# AXIS Q16 Network Camera Series
## Outstanding image performance in demanding lighting conditions.



> HDTV 720p @ 50/60 fps

> WDR with dynamic capture

> Lightfinder technology

> Power over Ethernet

> Outdoor-ready models with Arctic Temperature Control

AXIS Q16 Network Camera Series comprises indoor and outdoor-ready fixed cameras that deliver outstanding image quality in demanding video surveillance conditions, such as poor or highly variable lighting.

The unique Lightfinder technology makes the cameras extremely sensitive to low light, effectively allowing them to 'see' even in dark conditions. The Wide Dynamic Range with 'dynamic capture' allows to provide homogeneous images, without too dark or too bright parts.

AXIS Q16 Series ranges from extended D1 resolution cameras to 1-megapixel cameras, with the advantage of HDTV 720p video at 50/60 frame per second in some models.

Installation is made easy with Power over Ethernet (IEEE 802.3af), which eliminates the need for power cables. The cameras also have a memory card slot for storing recordings locally.

The IP66-rated outdoor-ready cameras operate in temperatures from -40 ºC to 50 ºC (-40 ºF to 122 ºF) using High PoE. They feature Axis' unique Arctic Temperature Control to pre-heat the camera module for securing start up even at very low temperatures following a power failure.

# Low-light sensitive and wide dynamic range cameras for indoor and outdoor use

AXIS Q16 Fixed Network Cameras offers outstanding models supporting WDR-dynamic capture capability, which are suitable for surveillance in highly variable lighting conditions, and models supporting Lightfinder technology that are suitable for environments with poor light conditions. Models supporting high frame rate ensures that quick movements are captured in more details.

### Easy installation with innovative features

Setting the focus on AXIS Q16 Series is made easy with the focus assistant, indicated by a green LED when an image is in focus. Moreover, the focus can be remotely fine tuned with the remote back focus. The pixel counter helps the installer verify that the pixel resolution of an object fulfills regulatory or customer requirements. AXIS Q1614/-E can be install wherever but always have a perfect image thanks to the leveling assistance, which guides you to the correct level; and the auto rotation that flips the image to the right orientation, also when Corridor Format is used.
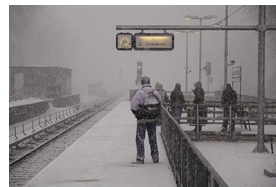
### Superior image quality

When light comes through a glass window or entrance, it creates both dark and bright zones. Identification of people or objects becomes critical. AXIS Q1604/-E, with Wide Dynamic Range-dynamic capture, ensures that no part of the image is too dark or too bright. Additionally, AXIS Q1614/-E provide a manual fine tuning of the high-contrast image for ease and clear identification even in very complicated scenes. AXIS Q1614/-E deliver smooth and highly detailed video in fast-paced environments. Identify of an incident is easy thanks to clear video with 50 or 60 frames per second in HDTV 720p video quality.

AXIS Q1602/-E and AXIS Q1614/-E incorporate Axis' revolutionary Lightfinder technology. Resulting in life-like colors in low-light conditions, the outstanding performance is the combination of well-founded decisions regarding the sensor and lens and carefully tuned image processing.

For more on WDR-dynamic capture and Lightfinder technology, go to: *www.axis.com/corporate/corp/tech_papers.htm*
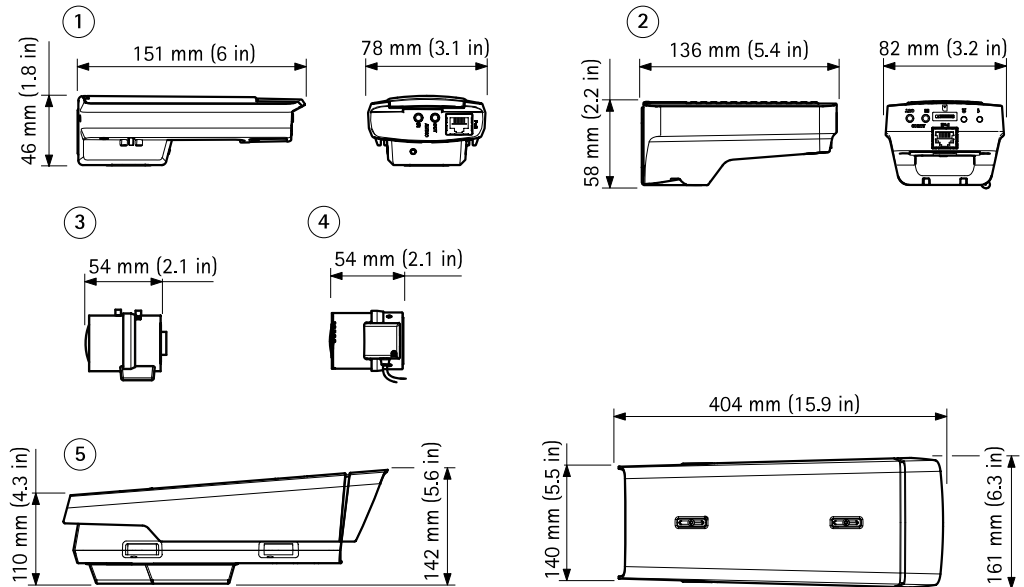
### Weather and impact protection

