

## 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  $\pm 110^\circ$ , tilt  $\pm 75^\circ$ , rotation  $\pm 170^\circ$

## 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

### Audio features

Automatic gain control  
Speaker pairing  
Spectrum visualizer<sup>1</sup>  
Voice enhancer  
10-band graphic equalizer for audio input

### Audio streaming

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

1. Feature available with ACAP

## Audio input

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

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## Audio output

Output through speaker pairing or portcast technology

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## 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

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## Network

### Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>2</sup>, HTTP/2, TLS<sup>2</sup>, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP<sup>®</sup>, 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

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## System integration

### Application Programming Interface

Open API for software integration, including VAPIX<sup>®</sup> and AXIS Camera Application Platform; specifications at [axis.com/developer-community](https://axis.com/developer-community).

One-click cloud connection

ONVIF<sup>®</sup> Profile G, ONVIF<sup>®</sup> Profile M, ONVIF<sup>®</sup> Profile S, and ONVIF<sup>®</sup> Profile T, specification at [onvif.org](https://onvif.org)

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### Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at [axis.com/vms](https://axis.com/vms).

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### Onscreen controls

Autofocus  
Video streaming indicator  
IR illumination  
Privacy masks  
Media clip

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### Edge-to-edge

Speaker pairing  
Siren and light pairing

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## 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

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## 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

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## Built-in installation aids

Pixel counter, remote zoom and focus, level grid

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## 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](https://axis.com/acap)

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### 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

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2. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([openssl.org](https://openssl.org)), and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@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)<sup>3</sup>, IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS<sup>3</sup>, TLS v1.2/v1.3<sup>3</sup>, 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](https://axis.com/support/cybersecurity/resources)

To read more about Axis cybersecurity support, go to [axis.com/cybersecurity](https://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](https://axis.com/warranty-implication-when-repainting).

### Mounting

Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon)

1/4"-20 UNC tripod screw thread

1/2" (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](https://openssl.org)), and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@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

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## IR illumination

Optimized IR with power-efficient, long-life 850 nm IR LEDs  
Range of reach 15 m (50 ft) or more depending on the scene

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## 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](http://axis.com)

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## Operating conditions

-30 °C to 50 °C (-22 °F to 122 °F)  
Start-up temperature: -30 °C  
Humidity 10–100% RH (non-condensing)

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## Storage conditions

-40 °C to 65 °C (-40 °F to 149 °F)  
Humidity 5–95% RH (non-condensing)

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## Dimensions

For the overall product dimensions, see the dimension drawing in this datasheet.  
Effective Projected Area (EPA): 0.015 m<sup>2</sup> (0.158 ft<sup>2</sup>)

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## Weight

975 g (2.1 lb)

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## Included accessories

Camera, installation guide, Windows<sup>®</sup> decoder 1-user license, connector kit, weathershield, connector guard, cable gaskets

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## 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](http://axis.com/products/axis-p4708-plve#accessories)

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## System tools

AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator  
Available at [axis.com](http://axis.com)

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## Languages

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese

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## Warranty

5-year warranty, see [axis.com/warranty](http://axis.com/warranty)

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## Part numbers

Available at [axis.com/products/axis-p4708-plve#part-numbers](http://axis.com/products/axis-p4708-plve#part-numbers)

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## 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](http://echa.europa.eu)

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### 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](http://axis.com/about-axis/sustainability)

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### Environmental responsibility

[axis.com/environmental-responsibility](http://axis.com/environmental-responsibility)  
Axis Communications is a signatory of the UN Global Compact, read more at [unglobalcompact.org](http://unglobalcompact.org)

