

Product guide

Network video solutions





Welcome to the Axis network video product guide

This guide has been developed to help you navigate our broad range of network video products. If you are looking for comprehensive product specifications, or information about our solutions and customer cases, please visit our website www.axis.com or contact your local Axis office.

The best in network video

Axis is the global market leader in network video. We were first to bring the benefits of network video technology to professional video surveillance and remote monitoring applications, introducing the world's first network camera in 1996. With more than two decades of experience in networking technologies, the largest installed base of network video products, as well as strong partnerships with leading players across all continents, Axis is the partner of choice in network video.

Flexible, scalable solutions

Using open technology standards that enable easy integration and scalability, Axis offers a full range of network video solutions for surveillance and remote monitoring applications in a broad spectrum of industry segments. Our cutting-edge portfolio comprises network cameras that redefine the categories they represent, as well as video encoders that enable cost-effective migration to the best in network video technology. Our offering also includes comprehensive video management software solutions and a full range of accessories.

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NETWORK CAMERAS

Watch anything, from anywhere at any time

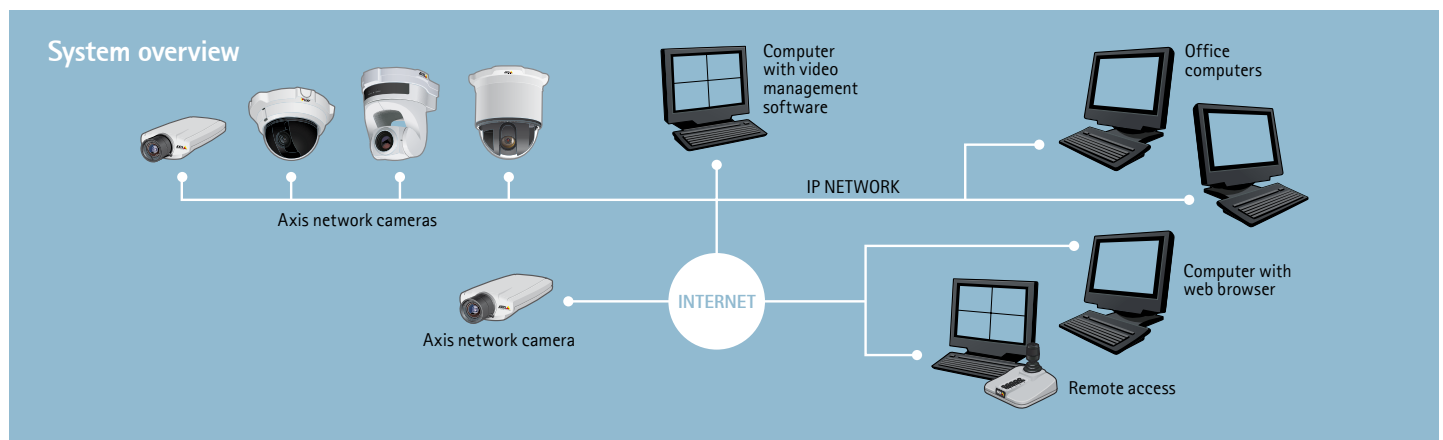
Axis network cameras enable you to remotely view and record live video from anywhere in the world. Based on open standards, they operate stand-alone and can be placed wherever there is an IP network connection. Images can be viewed using video management software or a standard web browser. With network cameras for day and night, indoors and outdoors, as well as wireless, vandal-protected and megapixel network cameras, Axis offers you a complete portfolio. Whether you need a professional video surveillance solution to secure the safety of people and places, or remotely monitor property and facilities, Axis can meet your needs.

Common features

- > Axis superior image quality
- > High resolution video - live and recorded. Many products with megapixel resolution
- > Direct connection to wired and wireless IP networks
- > Powerful event and alarm management
- > Built-in intelligence, e.g. motion detection and tampering alarm
- > Products with Motion JPEG, MPEG-4 and/or H.264
- > Comprehensive set of security features such as multi-level password, IP address filtering and HTTPS encryption
- > Powerful management tools for remote configuration and status
- > Powerful API (VAPIX®) for software integration
- > Products with IPv6 and Quality of Service
- > Products with multilingual user interface

Benefits

- > Remote access to live and recorded video - any time, anywhere, from any authorized computer
- > Digital quality images for perfect viewing
- > Sharp images of moving persons and objects thanks to progressive scan
- > Scalable and future-proof, based on open IP standards
- > Ease of integration with other systems, such as access control and point of sales
- > Efficient centralized management and reduced maintenance costs
- > Flexible and cost-efficient large-scale video surveillance solutions
- > Backed by the industry's largest base of video management software with Axis Application Development Partners



Types of network cameras

A complete portfolio for any need

The Axis product range offers the world's largest selection of network cameras. The cameras are divided into four categories – Fixed network cameras, Fixed dome network cameras, PTZ network cameras, and PTZ dome network cameras – providing high-quality video solutions for any professional indoor or outdoor video surveillance application.

Fixed network cameras

A fixed network camera meets a variety of application needs, and its traditional camera design adds a deterring effect. The viewing direction is set once the camera is mounted. There are several models with a varifocal lens and/or exchangeable lenses for increased flexibility. Housings are available for mounting the camera outdoors or in harsh environments.

Fixed dome network cameras

A fixed dome network camera is a compact camera solution with a dome casing. Its main benefit lies in its discreet, non-obtrusive design, as well as in the fact that it is difficult to see in which direction the camera is pointing. The camera's dome casing design offers efficient protection against redirection and defocusing.

PTZ network cameras

A PTZ network camera offers network video functionality combined with pan/tilt/zoom capability. The camera's movement is easily controlled via a computer connected to the network. Depending on the application, the most suitable choice may be a PTZ network camera where both movement and viewing direction are visible, a more discreet model where all moving parts are inside the casing, or a model with no moving parts.

PTZ dome network cameras

A PTZ dome network camera provides full flexibility by offering 360-degree pan, 180-degree tilt, extensive zooming capabilities and advanced mechanical design for continuous camera movement. PTZ domes are ideal for live monitoring, where the user needs to actively follow a person or object. They can also be operated in guard tour mode, where the camera automatically moves between preset positions.



FIXED NETWORK CAMERAS



AXIS 206

The world's smallest network camera, ideal for remote monitoring.

- > Progressive scan for sharper images
- > Motion JPEG
- > Up to 30 frames per second in resolutions ranging up to VGA 640x480 pixels



AXIS 207

The world's smallest, true bandwidth-efficient MPEG-4 network camera.

- > Progressive scan for sharper images
- > Simultaneous MPEG-4 and Motion JPEG
- > MPEG-4 implementation with motion estimation for optimized bandwidth efficiency
- > One-way audio with built-in microphone and audio detection alarm
- > Up to 30 frames per second in resolutions ranging up to VGA 640x480 pixels
- > One alarm input and one output for connecting external devices



Wireless

AXIS 207W

The world's smallest wireless MPEG-4 network camera, with built-in IEEE 802.11g wireless interface giving you the freedom to place the camera where it's needed.

- > Wireless IEEE802.11g and Ethernet for flexible installation
- > Support for WPA (Wi-Fi Protected Access) and WPA2 protocols for secured wireless transmission
- > All other features the same as AXIS 207



Megapixel Wireless

AXIS 207MW

The world's smallest wireless MPEG-4 network camera with megapixel resolution and built-in IEEE 802.11g wireless connection.

- > Up to 12 frames per second in 1.3 megapixel resolution (megapixel resolution up to 1280x1024)
- > All other features the same as AXIS 207W



AXIS 210

Superior video quality for professional indoor applications.

- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Up to 30 frames per second in all resolutions ranging up to 640x480
- > Replaceable CS mount lens
- > One alarm input and one output for connecting external devices



AXIS 210A

Superior video quality with audio and Power over Ethernet for professional indoor applications.

- > Power over Ethernet (IEEE 802.3af)
- > Two-way audio support including built-in microphone and audio detection alarm
- > All other features the same as AXIS 210



AXIS 211*

Professional network camera with superior video quality for indoor and outdoor surveillance and remote monitoring applications.

- > Up to 30 frames per second in all resolutions ranging up to 640x480
- > Varifocal lens with DC-iris
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Power over Ethernet (IEEE 802.3af)
- > Replaceable CS mount lens
- > One alarm input and one output for connecting external devices



AXIS 211A*

Professional network camera with superior video quality and two-way audio for indoor and outdoor surveillance and remote monitoring applications.

