

XX270-20-00

SN680D-WNIR Network PTZ Dome

Vicon Industries Inc.

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Vicon Industries Inc. does not warrant that the functions contained in this equipment will meet your requirements or that the operation will be entirely error free or perform precisely as described in the documentation. This system has not been designed to be used in life-critical situations and must not be used for this purpose.

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1. Description

The information in this manual provides quick installation and setup procedures for the SN680D-WNIR of Camera Dome. This unit should only be installed by a qualified technician using approved materials in conformance with federal, state, and local codes. Read these instructions thoroughly before beginning an installation. Always refer to Vicon’s website to assure you have the most up-to-date manual, www.vicon-security.com.

Vicon’s SN680D HD Network Dome Camera is designed for performance in the most demanding security installations. The 1080P megapixel pan, tilt, zoom (PTZ) camera series has an integrated 30x optical zoom lens (4.3 mm to 129 mm); integrated IR LEDs provide illumination up to a range of 394 ft (120 m).

The SN680D provides triple-streaming video and supports H.264 compression technology, drastically reducing file sizes and conserving valuable network bandwidth. Users can receive multiple streams simultaneously in different resolutions, frame rates and image qualities for viewing on different platforms.

The 12 VDC camera dome is designed for easy installation. The SN680D can be mounted on a wall or ceiling. Additional accessories allow the unit to be pendant mounted on a wall mount or in-ceiling. The camera can be tilted to 10 degrees above the horizon.

1.1 Components

This system comes with the following components;

Dome Camera	1
Installation Guide/CD	1
RJ-45 Coupler.....	1
2P screw type Connector.....	1
3P screw type Connector.....	1
12VDC Adaptor	1

1.2 Key Features

- **Brilliant video quality**

The network camera offers the highly efficient H.264 video compression, which drastically reduces bandwidth and storage requirements without compromising image quality. Motion JPEG is also supported for increased flexibility.

- **Triple Streams**

The network camera can deliver triple video streams simultaneously at full frame rate in all resolutions up to 1920 x 1080 using Motion JPEG and H.264. This means that several video streams can be configured with different compression formats, resolutions and frame rates for different needs.

- **Image setting adjustment**

The network camera also enables users to adjust image settings such as contrast, brightness and saturation to improve images before encoding takes place.

- **Intelligent video capabilities**

The network camera includes intelligent capabilities such as enhanced video motion detection. The network camera's external inputs and outputs can be connected to devices such as sensors and relays, enabling the system to react to alarms and activate lights or open/close doors.

- **Improved Security**

The network camera logs all user access, and lists currently connected users. Also, its full frame rate video can be provided over HTTPS.

- **Built-in Synchronized IR LED & Fixed IR LED**

The camera is equipped with two built-in IR LEDs, a fixed one for wide view and a zoom synchronized adjustable one for distant view.

- **ONVIF Certificate**

This is a global interface standard that makes it easier for end users, integrators, consultants, and manufacturers to take advantage of the possibilities offered by network video technology. ONVIF enables interoperability between different vendor products, increased flexibility, reduced cost, and future-proof systems.

2. Installation

2.1 Installation Procedure

An optional mounting kit, either a wall mount (V660-HDB242) or ceiling mount (V660-HDB241), is required to install the dome camera.

The wall or ceiling mount must be attached to a structural object such as hard wood or concrete that will support the weight of the mount and dome camera.

The use of a solid backboard is recommended when attaching to gypsum walls.

1. Remove the protection pad and the tape that is attached to the dome camera.
2. Attach the mounting base to wall/ceiling using the supplied M8/M6 tapping screw and plastic bushing.
3. To seal tightly, wrap the thread of the pipe end with Teflon tape about 20 times. Then use a silicone rubber sealant to seal the area where the wall (ceiling) mount and the pipe meet.
4. Place a bead of silicone sealant around the wall and ceiling mount mounting flange; press it to the surface and line up the flange hole with drilled holes.

