Product guide
Network video solutions

AXIS
COMMUNICATIONS

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.
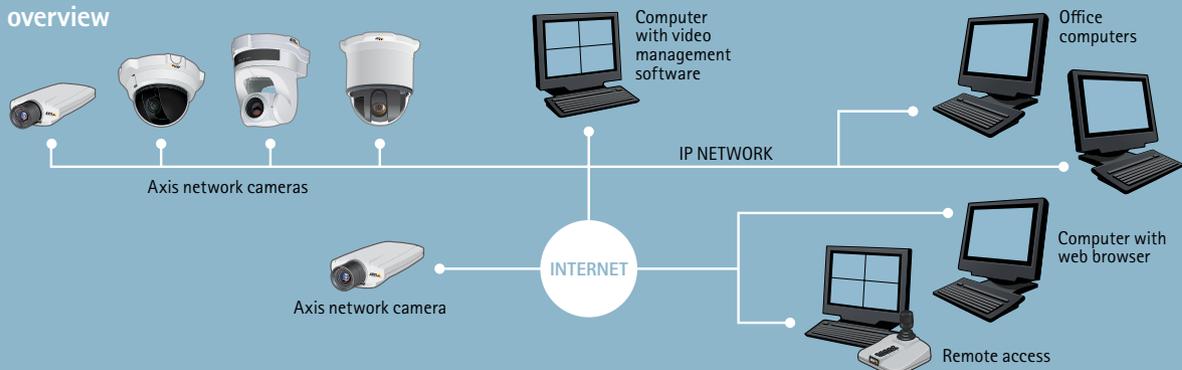
Common features
> Axis superior image quality
> High-resolution video - live and recorded. Products with HDTV and megapixel resolution
> Direct connection to wired and wireless IP networks
> Powerful event and alarm management
> Built-in intelligence, e.g. motion detection and tampering alarm
> Products 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

System overview

Axis network cameras

Computer with video management software

Office computers

IP NETWORK

Axis network camera

INTERNET

Computer with web browser

Remote access

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

Wireless

Megapixel Wireless

Wireless

AXIS 206

The smallest network camera 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/AXIS 207W

The smallest network cameras with MPEG-4.

> Progressive scan for sharper images
> Simultaneous MPEG-4 and Motion JPEG streams
> 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
> **AXIS 207W:** Wireless IEEE 802.11b/g and Ethernet for flexible installation
> **AXIS 207W:** Support for WPA (Wi-Fi Protected Access) and WPA2 protocols for secured wireless transmission

AXIS 207MW

The smallest wireless, megapixel network camera with MPEG-4.

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

AXIS M1011/ AXIS M1011–W

The smallest network cameras with H.264.

> Functional and smart design
> Simultaneous, multiple H.264, Motion JPEG and MPEG-4 streams
> Progressive scan for sharper images
> Active tampering alarm
> **AXIS M1011–W:** Wireless and wired connection to the network for flexible installation

Wireless

AXIS M1031–W

The smallest and smartest wire–less network camera with H.264.

> Functional and smart design
> Simultaneous, multiple H.264, Motion JPEG and MPEG-4 streams
> Progressive scan for sharper images
> PIR sensor for detecting movement even in the dark
> White LED for illuminating the scene automatically at an event or when requested by the user
> Two-way audio support including built-in microphone and speaker, and audio detection alarm
> Active tampering alarm
> Wireless IEEE 802.11b/g

AXIS 210/AXIS 210A

Superior video quality for profes–sional indoor applications.

> Progressive scan for sharper images
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> Replaceable CS mount lens
> One alarm input and one output for connecting external devices
> **AXIS 210A:** Power over Ethernet (IEEE 802.3af)
> **AXIS 210A:** Two-way audio support including built-in microphone and audio detection alarm
> **AXIS 210A:** Active tampering alarm

AXIS P1311

High–performance video surveil–lance with H.264 compression.

> Progressive scan for sharper images
> Simultaneous, multiple H.264, MPEG-4 and Motion JPEG streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> Replaceable CS mount lens
> One alarm input and one output
> Two-way audio support including built-in microphone and audio detection alarm
> Active tampering alarm
> Power over Ethernet (IEEE 802.3af)
> Built-in SD/SDHC memory card slot for optional local storage of video

AXIS 211/AXIS 211A

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 VGA 640x480
> Varifocal lens with DC-iris
> Progressive scan for sharper images
> Simultaneous Motion JPEG and MPEG-4 streams
> Power over Ethernet (IEEE 802.3af)
> Replaceable CS mount lens
> One alarm input and one output for connecting external devices
> **AXIS 211A:** Two-way audio support including built-in microphone and audio detection alarm
> **AXIS 211A:** Active tampering alarm

FIXED NETWORK CAMERAS

Wireless

Megapixel

Megapixel

AXIS 211W

Flexible wireless video surveillance with superior image quality.

> Wireless IEEE 802.11b/g
> All other features same as AXIS 211A

AXIS 211M

Megapixel video surveillance with exceptional image detail.

> 1.3 megapixel resolution
> Up to 12 frames per second in 1280x1024 resolution and up to 30 frames per second in 800x600 resolution
> All other features 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 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 streams
> 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 streams
> 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

Some network cameras that can be used outdoors require weatherproof housing. See pages 14-17 regarding network cameras for outdoor use.

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

FIXED CAMERA | FIXED DOME NETWORK CAMERAS

HDTV

AXIS Q1755

HDTV network camera with zoom and H.264.

