

## **AXIS M3086-V Dome Camera**

### Fixed 4 MP mini dome with deep learning

This cost-efficient mini dome offers a wide-angle view of 130° and 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. Additionally, the variant AXIS M3086-V Mic with a built-in microphone, it's out-of-the-box ready for AXIS Audio Analytics.

- > Great image quality in 4 MP
- > Lightfinder and WDR
- > Analytics with deep learning
- > Variant with built-in microphone
- > Axis edge vault safeguards the device





## AXIS M3086-V Dome Camera

Camera			NTP, NTS, RTSP, RTCP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3,	
Variants	AXIS M3086-V AXIS M3086-V Mic		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	
Image sensor	1/2.7" progressive scan RGB CMOS	System integra	System integration	
Lens	2.4 mm, F2.1 Horizontal field of view: 130° Vertical field of view: 93° Fixed iris, IR corrected	Application Programming Interface	Open API for software integration, including VAPIX®, metadata and AXIS Camera Application Platform (ACAP); specifications at axis.com/developer-community. ACAP includes Native SDK. One-click cloud connection	
Day and night	Automatic IR-cut filter		ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and	
Minimum illumination	With Lightfinder: Color: 0.19 lux at 50 IRE F2.1 B/W: 0.03 lux at 50 IRE F2.1	Video management	ONVIF® Profile T, specifications at <i>onvif.org</i> Compatible with AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development	
Shutter speed	1/38500 s to 1/5 s	systems	Partners available at axis.com/vms	
Camera angle adjustment	Pan ±175°, tilt ±80°, rotation ±175° Can be directed in any direction and see the wall/ceiling	Onscreen controls	Privacy masks Media clip	
System on chip (SoC)		Edge-to-edge	Speaker pairing	
Model	CV25	Event conditions	Application Audio: audio detection	
Memory	1024 MB RAM, 512 MB Flash		Device status: above/below/within operating temperature, IP	
Compute capabilities	Deep learning processing unit (DLPU)		address blocked, IP address removed, new IP address, network lost, system ready, live stream active	
Video			Edge storage: recording ongoing, storage disruption, storage health issues detected	
Video compression	H.264 (MPEG-4 Part 10/AVC) Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG		I/O: manual trigger, virtual input, digital input via accessories using portcast technology MQTT: subscribe Scheduled and recurring: schedule Video: average bitrate degradation, tampering	
Resolution	<b>16:9:</b> 2688x1512 (4 MP) to 640x360 <b>4:3:</b> 2304x1728 (4 MP) to 320x240			
Frame rate	25/30 fps with power line frequency 50/60 Hz in H.264 and H.265 <sup>a</sup>	Event actions	Day-night mode LEDs: flash status LED, flash status LED while the rule is active MQTT: publish	
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		Notification: HTTP, HTTPS, TCP and email Overlay text Recordings SNMP traps Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network	
WDR	WDR: Up to 120 dB depending on scene		share and email WDR mode External output activation via accessories using portcast technology	
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	Built-in installation aids  Analytics	Pixel counter, level grid	
Image processing	Axis Zipstream, WDR, Lightfinder 2.0	Applications	Included	
Pan/Tilt/Zoom	Digital PTZ		AXIS Object Analytics, Scene metadata, AXIS Audio Analytics <sup>b</sup> , AXIS Live Privacy Shield <sup>d</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	
Audio Audio features	Automatic gain control 10-band graphic equalizer for audio input Audio privacy control <sup>b</sup> Voice enhancer through portcast technology Speaker pairing	AVIC Object		
Audio streaming	Two-way (full duplex) Audio analytics even when audio streaming is off <sup>b</sup>	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	
Audio input	Input through portcast technology Built-in microphone (disabled by default): MEMS microphone <sup>b</sup>			
Audio output	Output through speaker pairing or portcast technology			
Audio 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	AXIS Audio Analytics	Only valid for variant with built-in microphone Features: adaptive audio detection, audio classification Audio classes: scream, shout	
Microphone	T4  D(4) (64  D 5D  64   4   4   4   4   4   4   4   4   4		Event metadata: audio detections, classifications	
SNR	71 dB(A) (94 dB SPL @ 1 m A-weighted with -10 dB) <sup>b</sup>	Scene metadata	Object classes: humans, faces, vehicles (types: cars, buses,	
Max SPL	130 dB (10% THD) <sup>b</sup>		trucks, bikes), license plates  Object attributes: vehicle color, upper/lower clothing color,	
	20 Hz to 20 kHz <sup>b</sup>		confidence, position	
Network			Audio data: audio level	
Network protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS <sup>c</sup> , HTTP/2, TLS <sup>c</sup> , QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP <sup>®</sup> , SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS,	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
Cybersecurity	
Edge security	Software: Signed firmware, 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>c</sup> , IEEE 802.1AR, HTTPS/HSTS <sup>c</sup> , TLS v1.2/v1.3 <sup>c</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 To read more about Axis cybersecurity support, go to 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.
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
Storage	Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit) Recording to network-attached storage (NAS)

