
3. Open the **Add user** dialog to add a name to a group and set the user rights.
4. Input the user name and password and then select one group for the current user.
The user rights cannot exceed the group right setup.
Ensure that the general user has the lower rights setup than the admin.

Modify user

Use this dialog to modify the user property, belonging group, password and rights.

Modify password

Use this dialog to modify the user password. Enter the old password and then input the new password twice to confirm the new setup. Click **OK** to save.

Users cannot modify others' passwords.

Group

The group management interface can add/remove group, modify group password and etc.

The **Add group** dialog is used to add a group and set its corresponding rights. Input the group name and then check the box to select the corresponding rights. It includes: preview, playback, record control, PTZ control and etc.

Click **Modify group** to modify group information such as remarks and rights.

PTZ

The Network PTZ interface is made up of the following fields:

Table 59: Network PTZ interface parameters

Parameter	Function
Pan/Tilt Control	Check to enable Pan/Tilt Control.
Protocol	Select the corresponding protocol.

The Analog PTZ interface is made up of the following fields:

Table 60: Analog PTZ interface parameters

Parameter	Note
Address	Address of the corresponding BX or GX Range Cameras. By default this is 1.
Baud rate	Select the Baud rate for camera. By default is 9600.
Data Bit	Default setting is 8.
Stop Bit	Default setting is 1.
Parity	Set parity mode of the protocol. Default setting is 0.

Default

Click **Default** on the **Default** interface to restore the entire system to factory default settings. The system cannot restore some information such as network IP address.

Import/Export

The Import/Export interface is made up of the following fields:

Table 61: Please refer to the following sheet for detailed information.

Parameter	Function
Import	Import the local setup files to the system.
Export	Export the corresponding system setup to your local PC.

Auto maintenance

The auto maintenance interface is used to select to auto reboot and auto delete the old files interval from the drop-down list.

To use the auto delete old files function, set the file period.

Upgrade

The upgrade interface is used to perform software upgrades on the system.

Select the upgrade file and click **Upgrade** to begin the firmware update.

Notice *Do not turn off the device power, disconnect the device, reboot or shutdown the device during the update period.*

Notice *If the incorrect program is updated, reboot the device. Errors in upgrades may cause some modules of the device to malfunction.*

Information

Version

The version interface is used to view system software version, WEB version, release date and etc.

Log

Use the Log interface to view the system log.

Table 62: Log interface parameters

Parameter	Function
Type	Log types include: system operation, configuration operation, data operation, alarm event, record operation, and user management, log clear.
Start time	Set the start time of the requested log.

Parameter	Function
End time	Set the end time of the requested log.
Search	Select log type from the drop-down list and click Search to view the list. Click Stop to terminate the current search operation.
Detailed information	Select one item to view the detailed information.
Clear	Click to delete all displayed log files.
Backup	Click to backup log files to current PC.

Use the Remote Log interface to manage connection details for a remote log.

Table 63: Remote Log interface parameters

Parameter	Function
Enable	Check to enable connection to a remote log.
IP Address	Enter the IP address which you use to connect to the remote log.
Port	Enter the port number which you use to connect to the remote log.
Device number	Enter the device number of the device which hosts the remote log.

Online User

The online user interface is used to view online user name, group name, IP address and login time.

Temperature

Notice *Only the BX Thermal Bullet Camera supports this measurement function.*

Rule Setup

Set up Rules in the Parameter Config interface on the **Rule** screen.

The Parameter Config interface is made up of the following fields:

Table 64: Parameter Config interface parameters

Parameter	Note
Measurement Items	Click + to add a new alarm area. Click the corresponding trash icon to delete a measurement item.
Open Local Config	Check to enable the local configuration function.
Target Radiation Coefficient	Optionally, set the target emissivity from 0 to 1.
Target Distance	Optionally, set the distance between the camera and the intended target from 0 to 1000m.
Target Reflection Temperature	Optionally, set the target temperature from 0 to 550°C.
Relay-out	Enable the alarm activation function. Select the alarm output port so that the system can

Parameter	Note
	activate the corresponding alarm device when the alarm occurs.
Alarm Result	Set the temperature mode that triggers the alarm. Spot: Optional Line: Max, Min or Average Area: Max, Min, Average, Standard or Middle The Preview interface continues to display the alarm as red after it has been triggered.
Alarm Condition	Set the alarm condition: Below, Match or Above.
Alarm Threshold Temperature	Optionally, set the temperature threshold for triggering the alarm from 0 to 550°C.
Temperature Error	Optionally, set the temperature error margin from 0 to 10°C.
Temperature Duration	Optionally, set the length of time for which the set temperature must be exceeded in order to trigger the alarm. From 0 to 1000s.
Redraw Rule	Click Redraw Rule to redraw the corresponding rules.

