



by **Schneider** Electric

QUICK START

IM Series Network Dome Camera



Sarix™ Technology

C2972M-A (1/10)

Product Overview

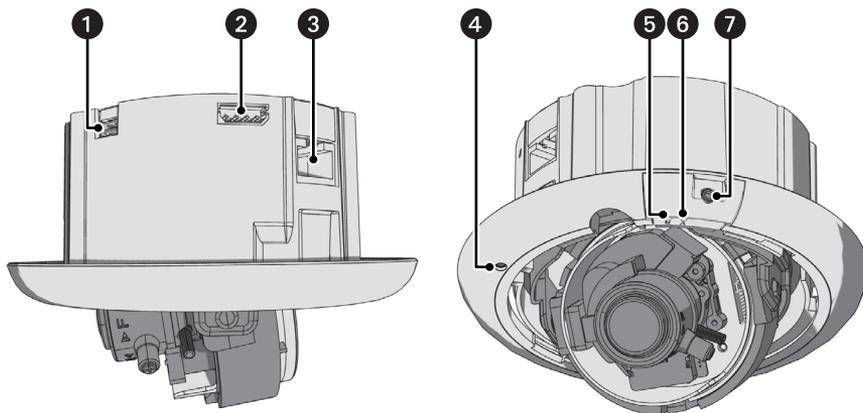


Figure 1. Camera Connections and Features

1 Accessory Port: For use with compatible Pelco accessories.

NOTE: A right-angle mini USB connector must be used to connect Pelco accessories to the accessory port.

2 Audio Connector: Supplies line-in audio from a user-supplied microphone. Audio functionality is only available for IM10 Series models; it can be enabled or disabled using the Web browser.

3 RJ-45 Network Port: Connects the camera to the IP network. Also supplies power to the camera through the network using PoE.

4 Microphone: Supplies built-in, line-in audio to a PC. Audio functionality is only available for IM10 Series models; it can be enabled or disabled using the Web browser.

5 Reset Button (R): Reboots the camera or restores the camera's factory default settings. This button is recessed. Use a small tool or a paper clip to press and release the reset button once to reboot the camera. Press and hold the reset button for 10 seconds to restore the camera to the factory default settings.

NOTE: The lower dome must be removed to access this button.

6 NTSC/PAL Button (V): Toggles the service port between NTSC and PAL formats. This button is recessed. Use a small tool or a paper clip to press and release the NTSC/PAL button to toggle between NTSC and PAL formats when using the service port. The default setting is NTSC.

NOTE: The lower dome must be removed to access this button.

7 Service Port: Outputs analog video. Use this port at the installation site to set up the field of view and to focus the camera. When a service cable is connected to the camera, video to the IP stream is disabled.

NOTES:

- Pelco recommends connecting the camera to a network that uses a Dynamic Host Configuration Protocol (DHCP) server to address devices.
- Do not use a network hub when configuring the network settings for the camera.
- To ensure secure access to the network camera, place the camera behind a firewall when it is connected to a network.

Installation

For detailed instructions, refer to the IM Series Installation/Operation manual on the resource disc supplied with the camera.

1. Properly orient the camera to ensure that the video is right-side-up when viewed. The lens connectors should be on the right side of the lens when you are looking directly at the camera (refer to Figure 2).

NOTE: Improper camera orientation can also be corrected using the Web interface.

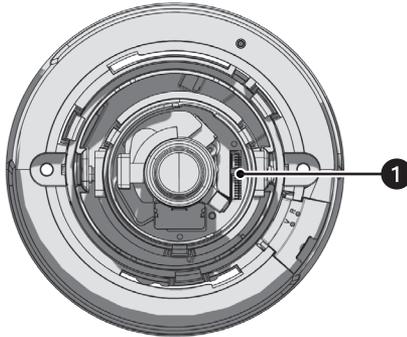


Figure 2. Orienting the Camera

1 Lens Connectors

2. Prepare the mounting surface:
 - In-ceiling installation
 - (1) Cut a 4-inch (10.16 cm) diameter hole in the ceiling/wall.
 - (2) Pull all wiring through the hole and terminate all wires (if not already terminated).
 - Surface installation
 - (1) Using the surface mount ring as a template, drill the holes for the mounting hardware.
 - (2) Drill a hole in the ceiling for the wiring; pull all wiring through the hole and terminate all wires (if not already terminated).

