# AXIS Q9307-LV Dome Camera
## All-in-one audio-visual monitoring device

This all-in-one device combines sharp video, audio, actionable analytics, and LED indicatorss. With four built-in microphones and a built-in speaker, it supports two-way communication. It comes with coughing fit and stressed voice analytics adding an extra audible dimension to active incident management. AXIS Live Privacy Shield lets you remotely monitor activities while safeguarding privacy. And the LED indicators clearly show when the camera is recording or when audio is being used. This vandal-resistant, IK08-rated camera withstands daily wipe-downs with chemical detergents. Plus, with just one device to install, it offers cost-efficient one-drop installation.

> **5 MP video with two-way audio**

> **Preinstalled audio and video analytics**

> **Remote monitoring while safeguarding privacy**

> **Withstands chemical wipe-downs**

> **Cost-efficient all-in-one device**

# AXIS Q9307-LV Dome Camera

## Camera

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|---|---|
| **Image sensor** | 1/2.7" progressive scan RGB CMOS<br>Pixel size 2.0 μm |
| **Lens** | Varifocal, 3–8 mm, F1.3<br>Horizontal field of view: 104°–40°<br>Vertical field of view: 74°–29°<br>Minimum focus distance: 1.0 m (3.3 ft)<br>IR corrected, remote zoom and focus, P-Iris control |
| **Day and night** | Automatic IR-cut filter<br>Hybrid IR filter |
| **Minimum illumination** | **Color:** 0.13 lux at 50 IRE, F1.3<br>**B/W:** 0 lux at 50 IRE, F1.3 |
| **Shutter speed** | 1/33500 s to 1/5 s |
| **Camera angle adjustment** | Pan ±190°, tilt -10 to +80°, rotation ±190° |

## System on chip (SoC)

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| **Model** | ARTPEC-8 |
| **Memory** | 2048 MB RAM, 8192 MB Flash |
| **Compute capabilities** | Deep learning processing unit (DLPU) |

## Video

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| **Video compression** | 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 |
| **Resolution** | **16:9:** 2592x1458 to 160x90<br>**16:10:** 1280x800 to 160x100<br>**4:3:** 2592x1944 to 160x120 |
| **Frame rate** | 25/30 fps with power line frequency 50/60 Hz |
| **Video streaming** | Up to 20 unique and configurable video streams[a]<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 |
| **Signal-to-noise ratio** | >55 dB |
| **WDR** | Forensic WDR: Up to 120 dB depending on scene |
| **Noise reduction** | Spatial filter (2D noise reduction)<br>Temporal filter (3D noise reduction) |
| **Multi-view streaming** | Up to 2 individually cropped out view areas in full frame rate |
| **Image settings** | Saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, tone mapping , exposure mode, exposure zones, defogging, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, text and image overlay, dynamic text and image overlay, polygon and mosaic privacy mask,target aperture, sensor roll |
| **Image processing** | Forensic WDR, Lightfinder 2.0, OptimizedIR |
| **Pan/Tilt/Zoom** | Digital PTZ, preset positions |

## Audio

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| **Audio features** | Spectrum visualizer[b]<br>Voice enhancer<br>Echo cancellation<br>A set of audio clips and chimes is pre-installed on the device |
| **Audio streaming** | Configurable duplex:<br>One-way (simplex, half duplex)<br>Two-way (half duplex, full duplex) |
| **Audio input** | 10-band graphic equalizer<br>Built-in microphone x4 |
| **Audio output** | Built-in 2.3 inches broadband dynamic cone speaker<br>87 dB SPL at 1 m/40 in (average for 250, 500, 1000, 2000, 4000 Hz) |
| **Audio encoding** | AAC-LC 8/16/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz, LPCM, 48 kHz<br>Configurable bitrate |

## Audio management

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| **AXIS Audio Manager Pro** | For larger and more advanced systems. Sold separately. See separate datasheet for specifications. |

## Network

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| **Network protocols** | IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[c], HTTP/2, TLS[c], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf), IEEE 802.1X (EAP-TLS), IEEE 802.1AR |