Temperature Contrast

The Temperature contrast function compares the temperature of a selected spot, line or area to the average temperature. The result is displayed in the **Preview** interface.

1. Click **+** to add contrast record.
2. Select the targets to be compared from the drop-downs.
3. Click **Save**.

The contrast result is displayed to the left of the **Preview** interface.

Global

The Global interface is made up of the following fields:

Table 65: Global interface parameters

Parameter	Note
Temperature Switch	Check to enable the temperature switch function. This function displays the real-time temperature of the target spot on the Preview interface.
Temperature Unit	Optionally, set the displayed temperature unit. °C or °F
Relative Humidity	Optionally, set the environment relative humidity from 0 to 100%.
Atmospheric Temperature	Optionally, set the environmental temperature from 0 to 100°C.
Physical Radiation Coefficient	Optionally, set the physical radiation coefficient from 0 to 1.
Object Distance	Optionally, set the physical distance of the target object from 0 to 1000m.
Object Reflective Temperature	Optionally, set the object reflective temperature from 0 to 100°C.
Hot Spot Follow	Check to enable hot spot detection tracing. This function displays the spot with the maximum temperature and minimum temperature in the Preview interface.

Parameter	Note
High CTMaker Color	Set the display color of high temperatures.
Low CTMaker Color	Set the display color of low temperatures.
Isotherm	Check to enable the Isotherm function. The highlighted image is displayed with areas between the minimum and maximum temperatures in a bright color. Areas at other temperatures are displayed in monochrome.
Min Temperature	Set the minimum temperature. When the gain mode is set to below the minimum temperature mode, the range is from -40°C to 160°C. When the gain mode is set to below the high temperature mode, the range is from -40°C to 600°C.
Medium Temperature	Set the medium temperature. When the gain mode is low temperature, the range is from -40°C to 160°C. When the gain mode is high temperature, the range is from -40°C to 600°C.
Max Temperature	Set the maximum temperature. When the gain mode is low temperature, the range is from -40°C to 160°C. When the gain mode is high temperature, the range is from -40°C to 600°C.
Saturation Temperature	Set the saturation temperature. When the gain mode is low temperature, the range is from -40°C to 160°C. When the gain mode is high temperature, the range is from -40°C to 600°C.
Color Code	Check to display the color code to one side of the Preview interface.

Heatmap

The Heatmap interface is made up of the following fields:

Table 66: Heatmap interface parameters

Parameter	Note
Export Heatmap	Click to export the Heatmap.

4 ALARM

Click **Alarm function** to display the Alarm interface.

Use the alarm interface to set the device alarm type and alarm sound setup. When a specified alarm has occurred, the system can record the corresponding alarm information on the right pane of the alarm list.

Table 67: Alarm interface parameters

Type	Parameter	Function
Alarm type	Motion detect	System triggers alarm when motion detection alarm occurs.
	Disk full	System triggers alarm when disk is full.
	Disk Error	System triggers alarm when disk error happens.
	Video Tamper	System triggers alarm when video is tampering.
	External alarm	Alarm input device sends out alarm.
	Illegal Access	System triggers alarm when the password has been entered incorrectly a certain number of times.
	Audio Detect	System triggers alarm when audio detect occurs.
	IVS	System triggers alarm when IVS detection occurs
	Scene Changing	System triggers alarm when a scene change is detected.
Operation	Prompt	System automatically pops up alarm dialog.
Alarm audio	Audio	When alarm occurs, system auto generates alarm audio. The audio supports customized setup.
	Path	Specify the alarm sound file.

