AXIS Q1615-LE Mk III Network Camera

For analytics with deep learning

AXIS Q1615-LE Mk III combines exceptional imaging and video performance with outstanding hardware and processing capabilities to provide the perfect platform for analytics based on artificial intelligence (AI) with deep learning. A fixed box camera with Q-line functionality, it features an innovative dual chipset that is the basis for nuanced and remarkably granular object classification. This advanced hardware offers a unique opportunity to take advantage of tailor-made third-party applications based on deep learning. The dual chipset also makes it possible for preinstalled AXIS Object Analytics to distinguish between bikes, cars, buses, trucks, and so on.

- > Powerful AI with deep learning
- > Granular object classification
- > Support for 3rd-party AI applications
- > Edge-based processing for scalability
- > Premium Axis Q-line camera features

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Camera

Image sensor	1/2.8" Progressive scan RGB CMOS
Lens	Varifocal, IR corrected, CS-mount **2 MP (16:9):** 2.8–8.5 mm, F1.2 Horizontal field of view: 102°–40° Vertical field of view: 58°–22° i-CS lens
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**HDTV 1080p 25/30 fps with Forensic WDR and Lightfinder:** Color: 0.05 lux, B/W: 0.01 lux at 50 IRE, F1.2 **HDTV 1080p 50/60 fps with Forensic WDR and Lightfinder:** Color: 0.1 lux, B/W: 0.02 lux at 50 IRE, F1.2 **HDTV 1080p 100/120 fps:** Color: 0.2 lux, B/W: 0.04 lux at 50 IRE, F1.2 0 lux with IR illumination on
Shutter speed	1/125000 to 2 s

System on chip (SoC)

Model	ARTPEC-7
Memory	2048 MB RAM, 1024 MB Flash
Compute capabilities	Deep learning processing unit (DLPU)

Video

Video compression	H.264 (MPEG-4 Part 10/AVC), Main, Baseline and High Profile H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	**HDTV 1080p 100/120 fps (no WDR):** 1920x1080 to 160x90 **HDTV 1080p 50/60 fps (WDR):**1920x1080 to 160x90 **HDTV 1080p 25/30 fps (WDR):** 1920x1080 to 160x90
Frame rate	Up to 100/120 fps (50/60 Hz) in 1080p (no WDR)
Video streaming	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265 Low latency mode Video streaming indicator
Image settings	Saturation, contrast, brightness, sharpness, Forensic WDR: Up to 120 dB depending on scene, white balance, day/night threshold, tone mapping, local contrast, exposure mode, exposure zones, defogging, electronic image stabilization, barrel distortion correction, compression, rotation: auto, 0°, 90°, 180°, 270°, dynamic text and image overlay, polygon privacy mask, mirroring of images Scene profiles: forensic, vivid, traffic overview
Pan/Tilt/Zoom	Digital PTZ, uploadable PTZ driver (Pelco D pre-installed)

Audio

Audio streaming	Two-way, full duplex
Audio encoding	24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bit rate
Audio input/output	External microphone input, line input, digital input with ring power, balanced microphone, balanced input, automatic gain control, line output 24 bit AD/DA-conversion

Network

Network protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], TLS[b], 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* One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S and ONVIF® Profile T, specifications at *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*.
Onscreen controls	Electronic image stabilization Day/night shift Defogging Wide dynamic range Video streaming indicator
Event conditions	Analytics, external input, supervised 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, shock detection, ring power overcurrent protection, 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: live stream open
Event actions	MQTT publish Record video: SD card and network share Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP and SNMP trap PTZ: PTZ preset, start/stop guard tour Overlay text, external output activation, play audio clip, zoom preset, defog mode, PTZ control
Built-in installation aids	Focus assistant, pixel counter, leveling assistant, camera orientation aid, traffic wizard i-CS: Remote zoom and focus Other lens: Remote back focus

Analytics

Applications	**Included** AXIS Object Analytics, AXIS Scene Metadata, AXIS Live Privacy Shield AXIS Video Motion Detection, active tampering alarm, audio detection **Supported** AXIS Perimeter Defender AXIS License Plate Verifier Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
AXIS Object Analytics	**Object classes:** humans, vehicles (types: cars, buses, trucks, bikes, other) **Scenarios**: line crossing, object in area, crossline counting, time in area Up to 10 scenarios **Other features**: Triggered objects visualized with trajectories, color-coded bounding boxes and tables Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
AXIS Scene Metadata	**Object classes**: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates Confidence, position

Approvals

EMC	EN 50121-4, EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 55035, EN 61000-6-1, EN 61000-6-2, EAC **Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A **Canada:** ICES-3(A)/NMB-3(A) **Japan:** VCCI Class A **Korea:** KCC KN32 Class A, KN35 **USA:** FCC Part 15 Subpart B Class A **Railway:** IEC 62236-4
Safety	IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IS 13252, CAN/CSA C22.2 No. 62368-1, 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/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)
Wireless	EN 300328, EN 301489-1, EN 301489-17, EN 301893, FCC Part 15 Subpart C, FCC Part 15 Subpart E, RSS-247, TELEC
Network	NIST SP500-267
Cybersecurity	ETSI EN 303 645, BSI IT Security Label, FIPS 140

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, AES-XTS-Plain64 256bit SD card encryption **Hardware:** Axis Edge Vault cybersecurity platform TPM 2.0 (CC EAL4+, FIPS 140-2 Level 2), secure keystore, secure boot
Network security	IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)[c], IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS[d], TLS v1.2/v1.3[e], 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-, and NEMA 4X-rated, IK10 impact resistant aluminum enclosure Weathershield with black anti-glare coating Color: White NCS S 1002-B Intrusion alarm switch
Mounting	¼"-20 tripod screw thread Camera stand included
Sustainability	PVC free
Power	Power over Ethernet IEEE 802.3at Type 2 Class 4, max. 25.5 W, typical 13.7 W
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range of reach 60 m (196 ft) or more depending on the scene
Connectors	Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE I/O: 6-pin 2.5 mm terminal block for four configurable inputs/outputs(12 V DC output, max load 50 mA). Two of the ports can be supervised. 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)
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS) For SD card and NAS recommendations see *axis.com*
Operating conditions	-40 °C to 60 °C (-40 °F to 140 °F) with PoE Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °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	201 x 179 x 494 mm (7.9 x 7.1 x 19.4 in)
Weight	6965 g (15.4 lb)
Included accessories	AXIS T94Q01A Wall Mount, Sunshield Connector kit, Resistorx® T20 tool, Installation Guide, Windows® decoder 1-user license
Optional lenses	Lens CS 4-10 mm F0.9 P-Iris Ricom 2MP Lens DC-iris 8-26 mm F0.9 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
Optional accessories	Axis mounts, Axis lenses, Axis midspans For more accessories, see *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*
Export control	The product contains U.S.-origin controlled technology/component, the US Export Administration Regulations (EAR) are always applicable to the product. You should comply at all times with all applicable national and international (re-) export control regulations.

a. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*
b. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*
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