## System integration

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| **Application Programming Interface** | Open API for software integration, including VAPIX®, metadata and AXIS Camera Application Platform (ACAP); specifications at *axis.com/developer-community*. ACAP includes Native SDK and Computer Vision SDK.<br>One-click cloud connection<br>ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at *onvif.org*<br>Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX. |
| **Video management systems** | Compatible with AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available at *axis.com/vms* |
| **Onscreen controls** | Day-night shift<br>Defog<br>WDR<br>Video streaming indicator<br>IR LED<br>Privacy masks<br>Media clip<br>Siren and light |
| **Event conditions** | A set of conditions is pre-configured for this device<br>Audio: audio detection, audio clip playing<br>Call: state, state change<br>Device status: above/below/within operating temperature, casing open, IP address blocked, IP address removed, live stream active, network lost, new IP address, system ready<br>Edge storage: recording ongoing, storage disruption, storage health issues detected<br>I/O: digital input is active, digital output is active, manual trigger, virtual input is active<br>MQTT: stateless<br>Scheduled and recurring: schedule<br>Video: average bitrate degradation, day-night mode, tampering |
| **Event actions** | A set of actions is pre-configured for this device<br>Audio: Play clip while rule is active<br>Audio clips: play, stop<br>Calls: answer call, end calls, make call<br>Day-night mode<br>Guard tour<br>Defog: set, set while the rule is active<br>I/O: toggle I/O once, toggle I/O while the rule is active<br>Illumination: use lights, use lights while the rule is active<br>Images: Send through FTP, SFTP, HTTP, HTTPS, network share and email<br>Light and siren: Run light profile, run light profile while the rule is active, stop activities<br>MQTT: send MQTT publish message<br>Notification: HTTP, HTTPS, TCP and email<br>Overlay text<br>Recordings: SD card and network share<br>SNMP trap messages: send, send while the rule is active<br>Status LED<br>Video clips: Send through FTP, SFTP, HTTP, HTTPS, network share and email<br>WDR mode |
| **Built-in installation aids** | Remote zoom and focus |

## Analytics

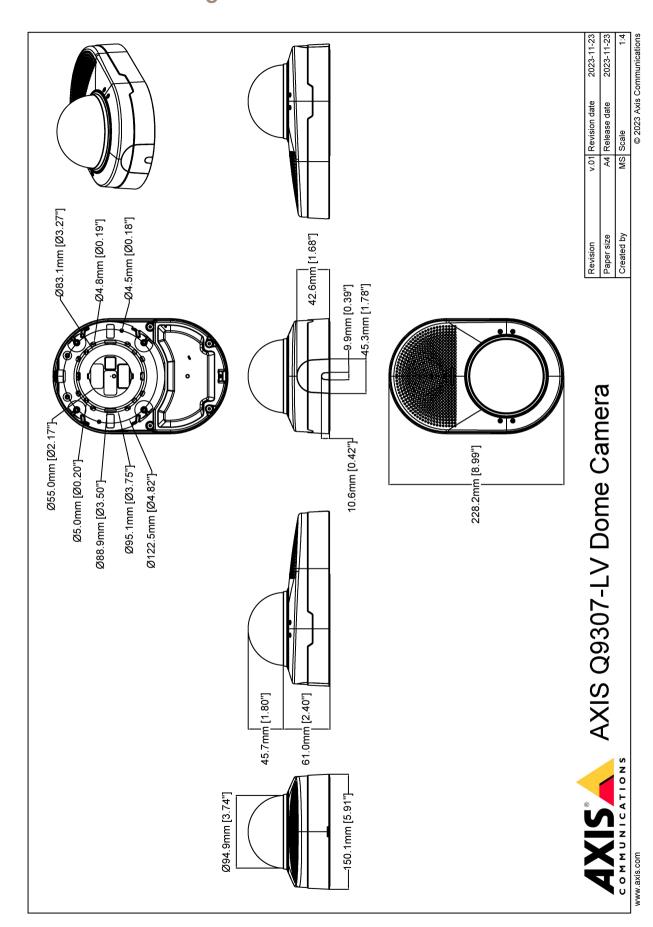| | |
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| **AXIS Object Analytics** | **Object classes:** humans, vehicles (types: cars, buses, trucks, bikes) |

