IP110 Series Camclosure® Network Camera System
INDOOR/OUTDOOR, NETWORK MINI DOME, SURFACE MOUNT

Product Features

- Power over Ethernet (IEEE802.3af) or 24 VAC Power Input
- Open Architecture
- 3 Simultaneous Video Streams
  - Dual MPEG-4: 30 images per second (ips)
  - Scalable MJPEG
- Supported Protocols: TCP/IP, UDP/IP (Unicast, Multicast IGMP), UPnP, DNS, DHCP, RTP, NTP
- Multilevel Password Protection
- Weatherproof, Puncture Proof Bubble; Tamper-Resistant Hardware
- 8 Camera and Lens Options for Low Light Sensitivity, Extreme Lighting, and Ultra High Resolution
  - Day/Night Wide Dynamic Range (WDR)
  - Day/Night High Resolution
  - Color WDR
  - Color High Resolution
- Includes Video Service Connector for On-Site Setup
- Alarm Input and Output

ENDURA ENABLED

- Thermostatically Controlled Heaters
- Progressive Scan
- Motion Detection
- Up to 30 ips at 704 x 480 or 704 x 576 Resolution

The **IP110 Series Camclosure®** is an indoor/outdoor, fixed mini dome system with a built-in 100Base-TX network interface for live streaming to a standard Web browser (Microsoft® Internet Explorer® or FireFox®). The network mini dome features open architecture connectivity for third-party software recording solutions and is also Endura Enabled™ to record, manage, configure, and view multiple live streams.

When connected to an Endura® network-based video security system, the mini dome has access to EnduraStor™ and EnduraView™ for optimized image quality and bandwidth efficiency. EnduraStor dramatically extends the recording duration at a lower frame rate, and EnduraView constantly monitors and automatically adjusts the system for the best picture possible.

The **IP110 Series Camclosure** supports Pelco camera application programming interface (API) for customized software solutions, giving users the flexibility to use third-party products.
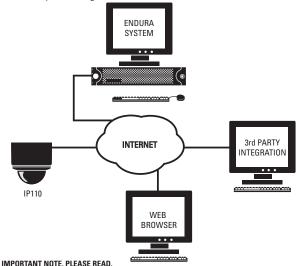
The **IP110 Series Camclosure** has built-in Power over Ethernet (IEEE802.3af), which supplies power to the camera using the network, eliminating the need for a separate power supply and reducing the cost of installation. For installation flexibility the unit is also prewired for 24 VAC locally.

The **IP110 Series Camclosure** is perfect for a variety of indoor and outdoor applications and its versatile design allows for multiple mounting options. It can be installed directly into a ceiling or wall, or to a 1.5-inch (3.81 mm) NPT fitting with the optional pendant mount adapter (ICS110-PG). The unit can also mount directly to a 4S electrical box using the optional adapter plate (ICS110-AP) or a standard plaster ring.

IMPORTANT NOTE. PLEASE READ.
The network implementation is shown as a general representation only and is not intended to show a detailed network topology. Your actual network will differ, requiring changes or perhaps additional network equipment to accommodate the system as illustrated. Please contact your local Pelco Representative to discuss your specific requirements.

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C3432 / REVISED 6-3-08

U.S. Patents D476,025; 6,715,939 B2; 6,805,498 B2

GENERAL

Construction	Aluminum with steel camera mounting bracket and polycarbonate dome
Finish	Light gray polyester powder coat
Light Attenuation	
Smoked	f/1.5 light loss
Clear	Zero light loss
Unit Weight	2.20 lb (1.00 kg)
Shipping Weight	4.00 lb (1.81 kg)

ELECTRICAL

Ports	RJ-45 connector for 100Base-TX Auto MDI/MDI-X Autonegotiate/Manual setting
Cabling Type	Cat5 or better for 100Base-TX
Input Voltage	24 VAC (18-36) or PoE (IEEE802.3 af)
Power Consumption	
PoE	<7.5 W, <13 W with heaters
24 VAC	<7.5 W, <14 W with heaters
Current Consumption	
PoE	<200 mA, <350 mA with heaters
24 VAC	<550 mA, <1 A with heaters
Alarm Input	10 VDC maximum, 5 mA maximum
Alarm Output	0-15 VDC maximum, 75 mA maximum
Service Connector	Internal to housing 3-connector, 2.5 mm connector providing NTSC/PAL video outputs

MECHANICAL

Pan/Tilt Adjustment	Manual
Pan	360°
Tilt	80° (20° to 100° range)
Rotation	360°
Cable Entry	1, 0.75-inch (1.91 cm) NPT threaded opening on side; 2, 0.75-inch (1.91 cm) openings on cover