	For CD and and NAC manner delices are mission
	For SD card and NAS recommendations see axis.com
Operating conditions	Temperature: 0 °C to 45 °C (32 °F to 113 °F) Humidity: 10–85% RH (non-condensing)
Storage conditions	Temperature: -40 °C to 65 °C (-40 °F to 149 °F) Humidity: 5–95% RH (non-condensing)
Dimensions	For the overall product dimensions, see the dimension drawing in this datasheet.
Weight	150 g (0.33 lb)
Box content	Camera, installation guide
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-m3086-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, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
Warranty	5-year warranty, see axis.com/warranty
Part numbers	Available at axis.com/products/axis-m3086-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: 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
Environmental responsibility	axis.com/environmental-responsibility Axis Communications is a signatory of the UN Global Compact, read more at unglobalcompact.org
a. Reduced frame ro b. Only valid for var c. This product incl OpenSSI Toolkit	ate in Motion JPEG riant with built-in microphone udes software developed by the OpenSSL Project for use in the Jonenssl and and contournable software written by Frie Young

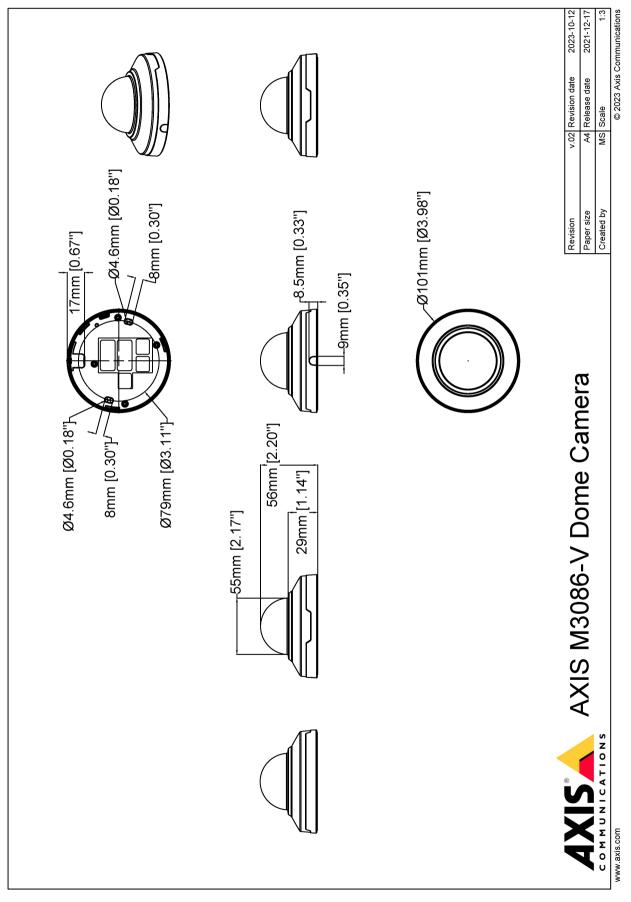
C. Inis product includes sortware developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young leay@cryptsoft.com).
 d. Available for download

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

	DORI definition	Distance
Detect	25 px/m (8 px/ft)	48.4 m (158.8 ft)
Observe	63 px/m (19 px/ft)	19.2 m (63.0 ft)
Recognize	125 px/m (38 px/ft)	9.7 m (31.8 ft)
Identify	250 px/m (76 px/ft)	4.8 m (15.7 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.

