

# AXIS M4218-V Dome Camera

## Varifocal 8 MP dome with deep learning

This compact and discreet dome delivers great image quality in superior 4K. Plus, thanks to WDR, it can handle difficult light conditions. A deep learning processing unit (DLPU) lets you take advantage of intelligent analytics based on deep learning on the edge. Designed to blend into any environment, it can be repainted and offers a range of accessories for discreet monitoring. Plus, it features an HDMI port and the flexibility to add audio and I/O connectivity using AXIS T61 Series. Furthermore, Axis Edge Vault provides a hardware-based cybersecurity platform that safeguards the device.

- > **Great image quality in superior 4K**
- > **Varifocal lens with remote zoom and focus**
- > **WDR for difficult light conditions**
- > **Analytics with deep learning**
- > **HDMI output for public viewing monitors**



# AXIS M4218-V Dome Camera

## Camera

### Image sensor

1/2.8" progressive scan RGB CMOS

### Lens

Varifocal, 3.5–6.6 mm, F1.7 – 2.6  
Horizontal field of view: 93°–47°  
Vertical field of view: 50°–26°  
Minimum focus distance: 1.5 m (59 in)

### Day and night

Automatic IR-cut filter

### Minimum illumination

Color: 0.24 lux at 50 IRE F1.7  
B/W: 0.04 lux at 50 IRE F1.7

### Shutter speed

1/71500 s to 1/5 s

### Camera adjustment

Pan  $\pm 180^\circ$ , tilt  $-40$  to  $+65^\circ$ , rotation  $\pm 105^\circ$   
Can be directed in any direction and see the wall/ceiling

## System on chip (SoC)

### Model

CV25

### Memory

2048 MB RAM, 512 MB Flash

### Compute capabilities

Deep learning processing unit (DLPU)

## Video

### Video compression

H.264 (MPEG-4 Part 10/AVC) Main and High Profiles  
H.265 (MPEG-H Part 2/HEVC) Main Profile  
Motion JPEG

### Resolution

3840x2160 to 320x240

### Frame rate

Up to 12.5/15 fps with power line frequency 50/60 Hz  
in H.264 and H.265<sup>1</sup>

### Video streaming

Multiple, individually configurable streams<sup>2</sup>  
Axis Zipstream technology in H.264 and H.265  
Controllable frame rate and bandwidth  
VBR/ABR/MBR H.264/H.265

### Multi-view streaming

2 individually cropped out view areas

### HDMI output

HDMI 1080p (16:9) @25/30 Hz refresh rate  
HDMI 720p (16:9) @50/60 Hz refresh rate

### Noise reduction

Spatial filter (2D noise reduction)  
Temporal filter (3D noise reduction)

### Image settings

Compression, color, brightness, sharpness, contrast,  
white balance, exposure control, motion-adaptive  
exposure, WDR: up to 110 dB depending on scene, text  
and image overlay, mirroring of images, privacy mask  
Rotation: 0°, 90°, 180°, 270°, including Corridor Format

### Pan/Tilt/Zoom

Digital PTZ

## Audio

### Audio input/output

Audio features through portcast technology: two-way  
audio connectivity, voice enhancer

1. Reduced frame rate in Motion JPEG

2. We recommend a maximum of 3 unique video streams per camera or channel, for optimized user experience, network bandwidth, and storage utilization. A unique video stream can be served to many video clients in the network using multicast or unicast transport method via built-in stream reuse functionality.

## Network

### Network protocols

IPv4, IPv6, USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>3</sup>, TLS<sup>3</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, DHCP, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)

## System integration

### Application Programming Interface

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

One-click cloud connection

ONVIF® Profile G, M, S and 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.

### 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

Privacy masks

Media clip

### Event conditions

Application

Device status: above operating temperature, above or below operating temperature, below operating temperature, within operating temperature, IP address removed, new IP address, network lost, system ready, live stream active

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

MQTT: publish

Notification: HTTP, HTTPS, TCP and email

Overlay text

Pre- and post-alarm video or image buffering for recording or upload

Recordings: SD card and network share

SNMP traps: send, send while the rule is active

Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email

WDR mode

### Built-in installation aids

Pixel counter, remote zoom and focus, level grid

## Analytics

### Applications

#### Included

AXIS Object Analytics, AXIS Video Motion Detection, AXIS Live Privacy Shield

#### Supported

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, occupancy in area, time in area

Up to 10 scenarios

**Other features:** triggered objects visualized with color-coded bounding boxes

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

**Object attributes:** vehicle color, upper/lower clothing color, confidence, position

## Approvals

### Product markings

CSA, UL/cUL, BIS, UKCA, CE, KC, EAC, VCCI, RCM

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@cryptosoft.com](mailto:ey@cryptosoft.com)).

