

# AXIS M4216-LV Dome Camera

## Varifocal 4 MP dome with IR and deep learning

Featuring Lightfinder, WDR, and OptimizedIR, this compact and discreet dome delivers great image quality—day and night, even in low light. 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 protects your Axis device ID and simplifies authorization of Axis devices on your network.

- > **Great image quality in 4 MP**
- > **Varifocal lens with remote zoom and focus**
- > **Lightfinder, WDR, and OptimizedIR**
- > **Analytics with deep learning**
- > **HDMI output for public viewing monitors**



# AXIS M4216-LV Dome Camera

## Camera

### Image sensor

1/2.7" progressive scan RGB CMOS

### Lens

Varifocal, 3–6 mm, F1.9 – 2.7  
Horizontal field of view: 100°–45°  
Vertical field of view: 72°–34°  
Remote focus and zoom, fixed iris

### Day and night

Automatic IR-cut filter

### Minimum illumination

With Lightfinder:  
Color: 0.18 lux at 50 IRE F2.0  
B/W: 0.03 lux at 50 IRE F2.0, 0 lux when IR illumination is on

### Shutter speed

1/37500 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

1024 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 and High Profiles  
Motion JPEG

### Resolution

2304x1728 to 320x240

### Frame rate

Up to 25/30 fps with power line frequency 50/60 Hz in H.264 and H.265<sup>1</sup>

### 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/MBR H.264/H.265  
Low latency mode  
HDMI

### Multi-view streaming

Up to 2 individually cropped out view areas in full frame rate

### HDMI output

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

### 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

## Network

### Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>2</sup>, TLS<sup>2</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, HDMI, 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](https://axis.com)

One-click cloud connection

ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® 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.

### 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).

### Event conditions

Device status: above operating temperature, above or below operating temperature, below operating temperature, IP address removed, network lost, new IP address, system ready, within operating temperature  
Edge storage: recording ongoing, storage disruption  
I/O: manual trigger, virtual input, digital input via AXIS T61 Audio and I/O Interfaces with portcast technology  
MQTT subscribe  
Scheduled and recurring: scheduled event  
Video: live stream open

### Event actions

MQTT publish  
Notification: email, HTTP, HTTPS, TCP and SNMP trap  
Overlay text, zoom preset, day/night mode  
Pre- and post-alarm video or image buffering for recording or upload  
Record video: SD card and network share  
Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email  
External output activation via AXIS T61 Audio and I/O Interfaces with portcast technology

## Built-in installation aids

Remote zoom, remote focus

## Analytics

### Applications

#### Included

AXIS Live Privacy Shield<sup>3</sup>, AXIS Object Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, AXIS Face Detector

#### Supported

AXIS People Counter

AXIS Queue Monitor

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, crossline counting, 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

### EMC

EN 55032 Class A, EN 55035, EN 61000-6-1, EN 61000-6-2

**Australia/New Zealand:** CISPR 24, CISPR 35, RCM AS/NZS CISPR 32 Class A

**Canada:** ICES-3(A)/NMB-3(A)

**Japan:** VCCI Class A

**Korea:** KC KN32 Class A, KC KN35

**USA:** FCC Part 15 Subpart B Class A

### Safety

IEC/EN/UL 62368-1, CAN/CSA C22.2 No. 62368-1, IS 13252  
IEC 62471

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)).

3. 16:9 capture mode required

## Environment

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-6, 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 water- and dust-resistant, 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.

## Sustainability

PVC free, BFR/CFR free, 43% recycled plastics

## Power

Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3

Typical 5 W, max 9.7 W

## Connectors

RJ45 10BASE-T/100BASE-TX PoE

HDMI type D

Audio: Audio and I/O connectivity via portcast technology

## IR illumination

Optimized IR with power-efficient, long-life 855 nm IR LEDs

Range of reach 20 m (65.6 ft) or more depending on the scene

## Storage

Support for microSD/microSDHC/microSDXC card

Support for SD card encryption

Support for recording to network-attached storage (NAS)

For SD card and NAS recommendations see [axis.com](https://axis.com)

## Operating conditions

0 °C to 45 °C (32 °F to 113 °F)

Humidity 10–85% RH (non-condensing)

## Storage conditions

–40 °C to 65 °C (–40 °F to 149 °F)

Humidity 5–95% RH (non-condensing)

## Dimensions

Height: 71 mm (2.8 in)

ø 121 mm (4.76 in)

## Weight

375 g (0.83 lb)

## Included accessories

Installation guide, Windows® decoder 1-user license

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



**Optional accessories**

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 TM3101 Pendant Wall Mount  
AXIS Surveillance Cards  
For more accessories, see *axis.com*

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**Languages**

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

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**Warranty**

5-year warranty, see *axis.com/warranty*

## 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).

### 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.

### OptimizedIR

Axis OptimizedIR provides a unique and powerful combination of camera intelligence and sophisticated LED technology, resulting in our most advanced camera-integrated IR solutions for complete darkness. In our pan-tilt-zoom (PTZ) cameras with OptimizedIR, the IR

beam automatically adapts and becomes wider or narrower as the camera zooms in and out to make sure that the entire field of view is always evenly illuminated.

### 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)