> HDTV quality, complying with SMPTE standards
> 30/25 (NTSC/PAL) frames per second in 1080i or 720p resolution and 16:9 format
> Progressive output for sharper images
> 10x optical and 12x digital zoom and autofocus
> Built-in SD/SDHC memory card slot for optional local storage of video
> Power over Ethernet (IEEE 802.3af)
> Gatekeeper feature triggers the camera to automatically zoom in when there is activity in a monitored area
> Two-way audio support including built-in microphone and audio detection alarm
> Active tampering alarm

AXIS 209FD

Flat, discreet high-quality camera for indoor surveillance.

> Small, discreet design
> Progressive scan for sharper images
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> 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 streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> Power over Ethernet (IEEE 802.3af)
> Active tampering alarm
> Available in two variants with different connectors: rugged RJ-45 connector or rugged M12 connector

Megapixel

AXIS 209MFD/
AXIS 209MFD-R

Flat, discreet high-resolution camera for indoor surveillance.

> Small, discreet design
> 1.3 megapixel resolution
> Progressive scan for sharper images
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 12 frames per second in 1280x1024 resolution and up to 20 frames per second for 16:9 resolutions up to 1024x576.
> Power over Ethernet (IEEE 802.3af)
> **AXIS 209MFD-R:** Rugged for use in demanding environments
> **AXIS 209MFD-R:** Active tampering alarm
> **AXIS 209MFD-R:** Available in two variants with different connectors: rugged RJ-45 connector or rugged M12 connector

FIXED DOME NETWORK CAMERAS

Megapixel

AXIS M3011

Ultra-discreet, recessed-mount video surveillance solution.

> Ultra-discreet fixed dome design for quick and easy recessed mounting in a drop ceiling
> Progressive scan for sharper images
> Simultaneous multiple H.264, MPEG-4 and Motion JPEG streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> Power over Ethernet (IEEE 802.3af)
> Active tampering alarm

AXIS 216FD/ AXIS 216FD-V

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

> Discreet and compact design, effectively protecting against tampering
> Varifocal lens with DC-iris
> Progressive scan for sharper images
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> 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
> Active tampering alarm
> **AXIS 216FD-V:** Vandal-resistant

AXIS P3301/ AXIS P3301-V

Discreet video surveillance with outstanding H.264 performance.

> Discreet and compact design, effectively protecting against tampering
> Varifocal lens with DC-iris
> Progressive scan for sharper images
> Wide dynamic range
> Multiple, simultaneous, individually configurable streams in H.264 and Motion JPEG at 30 frames per second in all resolutions
> Resolutions ranging up to VGA 640x480 pixels
> 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
> Active tampering alarm
> **AXIS P3301-V:** Vandal-resistant

AXIS 216MFD/ AXIS 216 MFD-V

Discreet video surveillance with exceptional image detail.

> 1.3 megapixel resolution
> **AXIS 216MFD-V:** Vandal-resistant, rugged casing with metal base
> All other features same as AXIS 216FD

FIXED DOME | PTZ NETWORK CAMERAS

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
> Progressive scan for sharper images
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30 frames per second in all resolutions ranging up to VGA 640x480 pixels
> Power over Ethernet (IEEE 802.3af)
> 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 streams
> 30 frames per second in VGA 640x480 resolution at maximum zoom. 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 same as AXIS 212 PTZ

AXIS 213 PTZ

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

> 26x optical zoom lens with autofocus
> IR mode with built-in IR lighting
> Video under all light conditions, indoor as well as outdoors
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30/25 (NTSC/PAL) frames per second in resolutions up to 4CIF
> Optional AXIS 213CM Connection Module for two way audio + alarm inputs and outputs

PTZ NETWORK CAMERAS

AXIS 214 PTZ

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

> 18x optical zoom lens with autofocus
> Automatic day and night functionality with removable IR filter
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30/25 (NTSC/PAL) frames per second in resolutions up to 4CIF
> Two-way audio, including audio detection alarm
> One alarm input and one output for connecting external devices

AXIS 215 PTZ

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

> Pan, tilt and zoom control over IP network
> 360° 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 streams
> Up to 30/25 (NTSC/PAL) frames per second in resolutions up to 4CIF
> Two-way audio, including audio detection alarm

AXIS 215 PTZ–E

Compact, outdoor–ready pan/tilt/zoom camera.

> Outdoor-proof
> IP66-rated
> Pan, tilt and zoom control over IP network
> 360° 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 streams
> Up to 30/25 (NTSC/PAL) frames per second in resolutions up to 4CIF

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 autofocus and 12x digital zoom
> Operates down to 0.3 lux at F1.4
> Wide dynamic range
> Remote pan/tilt/zoom control from any computer locally on the LAN or over the Internet
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30/25 (NTSC/PAL) frames per second in resolutions up to 4CIF
> 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 same as AXIS 231D+

AXIS 233D

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

> 35x optical zoom with autofocus and 12x digital zoom
> Area zoom for quick and simple pan/tilt/zoom
> Automatic day and night functionality with removable IR-filter
> Operates down to 0.5 lux in color and 0.008 lux in IR mode
> Wide dynamic range
> Progressive scan for sharper images
> Electronic image stabilizer
> Auto-tracking
> E-flip that electronically turns the image 180° when following an object under the dome
> Pan and tilt speed 0.05 - 450°/ second
> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30/25 (NTSC/PAL) frames per second in all resolutions
> On-screen direction indicator
> Two-way audio, including audio detection alarm
> Four alarm inputs and four outputs for connecting external devices

Some network cameras that can be used outdoors require weatherproof housing. See pages 14–17 regarding network cameras for outdoor use.