VIDEO

Compression	MPEG-4, MJPEG in Web viewing mode	
Video Streams	3, simultaneous	
Video Resolutions	NTSC	PAL
4CIF	704 x 480	704 x 576
2CIF	704 x 240	704 x 288
CIF	352 x 240	352 x 288
QCIF	176 x 120	176 x 144
Bit Rate Configurable	20 kbps to 2 Mbps per stream, implements EnduraView	
Web User Interface	Pelco Device Utility interface for viewing HTTP, requires Java Runtime Environment (JRE™)	
Video Access from		
Web Browser	Camera live view for up to 10 video sources	
Users	10 simultaneous users, unlimited number of users using multicast	
Minimum Web Browser		
Requirements	PC (Pentium® 4 microprocessor, 1.6 GHz) with Windows® 98/Windows 2000/Windows XP (or later) or Mac® OS X 10.3.9 (or later)	
RAM	512 MB	
Ethernet Card	100 Megabits	
Web Browser	Microsoft Internet Explorer 5.5 (or later) or Firefox 1.5 (or later)	
Screen Resolution	1024 x 768 pixels or higher, 16- or 32-bit pixel color resolution	
Firmware Upgrade	Pelco Device Utility or Endura Application	

Supported Protocols	TCP/IP, UDP/IP (Unicast, multicast IGMP), UPnP, DNS, DHCP, RTP, NTP
Software Included	Pelco Device Utility software identifies the IP address, checks the status of the device, and updates firmware
System Integration	Available at *www. pelco.com/ipcam*

ENVIRONMENTAL

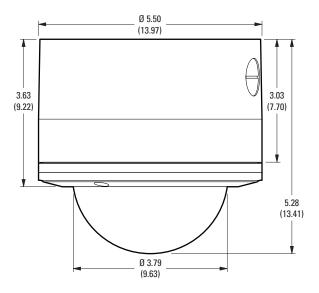|	
Environment	Low temperature, indoor/outdoor
Operating Temperature	-50° to 122°F (-46° to 50°C); de-ices to 25°F (-4°C)
Thermostat Operation	Heater is thermostatically controlled to activate <41°F (<5°C)

CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- FCC, Class B
- UL/cUL Listed
- IEEE802.3af compliant
- Meets NEMA Type 4X and IP66 standards
- U.S. Patents D476,025; 6,715,939 B2; 6,805,498 B2

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

CAMERA SPECIFICATIONS

	Day/Night Wide Dynamic Range Varifocal, Auto Iris (DW Series)	Day/Night High Resolution Varifocal, Auto Iris (DN Series)	Wide Dynamic Range Varifocal, Auto Iris (CW Series)	High Resolution Varifocal, Auto Iris (CH Series)
Imaging Device Picture Elements	1/3-inch Pixel Based Imager	1/3-inch Interline Color CCD	1/3-inch Pixel Based Imager	1/3-inch Interline Color CCD
NTSC	720 (H) x 540 (V)	768 (H) x 494 (V)	720 (H) x 540 (V)	768 (H) x 494 (V)
PAL	720 (H) x 540 (V)	752 (H) x 582 (V)	720 (H) x 540 (V)	752 (H) x 582 (V)
Dynamic Range (DW/CW only)	102 dB typical 120 dB maximum	—	102 dB typical 120 dB maximum	—
Scanning System	2:1 Interlace/ Progressive (DIP switch)	2:1 Interlace	2:1 Interlace/ Progressive (DIP Switch)	2:1 Interlace
Horizontal Resolution	NTSC: 504 TV lines PAL: 504 TV lines	NTSC: 540 TV lines PAL: 540 TV lines	NTSC: 504 TV lines PAL: 504 TV lines	NTSC: 540 TV lines PAL: 540 TV lines
Signal-to-Noise Ratio	>53 dB	>50 dB	>53 dB	>50 dB
Minimum Illumination	Color (day): 0.8 lux SENS 8X: 0.2 lux B-W (night): 0.08 lux SENS 8X: 0.02 lux (f/1.0, 40 IRE, AGC on, 75% scene reflectance)	Color (day): 0.15 lux B-W (night): 0.015 lux (f/1.0, 40 IRE, AGC on, 75% scene reflectance)	Color (day): 0.8 lux SENS 8X: 0.2 lux (f/1.0, 40 IRE, AGC on, 75% scene reflectance)	0.3 lux (f/1.0, 40 IRE, AGC on, 75% scene reflectance)
Day/Night Operation Day	Infrared (IR) cut filter	Infrared (IR) cut filter and optical low pass filter	—	—
Night	No filter	Optical low pass filter		
Filter Switch Threshold	Dusk 4 lux; Dark 1 lux	0.15 lux	—	—
Gain Control	Auto (36 dB maximum)	Auto/Manual (DIP switch)	Auto (36 dB maximum)	Auto/Manual (DIP switch)
Exposure	Auto (1/15 - 1/22,000)	Auto (1/60 - 1/100,000)	Auto (1/15 - 1/22,000)	Auto (1/60 - 1/100,000)
White Balance	Auto or manual (DIP switch), 2800°K - 7500°K	Auto or manual (DIP switch), 2500°K - 9500°K	Auto or manual (DIP switch), 2800°K - 7500°K	Auto or manual (DIP switch), 2500°K - 9500°K
Backlight Compensation	Auto	ON/OFF (DIP switch)	Auto	ON/OFF (DIP switch)