- > Two-way audio support including built-in microphone and audio detection alarm
- > All other features the same as AXIS 211



*Outdoor use of these network cameras requires weatherproof housing

Axis offers convenient and tailor-made solutions for mounting Axis network cameras outdoors and in harsh, humid and dusty environments.

For a full list of available outdoor housings, please visit:
www.axis.com/products/cam_housing



AXIS 211W*

Flexible wireless video surveillance with superior image quality.

- > Wireless IEEE 802.11g/802.11b and Ethernet for flexible installation
- > All other features the same as AXIS 211A



AXIS 211M*

Megapixel video surveillance with exceptional image detail.

- > 1.3 megapixel resolution
- > All other features the same as AXIS 211A



AXIS 221*

High performance network camera for demanding security installations under all lighting conditions.

- > Automatic day and night functionality with removable IR filter
- > High quality Pentax varifocal DC-iris lens for optimal image quality in outdoor light conditions
- > High light sensitivity
- > Up to 45 frames per second in all resolutions ranging up to 640x480. Up to 60 frames per second in 480x360 or lower
- > Power over Ethernet (IEEE 802.3af)
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Solid mechanical design with metal casing
- > Replaceable CS mount lens
- > Two alarm inputs and one output for connecting external devices
- > Active Tampering Alarm



AXIS 223M*

Day and night video surveillance with exceptional image detail.

- > 2.0 megapixel CCD sensor and lens
- > Up to 12 frames per second in 1600x900 resolution
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Automatic day and night functionality and iris control
- > Power over Ethernet (IEEE 802.3af)
- > Replaceable C/CS mount lens
- > Two alarm inputs and one output for connecting external devices
- > Two-way audio including audio detection alarm
- > Active Tampering Alarm

FIXED DOME NETWORK CAMERAS



AXIS 209FD

Flat, discreet high-quality camera for indoor surveillance.

- > Small, discreet design
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Power over Ethernet (IEEE 802.3af)



AXIS 209FD-R

Compact and rugged for buses and trains.

- > Flat design for public transportation
- > Vibration, humidity and dust-resistant
- > IP66-rated design
- > Built-in heater against condensation
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Power over Ethernet (IEEE 802.3af)
- > Active Tampering Alarm



AXIS 209MFD

Flat, discreet high-resolution camera for indoor surveillance.

- > 1.3 megapixel resolution
- > All other features the same as AXIS 209FD



AXIS 216FD

Professional, discreet fixed dome camera for indoor video and audio surveillance.

- > Discreet and compact design, effectively protecting against tampering
- > Power over Ethernet (IEEE 802.3af)
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Up to 30 frames per second in VGA 640x480 resolution
- > Two-way audio support including built-in microphone and audio detection alarm
- > One alarm input and one output for connecting external devices
- > Active Tampering Alarm



AXIS 216FD-V

Exceptional performance for vandal-resistant, indoor video surveillance.

- > Vandal-resistant and compact design
- > All other features the same as AXIS 216FD



Megapixel

AXIS 216MFD

Discreet video surveillance with exceptional image detail.

- > 1.3 megapixel resolution
- > All other features the same as AXIS 216FD



Megapixel

AXIS 216MFD-V

Discreet vandal-resistant video surveillance with exceptional image detail.

- > Vandal-resistant, rugged casing with metal base
- > All other features the same as AXIS 216MFD



Available in Q3 2008

AXIS P3301

Discreet video surveillance with outstanding H.264 performance.

- > Discreet and compact design, effectively protecting against tampering
- > Varifocal lens with DC-iris
- > Power over Ethernet (IEEE 802.3af)
- > Progressive scan for sharper images
- > Wide Dynamic Range
- > Multiple H.264 streams and simultaneous Motion JPEG streams
- > 30 frames per second in VGA 640x480 resolution
- > Two-way audio support including built-in microphone and audio detection alarm
- > One alarm input and one output for connecting external devices
- > Active Tampering Alarm



Available in Q3 2008



PTZ NETWORK CAMERAS

AXIS P3301-V

Discreet, vandal-resistant video surveillance with outstanding H.264 performance.

- > Vandal-resistant and compact design
- > All other features the same as AXIS P3301

AXIS 225FD

Fixed dome network camera for professional video surveillance in tough conditions.

- > Vandal-resistant design and tamper-proof mounting
- > Outdoor-proof, IP66-rated design with built-in heater and fan, operating in temperatures down to -20° C (-4° F)
- > Varifocal lens with DC-iris
- > Automatic day and night functionality with removable IR filter
- > Power over Ethernet (IEEE 802.3af)
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Up to 30 frames per second in VGA 640x480 resolution
- > Two alarm inputs and one output for connecting external devices
- > Active Tampering Alarm

AXIS 212 PTZ

Compact PTZ camera offering full overview and instant zoom with retained image resolution – yet with no moving parts.

- > Full overview based on high-quality 3 megapixel sensor and wide angle lens
- > Instant one-click pan, tilt and zoom; 3x instant zoom; 140° pan and 105° tilt; Pan and Tilt speed 400°/1 sec
- > PTZ with no moving parts - no wear and tear
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > 30 frames per second in VGA resolution (640x 480 pixels). Whether in overview mode or when zooming in, full VGA resolution is maintained.
- > Power over Ethernet (IEEE 802.3af)
- > Two-way audio support including built-in microphone and audio detection alarm
- > One alarm input and one output for connecting external devices

AXIS 212 PTZ-V

Vandal-resistant and compact PTZ camera offering full overview and instant zoom with retained image resolution – yet with no moving parts.

- > Vandal-resistant casing made in metal
- > Tamper-proof mounting
- > Vandal-resistant tilt wedge with an angle of 20 degrees for viewing along walls
- > All other features the same as AXIS 212 PTZ

**AXIS 213 PTZ***

Professional network camera with remote pan/tilt/zoom control.

- > 26x optical zoom lens with auto focus
- > IR mode with built-in IR lighting
- > Video under all light conditions, indoor as well as outdoors
- > Simultaneous Motion JPEG and MPEG-4
- > Resolutions up to 4CIF at up to 25 fps (PAL) or 30 fps (NTSC)
- > Optional AXIS 213CM Connection Module for two way audio + alarm inputs and outputs

**AXIS 214 PTZ***

Professional day and night camera with remote pan/tilt/zoom and audio.

- > 18x optical zoom lens with auto focus
- > Automatic day and night functionality with removable IR filter
- > Two-way audio support including audio detection alarm
- > Simultaneous Motion JPEG and MPEG-4
- > Resolutions up to 4CIF at up to 25 fps (PAL) or 30 fps (NTSC)
- > One alarm input and one output for connecting external devices

**AXIS 215 PTZ***

Compact pan/tilt/zoom camera for 360 degree video surveillance.

- > Pan, tilt and zoom control over IP network
- > 360 degree pan with Auto-flip
- > 12x optical and 4x digital, totally 48x zoom
- > Day and night functionality for increased light sensitivity
- > Simultaneous Motion JPEG and MPEG-4
- > Two-way audio, including audio detection alarm

*Outdoor use of these network cameras requires weatherproof housing

Axis offers convenient and tailor-made solutions for mounting Axis network cameras outdoors and in harsh, humid and dusty environments.

For a full list of available outdoor housings, please visit:
www.axis.com/products/cam_housing



PTZ DOME NETWORK CAMERAS



AXIS 231D+*

Network dome camera with remote pan, tilt and zoom control for demanding surveillance applications.

- > 18x optical zoom lens with auto focus and 12x digital zoom
- > Remote pan/tilt/zoom control from any computer locally on the LAN or over the Internet
- > Simultaneous Motion JPEG and MPEG-4
- > Resolutions up to 4CIF at up to 25 fps (PAL) or 30 fps (NTSC)
- > Operates down to 0.3 lux @ F1.4
- > Four alarm inputs and four outputs for connecting external devices



AXIS 232D+*

Day and night network dome camera designed for demanding security installations under all light conditions.

- > Automatic day and night functionality with removable IR filter
- > Operates down to 0.3 Lux in color and 0.005 Lux in IR-mode
- > All other features the same as AXIS 231D+












AXIS 233D*

High-speed dome camera with progressive scan and 35x zoom.