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

TECHNICAL OVERVIEW

Axis network cameras							
Fixed network cameras							
	AXIS 206	**AXIS 207/ AXIS 207W**	**AXIS 207MW**	**AXIS M1011/ AXIS M1011W**	**AXIS M1031–W**	**AXIS 210**	**AXIS 210A**	**AXIS P1311**
Image sensor	1/4" progressive scan CMOS	1/4" progressive scan CMOS	1/3" progressive scan CMOS 1.3 megapixel	1/4" progressive scan CMOS	1/4" progressive scan CMOS	1/4" progressive scan CCD	1/4" progressive scan CCD	1/4" progressive scan CMOS
Lens	4.0 mm/F2.0 fixed iris	4.0 mm/F2.0 fixed iris	3.6 mm/F1.8 fixed iris	4.4 mm/F2.0 fixed iris	4.4 mm/F2.0 fixed iris	4.0 mm/F1.2 fixed iris CS mount	4.0 mm/F1.2 fixed iris CS mount	4.0 mm/F1.2 fixed iris CS mount
Day and night								
Min illumination/ light sensitivity (lux)	4 - 10,000	1 - 10,000	2 - 10,000	1 - 10,000	1 - 10,000 0 with LED on	1 - 10,000	1 - 10,000	0.6 - 30,000
Video compression	Motion JPEG	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	H.264 Motion JPEG MPEG-4	H.264 Motion JPEG MPEG-4	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	H.264 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	640 x 480	640 x 480
Frames per second	30 (640x480)	30 (640x480)	12 (1280 x 1024)	30 (640x480)	30 (640x480)	30 (640x480)	30 (640x480)	30 (640 x 480)
Audio support		One-way, built-in mic	One-way, built-in mic		Two-way, built-in mic and speaker		Two-way, built-in mic	Two-way, built-in mic
Alarm in-/outputs		1/1	1/1			1/1	1/1	1/1
Intelligent video		Motion detection Audio detection	Motion detection Audio detection	Motion detection Tampering alarm	Motion detection Audio detection Tampering alarm	Motion detection	Motion detection Audio detection Tampering alarm	Motion detection Audio detection Tampering alarm
Security	Multi-level passwords	Multi-level passwords IP filtering[1] HTTPS encryption[1] IEEE 802.1X[1]	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption	Multi-level passwords IP filtering HTTPS encryption	Multi-level passwords IP filtering	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X
Network	IPv4	IPv4/v6[1], 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)	PoE splitter available	PoE splitter available	PoE splitter available	PoE splitter available	PoE splitter available	PoE splitter available	Class 2	Class 1
Serial connectors								
Outdoor use								Requires housing
Other		Wireless IEEE 802.11b/g[1]	Wireless IEEE 802.11b/g	AXIS M1011-W: wireless IEEE 802.11b/g	Built-in PIR sensor Illumination LED Wireless IEEE 802.11b/g			SD/SDHC memory card slot

1) AXIS 207W only

TECHNICAL OVERVIEW

Axis network cameras

Fixed network cameras

	AXIS 211	AXIS 211A	AXIS 211W	AXIS 211M	AXIS 221	AXIS 223M	AXIS Q1755
Image sensor	1/4" progressive scan CCD	1/4" progressive scan CCD	1/4" progressive scan CMOS	1/3" progressive scan CMOS 1.3 megapixel	1/3" progressive scan CCD	1/2.7" progressive scan CCD 2 megapixel	1/3'' progressive scan CMOS 2 megapixel
Lens	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 3.0 - 8.0 mm/F1.0 DC-iris, CS mount	Varifocal 4.0 - 8.0 mm/F1.4 DC-iris, C mount [2]	5.1 - 51 mm/F1.8 auto iris and autofocus 10x optical zoom 12x digital zoom
Day and night					Automatic	Automatic	Automatic
Min illumination/ light sensitivity (lux)	0.75	0.75	0.75	1	0.65 (color) 0.08 (B/W)	1.5 (color) 0.2 (B/W)	2 (color) 0.2 (B/W)
Video compression	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	H.264 Motion JPEG
Max video resolution (pixels)	640 x 480	640 x 480	640 x 480	1280 x 1024	640 x 480	1600x900 1600x1200	HDTV 1080i 1920x1080 HDTV 720p 1280x720
Frames per second	30 (640x480)	30 (640x480)	30 (640x480)	12 (1280x1024) 30 (800x600)	45 (640x480) 60 (480x360)	12 (1600x900) 9 (1600x1200)	30/25
Audio support		Two-way, built-in mic	Two-way, built-in mic	Two-way, built-in mic		Two-way	Two-way, built-in mic
Alarm in-/outputs	1/1	1/1	1/1	1/1	2/1	2/1	2 configurable inputs/outputs
Intelligent video	Motion detection	Motion detection Audio detection Tampering alarm	Motion detection Audio detection	Motion detection Audio detection	Motion detection Tampering alarm	Motion detection Audio detection Tampering alarm	Motion detection Audio detection Tampering alarm Gatekeeper
Security	Multi-level passwords IP filtering	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/v6, QoS
Power over Ethernet (IEEE 802.3af)	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 3
Serial connectors					RS-232, RS-485	RS-232, RS-485	RS-422/RS-485
Outdoor use	Requires housing	Requires housing	Requires housing	Requires housing	Requires housing	Requires housing	Requires housing
Other			Wireless IEEE 802.11b/g				SD/SDHC memory card slot and analog video out

