AXIS P4708-PLVE Panoramic Camera

2x 4K dual-sensor camera at 30 fps and deep learning

This dual-sensor camera offers 2x8MP at 30 fps. Lightfinder and Forensic WDR ensure sharp, clear images in challenging or poor light conditions. This high-performance AI-based camera enables improved processing and storage capabilities so you can collect and analyze even more data than before—on the edge. Plus, it delivers valuable metadata facilitating fast, easy, and efficient forensic search capabilities in live or recorded video. It offers flexible positioning of both varifocal camera heads and remote zoom and focus capabilities ensure cost-effective installation. Furthermore, Axis Edge Vault safeguards the device and protects sensitive information from unauthorized access.

- > 2x 4K, multidirectional camera, with one IP address
- > Support for AI analytics
- > 360° IR illumination with 2.5x zoom
- > Axis Lightfinder and Forensic WDR
- > Axis Edge Vault safeguards the device

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Camera

Image sensor	2 x 1/2.8" progressive scan RGB CMOS Pixel size 1.45 µm
Lens	Varifocal, 3.2–8.1 mm, F1.9–3.2 Horizontal field of view: 108°–40° Vertical field of view: 55°–23° Diagonal field of view: 131°–46° Minimum focus distance: 0.5 m (1.6 ft) Fixed iris, IR corrected, remote zoom and focus
Day and night	Automatic IR-cut filter
Minimum illumination	**Color:** 0.19 lux at 50 IRE, F1.9 **B/W:** 0 lux at 50 IRE, F1.9 0 lux with IR illumination on
Shutter speed	1/16000 s to 2 s with 50/60 Hz
Camera angle adjustment	Pan ±110°, tilt ±75°, rotation ±170°

System on chip (SoC)

Model	ARTPEC-8
Memory	4096 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:** 2x 3840x2160 (2x 8MP) to 2x 640x360
Frame rate	Up to 25/30 fps (50/60 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
Signal-to-noise ratio	>55 dB
WDR	Forensic WDR: Up to 120 dB depending on scene
Noise reduction	Spatial filter (2D noise reduction) Temporal filter (3D noise reduction)
Image settings	Saturation, contrast, brightness, sharpness, Forensic WDR, white balance, day/night threshold, tone mapping, exposure mode, exposure zones, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, dynamic text and image overlay, polygon privacy mask
Image processing	Axis Zipstream, Forensic WDR, Lightfinder, OptimizedIR

Audio

Audio features	Automatic gain control Speaker pairing Spectrum visualizer[a] Voice enhancer 10-band graphic equalizer for audio input
Audio streaming	Audio in, simplex Two-way audio via edge-to-edge technology
Audio input	Input for external unbalanced microphone, optional 5 V microphone power Digital input, optional 12 V ring power Unbalanced line input
Audio output	Output through speaker pairing or portcast technology
Audio encoding	24bit LPCM, 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® and AXIS Camera Application Platform; 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, specification at *onvif.org*
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 Video streaming indicator IR illumination Privacy masks Media clip
Edge-to-edge	Speaker pairing
Event conditions	Device status: above/below/within operating temperature, IP address removed, new IP address, 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: manual trigger, virtual input MQTT: subscribe Scheduled and recurring: schedule Video: average bitrate degradation, day-night mode, tampering
Event actions	Day-night mode Overlay text Illumination: use lights, use lights while the rule is active LEDs: flash status LED, flash status LED while the rule is active MQTT: publish Notification: HTTP, HTTPS, TCP and email Record video: SD card and network share Security: erase configuration 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	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 **Supported** 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) **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
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, EAC, 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, IEC/EN 62471, 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/IP67, IEC/EN 62262:2002 IK10, MIL-STD-810H (Method 501.7, 502.7, 506.6, 507.6, 509.7, 512.6), NEMA 250 Type 4X
Network	IPv6 USGv6, 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-, IP67-, NEMA 4X- and IK10-rated Polycarbonate hard-coated dome Aluminum and plastic casing, weathershield Color: white NCS S 1002-B or black NCS S 9000-N 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) ¼"-20 UNC tripod screw thread ½" (M20) conduit side entry
Power	Power over Ethernet (PoE) IEEE802.3at Type 2 Class 4 Typical 10.2 W, max 18.8 W IR illumination on: typical 13.3 W, max 18.8 W IR illumination off: typical 7.3 W, max 13.5 W
Connectors	Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE Audio: 3.5 mm mic/line in Audio: Audio and I/O connectivity via portcast technology
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LEDs Range of reach 15 m (50 ft) or more depending on the scene
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	-30 °C to 50 °C (-22 °F to 122 °F) Start-up temperature: -30 °C Humidity 10–100% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5–95% RH (non-condensing)
Dimensions	For the overall product dimensions, see the dimension drawing in this datasheet. Effective Projected Area (EPA): 0.015 m^2 (0.158 ft^2)
Weight	975 g (2.1 lb)
Included accessories	Camera, installation guide, Windows® decoder 1-user license, connector kit, weathershield, connector guard, cable gaskets
Optional accessories	Black casing, smoked dome, conduit adapters, AXIS T94N02 Pendant Kit AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, see *axis.com/products/axis-p4708-plve#accessories*
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-p4708-plve#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 *echa.europa.eu*
Materials	Renewable carbon-based plastic content: 9% (recycled: 7%, bio-based: 2%) 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*