- > 35x optical zoom with auto focus and 12x digital zoom
- > Electronic Image Stabilizer
- > Wide Dynamic Range
- > Automatic day and night functionality with removable IR-filter
- > Area zoom for quick and simple pan/tilt/zoom
- > Progressive scan for sharper images
- > Simultaneous Motion JPEG and MPEG-4
- > Resolutions up to 4CIF at up to 25fps (PAL) or 30 fps (NTSC)
- > Pan and tilt speed 0.05 - 450°/second
- > E-flip that electronically turns the image 180° when following an object under the dome
- > On-screen Direction Indicator
- > Two way audio
- > Four alarm inputs and four outputs for connecting external devices

TECHNICAL OVERVIEW

Axis network cameras







Fixed network cameras									
	AXIS 206 Network Camera	AXIS 207 AXIS 207W Network Camera	AXIS 207MW Network Camera	AXIS 210 AXIS 210A Network Camera	AXIS 211 AXIS 211A Network Camera	AXIS 211W Network Camera	AXIS 211M Network Camera	AXIS 221 Network Camera	AXIS 223M Network Camera
									
Image sensor	1/4" progressive scan CMOS	1/4" progressive scan CMOS	1/3" progressive scan RGB CMOS 1.3 Megapixel	1/4" Wfine progressive scan RGB CCD	1/4" Wfine progressive scan RGB CCD	1/4" progressive scan RGB CMOS	1/3" progressive scan RGB CMOS 1.3 Megapixel	1/3" Wfine progressive scan RGB CCD	1/2.7" Wfine progressive scan RGB CCD 2 Megapixel
Day and Night								Automatic	Automatic
Outdoor use					● ⁵	● ⁵	● ⁵	● ⁵	● ⁵
Lens	4.0 mm/F2.0 fixed iris	4.0 mm/F2.0 fixed iris	3.6 mm/F1.8 fixed iris	4.0 mm/F1.2 fixed iris CS mount	Varifocal 3.0 - 8.0 mm/ F1.0 DC-iris, CS mount	Varifocal 3.0 - 8.0 mm/ F1.0 DC-iris, CS mount	Varifocal 3.0 - 8.0 mm/ F1.0 DC-iris, CS mount	Varifocal 3.0 - 8.0 mm/ F1.0 DC-iris, CS mount	Varifocal 4.0 - 8.0 mm/ F1.4 DC-iris, C mount ⁶
Min illumination/ light sensitivity (lux)	4 - 10,000	1 - 10,000	2 - 10,000	1 - 10,000	0.75	0.75	1	0.65 (color) 0.08 (B/W)	1.5 (color) 0.2 (B/W)
Video compression	Motion JPEG	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4
Max video resolution (pixels)	640 x 480	640 x 480	1280 x 1024	640 x 480	640 x 480	640 x 480	1280 x 1024	640 x 480	1600x900 (16:9) 1600x1200 (4:3)
Frames per second	30 (640x480)	30 (640x480)	12 (1280x1024)	30 (640x480)	30 (640x480)	30 (640x480)	12 (1280x1024) 30 (800x600)	45 (640x480) 60 (480x360)	12 (16:9) 9 (4:3)
Audio support		One way	One way	Two way ³	Two way ³	Two way	Two way		Two way
Alarm in-/outputs		1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1
Intelligent video		Motion detection Audio detection	Motion detection Audio detection	Motion detection Audio detection ³	Motion detection Audio detection ³	Motion detection Audio detection	Motion detection Audio detection	Motion detection Active tampering alarm	Motion detection Audio detection Active tampering alarm
Security	Multi-level passwords	Multi-level passwords IP filtering ² HTTPS encryption ²	Multi-level passwords IP filtering HTTPS encryption	Multi-level passwords IP filtering HTTPS encryption ³ IEEE 802.1X ³	Multi-level passwords IP filtering HTTPS encryption ³ IEEE 802.1X ³	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X
Network	IPv4	IPv4, IPv6 ² , QoS ²	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)	See note ¹	See note ¹		Class 2 ⁴	Class 2	Class 2	Class 2	Class 2	Class 2
Serial connectors								RS-232, RS-485/422	RS-232, RS-485/422
Other	AXIS Camera Station One included	AXIS Camera Station One included	AXIS Camera Station One included						

1) PoE splitter available for AXIS 206/AXIS 207 2) AXIS 207W only 3) AXIS 210A/AXIS 211A only 4) AXIS 210A only. PoE splitter available for AXIS 210 5) Outdoor use requires weather-proof housing
6) Camera can be used with C/CS lens

TECHNICAL OVERVIEW

Axis network cameras







Fixed dome network cameras

	AXIS 209FD AXIS 209FD-R Network Camera	AXIS 209MFD Network Camera	AXIS 216FD AXIS 216FD-V Network Camera	AXIS 216MFD AXIS 216MFD-V Network Camera	AXIS 225FD Network Camera	AXIS P3301 AXIS P3301-V Network Camera
						
						Available in Q3 2008
Image sensor	1/4" progressive scan RGB CMOS	1/3" progressive scan RGB CMOS 1.3 Megapixel	1/4" progressive scan RGB CMOS	1/3" progressive scan RGB CMOS 1.3 Megapixel	1/4" Wfine progressive scan RGB CCD	1/4" progressive scan RGB CMOS
Day and Night					Automatic	
Outdoor use					●	
Lens	3.0 mm/F2.0 fixed iris	3.6 mm/F1.8 fixed iris	Varifocal 2.8 - 10 mm/F1.3 DC-iris	Varifocal 2.8 - 10 mm/F1.3 DC-iris	Varifocal 2.8 - 5.8 mm/F1.4 DC-iris	Varifocal 2.8 - 10 mm, F1.3 DC-iris
Min illumination/light sensitivity (lux)	1.5 - 10,000	3 - 10,000	1	2	1 (color) 0.2 (B/W)	1
Video compression	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG H.264
Max video resolution (pixels)	640 x 480	1280 x 1024	640 x 480	1280 x 1024	640 x 480	640 x 480
Frames per second (NTSC/PAL)	30 (640x480)	12 (1280x1024)	30 (640x480)	12 (1280x1024) 30 (800x600)	30 (640x480)	30 (640 x 480)
Pan/tilt/zoom						
Audio support			Two way	Two way		Two way
Alarm in-/outputs			1/1	1/1	2/1	1/1
Intelligent video	Motion detection Active tampering alarm ⁷	Motion detection	Motion detection Audio detection Active tampering alarm	Motion detection Audio detection Active tampering alarm	Motion detection Active tampering alarm	Motion detection Audio detection Active tampering alarm
Security	Multi-level passwords IP filtering HTTPS encryption	Multi-level passwords IP filtering HTTPS encryption	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X
Network	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)	Class 1	Class 1	Class 1	Class 1	Class 2 (without heater)	Class 2
Serial connectors					RS-485/422	
Other	AXIS 209FD-R: IP66-rated, rugged		AXIS 216FD: Tamper-resistant AXIS 216FD-V: Vandal-resistant	AXIS 216MFD: Tamper-resistant AXIS 216MFD-V: Vandal-resistant	Vandal-resistant, IP66-rated, heater and fan	WDR, AXIS P3301: Tamper-resistant AXIS P3301-V: Vandal-resistant

7) AXIS 209FD-R only 8) Also configurable for desktop use 9) Outdoor use requires weather-proof housing 10) With AXIS 213CM 11) Via Auto-flip 12) AXIS 232D+ only

TECHNICAL OVERVIEW

Axis network cameras

	PTZ network cameras				PTZ dome network cameras	
	AXIS 212 PTZ AXIS 212 PTZ-V Network Camera	AXIS 213 PTZ Network Camera⁸	AXIS 214 PTZ Network Camera⁸	AXIS 215 PTZ Network Camera	AXIS 231D+ AXIS 232D+ Network Dome Camera	AXIS 233D Network Dome Camera
						