2) Camera can be used with C/CS lens

TECHNICAL OVERVIEW

			Axis network cameras			

			Fixed dome network cameras			
	AXIS 209FD **AXIS 209FD–R**	**AXIS 209MFD** **AXIS 209 MFD–R**	**AXIS M3011**	**AXIS 216FD** **AXIS 216FD–V**	**AXIS P3301** **AXIS P3301–V**	**AXIS 216MFD** **AXIS 216MFD–V**	**AXIS 225FD** **AXIS 225FD 22mm**
Image sensor	1/4" progressive scan CMOS	1/3" progressive scan CMOS 1.3 megapixel	1/4" progressive scan CMOS	1/4" progressive scan CMOS	1/4" progressive scan CMOS	1/3" progressive scan CMOS 1.3 megapixel	1/4" progressive scan CCD
Lens	3.0 mm/F2.0 fixed iris	3.6 mm/F1.8 fixed iris	3.0 mm/F2.0 fixed iris	Varifocal 2.8 - 10 mm/F1.3 DC-iris	Varifocal 2.8 - 10 mm/F1.3 DC-iris	Varifocal 2.8 - 10 mm/F1.3 DC-iris	Varifocal, DC-iris AXIS 225FD: 2.8 – 5.8 mm/F1.4 AXIS 225FD 22 mm: 9 – 22 mm/ F1.5
Day and night							Automatic
Min illumination/ light sensitivity (lux)	1.5 - 10,000	3 - 10,000	1 - 10,000	1	1	2	AXIS 225FD: 1 (color), 0.2 (B/W) AXIS 225FD 22 mm: 1.5 (color), 0.3 (B/W)
Video compression	MPEG-4 Motion JPEG	MPEG-4 Motion JPEG	H.264 Motion JPEG MPEG-4	MPEG-4 Motion JPEG	H.264 Motion JPEG	MPEG-4 Motion JPEG	Motion JPEG MPEG-4
Max video resolution (pixels)	640 x 480	1280 x 1024	640 x 480	640 x 480	640 x 480	1280 x 1024	640 x 480
Frames per second	30 (640x480)	12 (1280x1024)	30 (640x480)	30 (640x480)	30 (640 x 480)	12 (1280x1024) 30 (800x600)	30 (640x480)
Audio support				Two-way, built-in mic	Two-way, built-in mic	Two-way, built-in mic	
Alarm in-/outputs				1/1	1/1	1/1	2/1
Intelligent video	Motion detection Tampering alarm[3]	Motion detection Tampering alarm[4]	Motion detection Tampering alarm	Motion detection Audio detection Tampering alarm	Motion detection Audio detection Tampering alarm	Motion detection Audio detection Tampering alarm	Motion detection Tampering alarm
Security	Multi-level passwords IP filtering HTTPS encryption	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	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)	Class 1	Class 1	Class 1	Class 1	Class 2	Class 1	Class 2 (without heater)
Serial connectors							RS-485
Outdoor use							●
Other	AXIS 209FD-R: IP66-rated, rugged, for mobile video surveillance	AXIS 209MFD-R: IP66-rated, rugged, for mobile video surveillance	Recessed mounting	AXIS 216FD: Tamper-resistant AXIS 216FD-V: Vandal-resistant	WDR, AXIS P3301: Tamper-resistant AXIS P3301-V: Vandal-resistant	AXIS 216MFD: Tamper-resistant AXIS 216MFD-V: Vandal-resistant	Vandal-resistant, IP66-rated, heater and fan

3) AXIS 209FD–R only 4) AXIS 209 MFD–R only

TECHNICAL OVERVIEW

Axis network cameras						
PTZ network cameras					**PTZ dome network cameras**	
AXIS 212 PTZ **AXIS 212 PTZ-V**	**AXIS 213 PTZ**	**AXIS 214 PTZ**	**AXIS 215 PTZ**	**AXIS 215 PTZ-E**	**AXIS 231D+** **AXIS 232D+**	**AXIS 233D**

