AXIS Q87-E Dual PTZ Network Camera Series

Thermal detection, HDTV and PTZ surveillance all in one.

> **HDTV image quality**

> **Thermal imaging**

> **H.264 video streams**

> **IP66-rated**

> **Continuous rotation, endless 360° pan**

AXIS Q87-E Dual PTZ Network Camera Series is ideal for mission-critical surveillance scenarios that demand 24-hour monitoring of restricted areas. The cameras offer pan/tilt flexibility and simultaneous video streams from a visual camera and a thermal camera, and allow detection, recognition and identification from one single unit.

The IP66-rated, outdoor-ready AXIS Q8721-E Network Camera provides a visual camera with 10x optical zoom and autofocus, and a thermal camera with 384x288 resolution. It is mounted on a motor that allows the entire unit to tilt and pan. The model is connected to the network using one Ethernet cable.

AXIS Q87-E models can pan 360° endlessly and tilt between +45 ° to –20° with a preset accuracy of 0.02°. The operating temperature ranges between –30 ℃ to 45 ℃ (–22 ℉ to 113 ℉).

The thermal camera can achieve higher detection accuracy than a visual camera since a thermal camera detects an object or a person hidden in a shadow or in a dark area. It can also function in complete darkness and adverse weather conditions. However, the visual camera allows for recognition possibilities and at night, it can benefit from optional PT IR Illuminator kit A for better identification. The combined visual/thermal camera units provide a powerful surveillance solution.

HDTV
NETWORK VIDEO

Technical Specifications – AXIS Q87-E Dual PTZ Network Cameras

Camera

Models	**AXIS Q8721-E:** includes AXIS Q1755 (visual camera) and AXIS Q1921 (thermal camera)
Image sensor	**Visual camera:** 1/3'' progressive scan CMOS 2 megapixel **Thermal camera:** Uncooled micro bolometer 384x288 pixels
Lens	**Visual camera:** f=5.1 - 51 mm, F1.8 - 2.1, autofocus, automatic day/night Horizontal angle of view: 48.1° - 5.1° M37x0.75 mounting thread for optional lens adaptor
Detection range	See tables below
Sensitivity	**Thermal camera:** NETD < 100 mK
Minimum Illumination	**Visual camera:** Color: 2 lux at 30 IRE, F1.8 B/W: 0.2 lux at 30 IRE, F1.8
Shutter time	**Visual camera:** 1/10000 s to 1/2 s
Zoom	**Visual camera:** 10x optical and 12x digital, total 120x

Video

Video compression	H.264 (MPEG-4 Part 10/AVC) Motion JPEG
Resolutions	**AXIS Q8721-E:** Visual camera with HDTV 1080i 1920x1080, HDTV 720p 1280x720; and Thermal camera with 384x288 sensor, image can be scaled up to 768x576 and to standard VGA resolution
Frame rate	**Visual camera:** 30/25 fps in all resolutions and video compression **Thermal camera:** Up to 30 fps within EU, Norway, Switzerland, Canada, USA, Japan, Australia, New Zealand Up to 8.3 fps in other countries* *Frame rate above 9 fps may be subject to export control regulations
Video streaming	**Visual camera:** Multiple, individually configurable streams in H.264 and Motion JPEG **Thermal camera:** At least 1 stream in H.264 and Motion JPEG: simultaneous, individually configured streams in max. resolution at 30 fps Controllable frame rate and bandwidth VBR/CBR H.264
Image settings	**Visual camera:** Compression, brightness, sharpness, white balance, exposure control, backlight compensation, rotation, mirroring of images, text and image overlay, privacy mask **Thermal camera:** Compression, brightness, exposure control, rotation, mirroring of images, text and image overlay, privacy mask, multiple palettes

Audio

Audio streaming	Two-way
Audio compression	AAC LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz Configurable bit rate
Audio input/ output	External microphone or line input, line output

Network

Security	Password protection, IP address filtering, HTTPS encryption**, IEEE 802.1X network access control**, digest authentication, user access log
Supported protocols	IPv4/v6, HTTP, HTTPS**, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS

This product includes software developed by the OpenSSL. Project for use in the OpenSSL Toolkit. (www.openssl.org)

System integration

Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform from Axis Communications; Interface specifications available at www.axis.com
Intelligent video	Video motion detection, active tampering alarm, audio detection, Support for AXIS Camera Application Platform **Visual camera:** Gatekeeper
Event triggers	Intelligent video and external input
Event actions	File upload: FTP, HTTP, network share and email Notification: email, HTTP and TCP External output activation Video and audio recording to edge storage Pre- and post-alarm video buffering
Data Streaming	Event data

