

# AXIS M4308-PLE Panoramic Camera

## 12 MP outdoor-ready dome with audio capture

AXIS M4308-PLE is a discreet, outdoor-ready mini dome designed to blend seamlessly into any environment. With a 12 MP sensor and stereographic lens, it offers outstanding images and complete 360° panoramic overview. Thanks to Sharpdome 360, this panoramic camera delivers greater sharpness at the edges of the image. AXIS Object Analytics is included and a deep learning processing unit (DLPU) enables unique opportunities to take advantage of analytics based on deep learning on the edge. It includes Axis Lightfinder and Axis Forensic WDR for true colors and great details in challenging light or near darkness. Plus, Axis OptimizedIR for surveillance in pitch darkness. Four built-in microphones and voice enhancer offers audio capture with great noise suppression.

- > **12 MP sensor with 360° overview**
- > **Stereographic lens and Sharpdome 360**
- > **Lightfinder, Forensic WDR, OptimizedIR**
- > **Support for analytics with deep learning**
- > **4 microphones with voice enhancer**



# AXIS M4308-PLE Panoramic Camera

## Camera

### Image sensor

1/1.7" progressive scan RGB CMOS

### Lens

1.3 mm, F2.4

Horizontal field of view: 183°

Vertical field of view: 183°

Fixed iris, fixed focus, IR corrected

### Day and night

Automatically removable infrared-cut filter

### Minimum illumination

Color: 0.19 lux at 50 IRE, F2.4

B/W: 0.04 lux at 50 IRE, F2.4

0 lux with IR illumination on

### Shutter speed

1/22000 s to 1 s

### Camera adjustment

Digital roll:  $\pm 180^\circ$

## System on chip (SoC)

### Model

ARTPEC-7

### Memory

2 GB RAM, 1 GB 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

Overview: 2880x2880 to 160x160

Panorama: 3840x2160 to 192x72

Double Panorama: 3584x2688 to 512x288

Quad view: 3584x2688 to 512x288

View area 1-4: 2048x1536 to 256x144

Corner right/left: 3200x1200 to 192x72

Double corner: 2560x1920 to 480x480

Corridor: 2560x1920 to 256x144

### Frame rate

360° overview only, up to 2880x2880 without WDR: 25/30 fps @ 50/60 Hz

360° overview and dewarped views up to max resolution with WDR: up to 12.5/15 fps @ 50/60 Hz

### 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

### Multi-view streaming

360° overview, dewarped panorama, corridor, corner left/right and quad views. Up to 4 individually cropped out and dewarped view areas. All different views can be streamed simultaneously. When streaming 4 dewarped view areas and one 360° overview in max resolution: up to 19 fps per stream.

### Image settings

Compression, color saturation, brightness, sharpness, contrast, local contrast, white balance, day/night threshold, tone mapping, exposure control (including automatic gain control), exposure zones, Forensic WDR: up to 120 dB depending on scene, fine tuning of low-light behavior, dynamic text and image overlay, mirroring, digital roll, polygon privacy masks

### Pan/Tilt/Zoom

Digital PTZ of view areas, digital PT of panorama, corner, corridor and quad views, preset positions, guard tours

## Audio

### Streaming

One-way, simplex, mono or stereo. Voice enhancement

## Encoding

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

## Input/output

4 built-in microphones (can be disabled), network speaker pairing

## Network

### Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>1</sup>, HTTP/2, TLS<sup>1</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)

## System integration

### Application Programming Interface

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

AXIS Guardian with One-Click Connection  
ONVIF<sup>®</sup> Profile G, ONVIF<sup>®</sup> Profile M, ONVIF<sup>®</sup> Profile S, ONVIF<sup>®</sup> Profile T specification at [onvif.org](https://onvif.org)  
Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX

### Onscreen controls

Day/night shift  
Wide dynamic range  
Video streaming indicator  
IR illumination