	AXIS 212 PTZ / AXIS 212 PTZ-V	AXIS 213 PTZ	AXIS 214 PTZ	AXIS 215 PTZ	AXIS 215 PTZ-E	AXIS 231D+ / AXIS 232D+	AXIS 233D
Image sensor	1/2" progressive scan CMOS 3 megapixel	1/4" CCD	1/4" ExView HAD CCD	1/4" CCD	1/4" CCD	1/4" ExView HAD CCD	1/4" ExView progressive scan HAD CCD
Lens	2.7 mm/F1.8 fixed iris 3x instant zoom	3.5 - 91 mm/F1.6 auto iris and autofocus 26x optical zoom 12x digital zoom	4.1 - 73.8 mm/F1.3 auto iris and autofocus 18x optical zoom 12x digital zoom	3.8 - 46 mm/F1.6 auto iris and autofocus 12x optical zoom 4x digital zoom	3.8 - 46 mm/F1.6 auto iris and autofocus 12x optical zoom 4x digital zoom	4.1 - 73.8 mm/F1.4 auto iris and autofocus 18x optical zoom 12x digital zoom	3.4 - 119 mm/F1.4 auto iris and auto focus 35x optical zoom 12x digital zoom
Day and night		Configurable Built-in IR lamp	Automatic	Automatic	Automatic	Automatic[6]	Automatic
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)	1 (color) 0.3 (B/W)	0.3 (color) 0.005 (B/W)[6]	0.5 (color) 0.008 (B/W)
Video compression	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
Max video resolution (pixels)	640 x 480	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)	4CIF: 704x480 (NTSC), 704x576 (PAL)
Frames per second (NTSC/PAL)	30 (640x480) at max. zoom	30/25 (4CIF)	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 via Auto-flip 180° tilt	20 presets 360° pan via Auto-flip 180° tilt	50 presets 360° endless pan 90° tilt Guard tour	100 presets 360° endless pan 180° tilt Guard tour
Audio support	Two-way with built-in mic	Two-way with AXIS 213CM	Two-way	Two-way			Two-way
Alarm in-/outputs	1/1	2/3 with AXIS 213CM	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	Motion detection Audio detection Auto-tracking
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	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	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)	Class 1						
Serial connectors		RS-232[5]					
Outdoor use		Requires housing	Requires housing	Requires housing	●	Requires housing	Requires housing
Other	Continuous motion 24/7 AXIS 212 PTZ-V: Vandal-resistant	Built-in IR light Analog video out with AXIS 213CM		Auto-flip and E-flip	Auto-flip and E-flip	Continuous motion 24/7, WDR	Continuous motion 24/7, E-flip, WDR, image stabilizer

5) With AXIS 213CM 6) AXIS 232D+ only

VIDEO ENCODERS

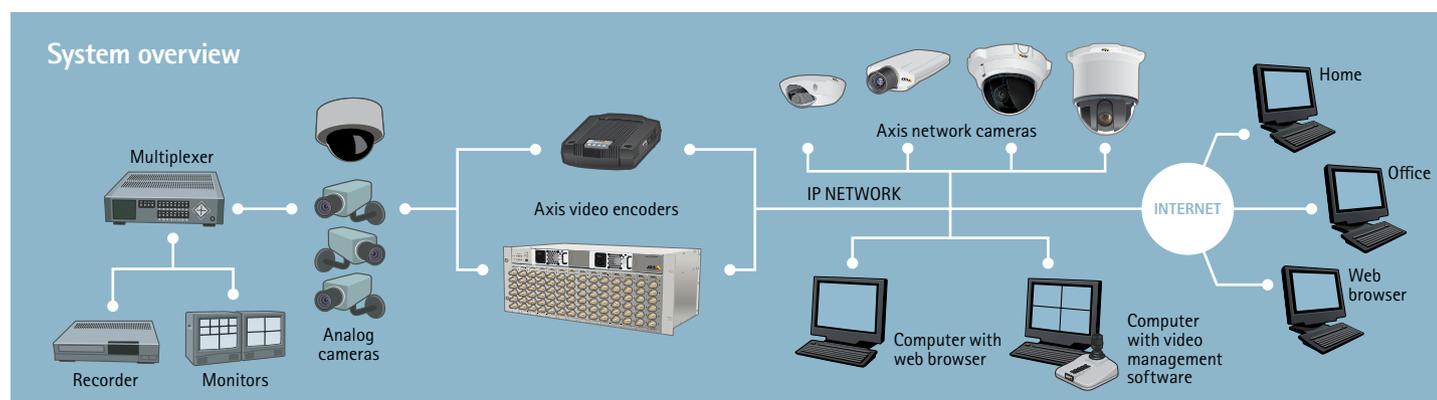## Helping you migrate your analog security system to an IP-based video solution

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 video 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 many of the benefits that network video 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

Multiplexer

Recorder   Monitors   Analog cameras

Axis video encoders

IP NETWORK

Axis network cameras

Computer with web browser

Computer with video management software

INTERNET

Home

Office

Web browser

1-CHANNEL VIDEO ENCODERS

AXIS 241S

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

> Simultaneous Motion JPEG and MPEG-4 streams
> Up to 30/25 (NTSC/PAL) frames per second up to 4CIF resolution
> Resolutions up to 704x480 (NTSC) and 704x576 (PAL)
> Support for third-party PTZ and dome cameras using uploadable PTZ drivers
> 4 alarm inputs and 4 outputs
> Built-in video motion detection
> Active tampering alarm
> 9 MB pre/post alarm memory per channel

AXIS M7001

The smallest, one-channel video encoder with H.264 providing an easy and cost-effective solution for small and large analog video installations.

> Simultaneous H.264 and Motion JPEG streams
> Full 30/25 (NTSC/PAL) frames per second in all resolutions
> Resolutions up to D1 (720x480 in NTSC, 720x576 in PAL)
> Image setting adjustment
> Power over Ethernet (IEEE 802.3af) with power out to the small covert camera included in the AXIS M7001 Covert Surveillance Kit
> Support for third-party PTZ and PTZ dome cameras using uploadable PTZ drivers
> Built-in video motion detection
> 20 MB pre/post alarm memory per channel

AXIS 243SA

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

> Simultaneous Motion JPEG and MPEG-4 streams
> Full 30/25 (NTSC/PAL) frames per second in all resolutions
> Resolutions up to 704x480 (NTSC) and 704x576 (PAL)
> Support for third-party PTZ and dome cameras using uploadable PTZ drivers
> Integrated two-way audio support
> 4 alarm inputs and 4 outputs
> Built-in video motion detection
> Audio detection
> Active tampering alarm
> 9 MB pre/post alarm memory per channel

AXIS 247S

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

> Simultaneous MPEG-4 and Motion JPEG streams
> Full 30/25 (NTSC/PAL) frames per second at 4CIF resolution
> Power over Ethernet (IEEE 802.3af) with power out for camera
> Integrated one-way audio support
> 1 alarm input and 1 output
> Built-in video motion detection
> Audio detection
> 9 MB pre/post alarm memory per channel

1–CHANNEL   4–CHANNEL

AXIS Q7401

One–channel, standalone video encoder for full–featured video surveillance with outstanding H.264 performance.

