AXIS 223M
Network Camera

*Day and night surveillance
with exceptional image detail*

AXIS 223M Network Camera is a high performance camera, designed for demanding security installations. It delivers crisp and clear images disclosing every detail, thanks to its top quality 2.0 megapixel progressive scan CCD sensor, megapixel varifocal lens and advanced image processing. This camera delivers more than 4 times higher resolution compared to a standard analog camera.

AXIS 223M features true day/night functionality with its automatically removable infrared cut filter, which enables color video in high and low light conditions as well as IR sensitive, black/white video at night.

Built-in support for Power over Ethernet (IEEE 802.3af) enables the camera to be powered via the network, consolidating power and reducing installation costs by eliminating the need for a power outlet.

AXIS 223M offers the most comprehensive set of network security and management capabilities in the network video market. Support for IEEE802.1X allows the camera to connect to a network secured with port-based control, and HTTPS encryption provides a secure channel to the camera and enables authentication of the video source. Installation and supervision of Axis video products is efficiently handled with the powerful AXIS Camera Management and AXIS Installation Monitor tools. AXIS 223M supports Internet Protocol version 6 (IPv6) in addition to version 4, as insurance against the growing shortage of IPv4 addresses.

Supported by the industry's largest base of video management software, AXIS 223M provides the perfect solution for securing bank offices, airports and other facilities, as well as for city and traffic surveillance, over IP based networks.
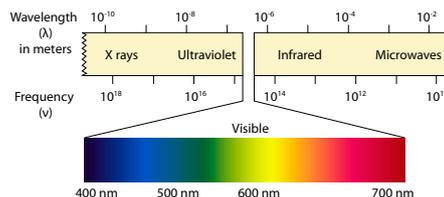
- 2.0 megapixel CCD sensor and lens for exceptional image detail

- Automatic Day/Night function and iris control for high quality images in low light conditions

- Power over Ethernet for reduced cabling and consolidated power

- Video motion detection, tampering detection and alarm image buffering of 200 images in full 1600x1200 resolution

- HTTPS encryption and IEEE802.1X network access control for the highest level of network security

- Two-way audio including audio detection alarm

TECHNICAL SPECIFICATIONS – AXIS 223M NETWORK CAMERA

Image sensor	1/2.7" Sony Wfine progressive scan RGB CCD
Lens	Computar HG2Z0414FC-MP-12, F1.4 varifocal 4.0 – 8.0 mm, DC-iris, C-mount, focus range: 0.5 m to infinity. The camera can be used with C or CS mount lens
Angle of view	38° – 72° horizontal
Minimum illumination	Color: 1.5 lux, F1.4 B/W: 0.2 lux, F1.4
Video compression	Motion JPEG MPEG-4 Part 2 (ISO/IEC 14496-2), Profiles: ASP and SP
Resolutions	Motion JPEG: 29 resolutions from 1600x1200 to 160x120 via API, 18 selections via configuration web page. MPEG-4: 16 resolutions from 640x480 to 160x120 via API, 10 selections via configuration web page
Frame rate	Motion JPEG: Up to 12 fps at 1600x900 (16:9 resolutions) Up to 9 fps at 1600x1200 (4:3 resolutions) MPEG-4: Up to 12 fps at 640x360 (16:9 resolutions) Up to 9 fps at 640x480 (4:3 resolutions)
Video streaming	Simultaneous Motion JPEG and MPEG-4 Controllable frame rate and bandwidth Constant and variable bit rate (MPEG-4)
Image settings	Compression levels: 11 (Motion JPEG)/23 (MPEG-4) Rotation: 90°, 180°, 270° Configurable color level, brightness, sharpness, contrast, white balance, exposure control, exposure area, backlight compensation, fine tuning of behavior at low light. Overlay capabilities: time, date, text, privacy mask or image
Shutter time	2 s to 1/7500 s
Audio	Two-way (half duplex) or one-way External microphone input or line input Mono audio output (line level) connects to PA system or active speaker with built-in amplifier Audio compression: AAC LC 8/16 kHz sampling frequency, 8-64 kbit/s, G.711 PCM, 8 kHz, 64 kbit/s, G.726 ADPCM, 32 or 24 kbit/s
Security	Multiple user access levels with password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, user access log
Users	20 simultaneous users Unlimited number of users using multicast (MPEG-4)
Alarm and event management	Events triggered by video motion detection, active tampering, temperature limits, IR cut filter, audio detection, external input or according to a schedule Image upload over FTP, email and HTTP Notification over TCP, email, HTTP and external output 36 MB of pre- and post alarm buffer
Connectors	RJ-45 for Ethernet 10BaseT/100BaseTX (PoE) Mini DC power jack Terminal blocks for 2 alarm inputs, 1 output, RS-485/422 half duplex port and alternative power connection D-sub for RS-232 port 3.5 mm jack for Mic/Line in, 3.5 mm jack for Line out
Casing	Aluminum casing

