

## 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, HTTP/2, TLS, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, 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® and AXIS Camera Application Platform; specifications at <a href="http://axis.com">axis.com</a> One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® 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>	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, IP address removed, network lost, new IP address, shock detected, storage failure, system ready, within operating temperature, casing open Video: tampering, average bitrate degradation, day-night mode Edge storage: recording ongoing, storage disruption I/O: digital input, manual trigger, virtual input PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready Scheduled and recurring: scheduled event Video: live stream open
<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, Scene metadata, AXIS Live Privacy Shield <sup>®</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) <b>Scenarios:</b> line crossing, object in area, crossline counting, occupancy in area, time 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>Scene metadata</b>	<b>Object classes:</b> humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates <b>Object attributes:</b> vehicle color, upper/lower clothing color, confidence, position
<b>Approvals</b>	
<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 <b>Australia/New Zealand:</b> CISPR 24, CISPR 35, RCM AS/NZS CISPR 32 Class A <b>Canada:</b> ICES-3(A)/NMB-3(A) <b>Japan:</b> VCCI Class A <b>Korea:</b> 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
<b>Cybersecurity</b>	
<b>Edge security</b>	Software: Signed firmware, 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 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), IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS, TLS v1.2/v1.3, 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>
<b>General</b>	
<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 V DC, 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 V DC 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)
<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)
<b>Weight</b>	4.4 kg (9.7 lb)
<b>Included accessories</b>	AXIS T94Q01A Wall Mount, sunshield, connector kit, resistor <sup>a</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. Available for download