> Multiple, simultaneous, individually configurable streams in H.264 and Motion JPEG at full 30/25 (NTSC/PAL) frames per second in all resolutions
> Resolutions up to D1 (720x480 in NTSC, 720x576 in PAL)
> Image setting adjustment
> Power over Ethernet (IEEE 802.3af) with power out for camera
> Support for third-party PTZ and PTZ dome cameras using uploadable PTZ drivers
> Integrated two-way audio support
> 4 configurable inputs/outputs
> Built-in video motion detection
> Audio detection
> Active tampering alarm
> 64 MB pre/post alarm memory
> SD/SDHC memory card slot for local storage

AXIS 240Q

Four–channel, standalone video encoder providing digital ben–efits to analog video surveillance systems.

> High-quality Motion JPEG streams per channel
> 6/5 (NTSC/PAL) frames per second per channel
> Resolutions up to 704x480 (NTSC) and 704x576 (PAL)
> Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
> 4 alarm inputs and 4 outputs
> Built-in video motion detection
> 3 MB pre/post alarm memory per channel

AXIS 241Q

Four–channel, standalone video encoder providing digital ben–efits to analog video surveillance systems.

> Simultaneous Motion JPEG and MPEG-4 streams per channel
> Up to 30/25 (NTSC/PAL) frames per second per channel
> Resolutions up to 704x480 (NTSC) and 704x576 (PAL)
> Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
> 4 alarm inputs and 4 outputs
> Built-in video motion detection
> Active tampering alarm
> 9 MB pre/post alarm memory per channel

AXIS 241QA

Four–channel, standalone video encoder with audio support pro–viding digital benefits to analog video surveillance systems.

> Simultaneous Motion JPEG and MPEG-4 streams per channel
> Up to 30/25 (NTSC/PAL) frames per second per channel
> Resolutions up to 704x480 (NTSC) and 704x576 (PAL)
> Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
> Integrated two-way audio support
> 4 alarm inputs and 4 outputs
> Built-in video motion detection
> Active tampering alarm
> 9 MB pre/post alarm memory per channel

4-CHANNEL

AXIS 243Q Blade

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

> Simultaneous Motion JPEG and MPEG-4 streams per channel
> Full 30/25 (NTSC/PAL) frames per second per channel in all resolutions
> Resolutions up to 704x480 (NTSC) and 704x576 (PAL)
> Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
> 4 alarm inputs and 4 outputs
> Built-in video motion detection
> Active tampering alarm
> 9 MB pre-/post-alarm buffer per channel

6-CHANNEL

AXIS Q7406 Blade

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

> Multiple, simultaneous, individually configurable streams per channel in H.264 and Motion JPEG at full 30/25 (NTSC/PAL) frames per second in all resolutions
> Resolutions up to D1 (720x480 in NTSC, 720x576 in PAL)
> Image setting adjustment
> Support for third-party PTZ and dome cameras, using uploadable PTZ drivers
> 2 configurable inputs/outputs per channel
> Built-in video motion detection
> Active tampering alarm
> 64 MB pre/post alarm memory per channel

VIDEO DECODER

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 standalone 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

	AXIS 241S Video Server	AXIS M7001 Video Encoder[2]	AXIS 243SA Video Server	AXIS 247S Video Server	AXIS Q7401 Video Encoder[3]
Video compression	MPEG-4, Motion JPEG	H.264, Motion JPEG	MPEG-4, Motion JPEG	MPEG-4, Motion JPEG	H.264, Motion JPEG
Maximum video resolution (pixels)	4CIF: 704x480 (NTSC), 704x576 (PAL)	D1: 720x480 (NTSC), 720x576 (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)
Frames per second Motion JPEG (NTSC/PAL) in maximum resolution	30/25 (4CIF)	30/25 (D1)	30/25 (4CIF)	30/25 (4CIF)	30/25 (D1)
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)	
Video source	1 BNC composite or Y/C video input[1]	1 BNC composite input	1 BNC composite or Y/C video input[1]	1 BNC composite input	1 BNC composite input
Audio support			Two-way	One-way	Two-way
Alarm inputs/outputs	4/4		4/4	1/1	4 configurable inputs/outputs
Intelligent video	Motion detection Tampering alarm	Motion detection	Motion detection Audio detection Tampering alarm	Motion detection Audio detection	Motion detection Audio detection Tampering alarm
Pan/tilt/zoom support	●	●	●		●
Security	Multi-level passwords IP filtering HTTPS encryption IEEE 802.1X	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/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)		Class 2		Class 2/3	Class 2/3
Serial connectors	RS-232, RS-485	RS-422/RS-485	RS-232, RS-485		RS-422/RS-485
Standalone version	●	●	●	●	●
Blade version	●				