Image sensor	1/2" progressive scan CMOS 3 Megapixel	1/4" CCD	1/4" ExView HAD CCD	1/4" CCD	1/4" ExView HAD CCD	1/4" ExView progressive scan HAD CCD
Day and Night		Configurable Built-in IR lamp	Automatic	Automatic	Automatic ¹²	Automatic
Outdoor use		● ⁹	● ⁹	● ⁹	● ⁹	● ⁹
Lens	2.7 mm/F1.8 fixed iris 3x instant zoom	3.5 - 91 mm auto iris and auto focus 26x optical zoom 12x digital zoom	4.1 - 73.8 mm auto iris and auto focus 18x optical zoom 12x digital zoom	3.8 - 46 mm auto iris and auto focus 12x optical zoom 4x digital zoom	4.1 - 73.8 mm auto iris and auto focus 18x optical zoom 12x digital zoom	3.4 - 119 mm auto iris and auto focus 35x optical zoom 12x digital zoom
Min illumination/light sensitivity (lux)	10 lux wide mode 20 lux tele mode	1 (color) 0.1 (B/W)	0.3 (color) 0.005 (B/W)	1 (color) 0.3 (B/W)	0.3 (color) 0.005 (B/W) ¹²	0.5 (color) 0.008 (B/W)
Video compression	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4	Motion JPEG MPEG-4
Max video resolution (pixels)	640 x 480	4CIF	4CIF	4CIF	4CIF	4CIF
Frames per second (NTSC/PAL)	30 (640x480) in overview	30/25 (4CIF)	30/25 (4CIF)	30/25 (4CIF)	30/25 (4CIF)	30/25 (4CIF)
Pan/tilt/zoom	20 presets 140° pan 105° tilt Guard tour	20 presets 340° pan 100° tilt	20 presets 340° pan 120° tilt	20 presets 360° pan ¹¹ 180° tilt	50 presets 360° endless pan 90° tilt Guard tour	100 presets 360° endless pan 180° tilt Guard tour
Audio support	Two way	Two way ¹⁰	Two way	Two way		Two way
Alarm in-/outputs	1/1	2/3 ¹⁰	1/1	1/1	4/4	4/4
Intelligent video	Motion detection Audio detection	Motion detection	Motion detection Audio detection	Motion detection Audio detection	Motion detection	Motion detection Audio detection
Security	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering	Multi-level passwords IP filtering HTTPS encryption	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X
Network	IPv4/v6, QoS	IPv4	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)	Class 1					
Serial connectors		RS-232 ¹⁰				
Other	Continuous motion 24/7 AXIS 212 PTZ-V: Vandal-resistant	Built-in IR light up to 3 m Analog video ¹⁰		Auto-flip and E-flip	Continuous motion 24/7	Continuous motion 24/7, E-flip, WDR, Image stabilizer

7) AXIS 209FD-R only 8) Also configurable for desktop use 9) Outdoor use requires weather-proof housing 10) With AXIS 213CM 11) Via Auto-flip 12) AXIS 232D+ only

VIDEO ENCODERS

Helping you migrate your analog security system to an IP-based video solution

Axis video encoders integrate easily into your existing analog CCTV system. A video encoder (also referred to as video server) digitizes analog video signals and distributes digital images directly over an IP-based network (e.g. LAN/intranet/Internet), turning analog cameras into network cameras. Users can view live images from a video management software application or a web browser on any networked computer, anywhere and at any time. With Axis video encoders, you get all the benefits that digital technology offers while protecting your existing analog investment.

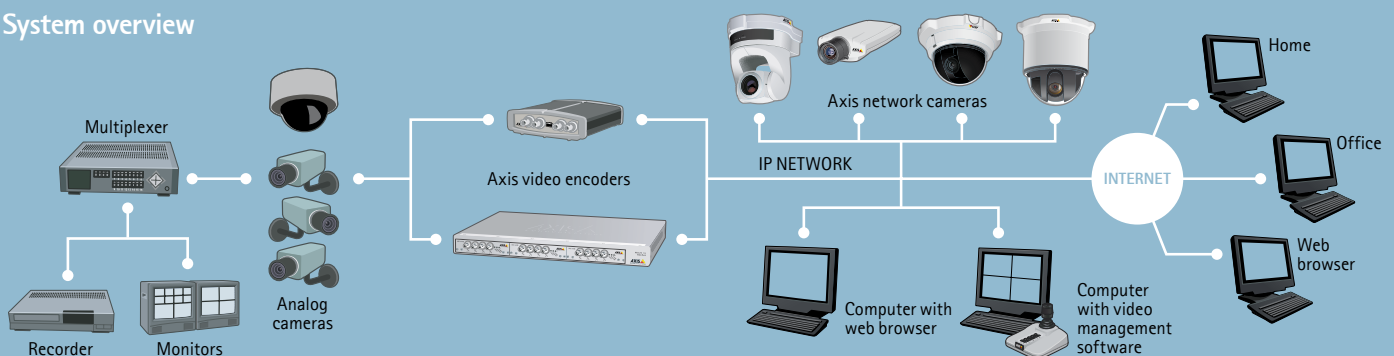
Common features

- > Analog video sources converted to high-quality digital video
- > De-interlace filter corrects motion blur caused by the analog video signal
- > Products with Motion JPEG, MPEG-4 and/or H.264
- > Direct connection to IP networks
- > Independent system with embedded web server – no need for additional hardware or software to capture and transfer images
- > Powerful event and alarm management capabilities
- > Remote configuration and status with Axis management tools or standard web browser
- > Comprehensive set of security features, including multi-level password, IP address filtering and HTTPS encryption
- > Powerful API (VAPIX®) for software integration
- > Products with IPv6 and Quality of Service (QoS)

Benefits

- > Remote access to live images, any time, anywhere, from any computer
- > Digital quality images for perfect viewing
- > Scalable and future-proof
- > Lower total cost of ownership by leveraging existing network infrastructure and legacy equipment
- > Convenient digital video storage
- > Increased functionalities compared with CCTV system
- > Remote and secure accessibility for efficient, centralized management and reduced maintenance costs
- > Ease of integration: easy addition of functionality, system expansion and integration with other systems, such as access control or point of sales
- > Backed by the industry's largest base of video management software with Axis Application Development Partners

System overview



1-CHANNEL VIDEO ENCODERS



AXIS 241S

One-channel, stand-alone video encoder providing digital benefits to analog video surveillance systems.

- > Up to 30/25 frames per second up to 4CIF resolution



AXIS 243SA

One-channel, stand-alone video encoder with audio support providing full-featured digital benefits to analog video surveillance systems.

- > Full 30/25 frames per second in MPEG-4 and Motion JPEG in all resolutions
- > Integrated two-way audio support
- > Active Tampering Alarm



AXIS 247S

An ultra-compact one-channel video encoder solution, ideal for installation close to the analog camera.

- > Full 25/30 frames per second at 4CIF resolution
- > Simultaneous Motion JPEG and MPEG-4
- > Power over Ethernet (IEEE 802.3af) with power out for camera
- > Integrated one way audio support including detection alarm



Available in Q3 2008

AXIS Q7401

One-channel, stand-alone video encoder for full-featured video surveillance with outstanding H.264 performance.

- > Multiple video streams simultaneously at full 25/30 frames per second in all resolutions up to D1 (720x480 in NTSC, 720x576 in PAL)
- > Simultaneous H.264 and Motion JPEG
- > Image setting adjustment
- > Power over Ethernet (IEEE 802.3af) with power out for camera
- > Integrated two-way audio support
- > SD/SDHC memory card slot for local storage
- > Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
- > Intelligent video capabilities
- > Active Tampering Alarm

Common features AXIS 241S/Q/QA/243SA

- > Simultaneous Motion JPEG and MPEG-4
- > 5 different resolutions up to 704x576 (PAL) and 704x480 (NTSC), and 11 different compression levels
- > High quality, de-interlaced video
- > Built-in video motion detection
- > 4 freely configurable alarm inputs and 4 outputs
- > 9 MB pre/post alarm memory per channel
- > Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
- > Up to 20 simultaneous viewers (unlimited with MPEG-4 multicast)
- > Auto sensing for PAL and NTSC

4-CHANNEL VIDEO ENCODERS



AXIS 240Q

Four-channel, stand-alone video encoder providing digital benefits to analog video surveillance systems.

- > High quality Motion JPEG video at 6 (NTSC) or 5 (PAL) frames per second per channel
- > Multiple resolutions and compression levels
- > 4 alarm inputs and 4 outputs
- > 3 MB pre/post alarm memory per channel
- > Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
- > Up to 20 simultaneous viewers



AXIS 241Q

Four-channel, stand-alone video encoder providing digital benefits to analog video surveillance systems.

- > Up to 30/25 frames per second up to 4CIF resolution



AXIS 241QA

Four-channel, stand-alone video encoder with audio support providing digital benefits to analog video surveillance systems.

- > Up to 30/25 frames per second up to 4CIF resolution
- > Integrated two-way audio support



AXIS 243Q Blade

Four-channel video encoder blade providing full frame rate in full 4CIF resolution.

- > Full 25/30 frames per second at all resolutions for all channels simultaneously
- > Simultaneous Motion JPEG and MPEG-4
- > Video motion detection and 9MB pre-/post-alarm buffer per channel
- > Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
- > Up to 20 simultaneous users (unlimited with MPEG-4 multicast)
- > Active Tampering Alarm

Common features AXIS 241S/Q/QA/243SA

- > Simultaneous Motion JPEG and MPEG-4
- > 5 different resolutions up to 704x576 (PAL) and 704x480 (NTSC), and 11 different compression levels
- > High quality, de-interlaced video
- > Built-in video motion detection
- > 4 freely configurable alarm inputs and 4 outputs
- > 9 MB pre/post alarm memory per channel
- > Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
- > Up to 20 simultaneous viewers (unlimited with MPEG-4 multicast)
- > Auto sensing for PAL and NTSC

6-CHANNEL VIDEO ENCODERS



Available in Q3 2008

AXIS Q7406 Blade

Six-channel video encoder blade for full-featured video surveillance with outstanding H.264 performance.

