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





AXIS P4708-PLVE Panoramic Camera

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 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, 8 polygon privacy masks per channel

Image processing
Axis Zipstream, Forensic WDR, Lightfinder, OptimizedIR

Audio

Features
Automatic gain control
Speaker pairing
Spectrum visualizer[1]
Voice enhancer
10-band graphic equalizer for audio input

Streaming
Audio in, simplex
Two-way audio via edge-to-edge technology

1. *Feature available with ACAP*

Input
Input for external unbalanced microphone, optional 5 V microphone power
Digital input, optional 12 V ring power
Unbalanced line input

Output
Output through speaker pairing or portcast technology

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[2], HTTP/2, TLS[2], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, PTP, 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*.
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 Camera Station Edge, AXIS Camera Station Pro, and video management software from Axis' partners available at *axis.com/vms*.

Onscreen controls
Autofocus
Video streaming indicator
IR illumination
Privacy masks
Media clip

Edge-to-edge
Speaker pairing
Siren and light 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, with up to 5 scenarios per channel
Other features: Triggered objects visualized with trajectories, color-coded bounding boxes and tables
Polygon include/exclude areas
Perspective configuration
ONVIF Motion Alarm event

2. *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).*

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, BSI IT Security Label, FIPS 140

Cybersecurity

Edge security
Software: Signed OS, brute force delay protection, digest authentication and OAuth 2.0 RFC6749 Client Credential Flow/OpenID Authorization Code Flow for centralized ADFS account management, password protection, Axis Cryptographic Module (FIPS 140-2 level 1), 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)[3],
IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,
HTTPS/HSTS[3], TLS v1.2/v1.3[3], 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
IR illumination on: typical 13.3 W, max 18.8 W
IR illumination off: typical 7.3 W, max 13.5 W

3. *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).*

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 (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*

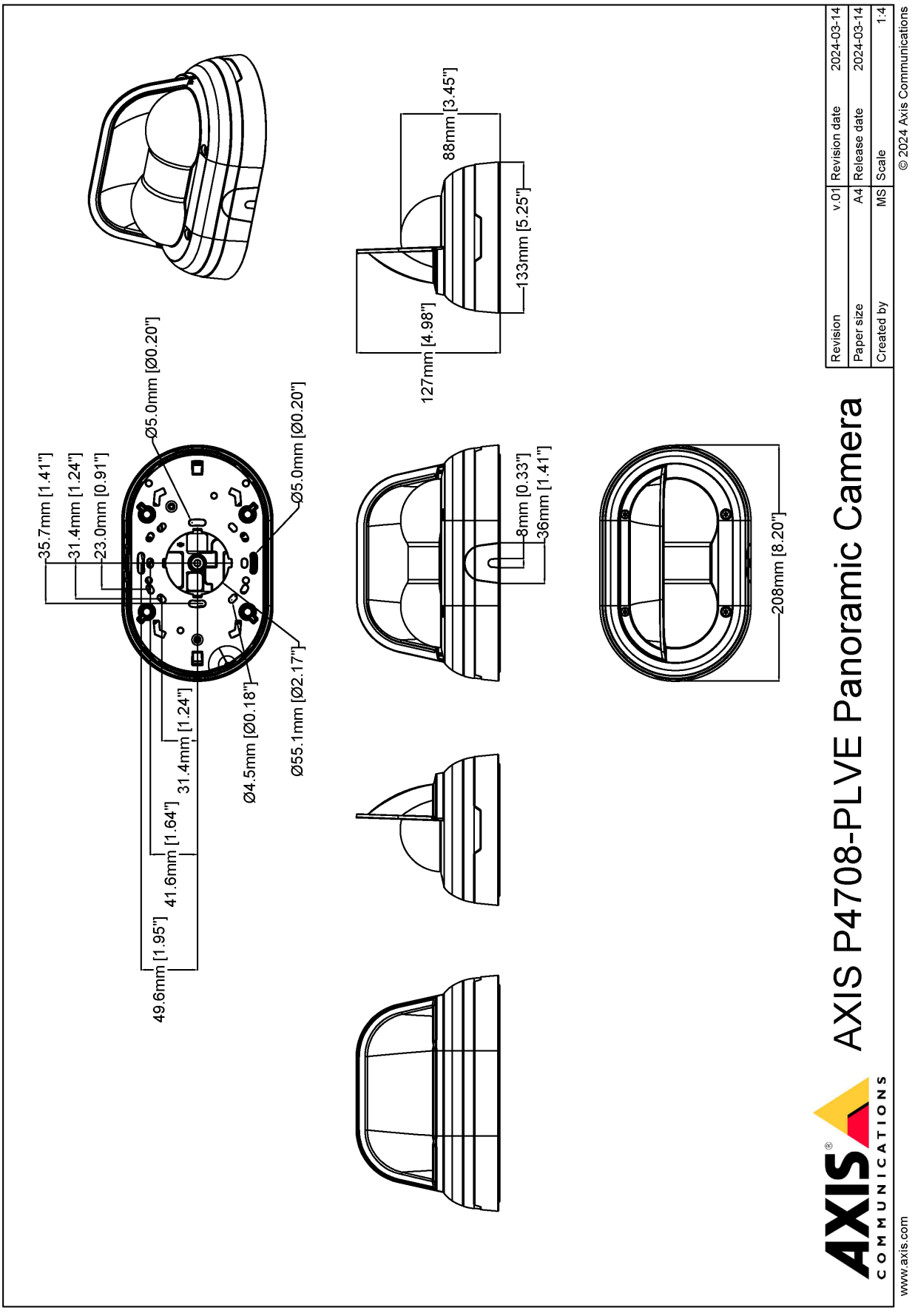
Environmental responsibility
axis.com/environmental-responsibility
Axis Communications is a signatory of the UN Global Compact, read more at *unglobalcompact.org*

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



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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