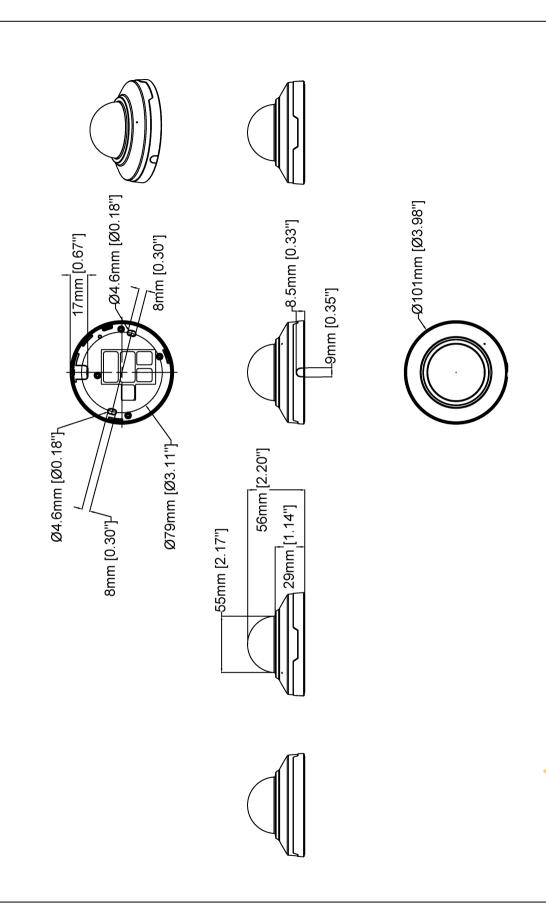
# **Dimension drawing**



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2023-10-12 2021-12-17 v.02 Revision date
A4 Release date
MS Scale Revision Paper size Created by



 Revision
 v. 01
 Revision date
 2023-10-12

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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 Al-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 Audio Analytics**

AXIS Audio Analytics uses adaptive audio detection to generate alarms on sudden increases in sound volume. With Al-based classifiers, it can detect screaming and shouting. You can also get extra confirmation by combining AXIS Audio Analytics with video analytics. This smart application only transmits metadata, ensuring privacy is safeguarded. A core feature of AXIS OS, AXIS Audio Analytics comes pre-installed at no extra cost.

#### 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 offers features to protect the device's identity, safeguard its integrity from factory and protect sensitive information from unauthorized access.

Establishing the root of trust starts at the device's boot process. In Axis devices, the hardware-based mechanism secure boot verifies the operating system (AXIS OS) that the device is booting from. AXIS OS, in turn, is cryptographically signed (signed firmware) during the build process. Secure boot and signed firmware tie into each other and ensure that the firmware has not been tampered with during the lifecycle of the device and that the device only boots from authorized firmware. This creates an unbroken chain of cryptographically validated software for the chain of trust that all secure operations depend on.

From a security aspect, the secure keystore is the critical building-block for protecting cryptographic informa-

tion 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 is provided through a Common Criteria and/or FIPS 140 certified hardware-based cryptographic computing module. Depending on security requirements, an Axis device can have either one or multiple such modules, like a TPM 2.0 (Trusted Platform Module) or a secure element, and/or a system-on-chip (SoC) embedded Trusted Execution Environment (TEE).

Signed video ensures that video evidence can be verified as untampered without proving the chain of custody of the video file. Each camera uses its unique video signing key, which is securely stored in the secure keystore, to add a signature into the video stream. This allows video to be traced back to the Axis camera from where it originated, so it's possible to verify that the footage has not been tampered with after it left the camera.

To read more about Axis Edge Vault, go to 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 information is identified, recorded, and sent in full resolution and frame rate.

For more information, see axis.com/glossary

