

## AXIS M3085-V Dome Camera

Fixed 2 MP mini dome with deep learning

This cost-efficient mini dome features Wide Dynamic Range (WDR) to ensure clarity even when there's both dark and light areas in the scene. With Lightfinder, it delivers sharp color images even in low light. A deep learning processing unit enables intelligent analytics based on deep learning on the edge. And AXIS Object Analytics offers detection and classification of different types of objects – all tailored to your specific needs. Furthermore, this compact, easy-to-install, vandal-resistant camera comes factory focused so there's no manual focusing required.

- > [Great image quality in 2 MP](#)
- > [Compact, discreet design](#)
- > [WDR and Lightfinder](#)
- > [Support for analytics with deep learning](#)
- > [Built-in cybersecurity features](#)



# AXIS M3085-V Dome Camera

## Camera

### Image sensor

1/2.9" progressive scan RGB CMOS

### Lens

3.1 mm, F2.0  
Horizontal field of view: 102°  
Vertical field of view: 55°  
Fixed iris, IR corrected

### 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

### Shutter speed

1/19000 s to 1/5 s

### Camera adjustment

Pan  $\pm 175^\circ$ , tilt  $\pm 80^\circ$ , rotation  $\pm 175^\circ$   
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)  
Motion JPEG

### Resolution

16:9: 1920x1080 (1080p) to 640x360  
4:3: 1280x960 to 320x240

### Frame rate

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/ABR/MBR H.264/H.265

### WDR

WDR: Up to 120 dB depending on scene

### Multi-view streaming

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

### Image settings

Saturation, contrast, brightness, sharpness, white balance, day/night threshold, exposure mode, exposure zones, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, dynamic text and image overlay, privacy masks

### Image processing

Axis Zipstream, WDR, Lightfinder

### Pan/Tilt/Zoom

Digital PTZ

## Audio

### Features

Automatic gain control  
10-band graphic equalizer for audio input  
Voice enhancer through portcast technology  
Speaker pairing

### Streaming

Two-way (full duplex)

### Input

Input through portcast technology

### Output

Output through speaker pairing or portcast technology

1. Reduced frame rate in Motion JPEG

## Encoding

AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz, LPCM 48 kHz  
Configurable bitrate

## Network

### Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>2</sup>, HTTP/2, 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, PTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, DHCPv4/v6, 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

Privacy masks  
Media clip

### Edge-to-edge

Speaker pairing

## Event conditions

Application

Audio: audio detection

Device status: above/below/within operating temperature, IP address blocked, 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, digital input via accessories using portcast technology

MQTT: subscribe

Scheduled and recurring: schedule

Video: average bitrate degradation, tampering

## Event actions

Day-night mode

LEDs: flash status LED, flash status LED while the rule is active

MQTT: publish

Notification: HTTP, HTTPS, TCP and email

Overlay text

Recordings

SNMP traps

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

WDR mode

External output activation via accessories using portcast technology

## Built-in installation aids

Pixel counter, level grid

## Analytics

### Applications

#### Included

AXIS Object Analytics, AXIS Scene Metadata, AXIS Live Privacy Shield<sup>3</sup>, AXIS Video Motion Detection, active tampering alarm, audio detection

#### Supported

AXIS People Counter

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

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 ([eyay@cryptsoft.com](mailto:eyay@cryptsoft.com)).

3. Available for download

## **AXIS Object Analytics**

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

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

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

**Audio data:** audio level

## **Approvals**

### **Product markings**

CE, FCC, ICES, RCM, VCCI, BIS

### **Supply chain**

TAA compliant

### **EMC**

EN 55032 Class A, EN 55035, 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

### **Safety**

IEC/EN/UL 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 60068-2-78, 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, password protection

**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)<sup>4</sup>, IEEE 802.1AR, HTTPS/HSTS<sup>4</sup>, TLS v1.2/v1.3<sup>4</sup>, Network Time Security (NTS), X.509 Certificate PKI, IP address filtering

### **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 (to comply with IP42, follow Installation Guide), IK08 impact-resistant, polycarbonate/ABS casing  
Encapsulated electronics  
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).

### **Power**

Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 2  
Typical 3.6 W, max 4.2 W

### **Connectors**

Network: Shielded RJ45 10BASE-T/100BASE-TX PoE  
Audio: Audio and I/O connectivity via portcast technology

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)).

## 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

Temperature: 0 °C to 45 °C (32 °F to 113 °F)  
Humidity: 10–85% RH (non-condensing)

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## Storage conditions

Temperature: -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.