AXIS Q16-E Network Cameras save installation time and costs since they are ready out of the box for mounting outdoors. The IP66- and NEMA 4X- rated cameras have protection against dust, rain, snow and sunlight, and can operate in temperatures as low as -40 ºC (-40 ºF). Furthermore, they support IK10 rating for protection against impact and vandal acts. Additionally, AXIS Q1614/-E provides shock detection with adjustable sensitivity to send an alarm to personnel during attempted vandalism. Powered by Power over Ethernet makes installation easy since there is no need for a separate power cable.

*Lightfinder technology with AXIS Q1602/-E, AXIS Q1614/-E Network Cameras*
*Left: Reference image, Middle: High-end surveillance camera, Right: AXIS Q1602/-E Network Cameras*

## Dimensions

1. AXIS Q1602/Q1604
2. AXIS Q1614
3. AXIS Q1602 lens
4. AXIS Q1604/Q1614 lens
5. AXIS Q16–E

① 151 mm (6 in)   46 mm (1.8 in)   78 mm (3.1 in)

② 136 mm (5.4 in)   58 mm (2.2 in)   82 mm (3.2 in)

③ 54 mm (2.1 in)

④ 54 mm (2.1 in)

⑤ 110 mm (4.3 in)   142 mm (5.6 in)

404 mm (15.9 in)   140 mm (5.5 in)   161 mm (6.3 in)

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## Optional accessories

1. AXIS T8120
2. AXIS T81B22
3. AXIS T8123/-E
4. AXIS T90A Illuminators
5. Lenses
6. AXIS T8414

## Optional accessories for outdoor models

1. Adapter plate
2. Pole mount
3. Corner mount
4. Ceiling brackets with ball joint
5. Column mount with ball joint

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## Technical Specifications – AXIS Q16 Network Camera Series

| Models | AXIS Q1602/-E: Extended D1 (768x576), indoor/outdoor<br>AXIS Q1604/-E: 1 MP/HDTV 720p, indoor/outdoor<br>AXIS Q1614/-E: 1 MP/HDTV 720p, indoor/outdoor |
|---|---|

### Camera

| Image sensor | Progressive scan RGB CMOS 1/3" |
|---|---|
| Lens | IR corrected, CS-mount, Megapixel resolution<br>AXIS Q1602/-E: DC-iris<br>AXIS Q1604/-E, AXIS Q1614/-E: P-Iris<br>AXIS Q1602/Q1604/Q1614: Varifocal 2.8–8 mm: 100°–34° view[a], F1.2<br>AXIS Q1602-E/Q1604-E/Q1614–E: Varifocal 2.8–8 mm: 80°–34° view[a], F1.2 |
| Day and night | Automatically removable infrared-cut filter |
| Minimum illumination | AXIS Q1602/-E: Color: 0.05 lux, F1.2, B/W: 0.008 lux, F1.2<br>AXIS Q1604/-E: Color: 0.1 lux, F1.2, B/W: 0.02 lux, F1.2<br>With dynamic capture: Color: 0.4 lux, F1.2, B/W: 0.06 lux, F1.2<br>AXIS Q1614/-E: Extended D1 and 720p 25/30 fps: Color: 0.05 lux, F1.2, B/W: 0.008 lux, F1.2; With dynamic capture: Color: 0.4 lux, F1.2, B/W: 0.06 lux, F1.2<br>720p 50/60 fps: Color: 0.1 lux, F1.2, B/W: 0.02 lux, F1.2 |