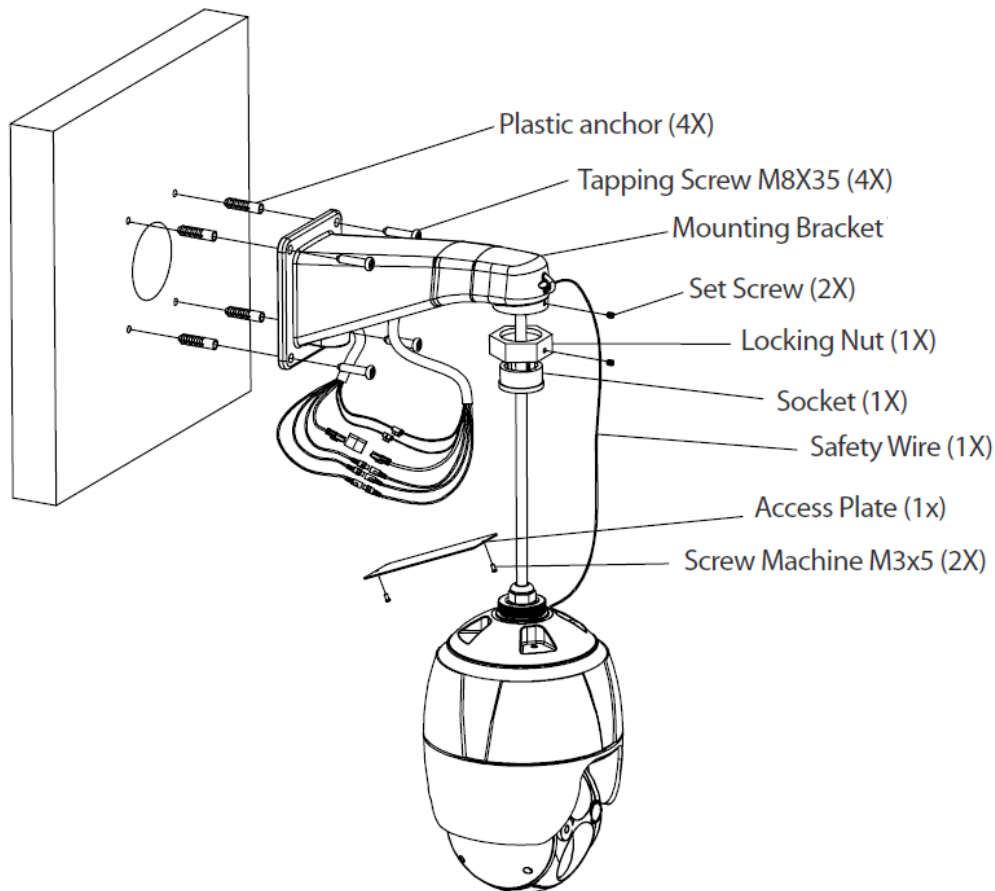
Caution 1: A silicone rubber sealant must be applied to seal the housing to secure waterproofing.

Caution 2: When installing, a mounting bracket must be used.

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1) Installation - Wall Mount

A wall mounting plate is supplied with the wall mount; this must be attached to a structural object such as concrete that will support the weight of the mount and dome camera.

