

## AXIS Q1656-BE Box Camera

Outdoor 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-BE 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, but with a variety of lenses, mounting options, and IR illumination kits, you can create a unique camera to meet your needs.

- > [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-BE Box Camera

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|--|---|
| <b>Camera</b>                            |   |
| <b>Image sensor</b>                      | 1/1.8" progressive scan RGB CMOS  |
| <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<br>Color: 0.05 lux at 50 IRE, F1.5<br>B/W: 0.01 lux at 50 IRE, F1.5<br>4 MP 50/60 fps with Lightfinder 2.0<br>Color: 0.1 lux at 50 IRE, F1.5<br>B/W: 0.02 lux at 50 IRE, F1.5<br>Lens not included   |
| <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<br>H.265 (MPEG-H Part 2/HEVC) Main Profile<br>Motion JPEG   |
| <b>Resolution</b>                        | 16:9 2688x1512 Quad HD to 160x90<br>4:3 2016x1512 to 160x120  |
| <b>Frame rate</b>                        | No WDR: Up to 60/50 fps (60/50 Hz) in all resolutions<br>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<br>Axis Zipstream technology in H.264 and H.265<br>Controllable frame rate and bandwidth<br>VBR/ABR/MBR H.264/H.265<br>Low latency mode<br>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, preset positions<br>Uploadable PTZ driver (Pelco D pre-installed)  |
| <b>Audio</b>                             |   |
| <b>Audio streaming</b>                   | Two-way, full duplex<br>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<br>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, 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><br>One-click cloud connection<br>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<br>Day/night shift<br>Defogging<br>Wide dynamic range<br>Video streaming indicator<br>Heater   |
| <b>Event conditions</b>                  | Analytics, external input, supervised external input, edge storage events, virtual inputs through API<br>Audio: audio detection<br>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<br>Video: tampering, average bitrate degradation, day-night mode<br>Edge storage: recording ongoing, storage disruption<br>I/O: digital input, manual trigger, virtual input<br>PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready<br>Scheduled and recurring: scheduled event<br>Video: live stream open |
| <b>Event actions</b>                     | Overlay text, external output activation, play audio clip, zoom preset<br>I/O: toggle I/O once, toggle I/O while the rule is active<br>MQTT: publish<br>Notification: HTTP, HTTPS, TCP, and email<br>Pre- and post-alarm video or image buffering for recording or upload<br>PTZ: PTZ preset, start/stop guard tour<br>Record video: SD card and network share<br>SNMP traps: send, send while the rule is active<br>Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email  |
| <b>Built-in installation aids</b>        | Remote back focus, leveling assistant, pixel counter<br>i-CS lens: Remote zoom and focus  |
| <b>Analytics</b>                         |   |
| <b>AXIS Object Analytics</b>             | Object classes: humans, vehicles (types: cars, buses, trucks, bikes)<br>Scenarios: line crossing, object in area, crossline counting, occupancy in area<br>Up to 10 scenarios<br>Metadata visualized with color-coded bounding boxes<br>Polygon include/exclude areas<br>Perspective configuration<br>ONVIF Motion Alarm event  |
| <b>Applications</b>                      | <b>Included</b><br>AXIS Live Privacy Shield<br>AXIS Object Analytics<br>AXIS Video Motion Detection<br><b>Supported</b><br>Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>   |
| <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<br>Australia/New Zealand: CISPR 24, CISPR 35,<br>RCM AS/NZS CISPR 32 Class A<br>Canada: ICES-3(A)/NMB-3(A)<br>Japan: VCCI Class A<br>Korea: KS C 9832 Class A, KS C 9815, KS C 9835, KS C 9547<br>USA: FCC Part 15 Subpart B Class A<br>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>                     | <b>Software:</b> 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<br><b>Hardware:</b> Axis Edge Vault cybersecurity platform<br>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)   |

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| <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>Storage</b>                   | Support for microSD/microSDHC/microSDXC card<br>Support for SD card encryption (AES-XTS-Plain64 256bit)<br>Recording to network-attached storage (NAS)<br>For SD card and NAS recommendations see <a href="https://www.axis.com">axis.com</a> |
| <b>Documentation</b>    | <i>AXIS OS Hardening Guide</i><br><i>Axis Vulnerability Management Policy</i><br><i>Axis Security Development Model</i><br>AXIS OS Software Bill of Material (SBOM)<br>To download documents, go to <a href="https://www.axis.com/support/cybersecurity/resources">axis.com/support/cybersecurity/resources</a><br>To read more about Axis cybersecurity support, go to <a href="https://www.axis.com/cybersecurity">axis.com/cybersecurity</a>  | <b>Operating conditions</b>      | -40 °C to 60 °C (-40 °F to 140 °F)<br><b>Arctic Temperature Control:</b> Start-up at -40 °C (-40 °F)<br>Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F)<br>Humidity 10–100% RH (condensing)                                |
| <b>General</b>          |  | <b>Storage conditions</b>        | -40 °C to 65 °C (-40 °F to 149 °F)<br>Humidity 5–95% RH (non-condensing)  |
| <b>Casing</b>           | IP66-, IP67-, and NEMA 4X-rated, IK10 impact-resistant aluminum enclosure with integrated dehumidifying membrane<br>IK10 impact-resistant plastic front window<br>weathershield with black anti-glare coating<br>Color: white NCS S 1002-B<br>For repainting instructions, go to the product's support page. For information about the impact on warranty, go to <a href="https://www.axis.com/warranty-implication-when-repainting">axis.com/warranty-implication-when-repainting</a> . | <b>Dimensions</b>                | 404 x 159 x 182 mm (16 x 6.3 x 7.2 in)  |
| <b>Sustainability</b>   | PVC free, BFR/CFR free, 0% recycled plastics, 5% bio-based plastics  | <b>Weight</b>                    | 3.3 kg (7.3 lb)   |
| <b>Power</b>            | Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4<br>Typical 11.8 W, max 12.95 W<br>10–28 V DC, typical 11.2 W, max 25.2 W<br>Power redundancy   | <b>Included accessories</b>      | Sunshield, connector kit, resistor <sup>®</sup> T20 tool, installation guide, Windows <sup>®</sup> decoder 1–user license   |
| <b>Connectors</b>       | RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE<br>Terminal block for two supervised and two unsupervised configurable inputs / digital outputs (12 V DC output, max load 50 mA)<br>RS485/RS422, 2 pcs, 2 pos, full duplex, terminal block<br>DC input, terminal block, 3.5 mm mic/line in, 3.5 mm line out<br>i-CS connector (compatible with P-Iris and DC-iris)   | <b>Optional accessories</b>      | AXIS T8415 Wireless Installation Tool<br>AXIS Surveillance Cards<br>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<br>Lens i-CS 9–50 mm F1.5 8 MP<br>Lens CS 12–50 mm F1.4 P-Iris 8 MP<br>Lens i-CS 1/1.8" 3.9–10 mm F1.5  |
|                         |  | <b>Video management software</b> | AXIS Camera Station and video management software from Axis<br>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, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese  |
|                         |  | <b>Warranty</b>                  | 5-year warranty, see <a href="https://www.axis.com/warranty">axis.com/warranty</a>  |