

## 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

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<sup>1</sup>, TLS<sup>1</sup>, 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](http://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](http://onvif.org)

### Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at [axis.com/vms](http://axis.com/vms).

### 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 Perimeter Defender

Support for AXIS Camera Application Platform enabling installation of third-party applications, see [axis.com/acap](http://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

1. 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 ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)).

## 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 OS, 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)<sup>2</sup>,  
IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS<sup>2</sup>, TLS  
v1.2/v1.3<sup>2</sup>, 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](https://axis.com/support/cybersecurity/resources)

To read more about Axis cybersecurity support, go to  
[axis.com/cybersecurity](https://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

Optimized IR 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](https://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, resistor<sup>x</sup> T20 tool, installation  
guide, Windows<sup>®</sup> 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

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

### **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](http://axis.com)

---

### **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](http://axis.com/warranty)