

# AXIS Q1645-LE Network Camera

High-speed video with 1/2" sensor and OptimizedIR

With AXIS Q1645-LE Network Camera it's easier than ever to capture details even in challenging lighting or low light. With a 1/2" sensor and i-CS lens, AXIS Q1645-LE ensures high-resolution images at up to 120 fps and provides superior light sensitivity with Forensic WDR and Lightfinder. The robust aluminum housing resists extreme temperatures, and comes with built-in IR LED illumination for surveillance in complete darkness. AXIS Q1645-LE enables proactive surveillance with pre-installed AXIS Guard Suite and orientation aid for quick orientation with multiple monitors. Zipstream optimizes the video stream to maintain high video quality while saving bandwidth and storage.

- > **2 MP resolution at up to 100/120 fps**
- > **1/2" sensor**
- > **Forensic WDR and Lightfinder**
- > **Electronic image stabilization (EIS)**
- > **AXIS Motion Guard, AXIS Fence Guard and AXIS Loitering Guard**



# AXIS Q1645-LE Network Camera

| Camera                            |   |
|-----------------------------------|---|
| Image sensor                      | 1/2" progressive scan RGB CMOS  |
| Lens                              | Varifocal, IR corrected, CS-mount<br>3.9–10.0 mm, F1.5<br>2 MP (16:9):<br>Horizontal field of view: 92°–42°<br>Vertical field of view: 50°–23°<br>i-CS lens   |
| Day and night                     | Automatically removable infrared-cut filter   |
| Minimum illumination              | 1080p 25/30 fps with WDR and Lightfinder:<br>Color: 0.05 lux, at 50 IRE F1.5, B/W: 0.01 lux, at 50 IRE F1.5<br>1080p 50/60 fps with WDR and Lightfinder:<br>Color: 0.1 lux, at 50 IRE F1.5, B/W: 0.02 lux, at 50 IRE F1.5<br>1080p 100/120 fps:<br>Color: 0.2 lux, at 50 IRE F1.5, B/W: 0.04 lux, at 50 IRE F1.5<br>1080p 25/30 fps with WDR and Lightfinder:<br>Color: 0.02 lux, at 50 IRE F0.9, B/W: 0.004 lux, at 50 IRE F0.9<br>0 lux with IR illumination on                           |
| Shutter speed                     | 1/143000 to 1 s   |
| Pan/Tilt/Zoom                     | Digital PTZ, uploadable PTZ driver (Pelco D pre-installed)  |
| System on chip (SoC)              |   |
| Model                             | ARTPEC-6  |
| Memory                            | 1 GB RAM, 512 MB Flash  |
| Video                             |   |
| Video compression                 | H.264 (MPEG-4 Part 10/AVC), Main, Baseline and High Profile<br>Motion JPEG  |
| Resolution                        | 1920x1080 to 320x180  |
| Frame rate                        | HDTV 1080p (1920x1080) with WDR:<br>Up to 50/60 fps with power line frequency 50/60 Hz<br>HDTV 1080p (1920x1080) without WDR:<br>Up to 100/120 fps with power line frequency 50/60 Hz   |
| Video streaming                   | Multiple, individually configurable streams in H.264 and Motion JPEG<br>Axis Zipstream technology in H.264<br>Controllable frame rate and bandwidth<br>VBR/ABR/MBR H.264  |
| Image settings                    | Saturation, contrast, brightness, sharpness, Forensic WDR – 120 dB, white balance, day/night threshold, exposure mode, exposure zones, compression, orientation: auto, 0°, 90°, 180°, 270°, mirroring of images, dynamic text overlay, image overlay, privacy masks, defogging, noise reduction, electronic image stabilization, barrel distortion correction, orientation aid, fine tuning of behavior at low light<br>Scene profiles: forensic, vivid, traffic overview, backlit entrance |
| Audio                             |   |
| Audio streaming                   | Two-way, full duplex  |
| Audio encoding                    | AAC-LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz<br>Configurable bit rate  |
| Audio input/output                | External balanced/unbalanced microphone or line input, line output, automatic gain control<br>24 bit AD/DA-conversion   |
| Network                           |   |
| Security                          | Password protection, IP address filtering, HTTPS <sup>a</sup> encryption, IEEE 802.1x (EAP-TLS) <sup>a</sup> network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware  |
| Supported protocols               | IPv4, IPv6 USGv6, HTTP, HTTP/2, HTTPS <sup>a</sup> , SSL/TLS <sup>a</sup> , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP <sup>TM</sup> , SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, LLDP, CDP, MQTT v3.1.1, Syslog.   |
| System integration                |   |
| Application Programming Interface | Open API for software integration, including VAPIX <sup>®</sup> and AXIS Camera Application Platform; specifications at <a href="http://axis.com">axis.com</a><br>AXIS Video Hosting System (AVHS) with One-Click Connection<br>One-click cloud connection  |