| Shutter time | AXIS Q1602/-E: 1/29500 s to 2 s<br>AXIS Q1604/-E:<br>1/24500 s to 2 s with power line frequency 50 Hz<br>1/29500 s to 2 s with power line frequency 60 Hz<br>With dynamic capture:<br>1/192 s to 1/37 s with power line frequency 50 Hz<br>1/231 s to 1/44 s with power line frequency 60 Hz<br>AXIS Q1614/-E:<br>Extended D1 and 720p 25/30 fps:<br>1/24500 s to 2 s with power line frequency 50 Hz<br>1/29500 s to 2 s with power line frequency 60 Hz<br>720p 25/30 fps with dynamic capture:<br>1/192 s to 1/37 s with power line frequency 50 Hz<br>1/231 s to 1/44 s with power line frequency 60 Hz<br>720p 50/60 fps: 1/43500 s to 2 s |
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### Video

| Video compression | H.264 (MPEG-4 Part 10/AVC), H.264 Main and Baseline Profile, Motion JPEG |
|---|---|
| Resolutions | AXIS Q1602/-E: 768x576 to 160x90<br>AXIS Q1604/-E: 1280x960[b] (1 MP) to 160x90<br>AXIS Q1614/-E: 25/30 fps: 1280x960[b] to 160x90; 50/60 fps: 1280x720 to 160x90; Extended D1: 768x576 to 160x90 |
| Frame rate | AXIS Q1602/-E, H.264 and Motion JPEG:<br>30 fps in all resolutions<br>AXIS Q1604/-E, H.264 and Motion JPEG: |

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|---|---|
| | 30 fps in 60 Hz capture mode<br>25 fps in 50 Hz capture mode<br>**AXIS Q1614/–E, H.264 and Motion JPEG:**<br>**Extended D1 and 720p 25/30 fps:**<br>Up to 30 fps with power line frequency 60 Hz<br>Up to 25 fps with power line frequency 50 Hz<br>**720p 50/60 fps:**<br>Up to 60 fps with power line frequency 60 Hz<br>Up to 50 fps with power line frequency 50 Hz |
| Video streaming | Multiple, individually configurable streams in H.264/Motion JPEG,<br>Controllable frame rate and bandwidth, VBR/CBR H.264 |
| Image settings | Compression, Color, Brightness, Sharpness, Contrast, White<br>balance, Exposure control, Exposure zones, Backlight<br>compensation, WDR-dynamic contrast, Fine tuning of behavior<br>at low light, Text and image overlay, Privacy mask, Mirroring<br>of images<br>**AXIS Q1604/–E:** WDR-dynamic capture: Up to 120dB<br>(0.4–400,000 lux) depending on scene<br>**AXIS Q1614/–E:** WDR-dynamic capture: Up to 120dB<br>(0.4–400,000 lux) depending on scene, Auto-rotation, Shadow<br>and highlight recovery, Day/night shift level<br>**AXIS Q1602/Q1604/Q1614:** Rotation: 0°, 90°, 180°, 270°<br>including Corridor Format |

### Audio

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| Audio streaming | Two-way |
| Audio compression | AAC LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz<br>Configurable bit rate<br>**AXIS Q1614/–E:** AAC LC 8/16/32 kHz |
| Audio input/output | External microphone, input or line input, line output<br>**AXIS Q1602/Q1604/Q1614:** Built-in microphone (can be<br>disabled)<br>**AXIS Q1614/–E:** External balanced/unbalanced microphone or<br>line input, line output |

### Network

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| Security | Password protection, IP address filtering, HTTPS[c] encryption,<br>IEEE 802.1X[c] network access control, Digest authentication, User<br>access log |
| Supported protocols | IPv4/v6, HTTP, HTTPS[c], SSL/TLS[c], QoS Layer 3 DiffServ, FTP,<br>CIFS/SMB, SMTP, Bonjour, UPnP, SNMPv1/v2c/v3 (MIB-II), DNS,<br>DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP,<br>ARP, SOCKS |

### System integration

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| Application Programming Interface | Open API for software integration, including VAPIX®<br>and AXIS Camera Application Platform; specifications at<br>www.axis.com. AXIS Video Hosting System (AVHS) with<br>One-Click Camera Connection. ONVIF Profile S; specification<br>available at www.onvif.org |
| Intelligent video | Video motion detection, Active tampering alarm, Audio detection,<br>Support for AXIS Camera Application Platform enabling<br>installation of additional applications |
| Event triggers | Intelligent video, Edge storage events, External input<br>**AXIS Q1614/–E:** Shock detection |
| Event actions | File upload: FTP, HTTP, network share and email<br>Notification: email, HTTP and TCP<br>Video and audio recording to edge storage<br>Pre- and post-alarm video buffering<br>External output activation; Play audio clip |
| Data streaming | Event data |
| Built-in installation aids | Focus assistant, Pixel counter, Remote back focus<br>**AXIS Q1614/–E:** Leveling assistant |

