

## AXIS Q1656-LE Box Camera

### Outstanding performance in 4 MP

With 4 MP resolution at up to 60 fps, a 1/1.8" sensor, and Lightfinder 2.0, AXIS Q1656-LE delivers exceptional video quality even in poor light conditions. Plus, a built-in wiper ensures great images in all weather conditions. Based on the latest Axis system-on-chip (SoC), it offers support for advanced features and powerful applications based on deep learning on the edge. And, AXIS Object Analytics offers highly nuanced object classification. This outdoor-ready camera includes premium Q-line functionality and support for PoE and redundant DC power. Furthermore, enhanced security functionality prevents unauthorized access and safeguards your system.

- > [Exceptional images with 1/1.8" sensor](#)
- > [Support for analytics with deep learning](#)
- > [Enhanced security features](#)
- > [Premium Axis Q-line camera functionality](#)
- > [Built-in wiper for snow and rain](#)



# AXIS Q1656-LE Box Camera

<b>Camera</b>	
<b>Image sensor</b>	1/1.8" progressive scan RGB CMOS
<b>Lens</b>	Varifocal, 3.9–10 mm, F1.5 Horizontal field of view: 113°–47° Vertical field of view: 60°–27° Autofocus, i-CS lens, IR corrected, remote zoom and focus, P-Iris control Minimum focus distance: 0.5 m (1.6 ft)
<b>Day and night</b>	Automatically removable infrared-cut filter
<b>Minimum illumination</b>	4 MP 25/30 fps with Forensic WDR and Lightfinder 2.0 Color: 0.05 lux at 50 IRE, F1.5 B/W: 0.01 lux at 50 IRE, F1.5 4 MP 50/60 fps with Lightfinder 2.0 Color: 0.1 lux at 50 IRE, F1.5 B/W: 0.02 lux at 50 IRE, F1.5 4 MP 25/30 fps with Forensic WDR and Lightfinder 2.0 With optional F0.9 lens 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>	1/47500 s to 1 s
<b>System on chip (SoC)</b>	
<b>Model</b>	ARTPEC-8
<b>Memory</b>	2048 MB RAM, 8194 MB Flash
<b>Compute capabilities</b>	Deep learning processing unit (DLPU)
<b>Video</b>	
<b>Video compression</b>	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
<b>Resolution</b>	16:9 2688x1512 Quad HD to 160x90 4:3 2016x1512 to 160x120
<b>Frame rate</b>	No WDR: Up to 60/50 fps (60/50 Hz) in all resolutions WDR: Up to 30/25 fps (60/50 Hz) in all resolutions
<b>Video streaming</b>	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
<b>Multi-view streaming</b>	Up to 8 individually cropped out view areas
<b>Image settings</b>	Saturation, contrast, brightness, Forensic WDR: Up to 120 dB depending on scene, white balance, day/night threshold, tone mapping, exposure mode, exposure zones, defogging, barrel distortion correction, electronic image stabilization, compression, rotation: 0°, 90°, 180°, 270° including Corridor Format, mirroring, dynamic text and image overlay, polygon privacy mask Scene profiles: forensic, vivid, traffic overview
<b>Pan/Tilt/Zoom</b>	Digital PTZ, preset positions Uploadable PTZ driver (Pelco D pre-installed)
<b>Audio</b>	
<b>Audio streaming</b>	Two-way, full duplex Noise reduction
<b>Audio encoding</b>	24bit LPCM, 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 microphone input or line input, line output, ring power, digital audio input, automatic gain control
<b>Network</b>	
<b>Network protocols</b>	IPv4, IPv6 USGv6, HTTP, HTTPS <sup>a</sup> , HTTP/2, TLS <sup>a</sup> , QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP <sup>®</sup> , SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS)
<b>System integration</b>	
<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> 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, specification at <a href="http://onvif.org">onvif.org</a>
<b>Onscreen controls</b>	Electronic image stabilization Day/night shift Defogging Wide dynamic range Video streaming indicator IR illumination Timed wiper Wiper Heater
<b>Event conditions</b>	Application Audio: audio detection, audio clip playing Device status: above/below/within operating temperature, casing open, IP address blocked, IP address removed, live stream active, network lost, new IP address, ring power overcurrent protection, system ready Digital audio: digital signal contains Axis metadata, digital signal has invalid sample rate, digital signal missing, digital signal okay Edge storage: recording ongoing, storage disruption, storage health issues detected I/O: digital input, manual trigger, virtual input MQTT: stateless PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready Scheduled and recurring: schedule Video: average bitrate degradation, day-night mode, tampering
<b>Event actions</b>	Overlay text, external output activation, play audio clip, zoom preset I/O: toggle I/O once, toggle I/O while the rule is active Illumination: use lights, use lights while the rule is active MQTT: publish Notification: HTTP, HTTPS, TCP, and email Pre- and post-alarm video or image buffering for recording or upload PTZ: PTZ preset, start/stop guard tour Record video: SD card and network share SNMP traps: send, send while the rule is active Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email
<b>Built-in installation aids</b>	Remote zoom and focus, remote back focus, leveling assistant, pixel counter
<b>Analytics</b>	
<b>Applications</b>	<b>Included</b> AXIS Object Analytics, AXIS Scene Metadata, AXIS Image Health Analytics, AXIS Live Privacy Shield <sup>b</sup> AXIS Video Motion Detection <b>Supported</b> AXIS Perimeter Defender, AXIS License Plate Verifier Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>
<b>AXIS Object Analytics</b>	<b>Object classes:</b> humans, vehicles (types: cars, buses, trucks, bikes, other) <b>Scenarios:</b> line crossing, object in area, time in area, crossline counting, occupancy in area Up to 10 scenarios <b>Other features:</b> triggered objects visualized with trajectories, color-coded bounding boxes and tables Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
<b>AXIS Image Health Analytics</b>	<b>Detection settings:</b> Tampering: blocked image, redirected image Image degradation: blurred image, underexposed image <b>Other features:</b> sensitivity, validation period
<b>AXIS Scene Metadata</b>	<b>Object classes:</b> humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates

