AXIS M3088-V Dome Camera

Fixed 8 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. A deep learning processing unit enables intelligent analytics based on deep learning on the edge. Plus, AXIS Object Analytics including time in area feature lets you track whenever an object stays in a defined area longer than a user-defined time, for example, to detect loitering. This compact, easy-to-install, vandal-resistant camera comes factory focused so there's no manual focusing required. Furthermore, Axis Edge Vault protects your Axis device ID and simplifies authorization of Axis devices on your network.

> **Great image quality in 8 MP**

> **Compact, discreet design**

> **WDR for challenging light**

> **Support for analytics with deep learning**

> **Built-in cybersecurity features**

AXIS M3088-V Dome Camera

Camera

Image sensor	1/2.8" progressive scan RGB CMOS
Lens	2.9 mm, F2.0 Horizontal field of view: 109° Vertical field of view: 56° Fixed iris, IR corrected
Day and night	Automatic IR-cut filter
Minimum illumination	**Color:** 0.25 lux at 50 IRE F2.0 **B/W:** 0.05 lux at 50 IRE F2.0
Shutter speed	1/71500 s to 1/5 s
Camera adjustment	Pan ±175°, tilt ±80°, rotation ±175° 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	**16:9:** 3840x2160 (8 MP) to 640x360 **4:3:** 2592x1944 to 320x240
Frame rate	12/15 fps with power line frequency 50/60 Hz in H.264 and H.265[a]
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
Pan/Tilt/Zoom	Digital PTZ

Audio

Audio features	Automatic gain control 10-band graphic equalizer for audio input Voice enhancer through portcast technology Speaker pairing
Audio streaming	Two-way (full duplex)
Audio input	Input through portcast technology
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

Network

Network protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[b], HTTP/2, TLS[b], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTCP, 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*. One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at *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*.
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[c], 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*
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

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)[b], IEEE 802.1AR, HTTPS/HSTS[b], TLS v1.2/v1.3[b], 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 SD card and NAS recommendations see *axis.com*
Operating conditions	Temperature: 0 °C to 40 °C (32 °F to 104 °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-m3088-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-m3088-v#part-numbers*

Sustainability

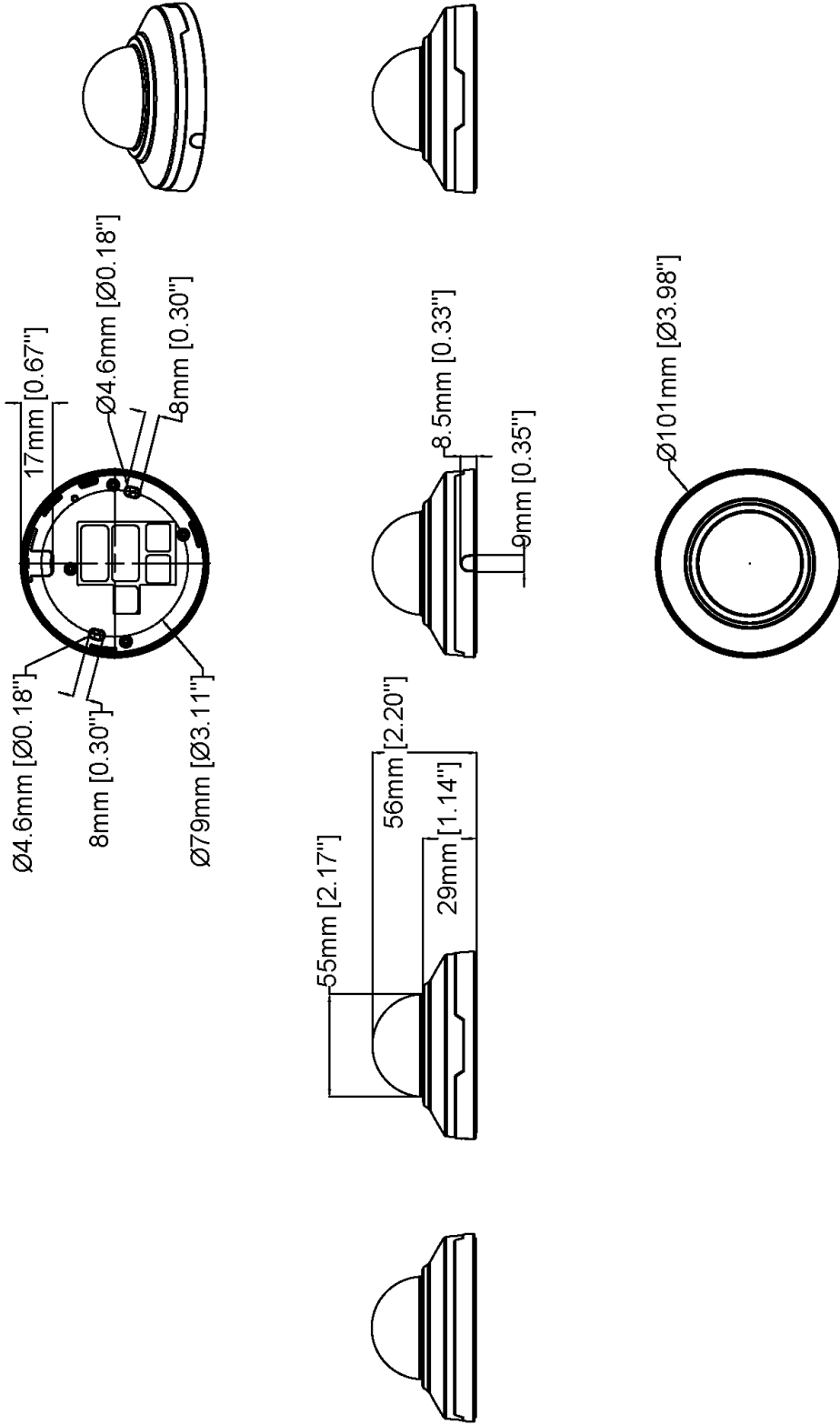|	
Substance control	PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard JS709 RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018 REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see *echa.europa.eu*
Materials	Renewable carbon-based plastic content: 57% (recycled) 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 rate in Motion JPEG*
b. *This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).*
c. *Available for download*

Detect, Observe, Recognize, Identify (DORI)

	DORI definition	Distance
Detect	25 px/m (8 px/ft)	82.9 m (271.9 ft)
Observe	63 px/m (19 px/ft)	32.9 m (107.9 ft)
Recognize	125 px/m (38 px/ft)	16.6 m (54.4 ft)
Identify	250 px/m (76 px/ft)	8.3 m (27.2 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

AXIS M3088-V Dome Camera

17mm [0.67"]
Ø4.6mm [Ø0.18"]
8mm [0.30"]
Ø4.6mm [Ø0.18"]
8mm [0.30"]
Ø79mm [Ø3.11"]

8.5mm [0.33"]
9mm [0.35"]

Ø101mm [Ø3.98"]

56mm [2.20"]
29mm [1.14"]
55mm [2.17"]

Revision	v.01	Revision date	2021-12-17
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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.

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*

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