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| | **Scenarios**: line crossing, object in area, time in area, crossline counting, occupancy in area<br>Up to 10 scenarios<br>Metadata visualized with trajectories, color-coded bounding boxes and tables<br>Polygon include/exclude areas<br>Perspective configuration<br>ONVIF Motion Alarm event | | **Mounting** | Mounting bracket with junction box holes (double-gang, single-gang, and 4" octagon) and for wall or ceiling mount |
| | | | **Power** | Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 2 Class 4<br>Typical 10 W, max 25.5 W |
| | | | **Connectors** | Network: RJ45 10BASE-T/100BASE-TX PoE<br>I/O: 4-pin 2.5 mm (0.098 in) terminal block for 1 supervised digital input and 1 digital output (12 V DC output, max. load 25 mA) |
| **Metadata** | **Object data**: Classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates<br>**Attributes**: Vehicle color, upper/lower clothing color, confidence, position<br>**Event data**: Producer reference, scenarios, trigger conditions | | | |
| | | | **IR illumination** | OptimizedIR with power-efficient, long-life 850 nm IR LEDs<br>Range of reach 40 m (130 ft) or more depending on the scene |
| | | | **Storage** | 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 *axis.com* |
| **Applications** | **Included**<br>AXIS Object Analytics, AXIS Video Motion Detection, AXIS Live Privacy Shield, active tampering alarm, audio detection, Coughing fit and stressed voice detection<br>Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap* | | | |
| | | | **Operating conditions** | Temperature: 0 °C to 40 °C (32 °F to 104 °F)<br>Humidity: 10–85% RH (non-condensing) |
| | | | **Storage conditions** | Temperature: -40 °C to 65 °C (-40 °F to 149 °F)<br>Humidity: 5–95% RH (non-condensing) |

## Approvals

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|---|---|---|---|---|
| **Product markings** | CSA, UL/cUL, CE, KC, VCCI, RCM | | **Dimensions** | For the overall product dimensions, see the dimension drawing in this datasheet. |
| **Supply chain** | TAA compliant | | **Weight** | 1250 g (2.8 lb) |
| **EMC** | EN 55035, EN 55032 Class A, EN 50121-4, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2<br>**Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A<br>**Canada:** ICES-3(A)/NMB-3(A)<br>**Japan:** VCCI Class A<br>**Korea:** KC KN35, KC KN32 Class A<br>**USA:** FCC Part 15 Subpart B Class A | | **Box content** | Camera, installation guide, TORX® TR20 bits, terminal block connector, connector guard, cable gaskets, owner authentication key |
| | | | **Optional accessories** | AXIS T91E61 Wall Mount, AXIS T91B47 Pole Mount, AXIS T94K01D Pendant Kit<br>AXIS T8415 Wireless Installation Tool<br>AXIS Surveillance Cards<br>For more accessories, go to *axis.com/products/axis-q9307-lv#accessories* |
| **Safety** | CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3, IEC/EN 62471 risk group exempt | | | |
| **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, IEC/EN 60529 IP44, IEC/EN 62262 IK08 | | **System tools** | AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator<br>Available at *axis.com* |
| **Network** | NIST SP500-267 | | **Languages** | English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese |

## Cybersecurity

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| **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<br>**Hardware:** Axis Edge Vault cybersecurity platform<br>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) | | **Warranty** | 5-year warranty, see *axis.com/warranty* |
| | | | **Part numbers** | Available at *axis.com/products/axis-q9307-lv#part-numbers* |

### Sustainability

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| **Substance control** | PVC free<br>RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018<br>REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see *echa.europa.eu* |
| **Network security** | IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)[c], IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS[c], TLS v1.2/v1.3[c], Network Time Security (NTS), X.509 Certificate PKI, host-based firewall |

