

# AXIS Q1656 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 delivers exceptional video quality even in poor light 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 high-performance box camera includes premium Q-line functionality and support for PoE and redundant DC power. Furthermore, built-in cybersecurity features, such as Axis Edge Vault, signed firmware and secure boot, and FIPS-certified TPM, prevent unauthorized access and safeguard your system.

- > [Exceptional images with 1/1.8" sensor](#)
- > [Support for analytics with deep learning](#)
- > [Built-in cybersecurity features](#)
- > [Premium Axis Q-line camera functionality](#)
- > [Remote zoom and focus](#)



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<b>Camera</b>		<b>System integration</b>	
<b>Image sensor</b>	1/1.8" progressive scan RGB CMOS	<b>Application Programming Interface</b>	Open API for software integration, including VAPIX®, metadata, and AXIS Camera Application Platform (ACAP); specifications at <a href="https://axis.com/developer-community">axis.com/developer-community</a> . ACAP includes Native SDK and Computer Vision SDK. One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at <a href="https://onvif.org">onvif.org</a>
<b>Lens</b>	Varifocal, 3.9–10 mm, F1.5 Horizontal field of view: 120°–47° Vertical field of view: 63°–27° Autofocus, i-CS lens, IR corrected, remote zoom and focus, P-Iris control Minimum focus distance: 0.5 m (1.6 ft)	<b>Onscreen controls</b>	Electronic image stabilization Day/night shift Defogging Wide dynamic range Video streaming indicator
<b>Day and night</b>	Automatically removable infrared-cut filter	<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 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>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	<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 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>Shutter speed</b>	1/47500 s to 1 s	<b>Built-in installation aids</b>	Remote zoom and focus, remote back focus, leveling assistant, pixel counter
<b>System on chip (SoC)</b>		<b>Analytics</b>	
<b>Model</b>	ARTPEC-8	<b>AXIS Object Analytics</b>	Object classes: humans, vehicles (types: cars, buses, trucks, bikes) Trigger conditions: line crossing, object in area, time in area <sup>BETA</sup> Up to 10 scenarios Metadata visualized with trajectories and color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
<b>Memory</b>	2048 MB RAM, 8194 MB Flash	<b>Metadata</b>	Object data: Classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates Confidence, position Event data: Producer reference, scenarios, trigger conditions
<b>Compute capabilities</b>	Deep learning processing unit (DLPU)	<b>Applications</b>	<b>Included</b> AXIS Object Analytics AXIS Video Motion Detection <b>Supported</b> Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="https://axis.com/acap">axis.com/acap</a>
<b>Video</b>		<b>Cybersecurity</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>Edge security</b>	<b>Software:</b> Signed firmware, brute force delay protection, digest authentication, password protection, AES-XTS-Plain64 256bit SD card encryption <b>Hardware:</b> Secure boot, Axis Edge Vault with Axis device ID, signed video, secure keystore (CC EAL4+, FIPS 140-2 level 2 certified hardware protection of cryptographic operations and keys)
<b>Resolution</b>	16:9 2688x1512 Quad HD to 160x90 4:3 2016x1512 to 160x120	<b>Network security</b>	IEEE 802.1X (EAP-TLS) <sup>a</sup> , IEEE 802.1AR, HTTPS/HSTS <sup>a</sup> , TLS v1.2/v1.3 <sup>a</sup> , Network Time Security (NTS), X.509 Certificate PKI, IP address filtering
<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>Documentation</b>	AXIS OS Hardening Guide
<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		
<b>Pan/Tilt/Zoom</b>	Digital PTZ, 2.5x optical zoom, 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, built-in microphone (can be disabled), ring power, digital audio input, automatic gain control		
<b>Network</b>			
<b>Security</b>	IP address filtering, HTTPS <sup>a</sup> encryption, IEEE 802.1x (EAP-TLS) <sup>a</sup> network access control, user access log, centralized certificate management		
<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, Syslog		

Axis Vulnerability Management Policy  
 Axis Security Development Model  
 To download documents, go to [axis.com/support/cybersecurity/resources](https://www.axis.com/support/cybersecurity/resources)  
 To read more about Axis cybersecurity support, go to [axis.com/cybersecurity](https://www.axis.com/cybersecurity)

FCC Part 15 Subpart B Class A, ICES-3(B)/NMB-3(B),  
 KS C 9832 Class A, KS C 9815, KS C 9835, KS C 9547,  
 RCM AS/NZS CISPR 32 Class A, VCCI Class A

**Safety**  
 IEC/EN/UL 62368-1

**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

**Network**  
 NIST SP500-267

General	
<b>Casing</b>	Aluminum casing Color: black NCS S 9000-N
<b>Mounting</b>	¼"-20 UNC tripod screw thread
<b>Sustainability</b>	
<b>Power</b>	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 5.1 W, max 8.2 W 10-28 V DC, typical 4.6 W, max 7.7 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) AXIS T92G20 connector, Security lock slot
<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://www.axis.com">axis.com</a>
<b>Operating conditions</b>	-20 °C to 60 °C (-4 °F to 140 °F) Humidity 10-85% RH (non-condensing)
<b>Storage conditions</b>	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)
<b>Approvals</b>	EMC CISPR 24, CISPR 35, EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2,

<b>Dimensions</b>	214 x 80 x 68 mm (8.4 x 3.2 x 2.7 in)
<b>Weight</b>	790 g (1.7 lb)
<b>Included accessories</b>	Installation guide, Windows® decoder 1-user license, stand, drill hole template, connector kit, RESISTORX® L-key
<b>Optional accessories</b>	AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, see <a href="https://www.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://www.axis.com/vms">axis.com/vms</a>
<b>Languages</b>	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese
<b>Warranty</b>	5-year warranty, see <a href="https://www.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), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

Environmental responsibility:

[axis.com/environmental-responsibility](https://www.axis.com/environmental-responsibility)