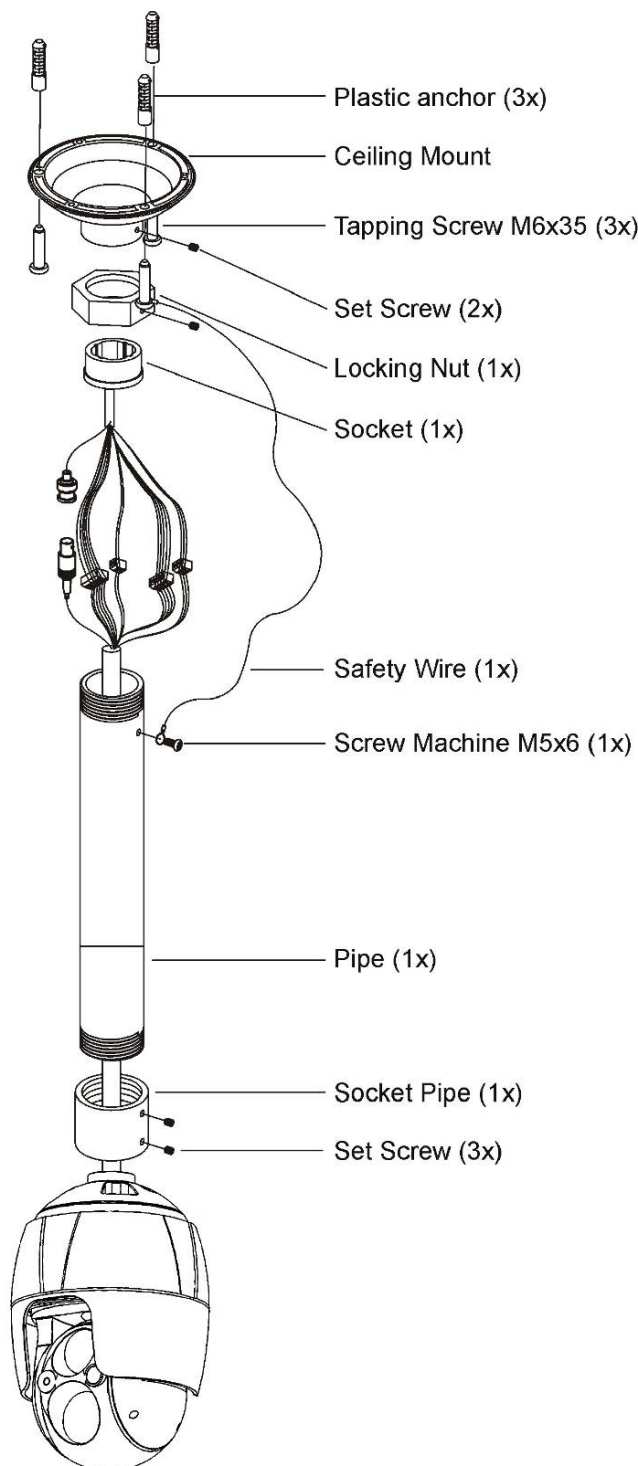


1. Select a suitable mounting location and verify there is sufficient cable to reach the middle of the wall mount.
2. Mark and drill mounting holes in the mounting surface using the wall mount flange as a template. Open a cable access hole, if needed.
3. Secure the mounting plate to the wall using the hardware provided or appropriate for the mounting surface.
4. Pull out cables required to connect to the dome camera from the wall or route cables through a section of 0.75 in. (19 mm) conduit pipe.
5. Remove the cable access plate from the underside of the wall mount bracket.
6. Attach the wall mount bracket using screws; route cables through the access plate hole.
7. Attach the housing's safety wire to the wall mount's latch.
8. Route cables on the dome through the wall mount bracket. Fix the housing to the wall mount bracket using the locking nut and tighten the housing set screw with the supplied wrench.
9. After connecting cables, reattach the access plate.

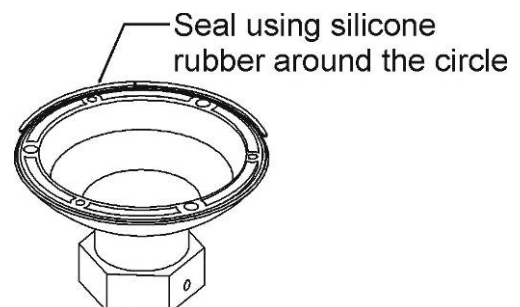
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2) Installation - Ceiling Mount

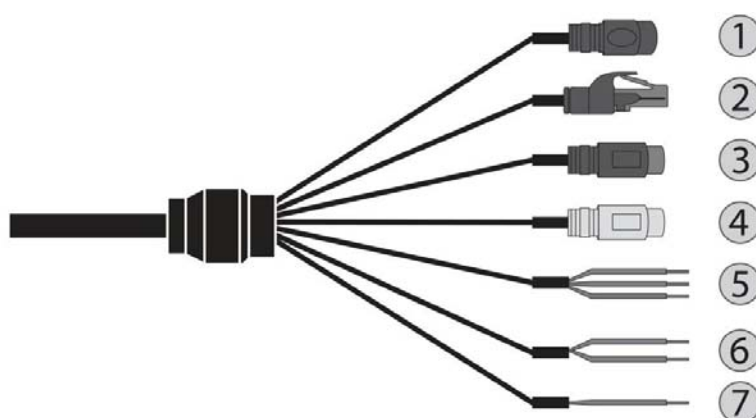
The ceiling mounting plate must be attached to a structural object such as concrete that will support the weight of the mount and Dome Camera.



1. Select a suitable mounting location and verify there is sufficient cable to connect with cables from the housing.
2. Mark and drill mounting holes in the surface using the ceiling mount flange as a template.
3. Secure the mounting plate to the wall using the hardware provided or appropriate for the mounting surface.
4. Pull out cables required to connect to the dome camera from the ceiling.
5. Attach the ceiling mount plate using screws; route cables through the locking nut.
6. Route cables through the pipe. Tighten the housing with the pipe using the socket.
7. Attach the housing's safety wire to the ceiling mount's M6X35 tapping screw.
8. After connecting cables, fix the pipe to the ceiling mount using the locking nut.
9. Tighten set screws of the socket and locking nut with the supplied wrench.