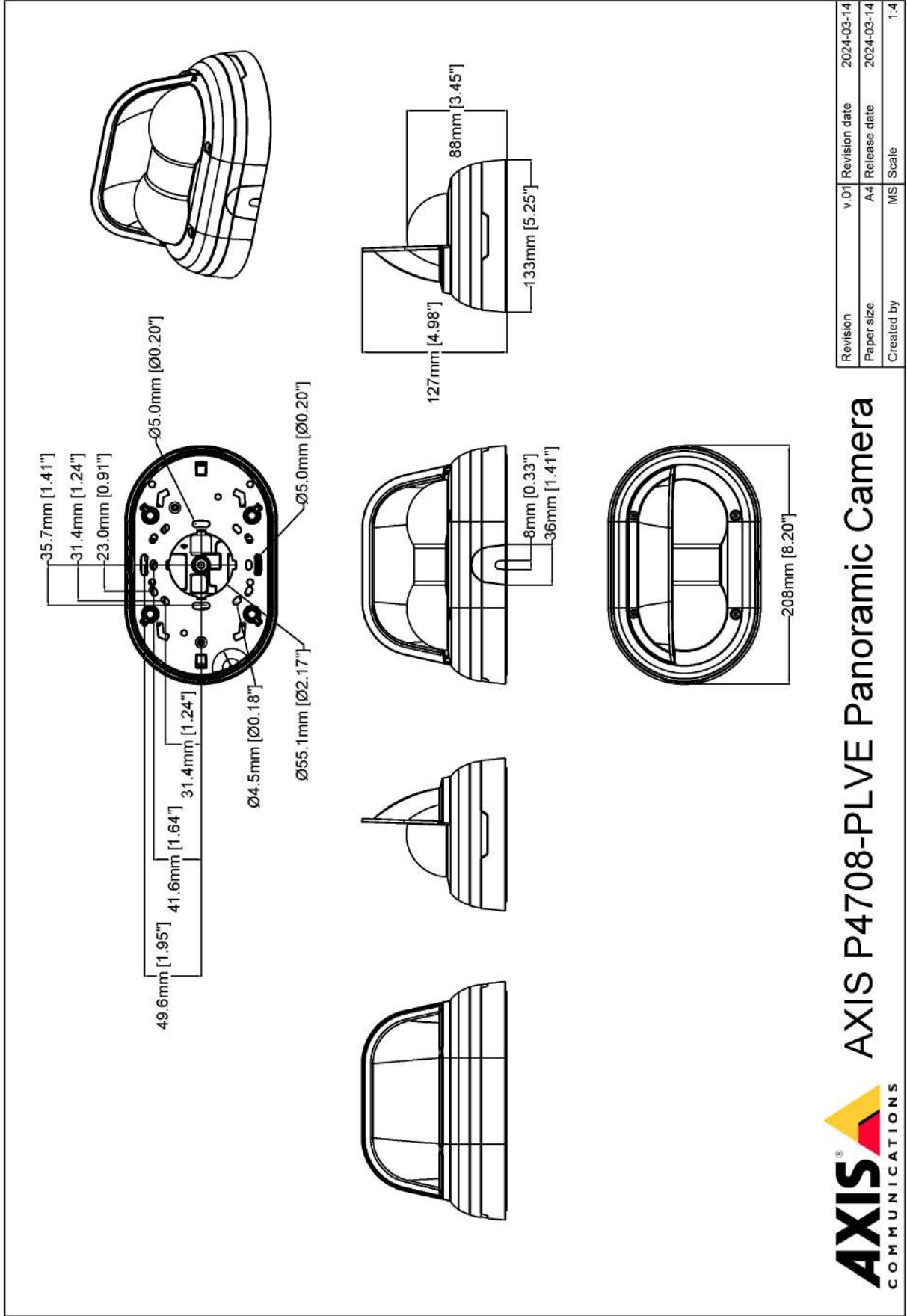
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## Detect, Observe, Recognize, Identify (DORI)

|           | 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



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

**AXIS** COMMUNICATIONS

AXIS P4708-PLVE Panoramic Camera

## 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](https://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](https://axis.com/glossary)