### Event conditions

Analytics, edge storage events, virtual inputs through API, supervised external inputs, open casing, audio detection  
MQTT subscribe

## Event actions

Record video/audio: SD card and network share  
MQTT publish  
Upload of images or video/audio clips: FTP, SFTP, HTTP, HTTPS, network share and email  
Pre- and post-alarm video or image buffering for recording or upload  
Notification: email, HTTP, HTTPS, TCP and SNMP trap  
PTZ: PTZ preset, start/stop guard tour  
Overlay text, external output activation, play audio clip, zoom preset, day/night mode

### Built-in installation aids

Pixel counter, digital roll, repositioning of quad views, digital PTZ of view areas, digital PT of panorama, corner, corridor and quad views

## Analytics

### Applications

#### Included

AXIS Object Analytics, AXIS Image Health Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, active tampering alarm, audio detection

#### Supported

Support for additional applications if the device is used with compatible accessories. For more information, contact your Axis partner.  
Support for AXIS Camera Application Platform enabling installation of third-party applications, see [axis.com/acap](https://axis.com/acap)

### AXIS Object Analytics

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

**Scenarios:** line crossing, object 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 Image Health Analytics

#### Detection settings:

Tampering: blocked image, redirected image  
Image degradation: blurred image, underexposed image  
**Other features:** sensitivity, validation period

### AXIS Scene Metadata

**Object classes:** humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates  
**Object attributes:** confidence, position

1. 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 ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)).

## Approvals

### EMC

EN 55032 Class A, EN 55035, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), VCCI Class A, RCM AS/NZS CISPR 32 Class A, KS C9832 Class A, KS C9835

### Safety

CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3, IEC/EN 62471 risk group exempt, IS 13252

### Environment

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, 60068-2-78, IEC/EN 60529 IP66, IEC/EN 62262 IK10 (IR window IK09), NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)

### Network

NIST SP500-267

### Cybersecurity

ETSI EN 303 645, BSI IT Security Label

## 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 Secure element (CC EAL 6+), Axis device ID, secure keystore, signed video, secure boot

### Network security

IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)<sup>2</sup>, IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS<sup>2</sup>, TLS v1.2/v1.3<sup>2</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-, NEMA 4X- and IK10-rated (IR window IK09)

Polycarbonate hard coated dome

Sharpdome 360

Aluminum

Color: white NCS S 1002-B

For repainting instructions of skin cover or casing and impact on warranty, contact your Axis partner.

### Sustainability

PVC free

### Power

Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4  
Typical 7.9 W, max 15.5 W

### Connectors

Shielded RJ45 10BASE-T/100BASE-TX PoE

Terminal block for 1 supervised alarm input and 1 output (12 V DC output, max. load 25 mA)

### IR illumination

Optimized IR with with power-efficient, long-life 850 nm IR LEDs

Range of reach 15 m (49 ft) or more depending on 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](https://axis.com)

### Operating conditions

-40 °C to 50 °C (-40 °F to 122 °F)

Start-up temperature: -30 °C to 50 °C (-22 °F to 122 °F)

Maximum temperature (intermittent): 55 °C (131 °F)

Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F)

Humidity 10–100% RH (condensing)

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)).

**Storage conditions**

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

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**Dimensions**

Height: 69 mm (2.7 in)  
ø 149 mm (5.8 in)

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**Weight**

850 g (1.9 lb)

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**Included accessories**

Installation guide, Windows® decoder 1-user license, drill hole template, cable gaskets, connector guard, I/O connector, RESISTORX® TR20 bit, mounting bracket, cable hole lid, view protector

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**Optional accessories**

AXIS T94T02D Pendant kit with weathershield  
AXIS Surveillance Cards  
AXIS TM3808-E Skin Cover Black  
AXIS Mounts & Cabinets  
AXIS TM3204 Recessed Mount  
AXIS TM3206 Recessed Mount  
For more accessories, see [axis.com](https://axis.com)

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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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**Languages**

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese  
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](https://axis.com/warranty)