

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

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 Mozilla® 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.

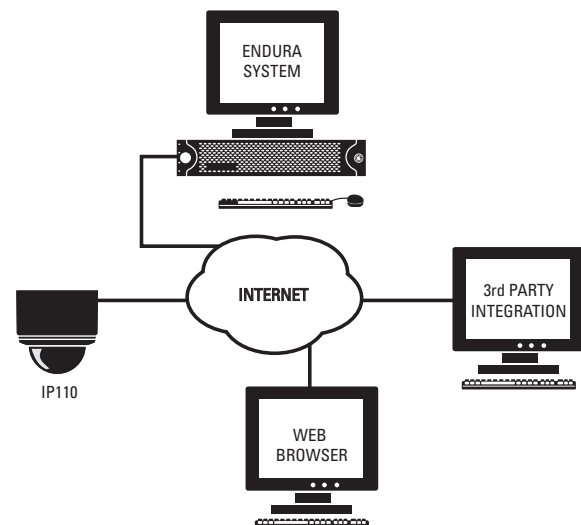
The **IP110 Series Camclosure** supports Pelco camera application programming interface (API) for customized software solutions, giving users the flexibility to use third-party products.

The **IP110 Series Camclosure** has built-in Power over Ethernet (PoE) 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.



- 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 perfect for a variety of indoor and outdoor applications, and its versatile design allows for multiple mounting options. It can be installed directly to a ceiling or wall. It can also be installed to a 1.5-inch (3.81 mm) NPT fitting with the optional pendant mount adapter (IP110-P). 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.



TECHNICAL SPECIFICATIONS

GENERAL

Construction	Aluminum with steel camera mounting bracket and polycarbonate dome
Impact	IP110 is a rugged product that exceeds an IK10++ rating of Standard EN62262 and can withstand up to 100J in a vertical impact
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 to 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	One 0.75-inch (1.91 cm) NPT threaded opening on side of NEMA cover and one 0.75-inch (1.91 cm) opening on top of NEMA cover

VIDEO

Compression	MPEG-4, MJPEG
Video Streams	3, simultaneous
Video Resolutions	<u>NTSC</u> <u>PAL</u>
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	MPEG-4, 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 Users	Camera live view for up to 10 video sources 10 simultaneous users, unlimited number of users using multicast

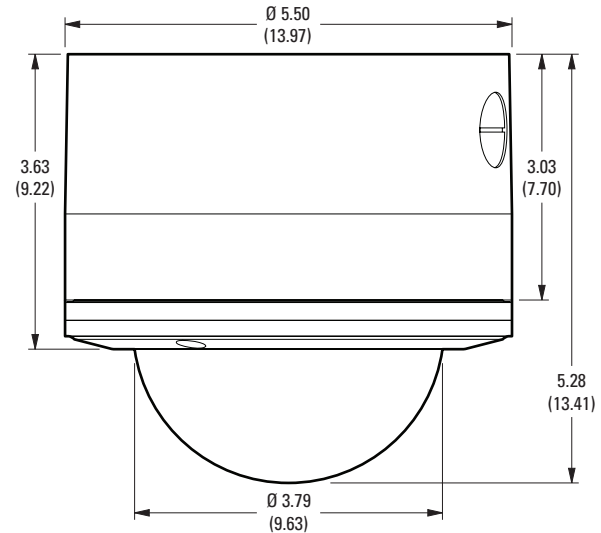
Minimum Web Browser Requirements	PC (Intel® Pentium® 4 microprocessor, 1.6 GHz) with Windows® 98/Windows 2000/Windows XP (or later) or Mac® OS X 10.3.9 (or later)
RAM	512 MB
Ethernet Card	100 Megabits
Web Browser	Internet Explorer 5.5 (or later) or Firefox 1.5 (or later)
Screen Resolution	1024 x 768 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 at <41°F (<5°C)

CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- FCC, Class B
- UL/cUL Listed
- GOST
- 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.

TECHNICAL SPECIFICATIONS

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	1/3-inch pixel based imager	1/3-inch interline color CCD	1/3-inch pixel based imager	1/3-inch interline color CCD
Picture Elements	720 (H) x 540 (V)	768 (H) x 494 (V)	720 (H) x 540 (V)	768 (H) x 494 (V)
NTSC	720 (H) x 540 (V)	752 (H) x 582 (V)	720 (H) x 540 (V)	752 (H) x 582 (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° to 7500°K	Auto or manual (DIP switch), 2500° to 9500°K	Auto or manual (DIP switch), 2800° to 7500°K	Auto or manual (DIP switch), 2500° to 9500°K
Backlight Compensation	Auto	ON/OFF (DIP switch)	Auto	ON/OFF (DIP switch)

LENS SPECIFICATIONS

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

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

SYSTEM MODELS AND ACCESSORIES

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 one enclosure and one bubble.

SYSTEM NUMBERS

Camera Type	Lower Dome	Lens	Lens Type	NTSC	PAL
Day/Night, Wide Dynamic Range	Smoked	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP110-DWV9 IP110-DWV22	
Day/Night, Wide Dynamic Range	Clear	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP111-DWV9 IP111-DWV22	
Day/Night	Smoked	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP110-DNV9 IP110-DNV22	IP110-DNV9X IP110-DNV22X
Day/Night	Clear	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP111-DNV9 IP111-DNV22	IP111-DNV9X IP111-DNV22X
Color, Wide Dynamic Range	Smoked	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP110-CWV9 IP110-CWV22	
Color, Wide Dynamic Range	Clear	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP111-CWV9 IP111-CWV22	
Color, High Resolution	Smoked	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP110-CHV9 IP110-CHV22	IP110-CHV9X IP110-CHV22X
Color, High Resolution	Clear	3.0 ~ 9.5 mm 9.0 ~ 22.0 mm	Varifocal, Auto Iris	IP111-CHV9 IP111-CHV22	IP111-CHV9X IP111-CHV22X

RECOMMENDED POWER SUPPLIES

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

OPTIONAL ACCESSORIES

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

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.

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