- > Multiple video streams simultaneously at full 25/30 frames per second in all resolutions up to D1 (720x480 in NTSC, 720x576 in PAL)
- > Simultaneous H.264 and Motion JPEG streams
- > Image setting adjustment
- > Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
- > Intelligent video capabilities
- > Active Tampering Alarm

NETWORK VIDEO DECODERS



AXIS 292 Network Video Decoder

The Axis network video decoder decodes digital video and audio streams for analog systems.

- > Allows regular TV sets, analog monitors and analog video switches to be connected to an Axis IP-based video system
- > For use with all Axis Motion JPEG and MPEG-4 based products

RACKS FOR ENTERPRISE INSTALLATIONS

Designed for improved serviceability and quick replacement of units, AXIS 291 1U Video Server Rack, AXIS Video Server Rack and AXIS Q7900 Rack hold up to 3, 12 or 14 video encoder blades respectively, which are interchangeable and hot-swappable so there is no need to power down when installing or changing blades. The racks come with integrated power supply for easy installation and expansion. Axis video encoder racks combine high reliability and functionality with flexible and professional installation, and provide higher density of video channels compared with stand-alone solutions. Axis video encoder racks are specially designed for applications involving a large number of cameras, both existing and new, as well as applications that cover large physical surveillance areas such as prisons, airports, large buildings, university campuses, subways and railway stations.



AXIS 291 1U Video Server Rack

AXIS 291 1U Video Server Rack is a high-density solution for quick and professional installation of up to 3 video encoders in the same rack. It is designed to migrate from 1 to 18 analog cameras into high performance, IP-based, digital solutions.

- > 1 Unit high rack solution
- > 3 slots for Axis video encoder blades; "hot swap" support
- > Serial communication and I/O connectors at the rear of each slot, and a single network connection together with integrated power for simple installation
- > Any combination of AXIS 240Q, AXIS 241Q/S, AXIS 243Q and AXIS Q7406



AXIS Video Server Rack

AXIS Video Server Rack enables large surveillance installations to quickly install as many as 12 video encoder blades in the same rack. It is designed to migrate from 1 to 48 analog cameras into high performance, IP-based, digital solutions.

- > 3 Unit high rack solution
- > 12 slots for Axis video encoder blades; "hot swap" support
- > Network, serial communication and I/O connectors at the rear of each slot, and common power supply
- > Any combination of AXIS 240Q and AXIS 241Q/S












AXIS Q7900 Rack

AXIS Q7900 Rack enables large surveillance installations to quickly install as many as 14 video encoder blades in the same rack. It is designed to migrate from 1 to 84 analog cameras into high performance, IP-based, digital solutions.

- > 4 Unit high rack solution
- > 14 slots for Axis video encoder blades; "hot swap" support
- > Two integrated, replaceable, redundant power supplies
- > Replaceable fan cassettes
- > Four Gigabit Ethernet ports – optionally use only 1 port or all 4 ports
- > Serial communication and I/O connectors at the rear of each slot, and common power supply
- > Any combination of AXIS 240Q, AXIS 241Q/S, AXIS 243Q and AXIS Q7406

TECHNICAL OVERVIEW

Axis video encoders

	1-channel video encoders				4- and 6-channel video encoders				
	AXIS 241S Video Server 	AXIS 243SA Video Server 	AXIS 247S Video Server 	AXIS Q7401 Video Encoder ²⁾  <small>Available in Q3 2008</small>	AXIS 240Q Video Server 	AXIS 241Q Video Server 	AXIS 241QA Video Server 	AXIS 243Q Blade Video Server 	AXIS Q7406 Video Encoder Blade  <small>Available in Q3 2008</small>
Video compression	MPEG-4, Motion JPEG	MPEG-4, Motion JPEG	MPEG-4, Motion JPEG	H.264, Motion JPEG	Motion JPEG	MPEG-4, Motion JPEG	MPEG-4, Motion JPEG	MPEG-4, Motion JPEG	H.264, Motion JPEG
Maximum video resolution (pixels)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	D1: 720x480 (NTSC), 720x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	D1: 720x480 (NTSC), 720x576 (PAL)
Frames per second H.264 (NTSC/PAL) in maximum resolution				30/25 (D1)					30/25 (D1) per channel
Frames per second MPEG-4 (NTSC/PAL) in maximum resolution	21/17 (4CIF), 30/25 (2CIF)	30/25 (4CIF)	27/23 (4CIF), 30/25 (VGA)			21/17 (4CIF) using 1 channel, 20/17 (CIF) per channel using 4 channels	21/17 (4CIF) using 1 channel, 20/17 (CIF) per channel using 4 channels	30/25 (4CIF) per channel	
Frames per second Motion JPEG (NTSC/PAL) in maximum resolution	30/25 (4CIF)	30/25 (4CIF)	30/25 (4CIF)	30/25 (D1)	6/5 (4CIF) per channel	30/25 (4CIF) using 1 channel, 30/25 (CIF) per channel using 4 channels	30/25 (4CIF) using 1 channel, 30/25 (CIF) per channel using 4 channels	30/25 (4CIF) per channel	30/25 (D1) per channel
Video source	1 BNC composite or Y/C video input ¹⁾	1 BNC composite or Y/C video input ¹⁾	1 BNC composite input	1 BNC composite input	4 BNC composite inputs	4 BNC composite inputs	4 BNC composite inputs	4 BNC composite inputs	6 BNC composite inputs
Audio support		Two-way	One-way	Two-way			Two-way		
Alarm inputs/outputs	4/4	4/4	1/1	4 configurable inputs/outputs	4/4	4/4	4/4	4/4	2 configurable inputs/outputs per channel
Intelligent video	Motion detection	Motion detection, Audio detection, Active tampering alarm	Motion detection, Audio detection	Motion detection, Audio detection, Active tampering alarm	Motion detection	Motion detection	Motion detection	Motion detection, Active tampering alarm	Motion detection, Active tampering alarm
Pan/tilt/zoom support	●	●		●	●	●	●	●	●
Security	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X	Multi-level passwords, IP filtering, HTTPS encryption, IEEE 802.1X
Network	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4	IPv4/v6, QoS	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)			Class 2, 3	Class 2, 3					
Serial connectors	RS-232, RS-485	RS-232, RS-485		RS-422, RS-485	RS-232, RS-485	RS-232, RS-485	RS-232, RS-485	RS-485	RS-485
Standalone version	●	●	●	●	●	●	●	●	●
Blade version	●				●	●		●	●




1) Y/C video requires converter cable 2) Supports local storage with SD/SDHC card

TECHNICAL OVERVIEW








Axis video server racks

Rack solutions

Designed for high-density installations, Axis video encoder rack solutions accommodate multiple video encoder blades in the same rack.

	AXIS 291 1U Video Server Rack 	AXIS Video Server Rack 	AXIS Q7900 Rack  <small>Available in Q3 2008</small>
Slots	3	12	14
Maximum number of channels	18	48	84
Blades supported	AXIS 240Q, AXIS 241Q, AXIS 241S, AXIS 243Q, AXIS Q7406	AXIS 240Q, AXIS 241Q, AXIS 241S	AXIS 240Q, AXIS 241Q, AXIS 241S, AXIS 243Q, AXIS Q7406
Network	Ethernet 10BaseT/100BaseTX/1000BaseT (Gigabit Ethernet)	10BaseT/100BaseTX	Four Ethernet 10BaseT/100BaseTX/1000BaseT (Gigabit Ethernet)

Video Encoder Blade and Rack compatibility chart

	AXIS 240Q 	AXIS 241Q/S 	AXIS 243Q 	AXIS Q7406 
AXIS 291 1U Video Server Rack 	●	●	●	●
AXIS Video Server Rack 	●	●		
AXIS Q7900 Rack 	●	●	●	●

VIDEO MANAGEMENT SOFTWARE

Remote viewing, recording and event management

Axis provides video management software that complements the company's network cameras and video encoders. Axis Application Development Partners (ADP) offer an additional wide range of complete video solutions.

