

## AXIS Q1656-BLE Box Camera

Outdoor barebone model in 4 MP with IR

With 4 MP resolution at up to 60 fps, a 1/1.8" sensor, and Lightfinder 2.0, AXIS Q1656-BLE 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 outdoor-ready barebone unit comes without lens and mounting for maximum flexibility. Furthermore, it includes power-efficient IR and white LED illumination.

- > **Exceptional images with 1/1.8" sensor**
- > **Support for analytics with deep learning**
- > **Built-in cybersecurity features**
- > **Ready to customize for specific needs**
- > **Built-in wiper for snow and rain**



# AXIS Q1656-BLE Box Camera

<b>Camera</b>		IR illumination	
<b>Image sensor</b>	1/1.8" progressive scan RGB CMOS	Timed wiper	
<b>Day and night</b>	Automatically removable infrared-cut filter	Wiper	
<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 Lens not included 0 lux with IR illumination on	Heater	
<b>Shutter speed</b>	1/47500 s to 1 s	<b>Event conditions</b>	
<b>System on chip (SoC)</b>		Analytics, external input, supervised external input, edge storage events, virtual inputs through API	
<b>Model</b>	ARTPEC-8	Audio: audio detection	
<b>Memory</b>	2048 MB RAM, 8194 MB Flash	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	
<b>Compute capabilities</b>	Deep learning processing unit (DLPU)	Video: tampering, average bitrate degradation, day-night mode	
<b>Video</b>		Edge storage: recording ongoing, storage disruption	
<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	I/O: digital input, manual trigger, virtual input	
<b>Resolution</b>	16:9 2688x1512 Quad HD to 160x90 4:3 2016x1512 to 160x120	PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready	
<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	Scheduled and recurring: scheduled event	
<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	Video: live stream open	
<b>Multi-view streaming</b>	Up to 8 individually cropped out view areas	<b>Event actions</b>	
<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	Overlay text, external output activation, play audio clip, zoom preset	
<b>Pan/Tilt/Zoom</b>	Digital PTZ, preset positions Uploadable PTZ driver (Pelco D pre-installed)	I/O: toggle I/O once, toggle I/O while the rule is active	
<b>Audio</b>		Illumination: use lights, use lights while the rule is active	
<b>Audio streaming</b>	Two-way, full duplex Noise reduction	MQTT: publish	
<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	Notification: HTTP, HTTPS, TCP, and email	
<b>Audio input/output</b>	External microphone input or line input, line output, ring power, digital audio input, automatic gain control	Pre- and post-alarm video or image buffering for recording or upload	
<b>Network</b>		PTZ: PTZ preset, start/stop guard tour	
<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, 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)	Record video: SD card and network share	
<b>System integration</b>		SNMP traps: send, send while the rule is active	
<b>Application Programming Interface</b>	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at <a href="https://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="https://onvif.org">onvif.org</a>	Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email	
<b>Onscreen controls</b>	Electronic image stabilization Day/night shift Defogging Wide dynamic range Video streaming indicator	<b>Built-in installation aids</b>	
		Remote back focus, leveling assistant, pixel counter i-CS lens: Remote zoom and focus	
		<b>Analytics</b>	
		<b>Applications</b>	Included AXIS Object Analytics, AXIS Scene Metadata, AXIS Live Privacy Shield <sup>a</sup> AXIS Video Motion Detection Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="https://axis.com/acap">axis.com/acap</a>
		<b>AXIS Object Analytics</b>	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
		<b>AXIS Scene Metadata</b>	Object classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates Object attributes: 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 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	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>Cybersecurity</b>		
<b>Edge security</b>	<p>Software: 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</p> <p>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)</p>	<p><b>IR illumination</b> OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range of reach 50 m (164 ft) or more depending on the scene</p> <p><b>Illumination LED</b> Power-efficient, long-life white LED Range of reach 25 m (82 ft) or more depending on the scene</p> <p><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="http://axis.com">axis.com</a></p> <p><b>Operating conditions</b> -40 °C to 60 °C (-40 °F to 140 °F) <b>Arctic Temperature Control:</b> 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)</p> <p><b>Storage conditions</b> -40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)</p> <p><b>Dimensions</b> 404 x 159 x 182 mm (16 x 6.3 x 7.2 in)</p> <p><b>Weight</b> 4.1 kg (9.0 lb)</p> <p><b>Included accessories</b> Sunshield, connector kit, resistor<sup>®</sup> T20 tool, installation guide, Windows<sup>®</sup> decoder 1-user license</p> <p><b>Optional accessories</b> AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, see <a href="http://axis.com">axis.com</a></p> <p><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 Lens i-CS 1/1.8" 3.9–10 mm F1.5</p> <p><b>Video management software</b> AXIS Camera Station and video management software from Axis Application Development Partners available at <a href="http://axis.com/vms">axis.com/vms</a></p> <p><b>Languages</b> English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese</p> <p><b>Warranty</b> 5-year warranty, see <a href="http://axis.com/warranty">axis.com/warranty</a></p>
<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>	<p>AXIS OS Hardening Guide</p> <p>Axis Vulnerability Management Policy</p> <p>Axis Security Development Model</p> <p>AXIS OS Software Bill of Material (SBOM)</p> <p>To download documents, go to <a href="http://axis.com/support/cybersecurity/resources">axis.com/support/cybersecurity/resources</a></p> <p>To read more about Axis cybersecurity support, go to <a href="http://axis.com/cybersecurity">axis.com/cybersecurity</a></p>	
<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="http://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 25.2 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)	

a. Available for download