1) Y/C video requires converter cable   2) Covert camera included in AXIS M7001 Covert Surveillance Kit   3) Supports local storage with SD/SDHC card

TECHNICAL OVERVIEW

Axis video encoders				
4- and 6-channel video encoders				
	AXIS 240Q Video Server	AXIS 241Q Video Server	AXIS 241QA Video Server	AXIS 243Q Blade Video Server	AXIS Q7406 Video Encoder Blade
Video compression	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)	4CIF: 704x480 (NTSC), 704x576 (PAL)	D1: 720x480 (NTSC), 720x576 (PAL)
Frames per second H.264 (NTSC/PAL) in maximum resolution					30/25 (D1) per channnel
Frames per second Motion JPEG (NTSC/PAL) in maximum resolution	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 channnel
Frames per second MPEG-4 (NTSC/PAL) in maximum resolution		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	
Video source	4 BNC composite inputs	4 BNC composite inputs	4 BNC composite inputs	4 BNC composite inputs	6 BNC composite inputs
Audio support			Two-way		
Alarm in-/outputs	4/4	4/4	4/4	4/4	2 configurable inputs/outputs per channel
Intelligent video	Motion detection	Motion detection Tampering alarm	Motion detection Tampering alarm	Motion detection Tampering alarm	Motion detection 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
Network	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS	IPv4/v6, QoS
Power over Ethernet (IEEE 802.3af)					
Serial connectors	RS-232, RS-485	RS-232, RS-485	RS-232, RS-485	RS-485	RS-485
Standalone version	●	●	●		
Blade version	●	●		●	●

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
Slots	3	12	14
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
Maximum number of channels	18	48	84
Rack size	1U	3U	4U
Rack width	19"	19"	19"
Built-in power supply	●	●	●
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
Remote viewing, recording and event management

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

APPLICATION DEVELOPMENT PARTNERS

Axis Application Development Partners (ADP), which comprise more than 600 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_program/

VIDEO MANAGEMENT SOFTWARE

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

> Site maps
> 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.

Typical environments for this type of installation are small offices or retail shops.

AXIS Camera Station and storage

Axis network cameras

Client

Optional local or remote access with AXIS Camera Station Client for viewing, playback and administration.

Client

Analog camera

Axis video encoder

Optional – existing CCTV system
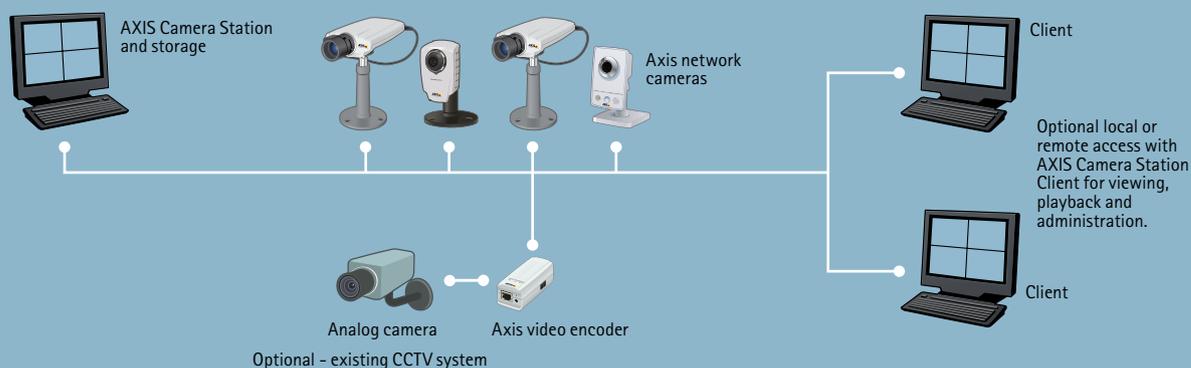
Scenario 2: Installation with local networks spread over a geographical area, including both local and remote cameras.

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.

Typical environments for this type of installation are schools or retail stores.

AXIS Camera Station Client

AXIS Camera Station Client

IP NETWORK

INTERNET

AXIS Camera Station and storage

Axis network cameras

Axis network cameras

Axis network cameras
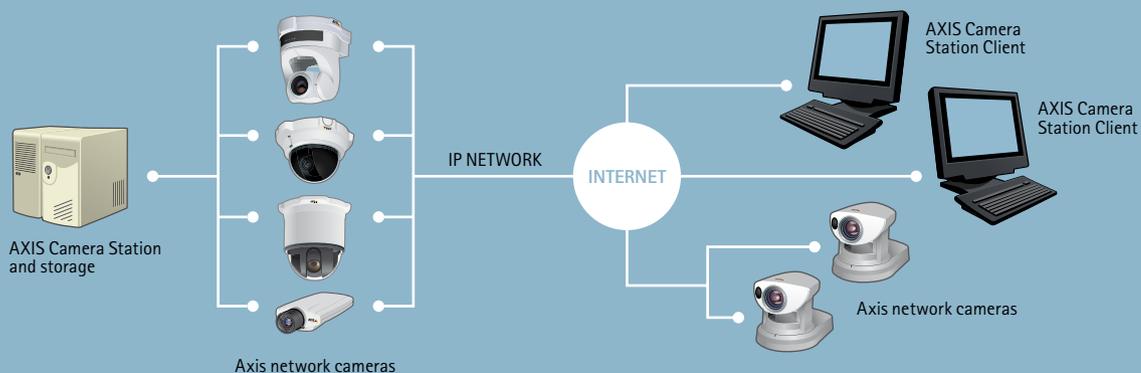
INSTALLATION AND MANAGEMENT TOOLS

AXIS Installation Monitor

AXIS Installation Monitor software simplifies the physical installation and service of Axis network cameras 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

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!