2.2 Basic Configuration of Camera System



No.	CONNECTOR	COLOR	DESCRIPTION
1	DC JACK	BLACK	12 VDC
2	RJ-45	BLACK	Ethernet, RJ-45 port compatible with 10/100Mbps
3	RCA	BLACK	AUDIO INPUT
4	RCA	GRAY	AUDIO OUTPUT
5	3P Cable	GRAY	GND
		RED	ALARM INPUT
		BLUE	ALARM OUTPUT
6	2P Cable	BROWN	RS485+(A)
		BROWN/WHITE	RS485-(B)
7	1P Cable	YELLOW/GREEN	F_GND

The camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes.

2.3 Connections

- **Connecting the Network**

Connect a standard RJ-45 cable to the network port of the camera. Generally a cross-over cable is used for directly connection to PC, while a direct cable is used for connection to a hub.

- **Connecting Alarms**

- **AI (Alarm Input)**

You can use external devices to signal the camera to react on events. Mechanical or electrical switches can be wired to the AI (Alarm Input) and G (Ground) connectors.

- **G (Ground)**

NOTE: All the connectors marked G or GND are common.

Connect the ground side of the alarm input and/or alarm output to the G (Ground) connector.

- **AO (Alarm Output)**

The camera can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Output) and G (Ground) connectors.

- **Connecting to the RS485**

The camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 half-duplex serial communications signals.

- **Connecting the Power**

Connect power of 12 VDC 5 A for the camera.

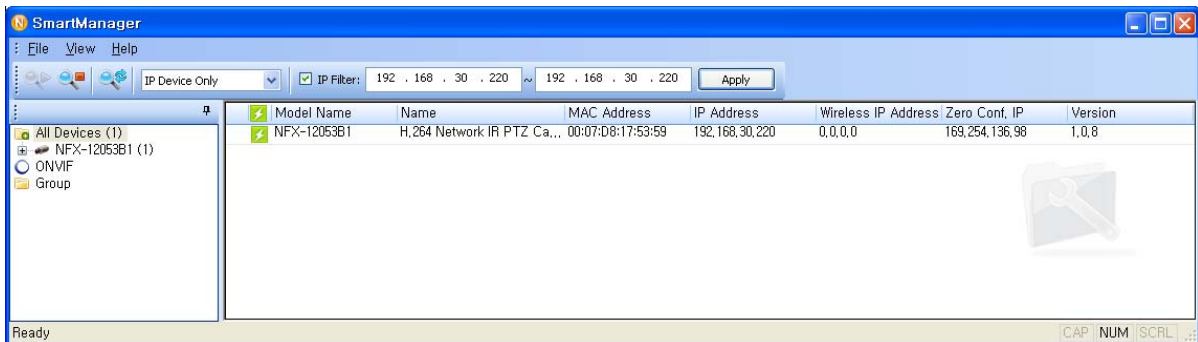
Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

2.4 Network Connection & IP assignment

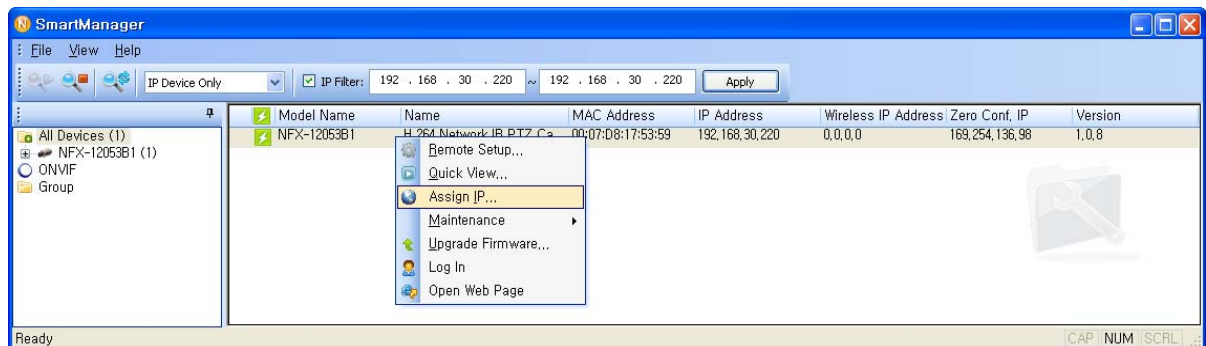
The network camera is designed for use on an Ethernet network and requires an IP address for access. Most networks today have a DHCP server that automatically assigns IP addresses to connected devices. By the factory default, your camera is set to obtain the IP address automatically via DHCP server. If your network does not have a DHCP server the network camera will use 192.168.1.100 as the default IP address.

