by **Schneider** Electric

IX and IXE Series Network Camera

Sarix™ Technology

C2951M-C (12/09)

Product Overview
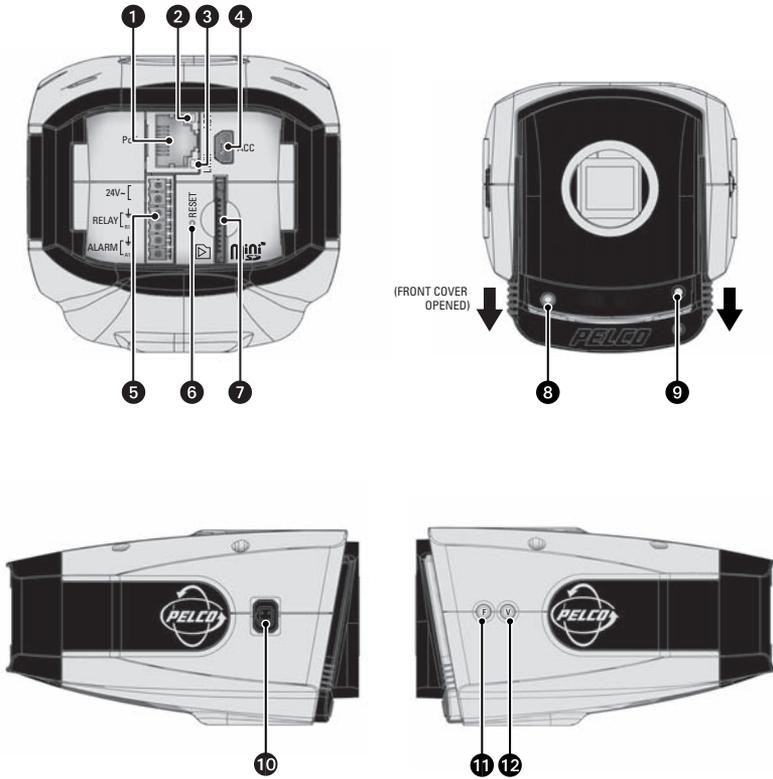
Figure 1. Camera Connections and Features

1 **RJ-45 Network Port:** Connects the camera to the network. Also supplies power to the camera through the network using Power over Ethernet (PoE). If PoE is not available, the camera is prewired for 24 VAC.

2 **Ethernet Activity LED:** Flashes green to indicate that data is being transmitted/received by the camera.

3 **Ethernet Link LED:** Glows solid amber to indicate that a live connection is established.

4 **Accessory Port:** For use with compatible Pelco accessories.

5 **24 VAC Power, Relay, and Alarm Connections:** Supports 24 VAC as the power source, one relay that can be used to control an external circuit, and one alarm for physical input into the system.

6 **Reset Button:** 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.

7 **Mini SD Card Slot:** Saves a snapshot image to a mini SD card based on alarm activity.

8 **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.

9 **Power LED:** Glows solid amber and then flashes green during the configuration sequence; glows solid green after the sequence is complete. The LED can be disabled through the user interface. If this LED glows red (solid or flashing), contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (International) for assistance.

10 **Auto Iris Lens Connector:** Controls the auto iris lens. Insert the 4-pin connector from the DC drive auto iris lens into this connector.

11 **Auto Back Focus Button:** Sets the auto back focus mechanism. Press the button once to center the auto back focus mechanism and to fully open the iris. Press and hold the button for three seconds to start the auto back focus mechanism and focus the camera.

12 **NTSC/PAL Button:** Toggles the service port between NTSC and PAL formats. The default setting is NTSC.

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 HUB in the network setup of the camera.
- To secure access to the IP camera, place the camera behind a firewall when it is connected to a network.

Installation

NOTES:

- For detailed instructions, refer to the IX Series Installation/Operation manual or the IXE Series Installation/Operation manual. Both are available on the resource disc.