General

Memory	**Visual camera:** 256 MB RAM, 128 MB Flash **Thermal camera:** 128 MB RAM, 128 MB Flash
Pan/Tilt	Pan: 360° endless, 0.1° – 20°/s Tilt: +45° to -20°, 0.1° – 20°/s
Protocol	Pelco D
Present accuracy	0.02°
Casing	Aluminum casing, sunshield ABS PMMA IP66-rated Color: RAL 9002
Power	**AXIS Q87-E:** 24 V AC 50/60 Hz, 200 W provided by power supply (sold separately) 230/120 V AC 50/60 Hz with built-in day/night sensor
Edge storage	SD/SDHC memory card slot (card not included) Support for recording to network share (network-attached storage or file server)
Environment	Indoor/outdoor
Operating conditions	-30 °C to +45 °C (-22 °F to 113 °F) Humidity 10 - 100% RH (condensing)
Approvals	EN 55022 Class A, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, C-tick AS/NZS CISPR 22, EN 61000-3-2, EN 61000-3-3, EN 60950-1, EN 60950-22, IEC/EN 60529 IP66 **Power supply** (sold separately): EN 55022 Class A, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, C-tick AS/NZS CISPR 22, EN 61000-3-2, EN 61000-3-3, EN 60950-1, EN 60950-22, IEC/EN 60529 IP66
Weight	**AXIS Q87-E:** 28.5 kg (63 lb.) (IR LED excluded)
Included accessories	Installation Guides, Installation and Management Software CD, Windows decoder 1-user license

Wide range coverage for AXIS Q1921

	Focal length	Viewing angle	Human: 1.8 x 0.5 m Critical dimension: 0.75 m		Vehicle: 1.4 x 4.0 m Critical dimension: 2.3 m	
	mm	Horizontal	meters	yards	meters	yards
Detection An observer can see an object 1.5 pixels on target	35	16°	700	766	2200	2405
	60	9°	1200	1312	3700	4046
Recognition An observer can distinguish an object 6 pixels on target	35	16°	175	191	550	601
	60	9°	300	328	920	1006
Identification An observer can distinguish a specific object 12 pixels on target	35	16°	90	98	270	295
	60	9°	150	164	460	503

Calculated with Johnson's criteria. The ranges vary in different weather conditions. Visit www.axis.com for more information.
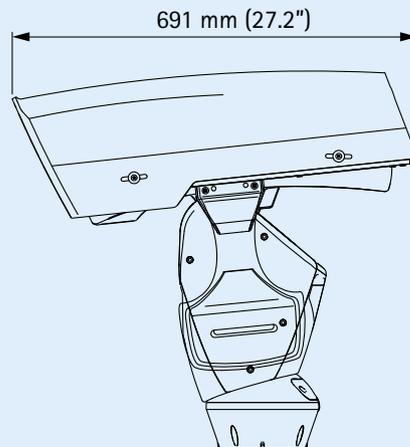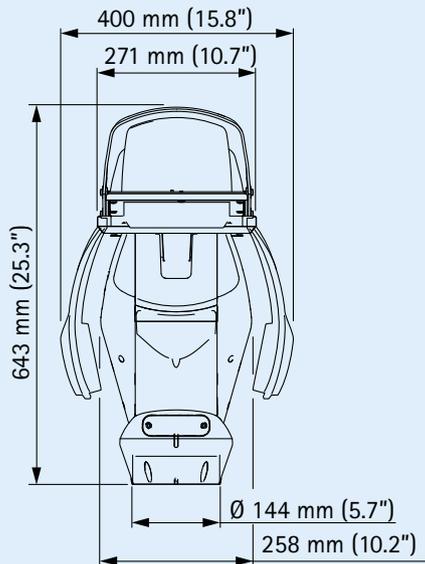
Technical Specifications – PT IR Illuminator kit A (sold separately)

General

Models	IR-LED 10° angle IR-LED 50° angle
Supported cameras	AXIS Q8721-E
Power	12-24 V AC/DC, 35 W Cable length 2.5 m (8 ft.)
Type	850 nm semi-covert
Environment	IP66-rated
Control technolog	Power level, photocell sensitivity, telemetry link for remote activation (if required)
Angle	10° to 50°

Distance	**IR-LED 10°:** 100 m (328 ft.) **IR-LED 50°:** 50 m (164 ft.)
Operating conditions	–50 °C to +50 °C (–58 °F to 122 °F)
Approvals	EN 62471 (risk group 1), EN 55022 Class A, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, C-tick AS/NZS CISPR 22, EN 60950-1, EN 60950-22, IEC/EN 60529 IP66
Weight per unit	1.4 kg (3.1 lb.)
Included accessories	U-bracket, in-built adjustable photocell
Dimensions	180 x 135 x 67 mm (7" x 5.2" x 2.6")

More information is available at www.axis.com

Dimensions

400 mm (15.8")
271 mm (10.7")
643 mm (25.3")
Ø 144 mm (5.7")
258 mm (10.2")

691 mm (27.2")

Required accessories
(Power supply and bracket sold separately)

AXIS Q87-E Power Supply 230 V AC or AXIS Q87-E Power Supply 120 V AC

AXIS Wall Bracket K   or   AXIS Column Bracket K

Mounting accessories

AXIS T95A64 Corner Bracket
(AXIS Wall Bracket K is required)

AXIS T95A67 Pole Bracket
(AXIS Wall Bracket K is required)

Optional accessories

PT IR Illuminator kit A
(include IR-LED 10° and 50° angle)

AXIS T8414 Installation Display

Raynox Conversion Lens 2.2x zoom
(for AXIS Q1755, visual camera)

AXIS Camera Companion (included), AXIS Camera Station and video management software from Axis' Application Development Partners (not included). For more information, see www.axis.com/products/video/software/

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