If DHCP is enabled and the product cannot be accessed, run the “SmartManager” utility on the CD to search and allocate an IP address, or reset the product to the factory default settings and then perform the installation again

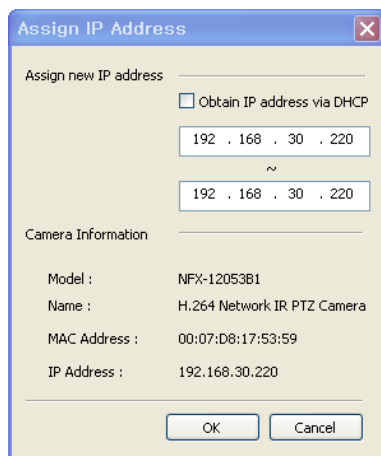
- 1) Connect the network camera/device to the network and power up.
- 2) Start SmartManager utility (Start > All programs > SmartManager > SmartManager). The main window will display, and after a short while any network devices connected to the network will be displayed in the list.



- 3) Select the camera on the list and click right button of the mouse. The pop-up menu displays as below.



- 4) Select Assign IP Address. The Assign IP window will display. Enter the required IP address.



Note: For more information, refer to the SmartManager User's Manual.

3. Operation

The network camera can be used with Windows® operating system and browsers. The recommended browsers are Internet Explorer®, Safari®, Firefox®, Opera™ and Google® Chrome® with Windows.

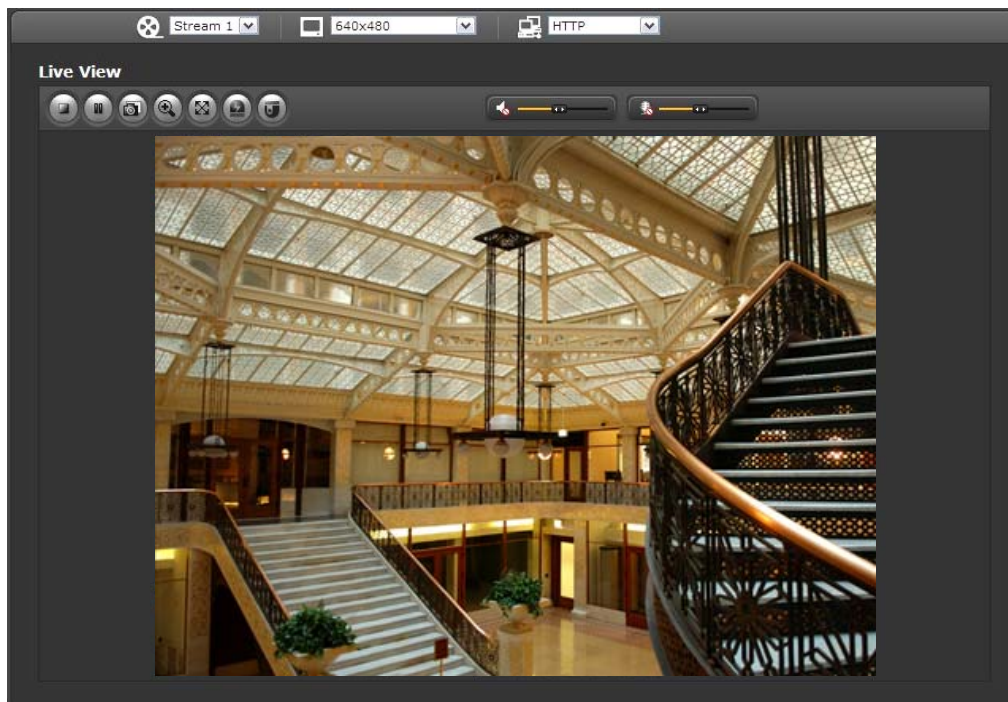
Note: To view streaming video in Microsoft Internet Explorer, set your browser to allow ActiveX controls.