## EMC

CISPR 35, CISPR 32 Class A, EN 55035,  
EN 55032 Class A, EN 61000-6-1, EN 61000-6-2  
USA: FCC Part 15 Subpart B Class A  
Canada: ICES-3(A)/NMB-3(A)  
Korea: KS C 9835, KS C 9832 Class A  
Australia/New Zealand: RCM AS/NZS CISPR 32 Class A  
Japan: VCCI Class A

## Safety

IEC/EN/UL 62368-1, CAN/CSA C22.2 No. 62368-1,  
IS 13252

## Environment

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6,  
IEC 60068-2-14, IEC 60068-2-27, IEC/EN 60529 IP42,  
IEC/EN 62262 IK08

## 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, AES-XTS-Plain64 256bit SD card encryption  
**Hardware:** Axis Edge Vault cybersecurity platform 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>4</sup>,  
IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,  
HTTPS/HSTS<sup>4</sup>, TLS v1.2/v1.3<sup>4</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

IP42 ingress protection, IK08 impact-resistant, polycarbonate and aluminum casing with hard-coated dome  
Encapsulated electronics  
Color: white NCS S 1002-B  
For repainting instructions of casing and impact on warranty, contact your Axis partner.

### Power

Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 2  
Typical 3 W, max 4.8 W

### Connectors

RJ45 10BASE-T/100BASE-TX PoE  
HDMI type D  
Audio: Audio and I/O connectivity via portcast technology

### Storage

Support for microSD/microSDHC/microSDXC card  
Recording to network-attached storage (NAS)  
For SD card and recorder recommendations, see [axis.com](https://axis.com)

### Operating conditions

0 °C to 40 °C (32 °F to 104 °F)  
Humidity 10–85% RH (non-condensing)

### Storage conditions

–30 °C to 65 °C (–22 °F to 149 °F)  
Humidity 5–95% RH (non-condensing)

### Dimensions

Height: 71 mm (2.8 in)  
ø 120 mm (4.72 in)

### Weight

356 g (0.78 lb)

### Box content

Camera, installation guide, owner authentication key, virtual client license for H.264/H.265

4. 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@cryptosoft.com](mailto:ey@cryptosoft.com)).



### Optional accessories

AXIS T8415 Wireless Installation Tool  
AXIS TM4201 Recessed Mount  
AXIS TM3207 Recessed Mount  
AXIS T94C01L Recessed Mount  
AXIS T94C01U Universal Mount  
AXIS T94C01M J-Box/Gang Box Plate  
AXIS M42 Casing A Black 4P  
AXIS M42 Smoked Dome A 4P  
AXIS T91A33 Lighting Track Mount  
AXIS T91A23 Tile Grid Ceiling Mount  
AXIS TM4101 Pendant Kit  
AXIS TM3101 Pendant Wall Mount  
AXIS Surveillance Cards  
For more accessories, go to [axis.com/products/axis-m4218-v#accessories](https://axis.com/products/axis-m4218-v#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  
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-m4218-v#part-numbers](https://axis.com/products/axis-m4218-v#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](https://echa.europa.eu)