5

INTELLIGENT AUTO-TRACKING

BX520 HD Adaptive IR PTZ Cameras can automatically monitor, intelligently detect and track a defined object using zoom, recording and alarm functions.

The device can carry out effective surveillance without any staff on site. It supports various action rules as well as auto-tracking and manual tracking simultaneously.

The BX520 HD Adaptive IR PTZ Cameras can be used in high-risk environments where staffing is low, such as banks, power stations and prisons.

The following tracking types are available:

- Single-scene tracking
- Multiple-scene tracking
- Panorama-scene tracking

Configure tracking types using the IVS Web setup interface.

Capabilities

Intelligently track objects using a BX520 HD Adaptive IR PTZ Camera and the web configuration interface. The BX520 HD Adaptive IR PTZ Cameras have the following capabilities.

Tripwire

Detect when a object crosses a predefined boundary or 'tripwire'.



Figure 12: Object crossing a pre-defined tripwire

- The customized tripwire setup can be a straight line or a line of any shape.

- Trigger alarms for crossing one-way or dual-way.
- There may be several tripwires in one scene to meet the monitor requirements of complex environments.
- Object size filters supported.

Cross Warning Zone

Detect moving objects crossing the specified zone or in the specified zone.

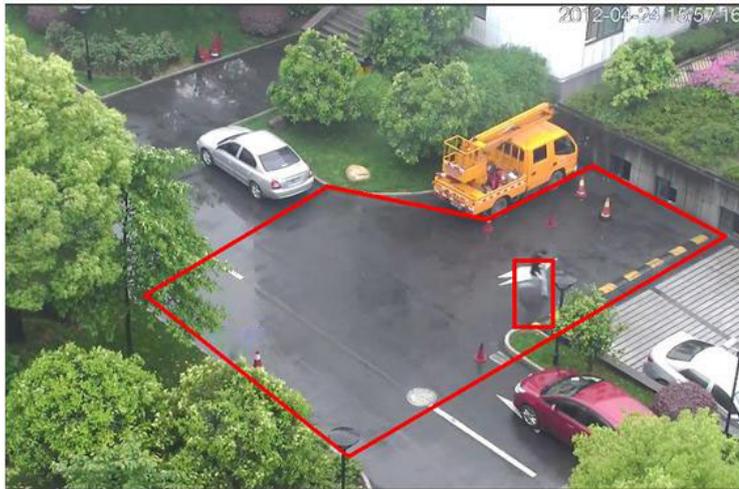


Figure 13: Cross Warning Zone defined

- The warning zone shape and size can be fully customized.
- When an object enters or leaves the zone, the system triggers an alarm.
- Detect moving object action in the zone. The activation amount and the stay time can be fully customized.
- Object size filter supported.

Perimeter Protection

Detect objects crossing a defined perimeter.



Figure 14: Perimeter protection

- The customized e-fence setup can be a straight line or a line of any shape.

- Trigger alarms for crossing one-way or dual-way.
- Object size filters supported.

Loitering Detection

Detect objects that stay in the specified zone longer than the set time.

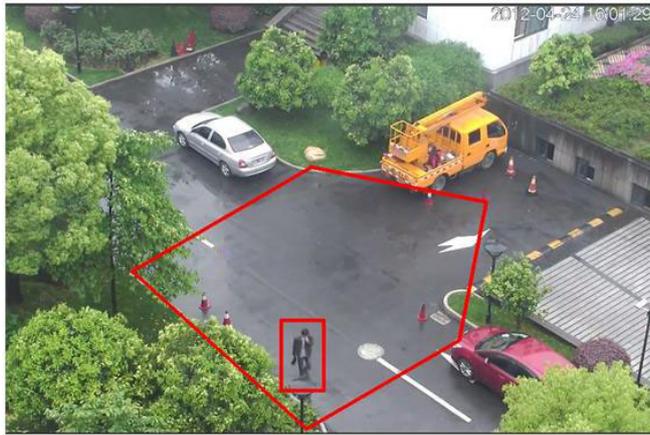


Figure 15: Loitering detection

- The detect zone shape and size can be fully customized.
- Time threshold can be fully customized.
- Object size filters supported.

Abandoned Object Detection

Detect any abandoned objects in the specified zone.