LENS SPECIFICATIONS

	Varifocal With Auto Iris			
Series	DW/CW Series		DN/CH Series	
Focal Length	3.0 mm ~ 9.5 mm	9.0 mm ~ 22.0 mm	3.0 mm ~ 9.5 mm	9.0 mm ~ 22.0 mm
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Relative Aperture (f)	1.0 to 1.8	1.5 to 2.9	1.0 to 1.8	1.5 to 2.9
Operation Iris Focus Zoom	Auto Manual Manual	Auto Manual Manual	Auto Manual Manual	Auto Manual Manual
Angle of View* Horizontal Diagonal Vertical	100.4° to 31.6° 131.6° to 39.6° 72.8° to 23.8°	32.4° to 13.6° 41.4° to 17.2° 23.8° to 10.2°	95.0° to 30.2° 123.6° to 37.6° 69.0° to 22.6°	30.6° to 13.0° 39.2° to 16.4° 22.6° to 9.8°

*Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.

MODEL NUMBERS

IP110-ENC   IP110 Series surface mount enclosure (no camera/lens)
IP110-LD   IP110 Series smoked bubble
IP111-LD   IP110 Series clear bubble with liner

When ordering an IP110 Series surface mount dome with no camera or lens, please order 1 enclosure and 1 bubble.

SYSTEM NUMBERS

Camera Type	Lower Dome	Lens	Lens Type	NTSC	PAL
Day/Night, Wide Dynamic Range	Smoked	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP110-DWV9 IP110-DWV22	
Day/Night, Wide Dynamic Range	Clear	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP111-DWV9 IP111-DWV22	
Day/Night	Smoked	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP110-DNV9 IP110-DNV22	IP110-DNV9X IP110-DNV22X
Day/Night	Clear	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP111-DNV9 IP111-DNV22	IP111-DNV9X IP111-DNV22X
Color, Wide Dynamic Range	Smoked	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP110-CWV9 IP110-CWV22	
Color, Wide Dynamic Range	Clear	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP111-CWV9 IP111-CWV22	
Color, High Resolution	Smoked	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP110-CHV9 IP110-CHV22	IP110-CHV9X IP110-CHV22X
Color, High Resolution	Clear	3-9 mm 9-22 mm	Varifocal, Auto Iris	IP111-CHV9 IP111-CHV22	IP111-CHV9X IP111-CHV22X

OPTIONAL ACCESSORIES

ICS110-AP   Adapter plate for a 4S electrical box
IP110-P   Pendant mount adapter
SWM Series   Compact wall mount with cable feedthrough. Requires ICS110-PG adapter.
IS-SC   4-foot service/monitor cable; compatible with any standard monitor BNC connector

RECOMMENDED POWER SUPPLIES

POE20U560G   Single port PoE injector
RCS Series   Rack mount multiple 24 VAC camera power supply, indoor
TF2000   Power supply for one 24 VAC camera, 20 VA
MCS Series   Multiple 24 VAC camera power supply, indoor
MCS*E Series   Multiple 24 VAC camera power supply, indoor
WCS Series   Single/multiple 24 VAC camera power supply, outdoor

NOTICE: *Judgment as to the suitability of the products for users' purposes is solely the users' responsibility. Users should refer to the Operation manuals for cautionary statements regarding user selected options and how they might affect video quality. Users shall determine the suitability of the products for their own intended application, picture rate and picture quality. In the event users intend to use the video for evidentiary purposes in a judicial proceeding or otherwise, users should consult with their attorney regarding any particular requirements for such use.*