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## Weight

150 g (0.33 lb)

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## Box content

Camera, installation guide

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## Optional accessories

AXIS TM3812 Tamper Cover  
AXIS T61 Audio and I/O Interface Series  
Black casing  
Smoked dome  
AXIS Surveillance microSDXC™ Card  
For more accessories, go to [axis.com/products/axis-m3085-v#accessories](https://axis.com/products/axis-m3085-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, 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-m3085-v#part-numbers](https://axis.com/products/axis-m3085-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: 57% (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

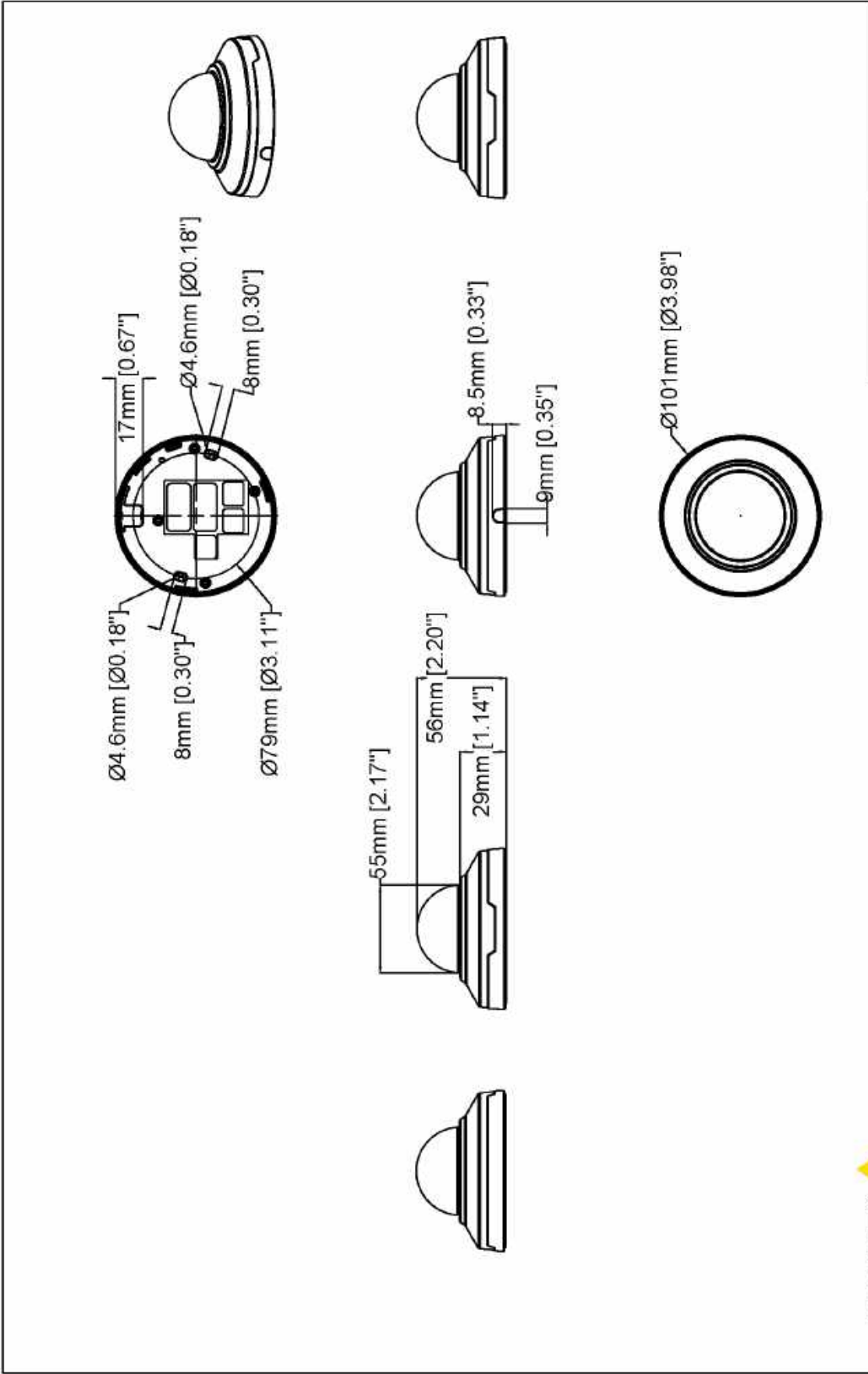
[axis.com/environmental-responsibility](https://axis.com/environmental-responsibility)  
Axis Communications is a signatory of the UN Global Compact, read more at [unglobalcompact.org](https://unglobalcompact.org)

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

|           | DORI definition     | Distance          |
|-----------|---------------------|-------------------|
| Detect    | 25 px/m (8 px/ft)   | 45.6 m (149.6 ft) |
| Observe   | 63 px/m (19 px/ft)  | 18.1 m (59.4 ft)  |
| Recognize | 125 px/m (38 px/ft) | 9.1 m (29.8 ft)   |
| Identify  | 250 px/m (76 px/ft) | 4.6 m (15.1 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.

Dimension drawing



|            |      |               |            |
|------------|------|---------------|------------|
| Revision   | v.01 | Revision date | 2021-12-17 |
| Paper size | A4   | Release date  | 2021-12-17 |
| Created by | MF   | Scale         | 1:3        |

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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.

information is identified, recorded, and sent in full resolution and frame rate.

For more information, see [axis.com/glossary](https://axis.com/glossary)

### 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.

### 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