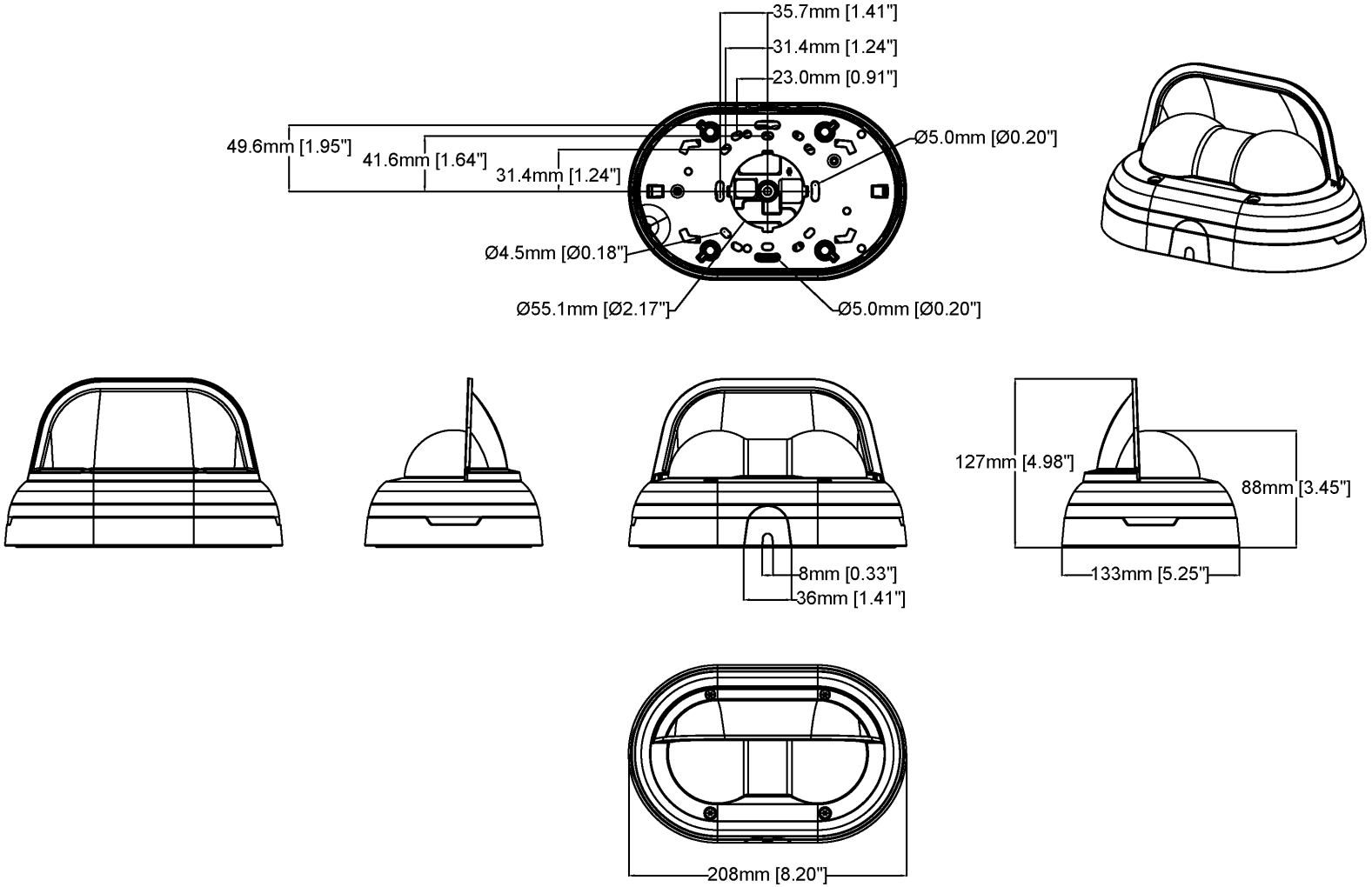
a. *Feature available with ACAP*
b. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*

Detect, Observe, Recognize, Identify (DORI)

	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	87.8 m (288.0 ft)	220.1 m (721.9 ft)
Observe	63 px/m (19 px/ft)	34.8 m (114.1 ft)	87.3 m (286.3 ft)
Recognize	125 px/m (38 px/ft)	17.6 m (57.7 ft)	44.0 m (144.3 ft)
Identify	250 px/m (76 px/ft)	8.8 m (28.9 ft)	22.0 m (72.2 ft)

The DORI values are calculated using pixel densities for different use cases as recommended by the EN-62676-4 standard. The calculations use the center of the image as the reference point and consider lens distortion. The possibility to recognize or identify a person or object depends on factors such as object motion, video compression, lighting conditions, and camera focus. Use margins when planning. The pixel density varies across the image, and the calculated values can differ from the distances in the real world.

Dimension drawing



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Revision	v.01	Revision date	2024-03-14
Paper size	A4	Release date	2024-03-14
Created by	MS	Scale	1:4

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Highlighted capabilities

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*.

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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