APPLICATION DEVELOPMENT PARTNERS



Axis Application Development Partners (ADP), which comprise more than 500 companies, offer a wide range of complete software solutions that meet varying specifications and requirements for different application areas – from entry-level software to comprehensive applications covering most industry segments. More information about Axis Application Development Partners is available at www.axis.com/partner/adp_intro.htm

VIEWING, RECORDING AND EVENT MANAGEMENT



AXIS Camera Station

AXIS Camera Station is a complete monitoring and recording system for up to 50 cameras. Designed for Axis network video products, this software offers easy installation and setup with automatic camera discovery, multi-configuration of devices and a powerful Event Configuration Wizard.

- > Viewing and recording of high quality video and audio from up to 50 cameras
- > Support for H.264, MPEG-4 and Motion JPEG video compression
- > Scheduled and event-driven recording
- > Powerful recording search and export functionality
- > Locking of prioritized recordings
- > Synchronized playback from up to 4 video sources simultaneously
- > Easy installation
- > Intuitive handling
- > Control of PTZ and dome cameras using mouse or joystick
- > Remote viewing and control
- > Multilingual support for English, French, German, Italian and Spanish

AXIS Camera Station User interface

AXIS Camera Station runs as a Windows service on a dedicated PC. Viewing and control are possible using the AXIS Camera Station's Windows client running on the local computer or connect from anywhere on the Internet or corporate network.

- 1) Easy navigation using different workspaces
- 2) Select customized split view
- 3) Quick access to Audio and PTZ Control
- 4) Alarm log
- 5) Live view
- 6) Red marker indicates alarm recording



AXIS Camera Station One

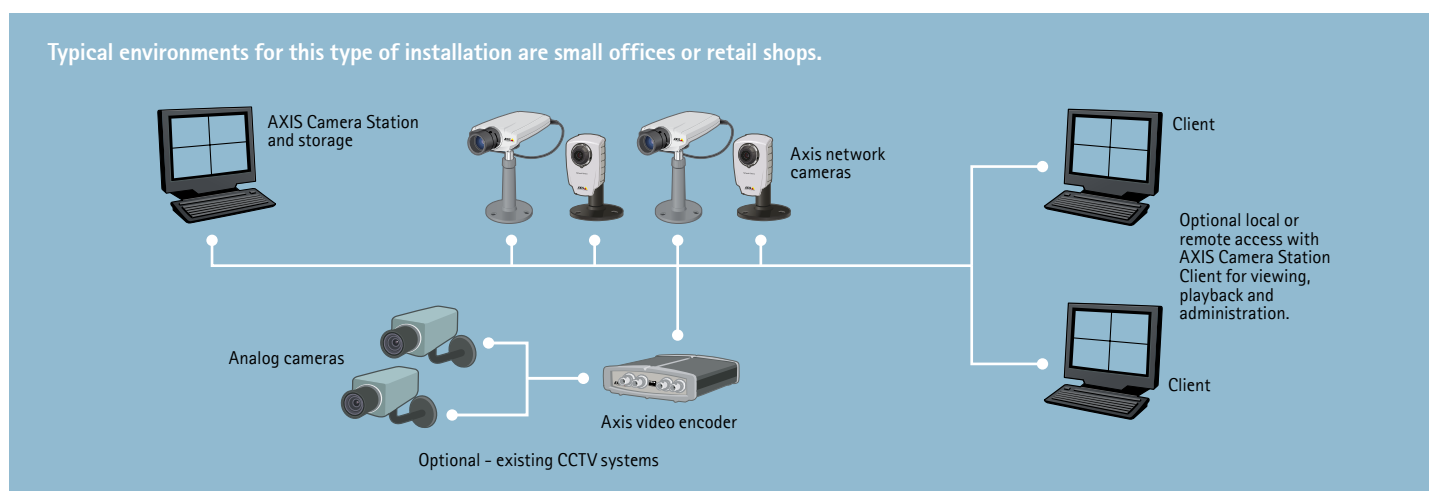
AXIS Camera Station One is a free one-camera version of AXIS Camera Station, designed for single camera viewing and recording.

The software is available from the Axis website and is upgradable to a 4- or 10-base license of AXIS Camera Station.

FREE OF CHARGE!

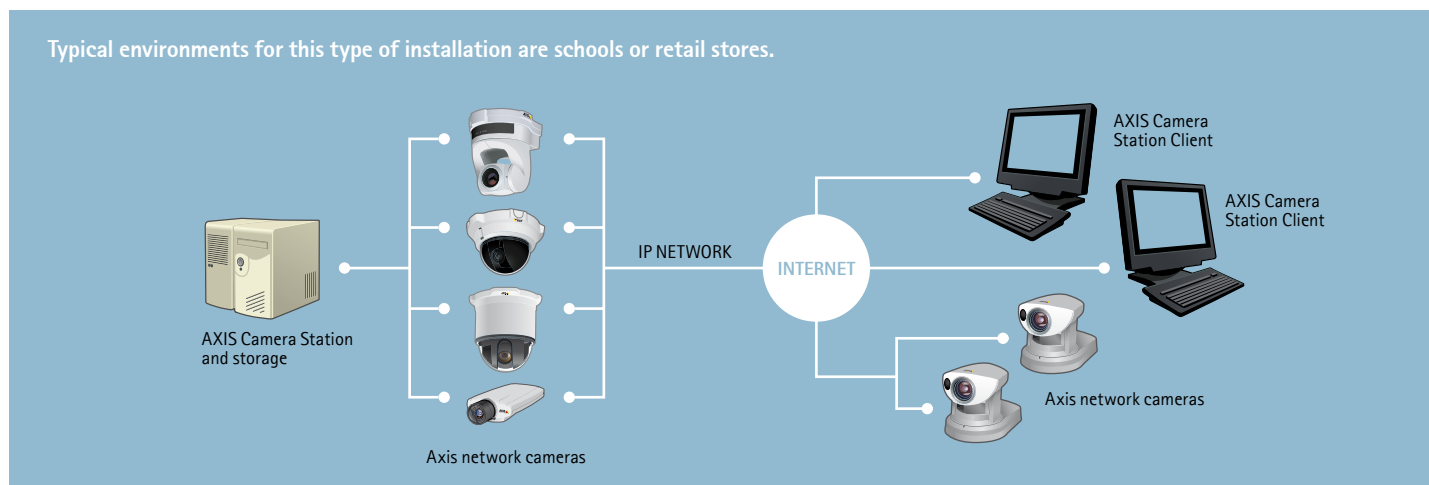
Scenario 1: Basic installation with remote access on the local network

AXIS Camera Station and Axis network cameras are located on the same local network. Viewing, playback and administration are done directly in AXIS Camera Station. Existing analog cameras connected to an Axis video encoder achieve the same functionality.



Scenario 2: Installation with local networks spread over a geographical area, including both local and remote cameras.

One common surveillance system is used at different locations spread over a geographical area. The system can be remotely accessed from anywhere on the Internet by a supervisor or a contracted security company using the AXIS Camera Station Client.



INSTALLATION AND MANAGEMENT TOOLS



AXIS Installation Monitor

Easy adjustment of focus, viewing angle and direction.

AXIS Installation Monitor software simplifies the physical installation and service of Axis network cameras as mounted on walls, ceilings, poles, etc. Basic camera properties can be monitored by using a handheld Pocket PC, and without having to rely on a laptop or contact with a colleague at a remote computer. The installer can easily view the live image from the camera while adjusting the focus, viewing angle

and direction, and even the field of view for pan/tilt cameras.

- > Automatically detects Axis video products
- > Simple adjustment of focus with easy-to-read indicator
- > Pan and tilt control
- > Views and controls I/Os
- > Supports wired, wireless and PoE installations
- > Makes adjustments conveniently by using a Pocket PC



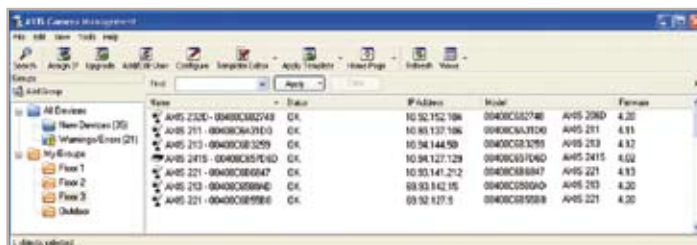
AXIS Camera Management

Efficient management tool for your Axis network video products.

AXIS Camera Management is a powerful and efficient installation and management tool for Axis network video products. The tool uses standard Internet protocols and runs on a standard Windows PC.

- > Locates and shows status of Axis video devices on the network
- > Assigns IP addresses, manually or automatically from a specified range
- > Configures single or multiple units
- > Manages user access rights
- > Firmware upgrades of multiple units, in sequence or in parallel

FREE OF CHARGE!



