Sarix® IXE Series Box Cameras with SureVision 2.0

UP TO 3 MPX, H.264, IP CAMERAS WITH WDR AND LOW-LIGHT PERFORMANCE

Product Features

- Next Generation SureVision 2.0 Technology, Including:
  - True Wide Dynamic Range (WDR)
  - Advanced Low-Light Performance
  - Anti-Bloom Technology
  - 3D Noise Filtering
  - Enhanced Tone Mapping
- Up to 3 Megapixel (MPx) Resolution
- Up to 30 Images per Second (ips) at 3 MPx
- CS Lens Mounts with Auto Back Focus (ABF)
- Power over Ethernet (PoE), IEEE 802.3af
- Built-in Pelco Analytics Suite

- Local Storage (Micro SD)
- Compatible with Pelco and Third-Party Video Systems
- ONVIF Profile S and Profile G Conformant
- 3-Year Warranty and Support

Sarix Enhanced Range with SureVision 2.0

Sarix® Enhanced (E) range cameras feature SureVision technology, delivering high definition (HD) resolution, consistent color science, fast processing power, and simultaneous advanced low-light performance with wide dynamic range (WDR) and anti-bloom technologies. New advancements include 3D noise filtering, smooth response to illumination changes, and improved tone mapping to retain color accuracy and overall image contrast.

Designed to install quickly, the cameras include auto back focus (ABF), built-in analytics, and other advanced features needed for demanding security applications.

Camera

Within the **Sarix Enhanced** Range, the **IXE Series Box Cameras** are compatible with a choice of standard CS mount megapixel lenses for wide angle or long range surveillance needs. The box cameras feature an auto back focus mechanism to accommodate this range of lenses and to ensure that the camera automatically stays in perfect focus. The Sarix IXE Series features advanced color science and a mechanical IR cut filter for increased sensitivity in low-light installations.

Video

The **IXE Series** supports two independently-configurable video streams in addition to a service video stream. The streams can be compressed in MJPEG and H.264 formats across several resolution configurations. The **IXE Series** offers real-time video (30 ips) with full HD resolution (up to 3 MPx) using H.264 compression for optimized bandwidth and storage efficiency.

The streams can be configured to a variety of frame rates, bit rates, and group of pictures (GOP) structures for additional flexibility in bandwidth administration. In addition, streams can be encoded as constrained variable bit rate (CVBR), constrained bit rate (CBR), or variable bit rate (VBR).

Open and Integrated

Sarix Enhanced range cameras seamlessly connect to Pelco video management systems such as Endura® version 2.0 (or later), and Digital Sentry® version 7.3 (or later). **Sarix Enhanced** range cameras integrate with major third-party video management systems through the Pelco API, and other third-party software and systems through the ONVIF Profile S and Profile G standards.

Built-In Analytics

Pelco Analytics enhance the flexibility and performance of **Sarix Enhanced** range cameras. Eight Pelco behaviors are preloaded and included as standard features. Pelco behaviors can be configured and enabled using a standard Web browser, and they are compatible with Endura or a third-party system that supports alarms using Pelco's API.

Convenient Power

Sarix Enhanced range cameras are designed with Power over Ethernet (PoE) to reduce costs and simplify planning, wiring, and installation. PoE functionality works with PoE-enabled network switches or power injectors, eliminating the need for separate power supplies and cabling, and increases camera fail safety through an uninterruptable power supply (UPS).

PELCO ANALYTICS

Sarix Enhanced range cameras includes eight user-configurable behaviors. The camera is capable of running up to two behaviors at the same time; although, the number of behaviors is limited to the available processing power of the camera and the type of analytic being used.

Note: Available processing power is determined by the settings for compression standards, resolution, image rate, bit rate, and analytic configuration.

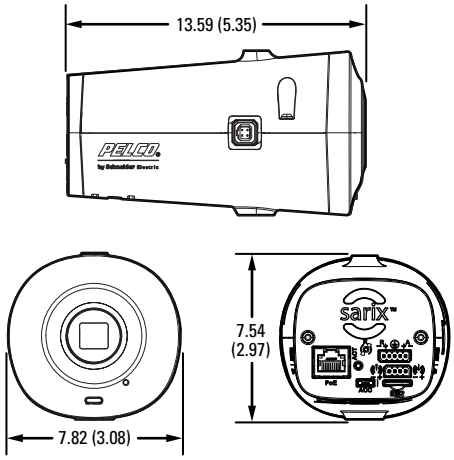
For each behavior, you can create several custom profiles that contain different camera settings. With these profiles, you can set up different scenarios for the behavior, which will automatically detect and trigger alarms when specific activity is detected.

Pelco analytics are configured and enabled using a standard Web browser, and Pelco behavior alarms are compatible with Endura or a third-party system that supports Pelco's API system.