3.1 Access from a browser

- 1) Start a browser (i.e., Internet Explorer).
- 2) Enter the IP address or host name of the network camera in the Location/Address field of your browser.
- 3) A starting page displays. Click **Live View** or **Setup** to enter web page.



- 4) The network camera's **Live View** page appears in your browser.

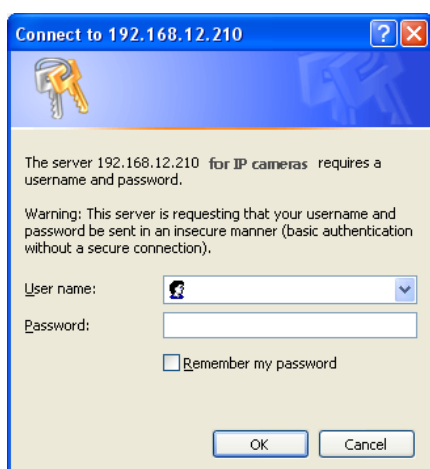


3.2 Access from the internet

Once connected, the network camera is accessible on your local network (LAN). To access the network camera from the Internet you must configure your broadband router to allow incoming data traffic to the network camera. To do this, enable the NAT traversal feature, which will attempt to automatically configure the router to allow access to the network camera. This is enabled from Setup > System > Network > NAT. For more information, refer to “3.5.7 System > Network > NAT” of User's Manual.

3.3 Setting the admin password over a secure connection

To gain access to the product, the password for the default administrator user must be set. This is done in the “Admin Password” dialog, which is displayed when the network camera is accessed for the setup at the first time. Enter your admin name and password, set by the administrator.



Note: The default administrator user name is ADMIN and the password is 1234”. If the password is lost, the network camera must be reset to the factory default settings. Refer to “Resetting to the factory default settings.”

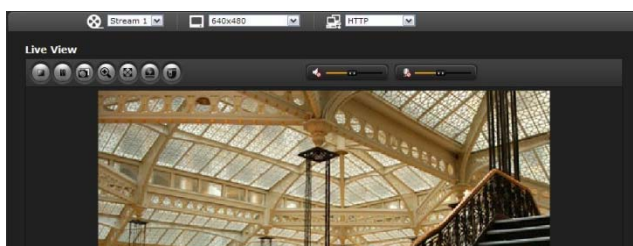
To prevent network eavesdropping when setting the admin password, this can be done via an encrypted HTTPS connection, which requires an HTTPS certificate (see **Note** below).

To set the password via a standard HTTP connection, enter it directly in the first dialog shown below. To set the password via an encrypted HTTPS connection, please see “3.5.7 System > Security > HTTPS” of User's Manual.

Note: HTTPS (Hypertext Transfer Protocol over SSL) is a protocol used to encrypt the traffic between web browsers and servers. The HTTPS certificate controls the encrypted exchange of information.

3.4 Live View Page

The Live View page provides seven screen modes: 1920x1080, 1280x1024, 1280x720, 704x480 (576), 640x480, and 320x240. Select the most suitable mode in accordance with your PC specifications and monitoring purposes.



1) General controls



Live View Page



Setup Page



Help Page



Stream 1

The video drop-down list allows the selection of a customized or pre-programmed video stream on the live view page. Stream profiles are configured under Setup > Basic Configuration > Video & Image. For more information, please see “3.5.1 Basic Configuration > Video & Image” of User’s Manual



1920x1080

The resolution drop-down list allows the selection of the most suitable video resolution to be displayed on Live View page.



HTTP

The protocol drop-down list allows the selection of which combination of protocols and methods to use depending on your viewing requirements, and on the properties of your network.

2) Control toolbar

The live viewer toolbar is available in the web browser page only. It displays the following buttons:



The Stop button stops the video stream being played. Pressing the key again toggles the start and stop. The Start button connects to the network camera or start playing a video stream.



The Pause button temporarily stops (pauses) the video stream being played.



The Snapshot button takes a still picture (snapshot) of the current image. The location where the image is saved can be specified.



The digital zoom activates a zoom-in or zoom-out function for the video image on the live screen.



The Full Screen button causes the video image to fill the entire screen area. No other windows will be visible. Press the 'Esc' button on the computer keyboard to cancel full screen view.