Processors, memory and clock	CPU: ETRAX FS Video processing and compression: ARTPEC-2 RAM: 64 MB, Flash: 8 MB Battery backed-up real-time clock
Power	7 - 24 V DC, max 6 W 10 - 24 V AC, max 8 VA Power over Ethernet (IEEE 802.3af), Class 2
Operating conditions	0 - 50 °C (32 - 122 °F) Humidity 20 - 80% RH (non-condensing)
Installation, management and maintenance	AXIS Camera Management tool on CD and web-based configuration. Configuration of backup and restore. Firmware upgrades over HTTP or FTP, firmware available at www.axis.com
Video access from web browser	Camera live view, video recording to file (ASF), sequence tour for up to 20 Axis video sources, customizable HTML pages
Minimum web browsing requirements	Pentium III CPU 500 MHz or higher, or equivalent AMD 128 MB RAM, DirectX compatible graphics board, Direct Draw, Windows Vista XP, 2000, Server 2003 Internet Explorer 6.0 or later For other operating systems and browsers see www.axis.com/techsup
System integration support	Open API for software integration, including AXIS VAPIX API*, AXIS Media Control SDK*, event trigger data in video stream, and access to serial port peripherals over TCP. Quality of Service (QoS) Layer 3, DiffServ Model. Watchdog Embedded Linux operating system *Available at www.axis.com
Supported protocols	IPv4/v6, HTTP, HTTPS, SSL/TLS*, TCP, ICMP, SNMPv1/v2c/v3 (MIB-II), RTSP, RTP, UDP, IGMP, RTCP, SMTP, FTP, DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, SOCKS, NTP, etc. More information on protocol usage available at www.axis.com * This product includes software developed by the Open SSL Project for use in the Open SSL Tool kit (www.openssl.org)
Included accessories	Installation Guide, CD with User's Manual, recording software, installation and management tools, mounting and connector kits, power supply PS-K 9 V DC, mount ring for alternative CS lens, licenses for 1 encoder and 1 decoder, decoder software for Windows
Video management software (not incl.)	AXIS Camera Station - Video management software for viewing, recording and archiving up to 25 cameras See www.axis.com/partner/adp_partners.htm for more software applications via partners
Accessories (not incl.)	Housings for adverse indoor/outdoor environments IR illuminators for discreet lighting and improved image quality in low-light situations Network Video Decoder for monitors Multi-user decoder license pack
Approvals	EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, EN61000-6-1, EN61000-6-2, FCC Part 15 Subpart B Class B, VCCI Class B, C-tick AS/NZS CISPR22, ICES-003 Class B, EN60950-1. Power supply: , UL, cUL
Dimensions (HxWxD) and weight	49 x 88 x 200 mm (1.9" x 3.5" x 7.9") 620 g (21.9 oz) excl. power supply

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

Wavelength (λ) in meters	10^{-10}	10^{-8}	10^{-6}	10^{-4}	10^{-2}
	X rays	Ultraviolet	Infrared		Microwaves
Frequency (ν)	10^{18}	10^{16}	10^{14}	10^{12}	10^{10}

Visible

400 nm 500 nm 600 nm 700 nm

Light as perceived by the human eye ranges between wavelengths of ~400-700 nm. Infrared light exists in nature at higher wavelengths, which can not be perceived by the human eye. IR light is filtered away in the camera by an IR cut filter in order to render a "human image", AXIS 223M can thus produce high quality b/w pictures by removing the IR cut filter when light conditions are too dark to render colors.

www.puls-ltd.co.uk

AXIS COMMUNICATIONS