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### Materials

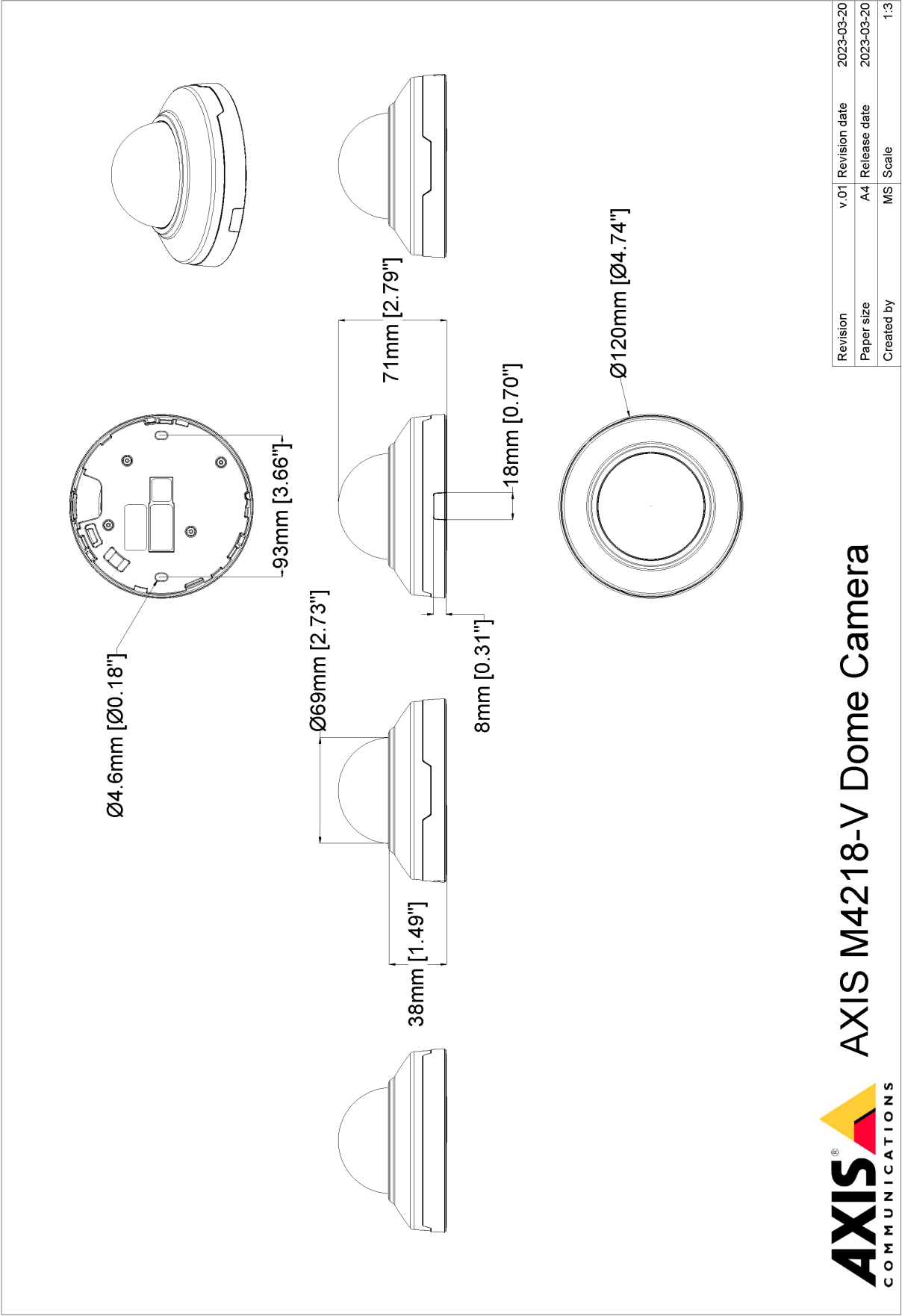
Renewable carbon-based plastic content: 38.9% (recycled)  
Screened for conflict minerals in accordance with OECD guidelines  
To read more about sustainability at Axis, go to [axis.com/about-axis/sustainability](https://axis.com/about-axis/sustainability)

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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)

Dimension drawing



|            |      |               |            |
|------------|------|---------------|------------|
| Revision   | v.01 | Revision date | 2023-03-20 |
| Paper size | A4   | Release date  | 2023-03-20 |
| Created by | MS   | Scale         | 1:3        |

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

|           | DORI definition     | Distance (wide)    | Distance (tele)      |
|-----------|---------------------|--------------------|----------------------|
| Detect    | 25 px/m (8 px/ft)   | 97.57 m (320.0 ft) | 184.48 m (605.09 ft) |
| Observe   | 63 px/m (19 px/ft)  | 38.71 m (127.0 ft) | 73.20 m (240.1 ft)   |
| Recognize | 125 px/m (38 px/ft) | 19.50 m (63.96 ft) | 36.89 m (121.0 ft)   |
| Identify  | 250 px/m (76 px/ft) | 9.72 m (31.9 ft)   | 18.43 m (60.45 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.

## 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)