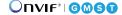# AXIS Q1656-B Box Camera
Indoor barebone model in 4 MP

With 4 MP resolution at up to 60 fps, a 1/1.8" sensor, and Lightfinder 2.0, AXIS Q1656-B 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 applications based on deep learning on the edge. And AXIS Object Analytics provides highly nuanced object classification. With built-in cybersecurity features, it prevents unauthorized access and safeguards your system. This lightweight barebone unit comes without lens for maximum flexibility. It's designed for retrofitting AXIS T92E20 Outdoor Housing, making it easy to add deep-learning capabilities to existing installations.

> **Exceptional images with 1/1.8" sensor**

> **Support for analytics with deep learning**

> **Built-in cybersecurity features**

> **Support for i-CS lens**

> **Ready to customize for specific needs**

AXIS Q1656-B Box Camera

Camera

Image sensor	1/1.8" progressive scan RGB CMOS
Day and night	Automatically removable infrared-cut filter
Minimum illumination	**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 Lens not included
Shutter speed	1/47500 s to 1 s

System on chip (SoC)

Model	ARTPEC-8
Memory	2048 MB RAM, 8194 MB Flash
Compute capabilities	Deep learning processing unit (DLPU)

Video

Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	**16:9** 2688x1512 Quad HD to 160x90 **4:3** 2016x1512 to 160x120
Frame rate	**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
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
Multi-view streaming	Up to 8 individually cropped out view areas
Image settings	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
Pan/Tilt/Zoom	Digital PTZ, preset positions Uploadable PTZ driver (Pelco D pre-installed)

Audio

Audio streaming	Two-way, full duplex Noise reduction
Audio encoding	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
Audio input/output	External microphone input or line input, line output, built-in microphone (can be disabled), ring power, digital audio input, automatic gain control

Network

Network protocols	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, 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)

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, specification at *onvif.org*
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, 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
Event actions	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
Built-in installation aids	Remote back focus, leveling assistant, pixel counter i-CS lens: Remote zoom and focus

Analytics

Applications	**Included** AXIS Object Analytics, Scene metadata, AXIS Live Privacy Shield [a] AXIS Video Motion Detection 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, time in area, crossline counting, occupancy in area Up to 10 scenarios **Other features:** triggered objects visualized with color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
Scene metadata	**Object classes:** humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates **Object attributes:** vehicle color, upper/lower clothing color, confidence, position

Approvals

EMC	EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2 **Australia/New Zealand:** CISPR 24, CISPR 35, RCM AS/NZS CISPR 32 Class A **Canada:** ICES-3(B)/NMB-3(B) **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
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
Cybersecurity	ETSI EN 303 645, FIPS 140

Cybersecurity

Edge security	**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)

Network security	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	**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*
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*	**Operating conditions**	-20 °C to 60 °C (-4 °F to 140 °F) Humidity 10–85% RH (non-condensing)
		Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
		Dimensions	155 x 80 x 58 mm (6.1 x 3.2 x 2.3 in)
		Weight	400 g (0.9 lb)
General		**Included accessories**	Installation guide, Windows® decoder 1-user license, drill hole template, connector kit, RESISTORX® L-key
Casing	Aluminum casing Color: black NCS S 9000-N	**Optional accessories**	AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, see *axis.com*
Mounting	¼"-20 UNC tripod screw thread		
Sustainability	PVC free, BFR/CFR free, 2% recycled plastics, 4% bio-based plastics	**Optional lenses**	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 Lens i-CS 1/1.8" 3.9-10 mm F1.5
Power	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	**Video management software**	AXIS Camera Station and video management software from Axis Application Development Partners available at *axis.com/vms*
Connectors	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	**Languages**	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
		Warranty	5-year warranty, see *axis.com/warranty*

a. *Available for download*

AXIS®
COMMUNICATIONS