- Megapixel lenses are designed and tested to deliver optimal image quality to the IX Series and IXE Series megapixel cameras. A standard definition lens installed on a megapixel camera will limit the resolution of the camera and create poor image quality.

1. Install the lens:

   a. Remove the cover from the lens mount.

   b. Screw the lens onto the lens mount. Be careful to prevent dust from entering the space between the lens and the imager. If necessary, use clean, compressed air to remove any foreign matter (refer to the instructions shipped with the lens). Make sure the lens does not touch the camera imager when installed.

   c. Connect the auto iris lens to the 4-pin connector located on the side of the camera. Refer to Figure 4 for the pin connections for the auto iris lens connector.

| Pin	DC (AID) Auto Iris Lens
1	Control coil negative (-)
2	Control coil positive (+)
3	Drive coil positive (+)
4	Drive coil negative (-)
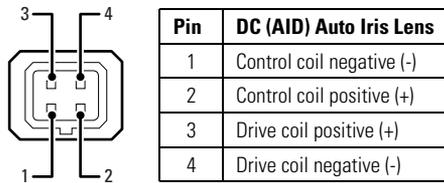
Figure 2. Lens Pin Connections

2. Use a standard 1/4-20 screw to mount the camera in the desired location. The maximum thread depth is 0.25 inches (6.4 mm). The camera can be mounted from either the top or bottom, depending on the type of camera mount used in your installation.

   NOTE: When installing inside an enclosure, mount the camera in an inverted position to allow easy access to the service port. Use the camera software to reconfigure the camera orientation for normal operation.

3. Connect the network cable to the RJ-45 network port located at the back of the camera (refer to Figure 3).

   NOTE: If the network has no Power over Ethernet (PoE), connect a 24 VAC Class 2 power supply to the 24 VAC power connector (refer to Figure 4).

Pin	Function
1	TX+
2	TX–
3	RX+
4	PoE 1-2
5	PoE 1-2
6	RX–
7	PoE 3-4
8	PoE 3-4
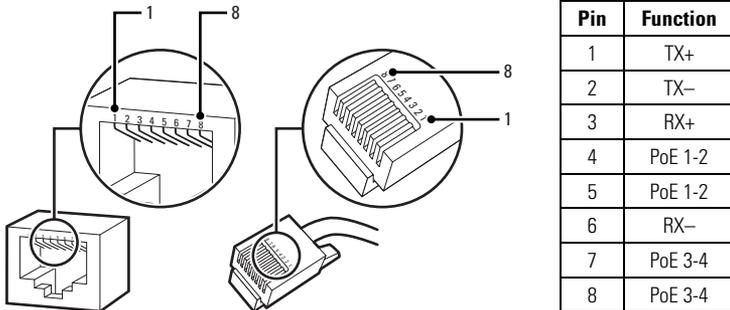
Figure 3. Pin Descriptions

4. For Class B installations, attach the supplied ferrite to the network cable. The ferrite should be installed on the cable approximately one inch from the camera's RJ-45 network port.

⚠ **WARNING:** The ferrite *must be installed* for the camera to meet FCC Class B compliance standards. Failure to correctly install the ferrite might cause harmful interference to radio communications.

5. Connect the necessary wiring for alarms and relays (refer to Figure 4). Only use the 24 VAC wires if PoE is not available.
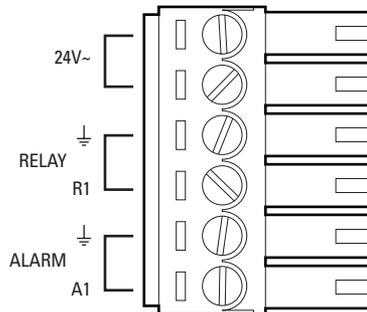

Figure 4. Alarm and Relay Wiring

6. Apply power to the camera.

7. View the camera image using the service port or a Web browser.

8. Focus the lens:

   a. Press the auto back focus button once to center the focus mechanism. The button is located on the side of the camera.

   b. Manually adjust the zoom and focus of the lens to the desired field of view (refer to the instructions shipped with the lens).

   c. Press and hold the back focus button for three seconds to start the auto back focus mechanism.

