

# AXIS P3738-PLE Panoramic Camera

## 4x 4K multidirectional with deep learning

This multidirectional camera offers four channels with 4K per channel to deliver excellent overviews and detailed coverage. It includes 360° IR illumination for clear, reflection-free footage and excellent image quality even in low light or complete darkness. This flexible camera offers various mounting options. For instance, it can be recessed mounted for discreet surveillance or mounted in ceilings for complete 360° coverage. With highly efficient power consumption, it ensures lower operating costs. It also supports powerful analytics based on deep learning. Furthermore, Axis Edge Vault, a hardware-based cybersecurity platform, guarantees the device's integrity and protects it from unauthorized access.

- > **4x 4K at 15 fps per channel**
- > **360° IR illumination with individually controlled LEDs**
- > **Flexible mounting options**
- > **Support for advanced analytics**
- > **Axis Edge Vault safeguards the device**



# AXIS P3738-PLE Panoramic Camera

## Camera

### Image sensor

4x 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

WDR on: 1/8000 s to 2 s  
WDR off: 1/16000 s to 2 s

### Camera adjustment

Pan ±90°, tilt +25° to +95°, rotation -5° to +95°, twist ±20°

## 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

4x 3840x2160 (4x 4K) to 4x 320x180

### Frame rate

Up to 12.5/15 fps (50/60 Hz) in all resolutions

### Video streaming

Multiple, individually configurable streams in H.264, H.265 and Motion JPG  
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, white balance, day/night threshold, local contrast, tone mapping, exposure mode, exposure zones, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, text and image overlay, dynamic text and image overlay, privacy masks, polygon privacy mask

### Image processing

Forensic WDR, Lightfinder, OptimizedIR

## Audio

### Audio input/output

Audio features through portcast technology: two-way audio connectivity with AXIS T61 Mk II

### Audio streaming

Two-way (half duplex, full duplex) via network speaker pairing technology

## 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®, 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](https://axis.com/developer-community).

One-click cloud connection

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

### 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).

### Onscreen controls

Autofocus  
Video streaming indicator  
IR illumination  
Privacy masks  
Media clip

### Edge-to-edge

Speaker pairing

## Event conditions

Device status: above operating temperature, above or below operating temperature, within operating temperature, IP address removed, new IP address, network lost, system ready, live stream active, casing open  
Edge storage: recording ongoing, storage disruption, storage health issues detected  
I/O: manual trigger, virtual input  
MQTT: stateless  
Scheduled and recurring: schedule  
Video: average bitrate degradation, day-night mode, tampering

## Event actions

Day-night mode  
Illumination: use lights, use lights while the rule is active  
MQTT: publish  
Notification: HTTP, HTTPS, TCP, and email  
Overlay text  
Recordings: record, record while the rule is active  
SNMP traps: send, send while the rule is active  
Status LED: flash, flash while the rule is active  
Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email

## Built-in installation aids

Remote zoom and focus, pixel counter, barrel distortion correction

## Analytics

### Applications

#### Included

AXIS Object Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, active tampering alarm

#### Supported

Support for AXIS Camera Application Platform enabling installation of third-party applications, see [axis.com/acap](https://axis.com/acap)

### Multisensor analytics

4 channels analytics support<sup>2</sup>

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 ([eyay@cryptsoft.com](mailto:eyay@cryptsoft.com)).  
2. For more information, go to the User manual on [axis.com](https://axis.com).

## **AXIS Object Analytics**

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

**Scenarios:** line crossing, object in area, time in area, crossline counting, occupancy in area

Up to 8 scenarios

**Other features:** triggered objects visualized with trajectories, and 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

Confidence, position

**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 61000-3-2, EN 61000-3-3, 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, IEC/EN 62471 risk group exempt, IS 13252, RCM AS/NZS 62368.1:2022,

### **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 IK09, ISO 21207 (Method B), MIL-STD-810H (Method 501.7, 502.7, 505.7 506.6, 507.6 509.7, 512.6), NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9), VDMA 24364

## **Network**

NIST SP500-267, IPv6 USGv6

## **Cybersecurity**

ETSI EN 303 645, BSI IT Security Label, FIPS 140

## **Cybersecurity**

### **Edge security**

**Software:** Signed OS, brute force delay protection, digest authentication, password protection, Axis Cryptographic Module (FIPS 140-2 level 1)

**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)<sup>3</sup>, 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 IK09-rated

Polycarbonate hard-coated dome

Aluminum and plastic casing, polycarbonate (PC) dome

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](https://axis.com/warranty-implication-when-repainting).