3. Connect the network cable to the RJ-45 network port on the side of the camera.

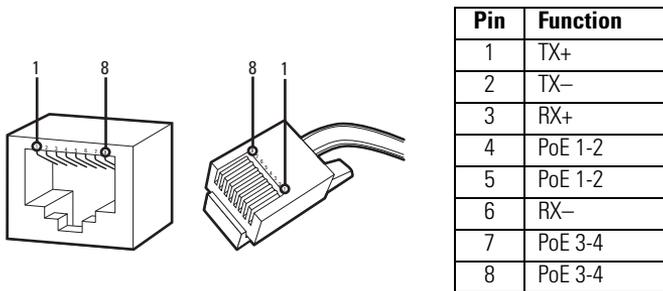


Figure 3. Cat5 Cable Pin Descriptions

4. If you are installing an IM10 Series model and are not using the built-in microphone, connect the necessary wiring for audio.

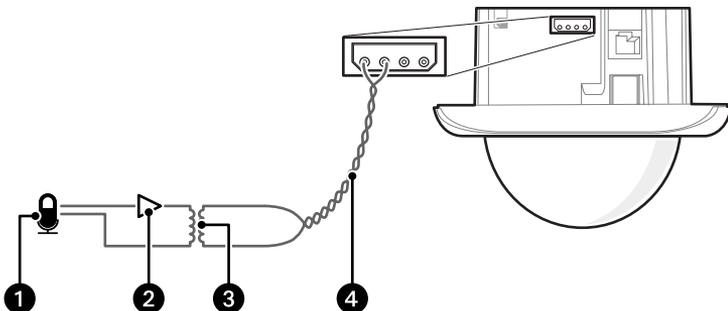


Figure 4. Line-In Audio Wiring

- ① Microphone
- ② Amplifier
- ③ 600-ohm Impedance Matching Transformer
- ④ Audio UTP Cable

5. Install the back box:

- In-ceiling installation
 - (1) Insert the back box into the hole in the ceiling/wall. Be sure to angle the back box during this step to ensure that the wiring is inserted into the hole first and is not bent or damaged.
 - (2) Use 3/16-inch toggle bolts (not supplied) to attach the back box to the mounting surface (refer to Figure 5).

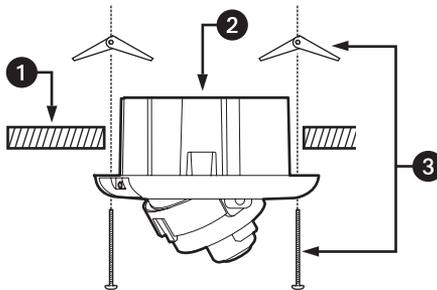


Figure 5. Fixed Ceiling or Wall Installation

- ① Ceiling/Wall
- ② Back Box
- ③ 3/16-inch Toggle Bolts (not supplied)

- Surface installation
 - (1) Use the surface mount template to mark two 0.50-inch (1.27 cm) mounting holes and one 0.75-inch (1.91 cm) cable feedthrough hole before drilling (refer to *Surface Mount Template* on page 18).
 - (2) Use 6-32 toggle bolts (not supplied) to attach the surface mount ring and back box to the mounting surface (refer to Figure 6)

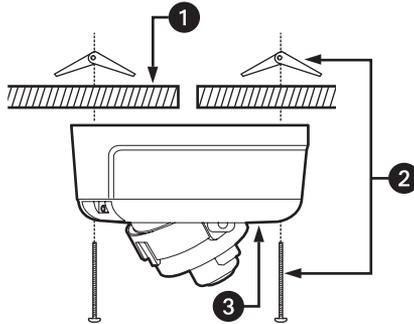


Figure 6. Ceiling or Wall Installation

- 1 Wall/Ceiling
- 2 6-32 Toggle Bolts (not supplied)
- 3 Back Box

6. Apply power to the camera.

NOTE: If the camera is not connected to a DHCP server and DHCP is enabled, the configuration sequence might take up to five minutes to complete.

7. Position the camera as needed:
 - a. View the camera image using the service port.
 - b. Manually rotate and tilt the camera module to position the camera. Do not over-rotate the module.

