# 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**

# AXIS Q1615-LE Mk III Network Camera

## Camera

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

## System on chip (SoC)

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

## Video

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| **Video compression** | H.264 (MPEG-4 Part 10/AVC), Main, Baseline and High Profile<br>H.265 (MPEG-H Part 2/HEVC) Main Profile<br>Motion JPEG |
| **Resolution** | **HDTV 1080p 100/120 fps (no WDR):** 1920x1080 to 160x90<br>**HDTV 1080p 50/60 fps (WDR):** 1920x1080 to 160x90<br>**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<br>Axis Zipstream technology in H.264 and H.265<br>Controllable frame rate and bandwidth<br>VBR/ABR/MBR H.264/H.265<br>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<br>Scene profiles: forensic, vivid, traffic overview |
| **Pan/Tilt/Zoom** | Digital PTZ, uploadable PTZ driver (Pelco D pre-installed) |

## Audio

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| **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<br>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<br>24 bit AD/DA-conversion |

## Network

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| **Security** | Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1x (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot, protection of cryptographic keys with FIPS 140-2 certified TPM 2.0 module |
| **Supported protocols** | IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], TLS[a], QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP™, SNMPv1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SFTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf) |

## System integration

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| **Application Programming Interface** | Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com*<br>AXIS Guardian with One-Click Connection<br>One-click cloud connection<br>ONVIF® Profile G, ONVIF® Profile S and ONVIF® Profile T, specifications at *onvif.org* |
| **Onscreen controls** | Electronic image stabilization<br>Day/night shift<br>Defogging<br>Wide dynamic range<br>Video streaming indicator |
| **Event conditions** | Analytics, external input, supervised 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, shock detection, ring power overcurrent protection, storage failure, system ready, within operating temperature<br>Edge storage: recording ongoing, storage disruption<br>I/O: digital input, manual trigger, virtual input<br>MQTT subscribe<br>PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready<br>Scheduled and recurring: scheduled event<br>Video: live stream open |
| **Event actions** | MQTT publish<br>Record video: SD card and network share<br>Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email<br>Pre- and post-alarm video or image buffering for recording or upload<br>Notification: email, HTTP, HTTPS, TCP and SNMP trap<br>PTZ: PTZ preset, start/stop guard tour<br>Overlay text, external output activation, play audio clip, zoom preset, defog mode, PTZ control |
| **Data streaming** | Event data |
| **Built-in installation aids** | Focus assistant, pixel counter, leveling assistant, camera orientation aid, traffic wizard<br>i-CS: Remote zoom and focus<br>Other lens: Remote back focus |

## Analytics

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| **AXIS Object Analytics** | **Object classes:** humans, vehicles (types: cars, buses, trucks, bikes)<br>**Trigger conditions:** line crossing, object in area<br>Up to 10 scenarios<br>Metadata visualized with color-coded bounding boxes<br>Polygon include/exclude areas<br>Perspective configuration<br>ONVIF Motion Alarm event |
| **Applications** | **Included**<br>AXIS Object Analytics<br>AXIS Video Motion Detection, active tampering alarm, audio detection<br>**Supported**<br>AXIS Perimeter Defender<br>Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap* |

## General

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| **Casing** | IP66-, IP67-, and NEMA 4X-rated, IK10 impact resistant aluminum enclosure<br>Weathershield with black anti-glare coating<br>Color: White NCS S 1002-B<br>Intrusion alarm switch |
| **Mounting** | ¼"-20 tripod screw thread<br>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<br>Range of reach 60 m (196 ft) or more depending on the scene |
| **Connectors** | Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE |

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| | 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.<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) |
| **Storage** | Support for microSD/microSDHC/microSDXC card<br>Support for SD card encryption (AES-XTS-Plain64 256bit)<br>Recording to network-attached storage (NAS)<br>For SD card and NAS recommendations see *axis.com* |
| **Operating conditions** | -40 °C to 60 °C (-40 °F to 140 °F) with PoE<br>Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °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 50121-4, IEC 62236-4, EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 55035, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), VCCI Class A, RCM AS/NZS CISPR 32 Class A, EAC, KCC KN32 Class A, KN35<br>**Safety**<br>IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, CAN/CSA C22.2 No. 62368-1, IEC 62471<br>**Environment**<br>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)<br>**Network**<br>NIST SP500-267 |

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| **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<br>Connector kit, Resistorx® T20 tool, Installation Guide, Windows® decoder 1-user license |
| **Optional lenses** | Lens CS 4-10 mm F0.9 P-Iris<br>Ricom 2MP Lens DC-iris 8-26 mm F0.9<br>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 |
| **Optional accessories** | Axis mounts, Axis lenses, Axis midspans<br>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 |
| **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).*

Environmental responsibility:

*axis.com/environmental-responsibility*

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