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|---|---|---|---|---|
| **Network security** | IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)[c],<br>IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,<br>HTTPS/HSTS[c], TLS v1.2/v1.3[c], Network Time Security (NTS), X.509 Certificate PKI, host-based firewall | | **Materials** | Renewable carbon-based plastic content: 31%<br>Screened for conflict minerals in accordance with OECD guidelines<br>To read more about sustainability at Axis, go to *axis.com/about-axis/sustainability* |
| **Documentation** | *AXIS OS Hardening Guide*<br>*Axis Vulnerability Management Policy*<br>*Axis Security Development Model*<br>AXIS OS Software Bill of Material (SBOM)<br>To download documents, go to *axis.com/support/cybersecurity/resources*<br>To read more about Axis cybersecurity support, go to *axis.com/cybersecurity* | | **Environmental responsibility** | *axis.com/environmental-responsibility*<br>Axis Communications is a signatory of the UN Global Compact, read more at *unglobalcompact.org* |

## General

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| **Casing** | IP44- and IK08-rated<br>Polycarbonate hard-coated dome<br>Aluminum and plastic casing<br>Color: white NCS S 1002-B<br>Withstands chemical wipe-downs. Read more in the user manual. |
| **LED indicators** | LED indicator<br>Audio LED |

a. *We recommend a maximum of 3 unique video streams per camera or channel, for optimized user experience, network bandwidth, and storage utilization. A unique video stream can be served to many video clients in the network using multicast or unicast transport method via built-in stream reuse functionality.*
b. *Feature available with ACAP*
c. *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).*

# Dimension drawing

Ø83.1mm [Ø3.27"]
Ø4.8mm [Ø0.19"]
Ø4.5mm [Ø0.18"]

Ø55.0mm [Ø2.17"]
Ø5.0mm [Ø0.20"]
Ø88.9mm [Ø3.50"]
Ø95.1mm [Ø3.75"]
Ø122.5mm [Ø4.82"]

42.6mm [1.68"]
9.9mm [0.39"]
45.3mm [1.78"]
10.6mm [0.42"]

228.2mm [8.99"]

45.7mm [1.80"]
61.0mm [2.40"]

Ø94.9mm [3.74"]
150.1mm [5.91"]

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|---|---|---|
| Revision | v.01 | Revision date | 2023-11-23 |
| Paper size | A4 | Release date | 2023-11-23 |
| Created by | MS | Scale | 1:4 |

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# Key features and technologies

### AXIS Live Privacy Shield

Remotely monitor activities both indoors and outdoors while safeguarding privacy in real-time.

With AI-based dynamic masking you can choose what to mask or blur while addressing rules and regulations protecting privacy and personal data. The application enables masking of moving and still objects such as humans, license plates, or backgrounds. The application works in real-time and on both live and recorded video streams.

### AXIS Object Analytics

AXIS Object Analytics is a preinstalled, multifeatured video analytics that detects and classifies humans, vehicles, and types of vehicles. Thanks to AI-based algorithms and behavioral conditions, it analyzes the scene and their spatial behavior within – all tailored to your specific needs. Scalable and edge-based, it requires minimum effort to set up and supports various scenarios running simultaneously.

### Chemical resistant casing

In some environments where hygiene requirements are rigorous, cleaning the exterior of the surveillance camera could be required daily or even several times a day. The recommended cleaning procedure involves chemical wipedowns using a soft cloth with specific chemical solutions such as cleansers or disinfectants. The chemical resistance of the casing has been verified through two types of in-house testing: environmental stress crack resistance testing and cleaning simulations.

### Coughing fit and stressed voice detection

Coughing fit and stressed voice detection are two audio analytic applications that detect incidents by listening to the surrounding audio 24/7. The audio analytics consists of two separate detection algorithms, and you can choose to use one of them, or both. The cough detector detects single coughs or coughing fits. The stressed voice detector identifies sound patterns associated with duress, anger, or fear.

### Echo cancellation

Devices with echo cancellation can recognize sounds that the built-in loudspeaker produces as echoes and remove them.

### LED indicators

LED indicators are used to signal different functionalities to the close environment. The LEDs help to improve safety, security, and operational efficiency and at the same time safeguards privacy. A LED indicator can for instance help protect privacy by letting you know when the camera is recording or when audio is being used. The LEDs can be used separately or together and can be switched off for more discrete monitoring.

For more information, see *axis.com/glossary*

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