Figure 16: Abandoned object detect zone

- The detect zone shape and size can be fully customized.
- Time threshold can be fully customized.
- Object size filters supported.

Missing Object Detection

Detect any missing objects in the specified zone.

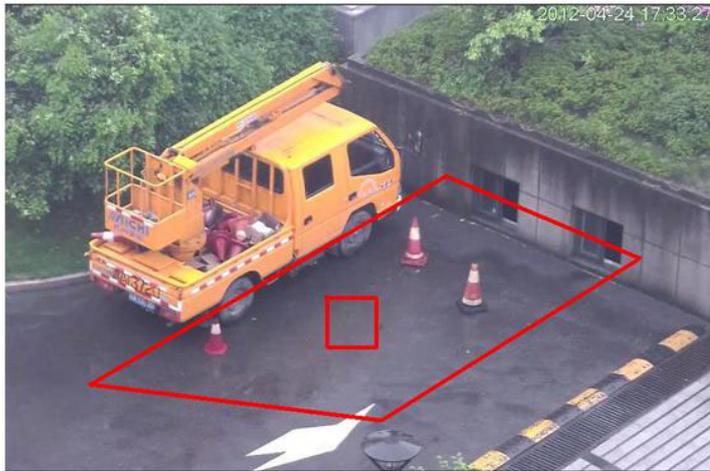


Figure 17: Missing object detect zone

- The detect zone shape and size can be fully customized.
- Time threshold can be fully customized.
- Object size filters supported.

Illegal Parking

Detect any illegal parking events in the specified zone.



Figure 18: Illegal parking detect zone

- The detect zone shape and size can be fully customized.
- Time threshold can be fully customized.

Fast Moving

Detect any fast moving objects in the specified zone.



Figure 19: Illegal parking detect zone

- The detect zone shape and size can be fully customized.
- Speed threshold can be fully customized.

Typical Applications

This section describes how to set up Intelligent Auto-tracking for the most commonly-used applications.

Single-Scene Track

Single-scene tracking is suitable for single-scene monitor zones. Set corresponding alarm activation rules here.

After an object has entered the monitor zone and activated the selected rule, the system can enable Auto-tracking.

For example, if you want to set one prohibited area in the monitor zone, use the 'Cross warning zone' rule.

1. Log in to the Web Configuration pages and click **Set**.
2. Select IVS in the menu tree on the left pane.
3. Set the track parameter.
4. Click **Save** to complete the setup.
5. To set the scene, navigate to the Scene setup interface and click **Add Scene**.
 - The system saves the current monitor area as the new scene by default.
 - a. Use the PTZ to adjust the monitor area and click **Scene Setup** to set a new scene.
 - b. Use the **Zoom** controls to adjust the PTZ zoom position.
 - c. Click **Set Track Rate** to set the track rate for the current scene.
 - d. Edit the Scene name and Track time as appropriate.
 - e. Click **Save** to complete setup.

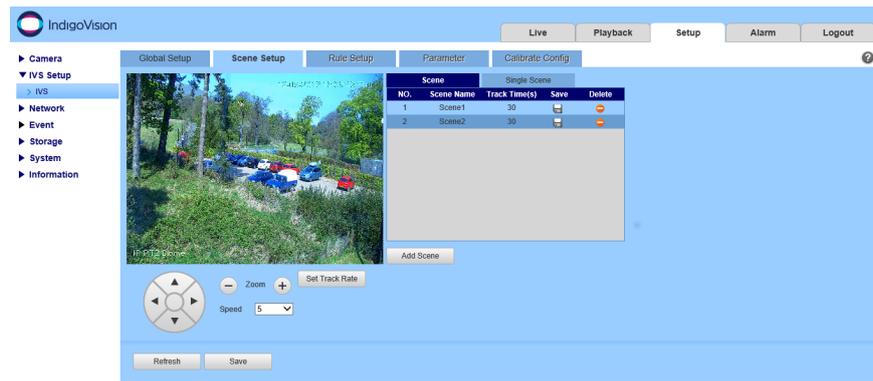


Figure 20: Scene setup interface

6. If appropriate, set the limited scene.
 - a. Check the corresponding box to enable the limited track function.
 - b. Select the track line at the right pane of the interface.
 - c. Use the PTZ direction and zoom to set the up/down/left/right line.
 - d. Click **Save** to complete setup.
7. Select the track scene.
 - a. Navigate to the single-scene track interface and select the monitor scene required.
 - b. Click **Save** button to complete setup.