Pelco analytics behaviors can be scheduled to work during a certain time or condition. For example, during the day, a camera can be configured with Object Counting to count the number of people that enter a lobby door. At night, the operator can change the profile to Camera Sabotage to trigger an alarm if a camera is moved or obstructed. Available Pelco behaviors include:

- **Abandoned Object:** Detects objects placed within a defined zone and triggers an alarm if the object remains in the zone longer than the user-defined time allows. An airport terminal is a typical installation for this behavior. This behavior can also detect objects left behind at an ATM, signaling possible card skimming.
- **Adaptive Motion Detection:** Detects and tracks objects that enter a scene and then triggers an alarm when the objects enter a user-defined zone. This behavior is primarily used in outdoor environments with light traffic to reduce the number of false alarms caused by environmental changes.
- **Camera Sabotage:** Detects contrast changes in the field of view. An alarm is triggered if the lens is obstructed by spray paint, a cloth, or a lens cap. Any unauthorized repositioning of the camera also triggers an alarm.
- **Directional Motion:** Generates an alarm in a high traffic area when a person or object moves in a specified direction. Typical installations for this behavior include an airport gate or tunnel where cameras can detect objects moving in the opposite direction of the normal flow of traffic or an individual entering through an exit door.
- **Loitering Detection:** Identifies when people or vehicles remain in a defined zone longer than the user-defined time allows. This behavior is effective in real-time notification of suspicious behavior around ATMs, stairwells, and school grounds.
- **Object Counting:** Counts the number of objects that enter a defined zone. This behavior can be used to count the number of people at a store entrance/exit or inside a store where the traffic is light. This behavior is based on tracking and does not count people in a crowded setting.
- **Object Removal:** Triggers an alarm if an object is removed from a user-defined zone. This behavior is ideal for customers who want to detect the removal of high value objects, such as a painting from a wall or a statue from a pedestal.
- **Stopped Vehicle:** Detects vehicles stopped near a sensitive area longer than the user-defined time allows. This behavior is ideal for airport curbside drop-offs, parking enforcement, suspicious parking, traffic lane breakdowns, and vehicles waiting at gates.

VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.



REAR VIEW

TECHNICAL SPECIFICATIONS

MODELS

IXES1	Sarix 0.5 MPx with SureVision, low-light, WDR, day-night, network camera with built-in Pelco analytics
IXE11	Sarix 1 MPx (720p) with SureVision, low-light, WDR, day-night, network camera with built-in Pelco analytics
IXE21	Sarix 2 MPx (1080p) with SureVision, low-light, WDR, day-night, network camera with built-in Pelco analytics
IXE31	Sarix 3 MPx (1080p) with SureVision, low-light, WDR, day-night, network camera with built-in Pelco analytics

CAMERA

Imaging Device	1/3-inch
Imager Type	CMOS
Imager Readout	Progressive scan
Highest Resolution	
3 MPx	2048 x 1536
2 MPx	1920 x 1080
1 MPx	1280 x 960
0.5 MPx	800 x 608
Signal-to-Noise Ratio	>60 dB
Auto Back Focus	Yes
Electronic Shutter Range	0.5 ~ 1/48,000 sec
True Wide Dynamic Range	Up to 100 dB*
White Balance Range	2,000° to 10,000°K
Sensitivity	f/1.2; 2,850°K; SNR >20 dB
Color (33 ms)	0.1 lux
Color (500 ms)	0.005 lux
Mono (33 ms)	0.05 lux
Mono (500 ms)	0.0013 lux
Day/Night Capabilities	Yes
Mechanical IR Cut Filter	Yes, (ON/OFF/AUTO selectable), with different set points on lux

*Sensor level is not inclusive of SureVision image processing.

AUDIO

Streaming	Bidirectional: full or half duplex
Input/Output	Line level/external microphone input; 600-ohm differential, 1 Vp-p max. signal level; built-in microphone
Compression	G.711 PCM 8 bit, 8 kHz mono at 64 kbit/s

NETWORK

Supported Protocols	TCP/IP, UDP/IP (Unicast, Multicast IGMP), UPnP, DNS, DHCP, RTP, RTSP, NTP, IPv4, IPv6, SNMP v2c/v3, QoS, HTTP, HTTPS, LDAP (client), SSH, SSL, SMTP, FTP, ARP, ICMP, and 802.1x (EAP)
Users	
Unicast	Up to 20 simultaneous users depending on the resolution settings
Multicast	Unlimited users H.264
Security Access	Password protected
Software Interface	Web browser view and setup

VIDEO

Video Streams	Multiple simultaneous streams with up to 2 different configurations plus service stream; the secondary stream is variable based on the setup of the primary stream
Available Resolutions	Two configurable streams as follows:

Camera Model	MPx	Max Mbps CVBR	Width	Height	Aspect Ratio
3 MPx	3.0	9.2	2048	1536	4:3
2 MPx	1.9	5.7	1600	1200	4:3
1 MPx	1.2	3.8	1280	960	4:3
0.5 MPx	0.5	2	800	608	4:3
	0.3	1.5	640	480	4:3
	0.08	0.5	320	240	4:3
3 MPx and 2 MPx	1080p	6	1920	1080	16:9
1 MPx	720p	2.9	1280	720	16:9
0.5 MPx	0.5	1.7	800	448	16:9
	0.2	1.2	640	352	16:9
	0.06	0.4	320	176	16:9

Note: Default Mbps values are based on High profile (30 ips; default IP GOP length).