### General

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|---|---|
| Casing | Camera: Metal (zinc)<br>**AXIS Q1602-E/Q1604-E/Q1614–E:** IP66- and NEMA 4X-rated,<br>IK10 impact resistant aluminum enclosure.<br>Color: White NCS S 1002-B |
| Memory | 256 MB RAM, 128 MB Flash |
| Power | **AXIS Q1602/Q1604:** 8–20 V DC or Power over Ethernet<br>IEEE 802.3af/802.3at Type 1 Class 3<br>**AXIS Q1602:** max. 6.5 W, **AXIS Q1604:** max. 6.9 W<br>**AXIS Q1614:** 8–28 V DC or Power over Ethernet<br>IEEE 802.3af/802.3at Type 1 Class 3, max. 10.8 W<br>**AXIS Q1602-E/Q1604-E/Q1614–E:** Power over Ethernet<br>IEEE 802.3af/802.3at Type 1 Class 3, max. 12.95 W or High PoE<br>max. 25.5 W |
| Connectors | RJ45 10BASE-T/100BASE-TX PoE, 3.5 mm mic/line in, 3.5 mm line<br>out<br>**AXIS Q1602/–E, AXIS Q1604/–E:** Terminal block for 1 alarm<br>input and 1 output<br>**AXIS Q1614/–E:** RS485/422, DC input, Terminal block for two<br>configurable inputs/outputs (12 V DC output, max. load 50 mA) |
| Edge storage | Support for recording to dedicated network-attached storage<br>(NAS)<br>**AXIS Q1602/–E, AXIS Q1604/–E:** SD/SDHC/SDXC slot supporting<br>memory card up to 64 GB (card not included)<br>**AXIS Q1614/–E:** microSD/microSDHC/microSDXC slot supporting<br>memory card up to 64 GB (card not included) |
| Operating conditions | **AXIS Q1602/Q1604/Q1614:** 0 °C to 50 °C (32 °F to 122 °F)<br>Humidity 10–85% RH (non-condensing)<br>**AXIS Q1602-E/Q1604-E/Q1614–E:** -30 °C to 50 °C (-22 °F to<br>122 °F) with PoE; down to -40 °C (-40 °F) with Axis High PoE<br>midspan, max. 30 W<br>Humidity 10–100% RH (condensing) |
| Approvals | EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024,<br>EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B,<br>ICES-003 Class B, VCCI Class B, C-tick AS/NZS CISPR 22 Class B,<br>KCC KN22 Class B, KN24, IEC/EN/UL 60950-1<br>**AXIS Q1602-E/Q1604-E/Q1614–E:** EN 50121-4, IEC 62236–4,<br>IEC/EN/UL 60950-22, IEC/EN 60529 IP66, NEMA 250 Type 4X,<br>IEC 60068-2-6, IEC 60068-2-27, IEC/EN 62262 IK10 |
| Weight | **AXIS Q1602/Q1604:** 600 g (1.3 lb)<br>**AXIS Q1614:** 925 g (2 lb)<br>**AXIS Q1602–E/Q1604–E:** 3100 g (6.8 lb)<br>**AXIS Q1614–E:** 3525 g (7.7 lb) |
| Included accessories | Stand, Connector kit, ResiTorx20 tool, Installation Guide,<br>Installation and Management Software CD, Windows decoder<br>1-user license<br>**AXIS Q1602-E/Q1604-E/Q1614–E:** Wall mount bracket,<br>Sunshield |
| Video management software | AXIS Camera Station and video management software from<br>Axis' Application Development Partners (not included). For more<br>information, see www.axis.com/products/video/software |
| Warranty | Axis 3–year warranty and AXIS Extended Warranty option, see<br>*www.axis.com/warranty* |

a. *Horizontal angle of view*
b. *1400x1050 (1.4 MP) scaled resolution available via VAPIX®*
c. *This product includes software developed by the OpenSSL Project for use in the
OpenSSL Toolkit (http://www.openssl.org/), and cryptographic software written by
Eric Young (eay@cryptsoft.com).*

**More information is available at www.axis.com**

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