The Manual Trigger button activates a pop-up window to manually start or stop the event.



The PTZ button activates a pop-up window for Pan, Tilt, and Zoom control.



Use this scale to control the volume of the speakers.



Use this scale to control the volume of the microphone.



The PTZ button activates a pop-up window for Pan, Tilt and Zoom control.

This controls video P/T/Z position for live view as well as for preset and tour setup. You can also control Iris, Focus and P/T/Z speed, which are applied for live view only. Additionally, a camera can be moved to a preset position or tour.



3) Video Streams

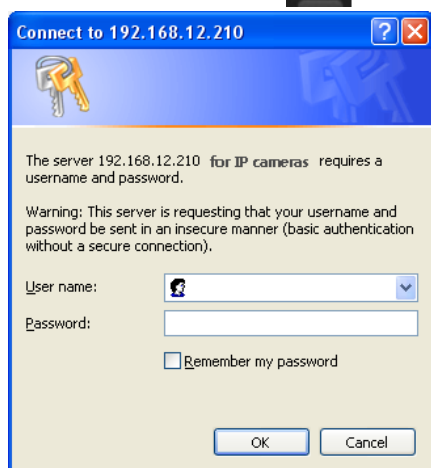
The network camera provides several images and video stream formats. Your requirements and the properties of your network will determine the type you use.

The Live View page in the network camera provides access to H.264 and Motion JPEG video streams, and to the list of available video streams. Other applications and clients can also access these video streams/images directly, without going via the Live View page.

3.5 Network Camera Setup

This section describes how to configure the network camera, and is intended for product Administrators, who have unrestricted access to all the Setup tools; and Operators, who have access to the settings for Basic Configuration, Live View, Video & Image, Audio, Event, Dome Configuration, and System.

You can configure the network camera by clicking Setup in the top right-hand corner of the Live View page. Click on the  to access the online help that explains the setup tools.



When accessing the network camera for the first time, the “Admin Password” dialog appears. Enter your admin name and password, set by the administrator.

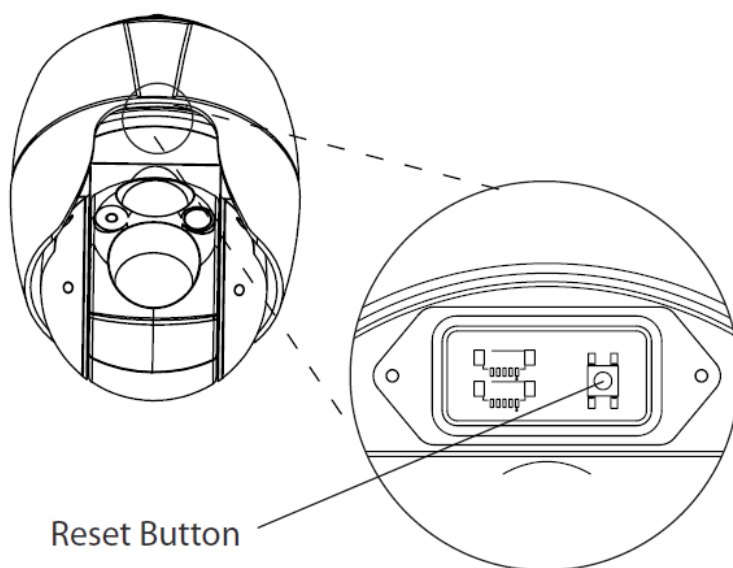
Note: If the password is lost, the network camera must be reset to the factory default settings. Please see “Resetting to the Factory Default Settings”.

3.6 Resetting to the Factory Default Settings

To reset the network camera to the original factory settings, go to the Setup > System > Maintenance web page (described in “3.5.7 System > Maintenance” of User’s Manual) or use the **Reset** button on the network camera, as described below:

- **Using the Reset button:**

Follow the instructions below to reset the network camera to the factory default settings using the Reset button.



1. Power off the network camera by disconnecting the power adapter.
2. Remove the plate covering the Reset button. Press and hold the Reset button (SW1) on the board with your finger while reconnecting the power.
3. Keep the Reset button (SW1) pressed for about 2 seconds.
4. Release the Reset button (SW1).
5. The network camera resets to factory defaults and restarts after completing the factory reset.

Caution: When performing a Factory Reset, you will lose any settings that have been saved.

3.7 More Information

For more information, refer to the network camera User’s manual, which is available on the CD included in this package.

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