 **WARNING:** Excessively turning the module in one direction could result in damage to the wiring.

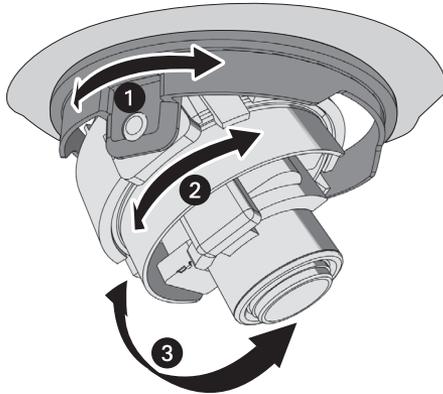


Figure 7. Adjusting the Pan and Tilt

- 1 Pan 355°
- 2 Rotate 220°
- 3 Tilt 180°

- c. Adjust the field of view:
 - (1) Loosen the zoom locking screw.
 - (2) Turn the zoom adjustment ring clockwise or counterclockwise to adjust the field of view.
 - (3) Tighten the zoom locking screw.

8. Focus the lens:
- **IMS0 Series models:**
 - (1) View the camera image using the service port.
 - (2) Loosen the focus locking screw.
 - (3) Turn the focus locking screw clockwise or counterclockwise to adjust the focus.
 - (4) When the optimal focus is reached, tighten the focus locking screw.
 - **IM10 Series models:**
 - (1) View the camera image using the service port or a Web browser.
 - (2) Manually adjust the zoom and focus of the lens to the desired field of view.
 - (3) The focus can be adjusted further using the settings in the Web interface.
9. Align the dome liner with the camera, and then snap it into place.



Figure 8. Installing the Dome Liner

10. Align the lower dome with the camera.
11. Press the lower dome into place against the trim ring, and then turn it 45 degrees to conceal the service port, reset button, and NTSC/PAL button.

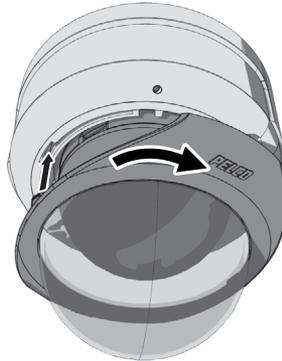


Figure 9. Installing the Lower Dome

Operation

IP ADDRESS SETTINGS

If the camera is connected to a Dynamic Host Configuration Protocol (DHCP) network and DHCP is set to the On position, the server will automatically assign an IP address to the device; DHCP On is the default setting for the camera. Set DHCP to the Off position to manually set the camera's IP address.

NOTES:

- If the camera is not connected to a DHCP server but DHCP is set to On, the default IP address 192.168.0.20 on subnet mask 255.255.255.0 is automatically assigned to the camera. After the first camera is connected and assigned the default IP address, the system will automatically look for other cameras on the auto IP address system and assign IP addresses in sequential order as required.
For example, if three cameras are connected to a network without a DHCP server, the first camera is assigned address 192.168.0.20, the second camera is assigned address 192.168.0.21, and the third camera is assigned address 192.168.0.22.
- Contact your network administrator to avoid network conflicts before setting or changing the camera's IP address.
- If you do not know the camera's IP address, install the Pelco Device Utility software available on the resource disc supplied with the product. The utility will locate the assigned name, IP address, and MAC address for devices connected to the same virtual local area network (VLAN) as your computer. The Device Utility software is also available at www.pelco.com/software/downloads/.

MINIMUM SYSTEM REQUIREMENTS

The following minimum system requirements are needed to use a Web browser with the IP camera:

Processor: Intel® Pentium® 4 microprocessor, 1.6 GHz

Operating system: Microsoft® Windows® XP, Windows Vista®, or Mac® OS X 10.4

Memory: 512 MB RAM

Network interface card: 100 megabits (or greater)

Monitor: Minimum of 1024 x 768 resolution, 16- or 32-bit pixel color resolution

Web Browser: Internet Explorer® 7.0 (or later) or Mozilla® Firefox® 3.0 (or later)

NOTE: Internet Explorer is not supported by Mac OS X 10.4.

Media Player: QuickTime® 7.6.5 for Windows XP, Windows Vista, or QuickTime 7.6.4 for Mac OS X 10.4.

NOTE: This product is not compatible with QuickTime version 7.6.4 for Windows XP or Windows Vista. If you have this version installed on your PC, you will need to upgrade to QuickTime version 7.6.5.

LIVE PAGE ICONS

Viewable icons are based on group permissions. The camera has two predefined groups: Public and Admin.

Public: This defined group can be modified or deleted. The default permissions for this group are single stream view, stream selection, and API access.

Admin: This is the only defined group that cannot be deleted; however, the administrator password can be changed. For security purposes, it is important that you change your password after you log on to the device for the first time. This group has access to all permissions.



Show Device List: Displays a list of viewable cameras connected to the same virtual local area network (VLAN) as the camera to which you are logged on.



Disable Viewer: Closes the live view window.



1 x 1 Mode: Displays a single video pane.



