

# 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	
<b>Image sensor</b>	1/2" progressive scan RGB CMOS
<b>Lens</b>	Varifocal, IR corrected, CS-mount 3.9–10.0 mm, F1.5 <b>2 MP (16:9):</b> Horizontal field of view: 92°–42° Vertical field of view: 50°–23° i-CS lens
<b>Day and night</b>	Automatically removable infrared-cut filter
<b>Minimum illumination</b>	<b>1080p 25/30 fps with WDR and Lightfinder:</b> Color: 0.05 lux, at 50 IRE F1.5, B/W: 0.01 lux, at 50 IRE F1.5 <b>1080p 50/60 fps with WDR and Lightfinder:</b> Color: 0.1 lux, at 50 IRE F1.5, B/W: 0.02 lux, at 50 IRE F1.5 <b>1080p 100/120 fps:</b> Color: 0.2 lux, at 50 IRE F1.5, B/W: 0.04 lux, at 50 IRE F1.5 <b>1080p 25/30 fps with WDR and Lightfinder:</b> 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
<b>Shutter speed</b>	1/143000 to 1 s
<b>Pan/Tilt/Zoom</b>	Digital PTZ, uploadable PTZ driver (Pelco D pre-installed)
System on chip (SoC)	
<b>Model</b>	ARTPEC-6
<b>Memory</b>	1 GB RAM, 512 MB Flash
Video	
<b>Video compression</b>	H.264 (MPEG-4 Part 10/AVC), Main, Baseline and High Profile Motion JPEG
<b>Resolution</b>	1920x1080 to 320x180
<b>Frame rate</b>	<b>HDTV 1080p (1920x1080) with WDR:</b> Up to 50/60 fps with power line frequency 50/60 Hz <b>HDTV 1080p (1920x1080) without WDR:</b> Up to 100/120 fps with power line frequency 50/60 Hz
<b>Video streaming</b>	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
<b>Image settings</b>	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	
<b>Audio streaming</b>	Two-way, full duplex
<b>Audio encoding</b>	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
<b>Audio input/output</b>	External balanced/unbalanced microphone or line input, line output, automatic gain control 24 bit AD/DA-conversion
Network	
<b>Security</b>	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
<b>Network protocols</b>	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS <sup>a</sup> , TLS <sup>a</sup> , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP™, SNMPv1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTP, RTSP, SFTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf).
System integration	
<b>Application Programming Interface</b>	Open API for software integration, including VAPIX <sup>®</sup> and AXIS Camera Application Platform; specifications at <a href="http://axis.com">axis.com</a> AXIS Video Hosting System (AVHS) with One-Click Connection One-click cloud connection

ONVIF<sup>®</sup> Profile G, ONVIF<sup>®</sup> Profile M, ONVIF<sup>®</sup> Profile S, and ONVIF<sup>®</sup> Profile T, specifications at [onvif.org](http://onvif.org)

<b>Event conditions</b>	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
<b>Event actions</b>	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
<b>Data streaming</b>	Event data
<b>Built-in installation aids</b>	i-CS: Remote zoom and focus Other lens: Remote back focus Traffic wizard, pixel counter, levelling assistant, autorotation
Analytics	
<b>Applications</b>	<b>Included</b> AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard AXIS Video Motion Detection, active tampering alarm, audio detection <b>Supported</b> AXIS Digital Autotracking, AXIS Perimeter Defender Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>
General	
<b>Casing</b>	IP66-, IP67-, NEMA 4X- and IK10-rated Metal (Aluminium) Color front: Black – NCS S 9000-N Color chassis: White – NCS S 1002-B Intrusion alarm switch
<b>Sustainability</b>	PVC free
<b>Power</b>	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 Typical 12.3 W, max 25.5 W
<b>Connectors</b>	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)
<b>IR illumination</b>	Optimized IR with power-efficient, long-life 850 nm IR LEDs Range of reach 30 m (98 ft) or more depending on the scene
<b>Storage</b>	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 <a href="http://axis.com">axis.com</a>
<b>Operating conditions</b>	Arctic temperature control: Start-up at –40 °C to 60 °C (–40 °F to 140 °F) Humidity 10–100% RH (condensing)
<b>Storage conditions</b>	–40 °C to 65 °C (–40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
<b>Approvals</b>	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, FCC Part 15 Subpart B Class A, ICES–003 Class A, VCCI Class A, RCM AS/NZS CISPR 32 Class A Safety

	IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IS 13252 <b>Environment</b> 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 <b>Other</b> IEC 62471	Tamron Varifocal 5MP Lens 4-13 mm, DC-iris & C-mount
<b>Dimensions</b>	178 x 206 x 494 mm (7 x 8.11 x 19.45 in)	<b>Optional accessories</b>
<b>Weight</b>	6350 g (13.2 lb)	AXIS T90B Illuminators, Axis network cable couplers, AXIS T8129 PoE Extender, AXIS T8415 Wireless Installation Tool, Axis midspans For more accessories, see <a href="http://axis.com">axis.com</a>
<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>Video management software</b>
<b>Optional lenses</b>	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	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. <i>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<a href="http://openssl.org">openssl.org</a>), and cryptographic software written by Eric Young (<a href="mailto:eyay@cryptsoft.com">eyay@cryptsoft.com</a>).</i>
		Environmental responsibility: <a href="http://axis.com/environmental-responsibility">axis.com/environmental-responsibility</a>