RECORDING SOLUTION

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/accessories.

Protective housings and mounting accessories

Various housings and mounting accessories are available for installing Axis network cameras in various environments. Housings may offer protection from rain, hot and cold environments, dust, vibrations and vandalism.

Illuminators

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

Power over Ethernet

Axis network video products, including PTZ cameras and PTZ domes, can communicate data and receive power over a single Ethernet cable with the use of Power over Ethernet (PoE) and High PoE products.

AXIS 295 Video Surveillance Joystick

Easy joystick control of Axis PTZ and PTZ dome network cameras. Easy to install and configure using USB interface. Features three-axis, durable (Hall-effect) joystick and 12 programmable push-buttons.

Lenses and lens accessories

They include Pentax Varifocal Lens 5-50 mm, Varifocal Lens 10-40 mm D/N, Varifocal Megapixel Lens 2.4-6 mm, and various M12 megapixel lenses.

BUNDLES AND KITS
Complete solutions and special offers

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

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 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 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.

BUNDLES

+

+

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 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.*

*Product not available for sale in North America

CAMERA AND HOUSING KITS

AXIS 211/211M
Outdoor T92A Kit

Consists of one AXIS 211/ AXIS 211M Network Camera and one AXIS T92A00, including wall mount with internal cable channel.*

AXIS 221/223M
Outdoor T92A Kit

Consists of one AXIS 221/ AXIS 223M Network Camera and one AXIS T92A00, including wall mount with internal cable channel.*

AXIS 211W
Outdoor Verso Kit

Consists of one AXIS 211W Network Camera and one VT Verso Housing and one Outdoor antenna 6dBi, including wall mount with internal cable channel and power.*

AXIS 211/211M
Outdoor Verso Kit

Consists of one AXIS 211/ AXIS 211M Network Camera and one VT Verso Housing, including wall mount with internal cable channel.*

AXIS 221/223M
Outdoor Verso Kit

Consists of one AXIS 221/ AXIS 223M Network Camera and one VT Verso Housing, including wall mount with internal cable channel.*

*Product not available for sale in North America

TECHNICAL CORNER

VIDEO STREAMING

Many Axis network video products offer users the option of more than one video compression format. The video compression standards include Motion JPEG, MPEG-4 Part 2 and H.264 (also known as MPEG-4 Part 10/AVC). H.264 is the latest compression standard that offers the most efficient format for compressing video, enabling great savings in bandwidth and storage without compromising image quality.

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

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

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.

QUALITY OF SERVICE (QoS)

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.

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 multi-megapixel resolutions 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 with conventional cameras.

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

HIGH–DEFINITION TELEVISION (HDTV)

Axis HDTV network cameras comply with SMPTE (Society of Motion Picture and Television Engineers) standards, guaranteeing adherence to HDTV resolutions and frame rates, better color fidelity and a 16:9 format. The two most important HDTV standards are SMPTE 296M and SMPTE 274M.

SMPTE 296M (HDTV 720p) defines a resolution of 1280x720 pixels with high color fidelity in a 16:9 format using progressive scanning at 25/30 Hertz (Hz), which corresponds to 25 or 30 frames per second depending on the country, or at 50/60 Hz (50/60 frames per second).

SMPTE 274M (HDTV 1080) defines a resolution of 1920x1080 pixels with high color fidelity in a 16:9 format using either interlaced or progressive scanning at 25/30 Hz or 50/60 Hz.

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 nighttime 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?

TOOLS AND RESOURCES

Axis offers a variety of tools and information resources to help design IP-Surveillance systems. Many are accessible from the Axis website: www.axis.com/tools

Lens Calculators

This tool helps you calculate the focal length of the lens you will need in order to capture a specific scene at a certain distance.

Camera Reach Tool

This tool focuses on Axis network cameras' scene capturing and object recognition capabilities at different distances and in combination with alternate lenses. The tool also helps you navigate through the Axis product portfolio to find the most appropriate camera for your application.

AXIS Design Tool

This simulation-based calculation tool, available online or on a DVD, helps determine the bandwidth and storage needs for specific network video projects. To order a free DVD copy, visit www.axis.com/free_dvd

Axis Housing Configurator

This tool helps you find the right housings and complementary accessories such as brackets, power supplies and cables for your specific camera application.

Technical guide to network video

Before setting up your own system, you need to consider what features are required. It is equally important to consider factors such as performance, interoperability, scalability, flexibility and future-proof functionality. This guide will walk you through these factors, helping you to achieve a solution that fully takes advantage of the potential of network video technology. To order a free personal copy, visit www.axis.com/free_guide

Intelligent Network Video: Understanding modern surveillance systems

This 390-page hardcover book is authored by Fredrik Nilsson and Axis Communications. It represents the first resource to provide detailed coverage of advanced digital networking and intelligent video capabilities. Published in September 2008, the book is available for purchase through Amazon, Barnes & Noble and CRC Press, or contact your local Axis office.

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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 more than 20 countries and cooperating with partners in more than 70 countries. Founded in 1984, Axis is listed on the NASDAQ OMX Stockholm under the ticker AXIS. For more information about Axis, please visit our website at www.axis.com.

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