2 x 2 Mode: Displays 4 video panes in rows of two.



3 x 3 Mode: Displays 9 video panes in rows of three.



4 x 4 Mode: Displays 16 video panes in rows of four.



Select Stream: Selects the viewable video stream (primary or secondary) and selects unicast or multicast settings.



Maximize Viewing Area: Scales the image to the full size of the browser.



Show Toolbar: Returns the window to normal view. This icon is only available after the window has been set to maximize viewing area.



Open Stream in New Window: Opens the video in a scalable, independent window. Opening the video in a separate window allows you to view the video while other applications are running. This window can be minimized, maximized, or closed using the title bar buttons of the active window. The window can also be resized to your specifications by dragging the lower-right corner of the window.



Take a Snapshot: Captures the image displayed in the video pane and saves it as a JPEG file.

SETTINGS PAGE

Depending on user permissions, the Settings page allows you to manage camera system settings, set up users and groups, and control the camera.

To access the camera settings:

1. Log on to the camera.
2. Click the Settings link in the navigation bar located in the upper-right corner of the page; a list of menu tabs appear.
3. Place the mouse pointer over a tab to display a list of submenus.

SYSTEM TAB

General Settings: Includes programmable fields for the device name, time server, and text overlay settings. You can also use the General Settings page to turn the camera's power LED on or off and to configure the Simple Mail Transfer Protocol (SMTP) server to send an email notification when an event handler is activated.

System Information: Includes read-only fields for the firmware version, hardware version, model number, and serial number of the system. This information is typically required by Pelco Product Support for troubleshooting purposes.

NETWORK TAB

General: Displays the hardware address, hostname, DHCP settings, and IP address settings.

SSL: (Secure Socket Layers) encrypts communications making it difficult for unauthorized users to intercept and view user names and passwords.

SSH: (Secure Shell) allows Pelco Product Support to log on to and service the camera for advanced troubleshooting purposes.

802.1x: Authenticates devices that want to establish a point-to-point access through a wired or wireless port using Extensible Authentication Protocol (EAP). This port-based authentication method prevents unauthorized access to a Local Area Network (LAN) through a physical port.

IMAGING TAB

General: Includes camera orientation and digital processing settings. The orientation settings allow for standard or inverted installation of the camera. The digital processing settings adjust the sharpness, saturation, and contrast of the scene.

Exposure: Adjusts scene detail and contrast. A scene with correct exposure settings has adequate detail and contrast between white and dark values. An image with too little or too much exposure eliminates detail in the scene. The camera features auto and manual exposure settings.

Focus: Includes auto focus and manual focus settings (refer to *Focus* in the IM Series Installation/Operation manual for detailed instructions). Focus sets the back focus to the center focal point of the scene. Auto focus automatically back focuses the camera on the subject in the center of the scene. Manual focus turns off the auto focus mechanism and locks the camera at a user-specified position. The manual focus setting is recommended only for indoor applications that have a single, unchanging primary light source.

Tone Map: Balances the brightest and darkest sections of an image to produce a picture with more balanced lighting and more detail.

White Balance: Defines how the camera processes video images to render true colors in a scene. White balance is especially effective in scenes with changing lighting conditions or in scenes with more than one type of light source.

Window Blanking: Conceals user-defined privacy areas. A blanked area appears on the screen as a solid gray window. The camera can handle up to four blanked windows as long as the total blanked area does not exceed 50 percent of the field of view.

A/V STREAMS TAB

Use the A/V Streams tab to configure the video and audio streams for the camera. The A/V Streams tab includes a Video Presets page, a Video Configuration page, and an Audio Configuration page.

Video Presets: The Video Preset page includes three fully-configured video presets, which include primary and secondary video stream settings for easy setup. These presets may also be used as a starting point for a custom video configuration. These preset configurations vary depending on camera model.

Video Configuration: The Video Configuration page allows you to customize the compression, resolution, image rate, and bit rate of the video streams. The default names for the streams are Primary Stream and Secondary Stream. Although each stream can be configured independently, the settings of one stream can limit the options available to the other stream, depending on the processing power used.

NOTE: Always configure the primary stream before the secondary stream. The primary stream should always be the most resource-intensive of the streams.

Audio Configuration: The Audio Configuration page allows you to set up the internal audio device or an external audio device. The default setting for Audio is disabled, which means that no audio is transmitted from the camera. When enabled, audio is transmitted from the camera to the PC. Based on your system configuration, images and audio may not be synchronized.