Object attributes: vehicle color, upper/lower clothing color, confidence, position

Approvals	
<b>EMC</b>	EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 50121-4 Australia/New Zealand: CISPR 24, CISPR 35, RCM AS/NZS CISPR 32 Class A Canada: ICES-3(A)/NMB-3(A) Japan: VCCI Class A Korea: KS C 9832 Class A, KS C 9815, KS C 9835, KS C 9547 USA: FCC Part 15 Subpart B Class A Railway: IEC 62236-4
<b>Safety</b>	IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IEC 62471, 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/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9), ISO 21207 (Method B)
<b>Network</b>	NIST SP500-267
<b>Cybersecurity</b>	ETSI EN 303 645, FIPS 140
Cybersecurity	
<b>Edge security</b>	<b>Software:</b> 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 <b>Hardware:</b> Axis Edge Vault cybersecurity platform TPM 2.0 (CC EAL4+, FIPS 140-2 Level 2), secure element (CC EAL 6+), system-on-chip security (TEE), Axis device ID, secure keystore, signed video, secure boot, encrypted filesystem (AES-XTS-Plain64 256bit)
<b>Network security</b>	IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2) <sup>a</sup> , IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS <sup>a</sup> , TLS v1.2/v1.3 <sup>a</sup> , Network Time Security (NTS), X.509 Certificate PKI, host-based firewall
<b>Documentation</b>	<i>AXIS OS Hardening Guide</i> <i>Axis Vulnerability Management Policy</i> <i>Axis Security Development Model</i> AXIS OS Software Bill of Material (SBOM) To download documents, go to <a href="https://axis.com/support/cybersecurity/resources">axis.com/support/cybersecurity/resources</a> To read more about Axis cybersecurity support, go to <a href="https://axis.com/cybersecurity">axis.com/cybersecurity</a>
General	
<b>Casing</b>	IP66-, IP67-, and NEMA 4X-rated, IK10 impact-resistant aluminum enclosure with integrated dehumidifying membrane IK08 impact-resistant glass front window with wiper weathershield with black anti-glare coating Color: white NCS S 1002-B For repainting instructions, go to the product's support page. For information about the impact on warranty, go to <a href="https://axis.com/warranty-implication-when-repainting">axis.com/warranty-implication-when-repainting</a> .
<b>Sustainability</b>	PVC free, BFR/CFR free, 2% recycled plastics, 7% bio-based plastics

<b>Power</b>	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 Typical 11.8 W, max 25.5 W 10–28 VDC, typical 11.2 W, max 25.5 W Power redundancy
<b>Connectors</b>	RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE Terminal block for two supervised and two unsupervised configurable inputs / digital outputs (12 VDC output, max load 50 mA) RS485/RS422, 2 pcs, 2 pos, full duplex, terminal block DC input, 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 50 m (164 ft) or more depending on the scene
<b>Illumination LED</b>	Power-efficient, long-life white LED Range of reach 25 m (82 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) Recording to network-attached storage (NAS) For SD card and NAS recommendations see <a href="https://axis.com">axis.com</a>
<b>Operating conditions</b>	-40 °C to 60 °C (-40 °F to 140 °F) Arctic Temperature Control: Start-up at -40 °C (-40 °F) Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F) Humidity 10–100% RH (condensing) Wind load (sustained): 60 m/s (134 mph)
<b>Storage conditions</b>	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
<b>Dimensions</b>	404 x 159 x 182 mm (16 x 6.3 x 7.2 in) Effective Projected Area (EPA): 0.06 m <sup>2</sup> (0.20 ft <sup>2</sup> )
<b>Weight</b>	4.4 kg (9.7 lb)
<b>Included accessories</b>	AXIS T94Q01A Wall Mount, sunshield, connector kit, resistor <sup>x</sup> <sup>®</sup> T20 tool, installation guide, Windows <sup>®</sup> decoder 1-user license
<b>Optional accessories</b>	AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, see <a href="https://axis.com">axis.com</a>
<b>Optional lenses</b>	Lens CS 4-10 mm F0.9 P-Iris Lens i-CS 9-50 mm F1.5 8 MP Lens CS 12-50 mm F1.4 P-Iris 8 MP
<b>Video management software</b>	AXIS Camera Station and video management software from Axis Application Development Partners available at <a href="https://axis.com/vms">axis.com/vms</a>
<b>Languages</b>	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
<b>Warranty</b>	5-year warranty, see <a href="https://axis.com/warranty">axis.com/warranty</a>

- a. 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 ([eyay@cryptsoft.com](mailto:eyay@cryptsoft.com)).
- b. Available for download