BUNDLES

Complete solutions and special offers

Axis offers a number of product bundles; for instance, a network camera with outdoor housing and solutions including several network cameras with video management software. These solutions let you get started quickly with your video application. For a full list of available bundles and special offers, please visit www.axis.com or contact your local Axis office.



**AXIS 262+/207
Surveillance Kit**

This bundle consists of four AXIS 207 Network Cameras and one AXIS 262+ Network Video Recorder.*



**AXIS 262+/210
Surveillance Kit**

This bundle consists of four AXIS 210 Network Cameras and one AXIS 262+ Network Video Recorder.*



**AXIS 210
Surveillance Kit**

This bundle consists of four AXIS 210 Network Cameras and one AXIS Camera Station software with licenses for four network cameras/video encoders.

*Product not available for sale in North America

RECORDING SOLUTIONS



AXIS 206 Surveillance Kit

This bundle consists of four AXIS 206 Network Cameras and one AXIS Camera Station software with licenses for four network cameras/video encoders.



AXIS 210A Surveillance Kit

This bundle consists of four AXIS 210A Network Cameras and one AXIS Camera Station software with licenses for four network cameras/video encoders.



AXIS 207 Surveillance Kit

This bundle consists of four AXIS 207 Network Cameras and one AXIS Camera Station software with licenses for four network cameras/video encoders.



AXIS 262+ Network Video Recorder

Complete network video recording solution*.

- > Records from up to eight cameras
- > Recording up to megapixel resolution
- > Simultaneous recording, live viewing and playback of recorded images
- > 250 GB hard disk with Anti-Vibration
- > Records up to 120 frames per second at 4CIF or VGA
- > Remote access to recorded material as well as to live cameras
- > Remote control for PTZ cameras

*Product not available for sale in North America

HARDWARE ACCESSORIES

A full range of accessories for all your video communication needs

Axis provides a wide range of complementary video and network accessories and devices for your network cameras and video encoders. A full list of available accessories can be found on Axis' website at www.axis.com/products/video/accessories.



IR illuminators

Infrared light for indoor/outdoor surveillance in low light or complete darkness.

- > Semi-covert or completely covert models available
- > Use with AXIS 213 PTZ, AXIS 214 PTZ, AXIS 215 PTZ, AXIS 232D+, AXIS 233D, AXIS 221 and AXIS 225FD Network Cameras



Power over Ethernet

Network video without the need for power outlets.

- > With the use of Power over Ethernet products, Axis network video products can communicate data and receive power over a single Ethernet cable



AXIS 295 Video Surveillance Joystick

Easy joystick control of Axis PTZ and dome cameras.

- > Easy to install and configure using USB interface
- > Durable high-quality joystick
- > X/Y-axis for positioning and turning handle for zoom
- > 12 programmable push-buttons



Lenses and lens accessories

- > Pentax Varifocal Lens 5-50mm
- > Lens 4mm CS mount
- > Lens CS varifocal 3.5-8mm DC-IRIS



Mounting accessories

- > Stand cam metal
- > Stand cam plastic
- > Wall bracket for AXIS 213 PTZ
- > AXIS 225FD Pendant Kit



Power accessories

- > Mains adapters and extension cables



Connectors and cables

- > Cable serial null modem
- > Terminal Conn. 4P 3.81mm
- > Terminal Conn. 8P 3.81mm

Protective housings

For mounting Axis network cameras outdoors and in harsh, humid and dusty indoor environments.

- > Various housings available, including vandal-resistant housings



TECHNICAL CORNER

AXIS SUPERIOR IMAGE QUALITY

Image quality is one of the most important features of any camera, if not the most important. This is particularly so in surveillance and monitoring applications, where lives and property may be at stake.

Determining factors

Unlike traditional analog cameras, Axis network cameras are equipped with processing power not only to capture and present the images, but also to digitally manage and compress the video for network transport. There is a natural trade-off between levels of compression and image quality. But even so, image quality can vary considerably, depending on choice of optics and image sensor, available processing power and level of sophistication of the algorithms. To summarize, one should specifically look at the aspects of

- > Type of image sensor
- > Low light capabilities of the camera
- > Ability to replace the lens
- > Resolution
- > Supported compression standards
- > Image capture technology

Why is Axis image quality superior?

Since the development of network cameras first began, Axis introduced a stream of image enhancing technologies and patents. From a technical point of view, Axis' Superior Image Quality rests on three pillars:

- > Advanced signal processing, image enhancement algorithms and video compression technologies
- > Custom-designed image processing and video networking chips
- > Careful selection and matching of the latest image sensors and lenses

AXIS' MOTION JPEG, MPEG-4 AND H.264 SUPPORT

Many Axis video products feature advanced real-time video encoding that can deliver Motion JPEG, MPEG-4 as well as H.264 video streams. This gives users the flexibility to maximize image quality for recording and reduce bandwidth needs for live viewing.

Axis' MPEG-4 (MPEG-4 Part 2) follows the ISO/IEC 14496-2 standard and provides Advanced Simple Profile (ASP) at level 5. With a wide range of settings, it is possible to configure the streams to be optimized for both bandwidth and quality.

Axis' H.264 (sometimes referred to as MPEG-4 Part 10/AVC) follows the ISO/IEC14496-10 standard, and offers

further possibilities to reduce storage costs and to increase the overall efficiency. Without compromising image quality, an H.264 encoder can reduce the size of a digital video file by more than 80% compared with Motion JPEG and as much as 50% compared with the previous MPEG-4 Part 2 standard.

The Axis Media Control (AMC) includes both an MPEG-4 and an H.264 decoder which makes viewing of streams and integration into applications easy.

Furthermore, Axis' multicasting support enables an unlimited number of viewers without sacrificing network system performance.

INTERNET PROTOCOL VERSION 6 (IPv6) AND QUALITY OF SERVICE (QoS)

As more and more devices are added to networks and to the Internet, IP addresses (the address that individually identifies each unit) are becoming a scarce resource. To handle this, a successor to the current IP protocol version 4, has been adopted: Internet Protocol version 6 (IPv6). The main improvement brought by IPv6 is the increase in the number of addresses available for networked devices. Other important improvements are in areas such as routing and network auto-configuration. Products that support IPv6 will be well prepared for the future, as IPv6 becomes more widely used.

As different networks, such as telephone, data and video (CCTV) all continue to merge into a single IP network, it becomes more and more important to control the sharing of network resources, to fulfill the requirements of each service.

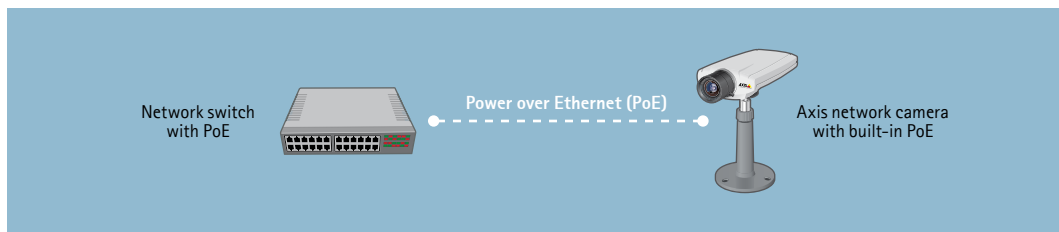
One solution is to have network equipment treat different types of services (voice, data, video) differently as the traffic passes through the network. By using Quality of Service (QoS), network applications can co-exist on the same network, without consuming each other's bandwidth. QoS makes it possible to prioritize traffic, thus creating a more reliable network.

POWER OVER ETHERNET (PoE)

One cable for transmitting video, audio* and power. With a network video solution, you have the option of using the same Ethernet cable both for data communications and power. This feature makes it easier to install products since an electrician is not required and the network video product is able to operate even when there is a power failure if the PoE source is connected to a UPS.

*depending on camera model

PoE technology is regulated in a standard called IEEE 802.3af and is designed in a way that does not degrade the network data communication performance or decrease the network reach. The power delivered over the LAN infrastructure is automatically activated when a compatible terminal is identified, and blocked to legacy devices that are not compatible. This feature allows users to freely and safely mix legacy and PoE-compatible devices on their network.



MEGAPIXEL

The higher the resolution, the more details can be seen in an image. This facilitates the identification of objects and persons – important considerations in video surveillance. Megapixel resolution allows the same scene to be viewed in greater detail, or a larger scene to be viewed at a maintained resolution. The higher resolution also means that digital pan/tilt/zoom can be used without causing a drop in resolution.

After the video signal from an NTSC or PAL analog camera has been digitized, the maximum resolution will be 0.4 megapixel. New network camera technology makes higher resolutions possible.