ONVIF Profile G, ONVIF Profile S, and ONVIF Profile T, specifications at [onvif.org](http://onvif.org)

| Event conditions           | Analytics, external input, edge storage events, virtual inputs through API<br>Audio: audio detection<br>Device status: above operating temperature, above or below operating temperature, below operating temperature, casing open, IP address removed, network lost, new IP address, storage failure, system ready, within operating temperature<br>Edge storage: recording ongoing, storage disruption<br>I/O: digital input, manual trigger, virtual input<br>PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready<br>Scheduled and recurring: scheduled event<br>Video: average bitrate degradation, day-night mode, live stream open, tampering |
|----------------------------|---|
| Event actions              | File upload: FTP, SFTP, HTTP, HTTPS, network share and email, send video clip<br>Notification: email, HTTP, HTTPS and TCP<br>Overlay text, Send SNMP Trap<br>Video and audio recording to edge storage<br>Pre- and post-alarm video buffering<br>External output activation, day/night vision mode, play audio clip, status LED, WDR mode, defog mode, PTZ control  |
| Data streaming             | Event data  |
| Built-in installation aids | i-CS: Remote zoom and focus<br>Other lens: Remote back focus<br>Traffic wizard, pixel counter, levelling assistant, autorotation  |
| Analytics                  |   |
| Applications               | Included<br>AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard<br>AXIS Video Motion Detection, active tampering alarm, audio detection<br>Supported<br>AXIS Digital Autotracking, AXIS Perimeter Defender<br>Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>  |
| General                    |   |
| Casing                     | IP66-, IP67-, NEMA 4X- and IK10-rated<br>Metal (Aluminium)<br>Color front: Black – NCS S 9000-N<br>Color chassis: White – NCS S 1002-B<br>Intrusion alarm switch  |
| Sustainability             | PVC free  |
| Power                      | Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4<br>Typical 12.3 W, max 25.5 W   |
| Connectors                 | Shielded RJ45 10BASE-T/100BASE-TX PoE<br>I/O: 6-pin 2.5 mm terminal block for four configurable inputs/outputs (12 V DC output, max load 50 mA)<br>RS485/RS422, 2 pcs, 2 pos, full duplex, terminal block<br>3.5 mm mic/line in, 3.5 mm line out<br>i-CS connector (compatible with P-Iris and DC-iris)   |
| IR illumination            | Optimized IR with power-efficient, long-life 850 nm IR LEDs<br>Range of reach 30 m (98 ft) or more depending on the scene   |
| Storage                    | Support for microSD/microSDHC/microSDXC card<br>Support for SD card encryption (AES-XTS-Plain64 256bit)<br>Support for recording to network-attached storage (NAS)<br>For SD card and NAS recommendations see <a href="http://axis.com">axis.com</a>  |
| Operating conditions       | Arctic temperature control:<br>Start-up at -40 °C to 60 °C (-40 °F to 140 °F)<br>Humidity 10–100% RH (condensing)   |
| Storage conditions         | -40 °C to 65 °C (-40 °F to 149 °F)<br>Humidity 5–95% RH (non-condensing)  |
| Approvals                  | EMC<br>EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, EN 50121-4, IEC 62236-4, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 32 Class A<br>Safety<br>IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IS 13252<br>Environment  |

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|-----------------------------|--|
|                             | IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66/67, IEC/EN 62262 IK10, NEMA 250 Type 4X<br><b>NetworkNIST SP500-267</b><br><b>Other</b><br>IEC 62471                            |
| <b>Dimensions</b>           | 178 x 206 x 494 mm (7 x 8.11 x 19.45 in)   |
| <b>Weight</b>               | 6350 g (13.2 lb)   |
| <b>Included accessories</b> | AXIS T94Q01A Wall Mount, AXIS T92G20 Outdoor Housing, connector kit, resistor <sup>®</sup> T20 tool, installation guide, Windows <sup>®</sup> decoder 1-user license   |
| <b>Optional lenses</b>      | Fujinon Varifocal Lens 8-80 mm, DC-iris<br>Lens i-CS 9-50 mm F1.5 8 MP<br>Lens CS 12-50 mm F1.4 P-Iris 8 MP<br>Lens i-CS 1/1.8" 3.9-10 mm F1.5<br>Ricomp 2MP Lens DC-iris 8-26 mm F0.9<br>Tamron Varifocal 5MP Lens 4-13 mm, DC-iris & C-mount |

|                                  |  |
|----------------------------------|--|
| <b>Optional accessories</b>      | AXIS T90B Illuminators, Axis network cable couplers, AXIS T8129 PoE Extender, AXIS T8415 Wireless Installation Tool, Axis midspans<br>For more accessories, see <a href="http://axis.com">axis.com</a> |
| <b>Video management software</b> | AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at <a href="http://axis.com/vms">axis.com/vms</a>                                  |
| <b>Languages</b>                 | English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese  |
| <b>Warranty</b>                  | 5-year warranty, see <a href="http://axis.com/warranty">axis.com/warranty</a>  |

- a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit ([openssl.org](http://openssl.org)), and cryptographic software written by Eric Young ([eyay@cryptsoft.com](mailto:eyay@cryptsoft.com)).*

Environmental responsibility:

[axis.com/environmental-responsibility](http://axis.com/environmental-responsibility)