

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.265¹

Video streaming

Multiple, individually configurable streams²
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, HTTPS³, TLS³, 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, 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

One-click cloud connection

ONVIF[®] Profile G, M, S and T, specification at 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.

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

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), and cryptographic software written by Eric Young (ey@cryptsoft.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)⁴,
IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,
HTTPS/HSTS⁴, TLS v1.2/v1.3⁴, 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

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

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), and cryptographic software written by Eric Young (ey@cryptsoft.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

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
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-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

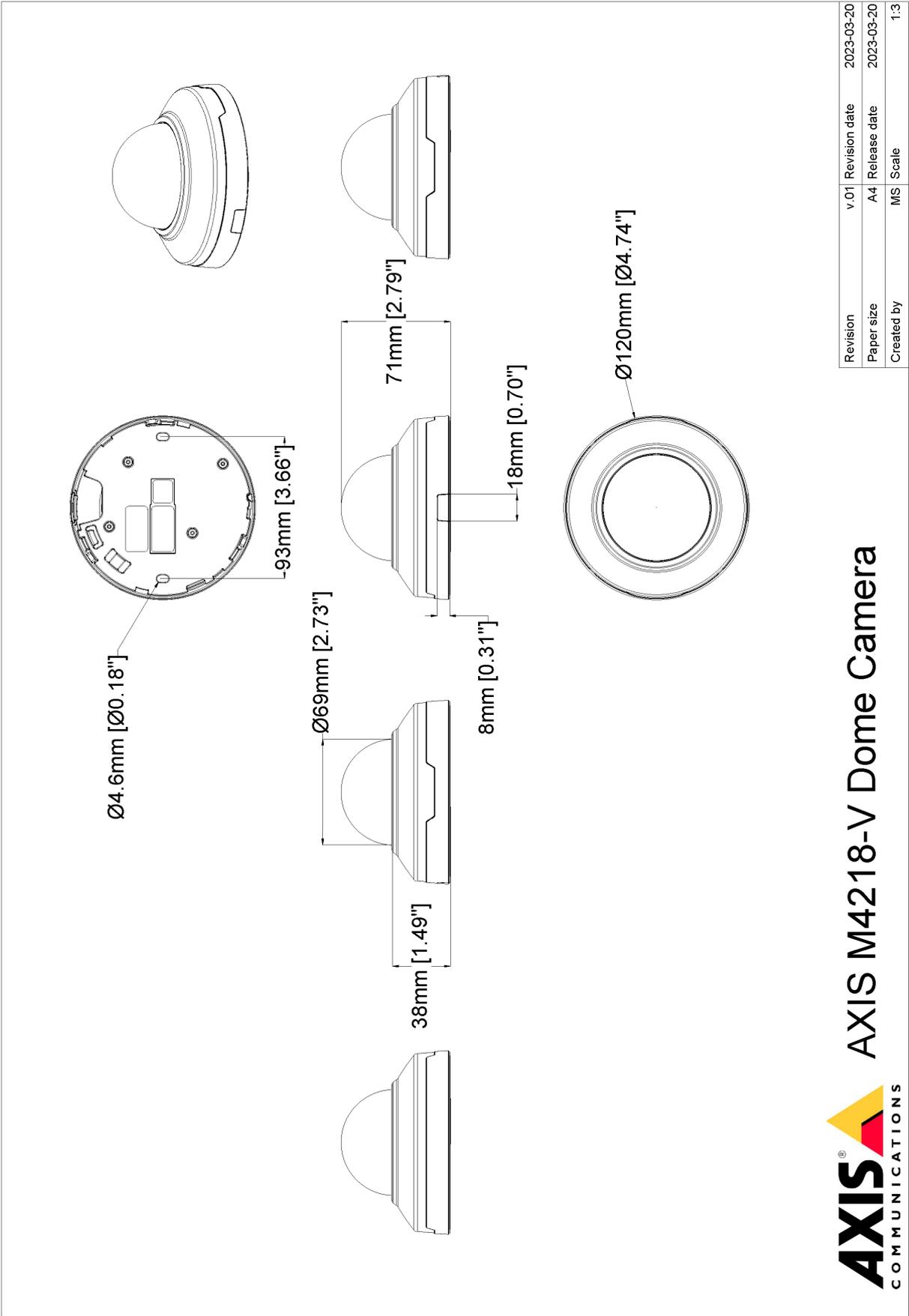
Materials

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

Environmental responsibility

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

© 2023 Axis Communications

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.

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