One common megapixel format is 1280x1024, which gives 1.3 megapixel resolution, 3 times higher than analog cameras. Cameras that provide up to 3 megapixel are also available. It is, however, important to bear in mind that higher resolutions generally lead to reduced light sensitivity, because of the smaller pixels in the image sensor as compared to conventional cameras.



The full 1600x1200 resolution provided by AXIS 223M Network Camera gives more than 4 times the number of pixels compared to a high resolution analog camera.

PREPARING YOUR NETWORK VIDEO PROJECT

Main considerations

1. Define the scene and type of network video products required

- > **Scene: What kind of scene do you want to monitor? How important is it?**
This will help you determine the features you would like to have in a network camera, such as video quality, light sensitivity and type of lens.
- > **Lighting conditions: level of indoor and/or outdoor light sensitivity required.**
Axis offers network cameras for indoor use, as well as models for both indoor/outdoor conditions. Indoor/outdoor cameras have varifocal lens that automatically adjust the lens' iris. Day/night cameras, which provide color images during daytime and black and white images during night time are also available.
Check details on the network camera's light sensitivity both in indoor and/or outdoor environments. Lighting conditions are measured in "lux".
- > **Distance from position of camera to object being monitored.**
This determines the type of camera and type of lens (normal, telephoto, wide-angle) to use, as well as the placement of the camera(s). Choose Axis network cameras with fixed focal or varifocal lenses, with or without replaceable lenses, according to the level of flexibility needed.
- > **Angle of view needed: wide, narrow, general or detailed coverage** (Determine how much of the scene you need to see).
Network cameras come with fixed angle and focus, as well as variable ones that allow remote pan/tilt/zoom capability, which enables a wider area of coverage.
- > **High or low traffic.**
The higher the traffic, the more cameras may be needed.

2. Determine your application needs: features, recording and storage needs

- > **Application:** Simple remote viewing, intelligent surveillance system with advanced event management, input/output triggers, audio?
- > **Viewing and recording needs:** Determine when and how often you need to view and record: day, night and/or weekends? Schedule the needs for every scene.
- > **Calculate** storage requirements.
- > **Calculate** bandwidth requirements.

3. Determine your network needs (LAN/WAN, wireless)

- > Assess network use of current LAN: what are you or the company using it for?
- > Assess network use of current WAN links.
- > Determine the pattern of congestion levels over a given period.
- > Do you need to add new equipment to the network, e.g. switches, or use existing infrastructure and equipment?
- > Do you need to subscribe to additional ISPs for redundancy?
- > Do you need to subscribe to additional ISPs for redundancy?

FREE PROJECT DESIGN TOOLS

A variety of tools that will help you design your network video project



Technical guide to network video

Before setting up your own network video system, you need to consider what features the system can provide. It is equally important to consider factors such as performance, interoperability, scalability, flexibility and future-proof functionality. This reference guide explores the techniques and factors to consider for the successful deployment of IP-based security surveillance and remote monitoring applications. It will help you achieve a solution that takes full advantage of the potential of network video technology.

Available in many languages: English, German, French, Italian, Spanish and Dutch.

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Axis network video design tools DVD

This DVD guides you through the factors and settings to consider for the successful deployment of a network video installation. It includes the AXIS Design Tool, a simulation-based calculation tool which helps determine the bandwidth and storage needs for specific network video projects.

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CONTACT INFORMATION

www.axis.com/request

CORPORATE HEADQUARTERS, SWEDEN

Head office, Lund
Axis Communications AB
Emdalavägen 14
SE-223 69 Lund
Tel: +46 46 272 18 00
Fax: +46 46 13 61 30

AUSTRALIA

Melbourne
Axis Communications Pty Ltd.
Level 27, 101 Collins Street
Melbourne VIC 3000
Tel: +613 9221 6133

CANADA

Axis Communications, Inc.
117 Lakeshore Road East
Suite 304
Mississauga ON L5G 4T6
Tel: +1 800 444 AXIS (2947)
Fax: +1 978 614 2100
Support:
Tel: 800 444 2947

CHINA

Shanghai
Shanghai Axis Communications
Equipment Trading Co.,Ltd.
Room 6001, Novel Building
887 Huai Hai Zhong Rd.
Shanghai 200020
Tel: +86 21 6431 1690

FRANCE, BELGIUM, LUXEMBURG

Paris
Axis Communications SAS
7-9 avenue Aristide Briand
94230 Cachan
Tel: +33 1 49 69 15 50
Fax: +33 1 49 69 15 59
Support:
Tel: +33 1 49 69 15 50

GERMANY, AUSTRIA, SWITZERLAND

Munich
Axis Communications GmbH
Lilienthalstr. 25
DE-85399 Hallbergmoos
Tel: +49 811 555 08 0
Fax: +49 811 555 08 69
Support:
Tel: +49 1805 2947 78

HONG KONG

Hong Kong
Axis Communications Limited
21/F, ICBC Tower
Citibank Plaza 3 Garden Road
Central
Hong Kong
Tel: +852 2273 5163
Fax: +852 2273 5999

INDIA

Bangalore
Axis Video Systems India Private
Limited
Kheny Chambers
4/2 Cunningham Road
Bangalore 560002
Karnataka
Tel: +91 (80) 4157 1222
Fax: +91 (80) 4023 9111

ITALY

Torino
Axis Communications S.r.l.
Corso Alberto Picco, 73
10131 Torino
Tel: +39 011 819 88 17
Fax: +39 011 811 92 60

JAPAN

Tokyo
Axis Communications K.K.
Shinagawa East 1 Tower 13F
2-16-1 Konan
Minato-ku Tokyo 108-0075
Tel: +81 3 6716 7850
Fax: +81 3 6716 7851

KOREA

Seoul
Axis Communications Korea
Co., Ltd.
Rm 407, Life Combi B/D.
61-4 Yoido-dong
Yeongdeungpo-Ku
Seoul
Tel: +82 2 780 9636
Fax: +82 2 6280 9636

MEXICO

Mexico City
AXISNet, S.A. de C.V.
Unión 61, 2º piso
Col. Escandón
México, D.F., C.P. 11800
Tel: +52 55 5273 8474
Fax: +52 55 5272 5358

THE NETHERLANDS

Rotterdam
Axis Communications BV
Glashaven 38
NL-3011 XJ Rotterdam
Tel: +31 10 750 46 00
Fax: +31 10 750 46 99
Support:
Tel: +31 10 750 46 31

SINGAPORE

Singapore
Axis Communications
(S) Pte Ltd.
7 Temasek Boulevard
#11-01A Suntec Tower 1
Singapore 038987
Tel: +65 6 836 2777
Fax: +65 6 334 1218

SPAIN

Madrid
Axis Communications
C/ Yunque 9, 1A
28760 Tres Cantos
Tel: +34 91 803 46 43
Fax: +34 91 803 54 52
Support:
Tel: +34 91 803 46 43

SOUTH AFRICA

Johannesburg
Axis Communications SA Pty Ltd.
Hampton Park, Atterbury House,
20 Georgian Crescent
Bryanston
Tel: +27 11 548 6780
Fax: +27 11 548 6799

PO Box 70939
Bryanston 2021

TAIWAN

Taipei
Axis Communications Ltd.
8F-11,101 Fushing North Road
Taipei
Tel: +886 2 2546 9668
Fax: +886 2 2546 1911

UNITED ARAB EMIRATES

Dubai
Axis Communications Middle East
PO Box 293637, DAFZA
Dubai
Tel: +971 4 609 1873

UNITED KINGDOM

Hertfordshire
Axis Communications (UK) Ltd
Suite 6-7, Ladygrove Court
Hitchwood Lane
Preston, Nr Hitchin
Hertfordshire SG4 7SA
Tel: +44 146 242 7910
Fax: +44 146 242 7911
Support:
Tel: +44 871 200 2071

UNITED STATES

Boston
Axis Communications Inc.
100 Apollo Drive
Chelmsford, MA 01824
Tel: +1 978 614 2000
Fax: +1 978 614 2100
Support:
Tel: 800 444 2947

About Axis Communications

Axis is an IT company offering network video solutions for professional installations. The company is the global market leader in network video, driving the ongoing shift from analog to digital video surveillance. Axis products and solutions focus on security surveillance and remote monitoring, and are based on innovative, open technology platforms.

Axis is a Swedish-based company, operating worldwide with offices in 18 countries and cooperating with partners in more than 70 countries. Founded in 1984, Axis is listed on the OMX Nordic Exchange, Large Cap and Information Technology. For more information about Axis, please visit our website at www.axis.com

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