AXIS Q3628-VE Dome Camera
Advanced 8 MP dome with remote adjustment

With remote pan-tilt-roll-zoom functionality, this top-of-the-line camera lets you easily adjust and readjust the camera view over the network. Thanks to Lightfinder 2.0 and Forensic WDR, it delivers outstanding image quality and great detail even in challenging light or near darkness. Built on the latest Axis system-on-chip, it supports advanced analytics based on deep learning on the edge. For instance, AXIS Object Analytics lets you detect and classify moving objects. This robust, IK10-rated camera comes enclosed in a metal casing. Furthermore, Axis Edge Vault safeguards your device and offers secure key storage with FIPS 140-2 level 2 certification.

> **Outstanding image quality in 8 MP**
> **Remote adjustment of the camera angle**
> **Analytics with deep learning**
> **Electronic image stabilization**
> **Axis Edge Vault safeguards device**

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Camera

Image sensor	1/1.2" progressive scan RGB CMOS Pixel size 2.9 µm
Lens	Varifocal, 6.2–12.9 mm, F1.6–2.9 Horizontal field of view: 103°–48° Vertical field of view: 56°–27° Minimum focus distance: 1.5 m (4.8 ft) IR corrected, remote zoom and focus, P-Iris control
Day and night	Automatic IR-cut filter
Minimum illumination	**Color:** 0.07 lux at 50 IRE, F1.6 **B/W:** 0.01 lux at 50 IRE, F1.6
Shutter speed	1/66500 s to 2 s with 60 Hz
Camera angle adjustment	Pan ±190°, tilt -8 to +75°, roll ±97°

System on chip (SoC)

Model	ARTPEC-8
Memory	2048 MB RAM, 8192 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:** 3840x2160 to 160x90 **16:10:** 1280x800 to 160x100 **4:3:** 2880x2160 to 160x120
Frame rate	**With Forensic WDR:** Up to 25/30 fps (50/60 Hz) in all resolutions **No WDR:** Up to 50/60 fps (50/60 Hz) in all resolutions
Video streaming	Up to 20 unique and configurable video streams[a] 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
Signal-to-noise ratio	>55 dB
WDR	Forensic WDR: Up to 120 dB depending on scene
Multi-view streaming	Up to 8 individually cropped out view areas
Noise reduction	Spatial filter (2D noise reduction) Temporal filter (3D noise reduction)
Image settings	Saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, 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, target aperture
Image processing	Axis Zipstream, Forensic WDR, Lightfinder 2.0
Pan/Tilt/Zoom	Digital PTZ with preset positions PTRZ preset positions

Audio

Audio features	AGC automatic gain control Network speaker pairing
Audio streaming	Configurable duplex: Two-way (half duplex, full duplex)
Audio input	10-band graphic equalizer Input for external unbalanced microphone, optional 5 V microphone power Digital input, optional 12 V ring power Unbalanced line input
Audio output	Output via network speaker pairing
Audio encoding	24bit LPCM 48 kHz, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bit rate

Network

Network protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[b], HTTP/2, TLS[b], 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

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. One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at *onvif.org* 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	Autofocus Electronic image stabilization Day/night shift Defogging Heater Media clip Privacy mask Video streaming indicator Wide dynamic range
Event conditions	Application Audio: audio detection Call: state, state change Device status: above/below/within operating temperature, IP address removed, new IP address, shock detected, network lost, system ready, ring power overcurrent protection, live stream active, casing open Digital audio input status Edge storage: recording ongoing, storage disruption, storage health issues detected I/O: digital input, manual trigger, virtual input MQTT: subscribe Scheduled and recurring: schedule Video: average bitrate degradation, tampering
Event actions	Audio clips: play, stop Calls: answer call, end SIP call, make SIP call Day-night mode Defog mode I/O: toggle I/O once, toggle I/O while the rule is active MQTT: publish Notification: HTTP, HTTPS, TCP and email Overlay text Pre- and post-alarm video or image buffering for recording or upload Recordings: SD card and network share SNMP traps: send, send while the rule is active Status LED: flash Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email WDR mode
Built-in installation aids	Pan-tilt-roll: designed to withstand at least 500 full movement cycles, autoroll, pixel counter, remote zoom and focus, level grid

Analytics

Applications	**Included** AXIS Object Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, active tampering alarm, audio detection AXIS Live Privacy Shield **Supported** AXIS Perimeter Defender, AXIS License Plate Verifier 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, crossline counting, occupancy in area, time in area Up to 10 scenarios **Other features:** triggered objects visualized with trajectories, color-coded bounding boxes and tables Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event		

AXIS 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

Product markings	CSA, UL/cUL, UKCA, CE, KC, VCCI, RCM
Supply chain	TAA compliant
EMC	CISPR 35, CISPR 32 Class A, EN 55035, EN 55032 Class A, EN 50121-4, EN 61000-6-1, EN 61000-6-2 **Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A **Canada:** ICES-3(A)/NMB-3(A) **Japan:** VCCI Class A **Korea:** KS C 9835, KS C 9832 Class A **USA:** FCC Part 15 Subpart B Class A **Railway:** IEC 62236-4
Safety	CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3, IS 13252
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 IP66, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9), ISO 21207 (Method B), ISO 20653 IP6K9K
Network	NIST SP500-267
Cybersecurity	ETSI EN 303 645, FIPS 140

Cybersecurity

Edge security	**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 **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)[b], IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS[b], TLS v1.2/v1.3[b], Network Time Security (NTS), X.509 Certificate PKI, host-based firewall
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*