Operation

Once the camera is installed, apply power to the camera. The camera will start a configuration sequence. The green LED flashes five times per second for approximately two minutes and then turns solid after the boot cycle is complete and the camera is on line.

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 set the camera's IP address manually.

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/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 shipped 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

IX SERIES

Processor: Intel® Pentium® 4 microprocessor, 1.6 GHz

Operating System: Microsoft® Windows® XP, Windows Vista®, or Mac® OS X 10.4 (or later)

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.

IXE SERIES

Processor: Intel Core™ 2 Duo microprocessor, 2.6 GHz

Operating System: Windows XP, Windows Vista, or Mac OS X 10.4 (or later)

Memory: 2 GB 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.

LOGGING ON TO THE CAMERA

1. Open the Web browser.
2. Type the camera's IP address in the browser address bar.

   NOTE: If you do not know the camera's IP address, you can locate it using the Pelco Device Utility software.

3. Click the Login button in the navigation bar; a dialog box appears.
4. Type your user ID and password; **admin** is the default for both.

   NOTE: If this is the first time you are logging on to the camera as the administrator, the default User ID and Password are admin (all lowercase). For security purposes, be sure to change the password after you log on for the first time.

5. Click Log In.

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 back focus and manual focus settings (refer to *Focus* in the IX Series Installation/ Operation manual or the IXE 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 setup the 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.

NOTE: 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 personalty.

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 alarm, system, and timer event sources.

Handlers: Defines the actions that a camera takes when an event occurs. The camera supports four event handlers: Send Email, Write JPEG to SD Card, Upload JPEG to FTP Server, and Open/Close Relay.

Analytic Configuration: Only available with the IXE Models. Allows you to create several custom profiles that contain different camera settings. With these profiles, you can set up different scenarios for a behavior, which will automatically detect and trigger alarms when specific activity is detected.

PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - Unshielded Twisted Pair (UTP) transmission products
  - CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models
- Three years:
  - Pelco-designed fixed network cameras and network dome cameras with Sarix™ technology.
  - Pelco-branded fixed camera models (CCC1390H Series, C10DN Series, C10CH Series, and IP3701H Series)
  - EH1500 Series enclosures
  - Spectra® IV products (including Spectra IV IP)
  - Camclosure® Series (IS, ICS, IP) integrated camera systems
  - DX Series digital video recorders (except DX9000 Series which is covered for a period of one year), DVR5100 Series digital video recorders, Digital Sentry® Series hardware products, DVX digital video recorders, and NVR300 Series network video recorders
  - Endura® Series distributed network-based video products
  - Genex® Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses.
  - DF5/DF8 Series fixed dome products
  - Legacy® Series integrated positioning systems
  - Spectra III™, Spectra Mini, Spectra Mini IP, Esprit®, ExSite®, and PS20 scanners, including when used in continuous motion applications.
  - Esprit Ti and TI2500 Series thermal imaging products
  - Esprit and WW5700 Series window wiper (excluding wiper blades).
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP®) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
  - Intelli-M® eIDC controllers
  - PMCL542F, PMCL547F, and PMCL552F FHD monitors
- One year:
  - Video cassette recorders (VCRs), except video heads. Video heads will be covered for a period of six months.
- Six months:
  - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid.

12-08-09

REVISION HISTORY

Manual #	Date	Comments
C2951M	1/09	Original version.
C2951M-A	2/09	Revised installation instructions.
C2951M-B	9/09	Revised manual to reflect Sarix 1.3 software additions/changes.
C2951M-C	12/09	Revised manual to reflect Sarix 1.4 software additions/changes.

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