NOTES:

- Improper use of audio/visual recording equipment may subject you to civil and criminal penalties. Applicable laws regarding the use of such capabilities vary between jurisdictions and may require, among other things, express written consent from the recorded subjects. You are solely responsible for insuring strict compliance with such laws and for strict adherence to any/all rights of privacy and personality.
- Not all camera models are equipped with an internal audio device. Refer to the specifications for your camera model for information.

USERS AND GROUPS TAB

Users: Defines the permissions assigned to individuals logged on to the camera. Use this feature to create, modify, or delete user accounts.

Groups: Defines the permissions assigned to users within a group. Use this setting to create, modify, and delete groups and permissions. Multiple permissions can be assigned to each group.

General Settings: Changes the way the camera manages the users and groups settings. These settings can be managed on a camera-to-camera basis or by using a centralized server to apply changes to multiple cameras.

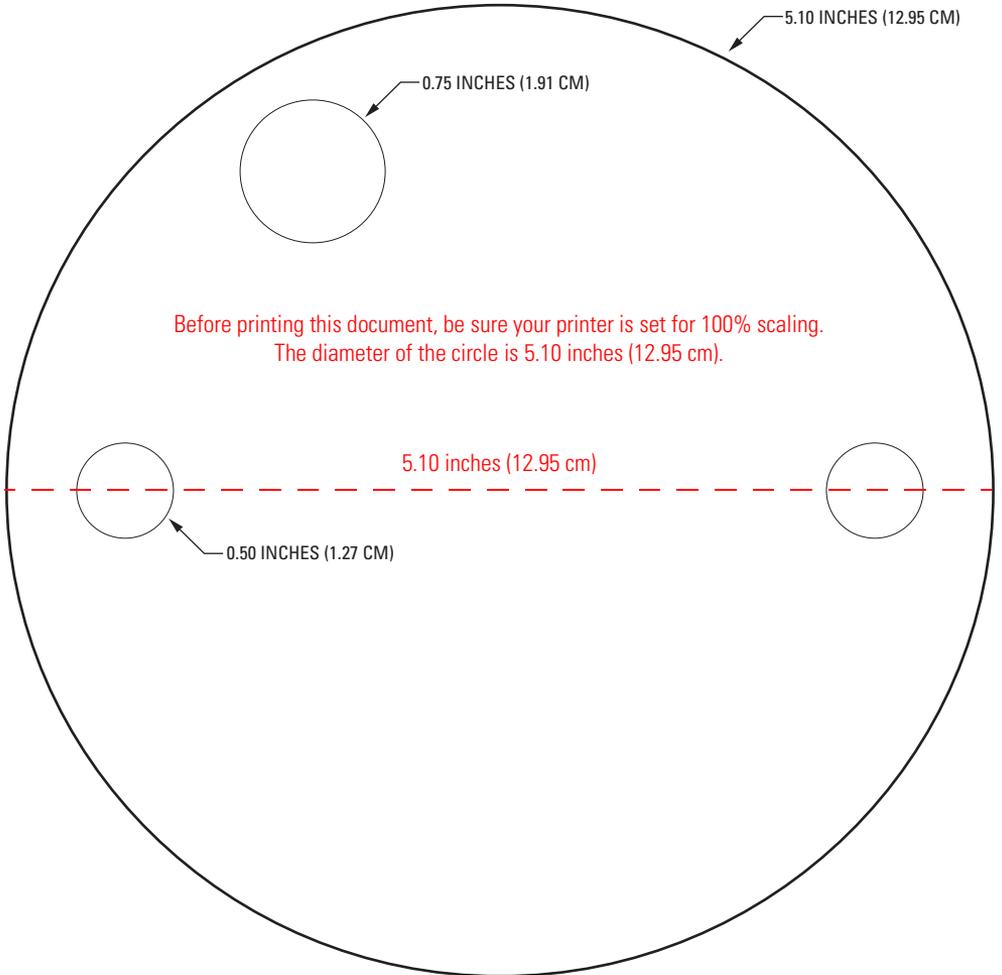
EVENTS TAB

Sources: Defines the camera functions that are automatically triggered by an event source. The camera supports system and timer event sources.

Handlers: Defines the actions that a camera takes when an event occurs. The camera supports two handlers: Send Email and Upload JPEG to FTP Server.

Surface Mount Template

For surface mount installations, position this mounting template on the ceiling or wall and mark the mounting and cable feedthrough holes before drilling.



 Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.



This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C2972M	10/09	Original version.
C2972M-A	1/10	Revised manual to reflect Sarix 1.4 software additions/changes.

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