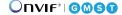**AXIS**
COMMUNICATIONS

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**

ONVIF® | **GMST**

HDTV
NETWORK VIDEO

AXIS Q1645-LE Network Camera

Camera

Image sensor	1/2" progressive scan RGB CMOS
Lens	Varifocal, IR corrected, CS-mount 3.9–10.0 mm, F1.5 **2 MP (16:9):** Horizontal field of view: 92°–42° Vertical field of view: 50°–23° i-CS lens
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**1080p 25/30 fps with WDR and Lightfinder:** Color: 0.05 lux, at 50 IRE F1.5, B/W: 0.01 lux, at 50 IRE F1.5 **1080p 50/60 fps with WDR and Lightfinder:** Color: 0.1 lux, at 50 IRE F1.5, B/W: 0.02 lux, at 50 IRE F1.5 **1080p 100/120 fps:** Color: 0.2 lux, at 50 IRE F1.5, B/W: 0.04 lux, at 50 IRE F1.5 **1080p 25/30 fps with WDR and Lightfinder:** Color: 0.02 lux, at 50 IRE F0.9, B/W: 0.004 lux, at 50 IRE F0.9 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 Motion JPEG
Resolution	1920x1080 to 320x180
Frame rate	**HDTV 1080p (1920x1080) with WDR:** Up to 50/60 fps with power line frequency 50/60 Hz **HDTV 1080p (1920x1080) without WDR:** Up to 100/120 fps with power line frequency 50/60 Hz
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis Zipstream technology in H.264 Controllable frame rate and bandwidth 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 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 Configurable bit rate
Audio input/output	External balanced/unbalanced microphone or line input, line output, automatic gain control 24 bit AD/DA-conversion

Network

Network protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS, TLS, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP™, SNMPv1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SFTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf).

System integration

Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* AXIS Video Hosting System (AVHS) with One-Click Connection One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at *onvif.org*
Event conditions	Analytics, external input, edge storage events, virtual inputs through API
	Audio: audio detection 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 Edge storage: recording ongoing, storage disruption I/O: digital input, manual trigger, virtual input MQTT subscribe PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready Scheduled and recurring: scheduled event 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 Notification: email, HTTP, HTTPS and TCP Overlay text, Send SNMP Trap Video and audio recording to edge storage Pre- and post-alarm video buffering External output activation, day/night vision mode, play audio clip, status LED, WDR mode, defog mode, PTZ control MQTT publish
Data streaming	Event data
Built-in installation aids	i-CS: Remote zoom and focus Other lens: Remote back focus Traffic wizard, pixel counter, levelling assistant, autorotation

Analytics

Applications	**Included** AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm, audio detection **Supported** AXIS Digital Autotracking, AXIS Perimeter Defender Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*

Approvals

EMC	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 **Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A **Canada:** ICES-003 Class A **Japan:** VCCI Class A **USA:** FCC Part 15 Subpart B Class A
Safety	IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IS 13252, IEC 62471
Environment	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
Network	NIST SP500–267

Cybersecurity

Edge security	**Software:** Signed firmware, brute force delay protection, digest authentication and OAuth 2.0 RFC6749 OpenID Authorization Code Flow for centralized ADFS account management, password protection
Network security	IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2), IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS, TLS v1.2/v1.3, Network Time Security (NTS), X.509 Certificate PKI, host-based firewall
Documentation	*AXIS OS Hardening Guide* *Axis Vulnerability Management Policy* *Axis Security Development Model* *AXIS OS Software Bill of Material (SBOM)* To download documents, go to *axis.com/support/cybersecurity/resources* To read more about Axis cybersecurity support, go to *axis.com/cybersecurity*

General

Casing	IP66-, IP67-, NEMA 4X- and IK10-rated Metal (Aluminium) Color front: Black - NCS S 9000-N Color chassi: White - NCS S 1002-B Intrusion alarm switch
Sustainability	PVC free

Power	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 Typical 12.3 W, max 25.5 W
Connectors	Shielded RJ45 10BASE-T/100BASE-TX PoE I/O: 6-pin 2.5 mm terminal block for four configurable inputs/outputs (12 V DC output, max load 50 mA) RS485/RS422, 2 pcs, 2 pos, full duplex, terminal block 3.5 mm mic/line in, 3.5 mm line out i-CS connector (compatible with P-Iris and DC-iris)
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range of reach 30 m (98 ft) or more depending on the scene
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Support for recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	Arctic temperature control: Start-up at -40 °C to 60 °C (-40 °F to 140 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Dimensions	178 x 206 x 494 mm (7 x 8.11 x 19.45 in)
Weight	6350 g (13.2 lb)

Included accessories	AXIS T94Q01A Wall Mount, AXIS T92G20 Outdoor Housing, connector kit, resistorx® T20 tool, installation guide, Windows® decoder 1-user license
Optional lenses	Fujinon Varifocal Lens 8–80 mm, DC-iris Lens i-CS 9–50 mm F1.5 8 MP Lens CS 12–50 mm F1.4 P-Iris 8 MP Lens i-CS 1/1.8" 3.9-10 mm F1.5 Ricom 2MP Lens DC-iris 8-26 mm F0.9 Tamron Varifocal 5MP Lens 4-13 mm, DC-iris & C-mount
Optional accessories	AXIS T90B Illuminators, Axis network cable couplers, AXIS T8129 PoE Extender, AXIS T8415 Wireless Installation Tool, Axis midspans For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
Warranty	5-year warranty, see *axis.com/warranty*

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