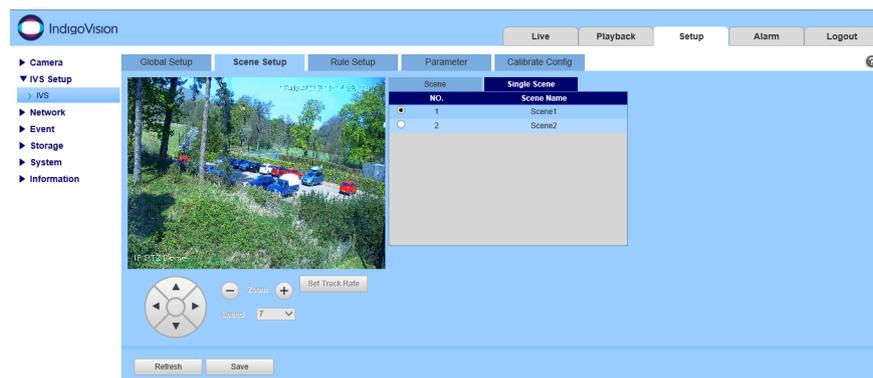


Figure 21: Single-scene track interface

8. Set the intelligent rule.
 - a. Navigate to the Rule setup interface to set the monitor scene of the rule.
 - b. Click **Add Rule**.
The system enables the rule by default.
 - c. Edit the Rule name and type as appropriate.
 - d. Click  and draw the rule threshold in the preview interface in the bottom left panel.
 - e. Select **Both** from the direction dropdown list.
 - f. Click **Save** to complete setup.



Figure 22: Rule setup interface

9. Click **Live**.

Notice *When you switch to a new scene, the system takes 3 seconds to enable Auto-tracking.*

10. Click  to draw the rule in the **Live** pane in the left bottom corner of the interface. Click to begin drawing and right-click to complete. When drawing the perimeter protection rule interface, draw the fence at the top first and then draw the fence at the bottom.
11. Click **Draw** to draw the target filter in the **Live** pane in the left bottom corner of the interface. The green pane indicates the maximum size and the red pane indicates the minimum size. Click the green pane and then drag the four corners to set the zone size.
12. Click **Save**.

Multiple-scene Track

Multiple-scene tracking is suitable for multiple-scene monitor zones. Set alarm activation rules for each scene.

After an object has entered the monitor zone and activated the selected rule, the system can enable Auto-tracking.

For example, if you want to use one BX520 HD Adaptive IR PTZ Camera to monitor three scenes using the Tour function, you can use the 'Loitering detection', 'Perimeter protection' and 'Tripwire' rules on three different scenes.

1. Log in to the Web Configuration pages and click **Set**.
2. Select IVS in the menu tree on the left pane.
3. Set the track parameter.
4. Click **Save** to complete the setup.
5. To set the scene, navigate to the Scene setup interface and click **Add Scene**.
6. Add the path for the multiple-scene track.
7. Click **Save** to complete setup.

Scene		Multi-scene		
NO.	Scene Name	Track Time(s)	Save	Delete
1	Door	30		
2	Wall	30		
3	Walkway	30		
<input type="button" value="Add Scene"/>				

Figure 23: Scene setup interface for multi-scene

8. Set the rule.
 - ▶ For more information, see "Single-Scene Track " on page 59
9. Click **Live** and use the PTZ to set the monitor scene.

Notice When you switch to a new scene, the system takes 3 seconds to enable Auto-tracking.

Panorama-Scene Tracking-Alarm Activation

The system can auto-track objects entering the monitor zone.

For example, you can set the BX520 HD Adaptive IR PTZ Camera to auto-track a recognized object after 1 second, and to keep tracking for 30 seconds.