### **Mounting**

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

1/2" (M20) conduit side entry

### **Power**

Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4

IR illumination on: typical 14.98 W, max 25.50 W

IR illumination off: typical 8.92 W, max 14.70 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

Network: Shielded RJ45 10BASE-T/100BASE-TX/  
1000BASE-T PoE

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## IR illumination

Optimized IR with power-efficient, long-life 850 nm IR LEDs  
Range of reach 15m (49.2 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](https://axis.com)

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## Operating conditions

-30 °C to 50 °C (-22 °F to 122 °F)  
Humidity 10–100% RH (condensing)  
Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F)

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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): 0.022 m<sup>2</sup> (0.24 ft<sup>2</sup>)

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## Weight

2 kg (4.4 lb)

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## Box content

Camera, installation guide, connector guard, cable gaskets

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## Optional accessories

AXIS TP3105-E Pendant Kit Black, AXIS TP3204-E Recessed Mount, AXIS TP3832-E Dome Smoked, AXIS TP3833-E Dome Casing Black, AXIS T94N01D Pendant Kit, AXIS TP3004-E Wall Mount Black, AXIS T8415 Wireless Installation Tool  
AXIS Surveillance Cards  
For more accessories, go to [axis.com/products/axis-p3738-ple#accessories](https://axis.com/products/axis-p3738-ple#accessories)

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## System tools

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

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## Part numbers

Available at [axis.com/products/axis-p3738-ple#part-numbers](https://axis.com/products/axis-p3738-ple#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](https://echa.europa.eu)

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### Materials

Renewable carbon-based plastic content: 17% (recycled: 9%, bio-based: 1%, carbon capture based: 7%)  
Screened for conflict minerals in accordance with OECD guidelines  
To read more about sustainability at Axis, go to [axis.com/about-axis/sustainability](https://axis.com/about-axis/sustainability)

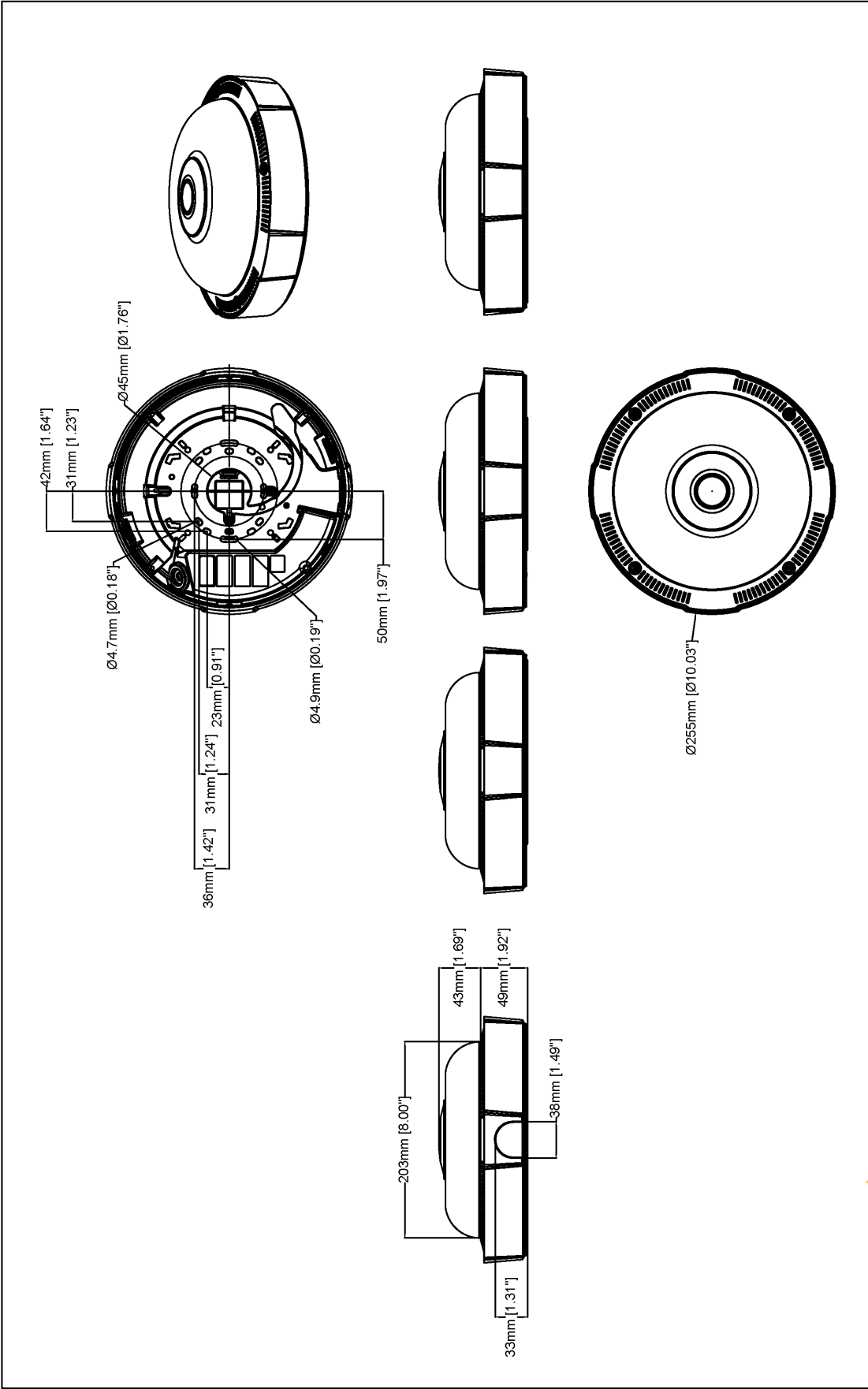
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### Environmental responsibility

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

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Dimension drawing



Revision	v.01	Revision date	2023-05-16
Paper size	A4	Release date	2023-05-16
Created by	MF	Scale	1:5

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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](https://axis.com/solutions/edge-vault).

### 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)