General

Casing	IP66-, NEMA 4X- and IK10-rated Polycarbonate hard-coated dome Aluminum casing, weathershield (PA+GF) 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 *axis.com/warranty-implication-when-repainting.*
Mounting	Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon)

	¾" (M25) conduit side entries
Power	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 Typical 8 W, max 25 W 10–28 V DC, typical 7 W, max 25 W
Connectors	Network: Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE I/O: 4-pin 2.5 mm terminal block for two configurable supervised inputs / digital outputs (12 V DC output, max load 50 mA) Audio: 3.5 mm mic/line in Power: DC input, terminal block
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*
Operating conditions	-50 °C to 55 °C (-58 °F to 131 °F) Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F) Start-up temperature: -40 °C (-40 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Dimensions	Height: 141 mm (5.6 in) ø 184 mm (7.2 in) Effective Projected Area (EPA): 0.0399 m^2 (0,4294 ft^2)
Weight	2100 g (4.6 lb)
Box content	Camera, weathershield, installation guide, conduit adapter, RESISTORX® TR20 screw bit, terminal block connectors, connector guard, cable gasket, owner authentication key
Optional accessories	AXIS TQ3103-E Pendant Kit, AXIS TQ3202-E Recessed Mount AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards
System tools	AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator Available at *axis.com*
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*
Part numbers	Available at *axis.com/products/axis-q3628-ve#part-numbers*

Sustainability

Substance control	PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard JS709 RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018 REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see *axis.com/partner.*
Materials	Renewable carbon-based plastic content: 62% (bio-based) Screened for conflict minerals in accordance with OECD guidelines To read more about sustainability at Axis, go to *axis.com/about-axis/sustainability*
Environmental responsibility	*axis.com/environmental-responsibility* Axis Communications is a signatory of the UN Global Compact, read more at *unglobalcompact.org*

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. *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

85.7mm [3.37"]
62.8mm [2.47"]
46.0mm [1.81"]
Ø4.7mm [Ø0.19"]
Ø6.5mm [Ø0.26"]
Ø55.0mm [Ø2.17"]
83.3mm [3.28"]
150.3mm [5.92"]
Ø4.7mm [Ø0.19"]
37.5mm [1.48"]
83.3mm [3.28"]

204.5mm [8.05"]
43.2mm [1.70"]
48.1mm [1.90"]
239.2mm [9.42"]

Ø183.5mm [Ø7.22"]

141.5mm [5.57"]
78.5mm [3.09"]

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Revision	v.02	Revision date	2023-04-06
Paper size	A4	Release date	2023-04-03
Created by	MS	Scale	1:5

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Highlighted capabilities

Pan-tilt-roll-zoom (PTRZ)

PTRZ functionality includes the ability of a camera to rotate around its vertical, lateral, and longitudinal axes. The camera's focal length is adjustable to achieve a narrower or wider field of view. Thanks to the remote functionality, you can quickly adjust and readjust the camera view remotely over the network, saving time and effort. PTRZ functionality also gives you the flexibility to make future adjustments easily, ensuring less disruption, less downtime, and that no dispatched technician is needed.

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.

Axis Edge Vault

Axis Edge Vault is the hardware-based cybersecurity platform that safeguards the Axis device. It forms the foundation that all secure operations depend on and offer features to protect the device's identity, safeguard its integrity and protect sensitive information from unauthorized access. For instance, **secure boot** ensures that a device can boot only with **signed OS**, which prevents physical supply chain tampering. With signed OS, the device is also able to validate new device software before accepting to install it. And the **secure keystore** is the critical building-block for protecting cryptographic information used for secure communication (IEEE 802.1X, HTTPS, Axis device ID, access control keys etc.) against malicious extraction in the event of a security breach. The secure keystore and secure connections are provided through a Common Criteria or FIPS 140 certified hardware-based cryptographic computing module.

Furthermore, signed video ensures that video evidence can be verified as untampered. Each camera uses its unique video signing key, which is securely stored in the secure keystore, to add a signature into the video stream allowing video to be traced back to the Axis camera from where it originated.

To read more about Axis Edge Vault, go to *axis.com/solutions/edge-vault*.

Electronic image stabilization

Electronic image stabilization (EIS) provides smooth video in situations where a camera is subject to vibrations. Built-in gyroscopic sensors continuously detect the camera's movements and vibrations, and they automatically adjust the frame to ensure you always capture the details you need. Electronic image stabilization relies on different algorithms for modeling camera motion, which are used to correct the images.

Forensic WDR

Axis cameras with wide dynamic range (WDR) technology make the difference between seeing important forensic details clearly and seeing nothing but a blur in challenging light conditions. The difference between the darkest and the brightest spots can spell trouble for image usability and clarity. Forensic WDR effectively reduces visible noise and artifacts to deliver video tuned for maximal forensic usability.

Lightfinder

The Axis Lightfinder technology delivers high-resolution, full-color video with a minimum of motion blur even in near darkness. Because it strips away noise, Lightfinder makes dark areas in a scene visible and captures details in very low light. Cameras with Lightfinder discern color in low light better than the human eye. In surveillance, color may be the critical factor to identify a person, an object, or a vehicle.

Zipstream

The Axis Zipstream technology preserves all the important forensic in the video stream while lowering bandwidth and storage requirements by an average of 50%. Zipstream also includes three intelligent algorithms, which ensure that relevant forensic information is identified, recorded, and sent in full resolution and frame rate.

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

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