1. Log in to the Web Configuration pages and click **Set**.
2. Select IVS in the menu tree on the left pane.
3. Check the box corresponding to the appropriate track parameter.
4. Select panorama-scene from the track type dropdown list.
The default activation rule is 'Cross Warning zone'.
5. Set the trigger delay time as 1 second and track time as 30 seconds.
6. Click **Save** to complete the setup.
7. Click **Live** and use the PTZ to set the monitor scene.

Notice When you switch to a new scene, the system takes 3 seconds to enable Auto-tracking.

Panorama-scene Track-Manual Activation

The system can auto-track objects entering the monitor zone.

For example, you can set the BX HD Adaptive IR PTZ Camera to auto-track a recognized object after 1 second, and to display an object frame in a rule. The system records an alarm.

1. Log in to the Web Configuration pages and click **Set**.
2. Select IVS in the menu tree on the left pane.
3. Set the track parameter.
4. Click **Save** to complete the setup.
5. Click **Live** and use the PTZ to set the monitor scene.

Notice *When you switch to a new scene, the system takes 3 seconds to enable Auto-tracking.*

6. Click  and select an object in the scene.

The BX HD Adaptive IR PTZ Camera can track the selected object in the specified monitor zone.

If there are several objects appearing at the same time, click  to select the new tracking object manually.

When enabling intelligent auto-tracking, the PTZ needs to stop intelligent track. The system can enable intelligent track automatically when the PTZ is idle for a period of time.

6

FISHEYE CAMERA CONFIGURATION

This section details the configuration options for fisheye cameras.

The IndigoVision fisheye camera uses a wide-angle lens which can monitor a larger area than would be possible using a conventional camera lens.

You can display video from a fisheye camera in original wide-angle format, or in a rectilinear or panoramic format.

Video monitoring window configuration

Configure how the video monitoring window displays video from the fisheye camera.

1. Log in to the camera, and navigate to **Setup > Camera > Video > Video**.
2. Select the camera's **Installation Mode** from the drop-down.

The **Installation Mode** is the type of surface on which the camera is installed. It defines the orientation of the video displayed in the video monitoring window.

3. Select a **Stream mode**.

The **Stream mode** defines how video is displayed in the video monitoring window. Stream modes are combinations of the following types of video pane:

- **Fisheye**

Displays the whole area covered by the fisheye lens without dewarping.

When displayed with rectilinear video panes, the focal points of the rectilinear video panes are displayed in the fisheye video pane as numbers.

- **Rectilinear**

Displays part of the area covered by the fisheye lens with dewarping.

Zoom in or out in **Live** view by scrolling up and down with the mouse.

To refocus a rectilinear video pane in **Live** view, click and drag a point in its field of view.

- **Panoramic**

Displays a panoramic view of part of the area covered by the fisheye lens with dewarping.

You cannot zoom or refocus a panoramic video pane in **Live** view.

You can select from the following **Stream mode** options:

Table 68: Stream modes

Stream mode	Description of the video monitoring window
1O	1 fisheye video pane.
1P	1 panoramic video pane.
2P	2 panoramic video panes. This option is not available for wall installation.

Stream mode	Description of the video monitoring window
1O+3R	1 fisheye video pane and 3 rectilinear video panes.
1R	1 rectilinear video pane.
4R	4 rectilinear video panes. Hover the mouse over the center of the video monitoring window to display a fisheye video pane.
2R	2 rectilinear video panes.

After you select a stream mode, a confirmation notification is displayed.
The video monitoring window is reset to the options you have selected.

Refocus a rectilinear video pane

In **Live** view, you can refocus a rectilinear video pane on a different part of the area covered by the fisheye camera.

To refocus the video pane to a point within its current field of view, click and drag a point in the rectilinear video pane.

To refocus the video pane to a point outside its current field of view using the fisheye video pane, do the following:

- In **Setup** view, select one of the following stream modes:
 - **1O+3R**
The fisheye video pane is displayed in the video monitoring window.
 - **1R**
To display the fisheye video pane, hover over the lower-right corner of the video monitoring window.
 - **4R**
To display the fisheye video pane, hover over the center of the video monitoring window.

In **Live** view, the focus points of the rectilinear video panes are displayed in the fisheye video pane as numbers.

- In **Live** view, click on the corresponding number in the fisheye video pane, and drag the number to the point on which you want to focus.
The rectilinear pane refocuses immediately.