Frame Rate	Up to 30, 25, 15, 12.5, 10, 5, 1 (depending on the coding, resolution, and stream configuration)
Video Encoding	H.264 High, Main, or Base profiles; and MJPEG
Bit Rate Control	Constrained variable bit rate (CVBR), constant bit rate (CBR), and variable bit rate (VBR) with target range
Service Stream	JPEG stream; the aspect ratio will be consistent with the independent streams

MECHANICAL

Lens Mount	CS mount; adjustable
Auto Iris Type	DC drive
Camera Mount	1/4 in. UNC-20 screw; top and bottom of camera housing

ELECTRICAL

Network Port	RJ-45 connector for 100Base-TX Auto MDI/MDI-X
Accessory Port	Micro B USB connector for Pelco accessories
Cable Type	Cat5 or better for 100Base-TX
Input Power	PoE (IEEE 802.3af, Class 3)
Power Consumption†	9 W nominal
Current Consumption	350 mA maximum
Local Storage	Micro SD, SDHC (see manual for details)
Alarm	
Input	10 VDC maximum, 5 mA maximum
Output	0 to 15 VDC maximum, 75 mA maximum
Relay Output	32 VDC maximum; 150 mA maximum

†Does not include optional accessories connected to accessory port.

TECHNICAL SPECIFICATIONS

ENVIRONMENTAL

Operating Temperature	–10° to 50°C (14° to 122°F)
Storage Temperature	–10° to 60°C (14° to 140°F)
Operating Humidity	20 to 80%, RH noncondensing
Storage Humidity	20 to 80%, RH noncondensing

PHYSICAL

Construction	
Material	Aluminum
Finish	Silver powder paint
Weight	
Unit	0.52 kg (1.16 lb)
Shipping	0.64 kg (1.41 lb)
Product Box Dimensions (approximate)	12.7 x 19.69 x 12.7 cm (5.0" D x 7.75" W x 5.0" H)

SOFTWARE FEATURES

- Multilingual menus in user interface: English, French, Italian, German, Spanish, Portuguese, Russian, Chinese, Turkish
- 16 window blanks, configurable in size
- Password protection
- Snapshot with JPEG capture at 2016 x 1523 resolution
- Text overlays for camera name, time, date

MINIMUM SYSTEM REQUIREMENTS

Processor	Intel® Core™ i3 processor, 2.4 GHz
Operating System	Microsoft® Windows® 7 (32- and 64-bit), or Window Vista®; or Mac® OS X 10.4 (or later)
Memory	4 GB RAM
Network Interface	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® 3.5 (or later); Internet Explorer 8.0 (or later) is recommended for configuring analytics
Media Player†	Pelco Media Player or QuickTime® 7.6.5 for Windows 7, XP, or Vista; or QuickTime 7.6.4 for Mac OS X 10.4 (or later)

*Internet Explorer is not supported by Mac OS X 10.4.

†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.

ANALYTICS

Required Systems for Pelco Analytics

Pelco Interface	WS5200 Advanced System Management Software on an Endura 2.0 (or later) system
Open API	The Pelco API can transmit behavior alarm data to third-party applications, available at *pdn.pelco.com*

CERTIFICATIONS/RATINGS

- CE, Class A
- FCC, Class A
- ICES-003, Class A
- UL/cUL Listed
- KCC
- C-Tick
- CB
- ONVIF Profile S and Profile G Conformant

INTEGRATION

Pelco System Integration	Endura 2.0 (or later) Digital Sentry 7.3 (or later)
Open API	Pelco API or ONVIF Profile S and Profile G
Mobile Application	Integrated with Pelco Mobile Application

RECOMMENDED MOUNT

C10-UM	Universal camera mount

RECOMMENDED ENCLOSURES

EH1512	Indoor/environmental, IP66
EH3512	Indoor/environmental, IP66

RECOMMENDED LENSES

13M2.2-6	MPx lens, varifocal, 2.2 ~ 6.0 mm, f/1.3 ~ 2.0
13M2.8-8	MPx lens, varifocal, 2.8 ~ 8.0 mm, f/1.2 ~ 1.9
13M2.8-12	MPx lens, varifocal, 2.8 ~ 12.0 mm, f/1.4 ~ 2.7
13M15-50	MPx lens, varifocal, 15.0 ~ 50.0 mm, f/1.5 ~ 2.1

Note: Pelco megapixel (MPx) lenses have been designed and tested to deliver optimal image quality for the IXE Series camera. The use of a standard definition lens or any other lens not tested by Pelco on an IXE Series MPx camera could limit the resolution of the camera, creating poor image quality.

OPTIONAL ACCESSORIES

IPCT01	Pelco IP camera tester§
ALM-1	External alarm accessory
POE1AT-US	1-port PoE midspan with US power cord
POE1AT-EU	1-port PoE midspan with European power cord

§Contact Pelco Product Support for more information about the use of the Pelco IP camera tester with cameras.

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