

AXIS M3128-LVE Dome Camera

AI-powered 8 MP turret style camera

This AI-powered camera offers flexible installation both indoors and outdoors. With a turret-style design, it suppresses light reflections and delivers great 8 MP image quality and usability. And OptimizedIR allows for surveillance in complete darkness. It comes preinstalled with AXIS Object Analytics to detect, classify, track and count objects like humans and vehicles. Furthermore, Axis Edge Vault, a hardware-based cybersecurity platform, safeguards the device and offers FIPS 140-3 Level 3 certified secure key storage and operations. This weatherproof camera is IP66-rated and has an operating temperature range from -30 °C to 50 °C (-22 °F to 122 °F).

- > **Great image quality in 4K**
- > **WDR and OptimizedIR**
- > **Available in black or white**
- > **AI-based video analytics**
- > **Built-in cybersecurity with Axis Edge Vault**



AXIS M3128-LVE Dome Camera

Variants

Black
White

Camera

Image sensor

1/2.8" progressive scan RGB CMOS
Pixel size 1.45 μm

Lens

2.9 mm, F2.0
Horizontal field of view: 110°
Vertical field of view: 60°
Minimum focus distance: 0.5 m (1.6 ft)
M12 mount, fixed iris
Fixed iris, Fixed focus, IR corrected

Day and night

Automatic IR-cut filter

Minimum illumination

Color: 0.22 lux at 50 IRE, F2.0
B/W: 0.05 lux at 50 IRE, F2.0
0 lux with IR illumination on

Shutter speed

1/71500 s to 2 s

Camera adjustment

Pan $\pm 180^\circ$, tilt 0 to 60° , rotation $\pm 95^\circ$

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 160x90

Frame rate

Up to 12.5/15 fps (12.5/15 Hz) with H.264 and H.265¹
in all resolutions

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

Signal-to-noise ratio

>55 dB

WDR

Up to 120 dB depending on scene

Multi-view streaming

2 individually cropped out view areas

Image settings

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

Image processing

WDR, OptimizedIR

Pan/Tilt/Zoom

Digital PTZ

Audio

Features

Voice enhancer through portcast technology
Speaker pairing

Streaming

Two-way (full duplex)

Input

Input through portcast technology

1. Reduced frame rate in Motion JPEG

Output

Output through speaker pairing or portcast technology

Encoding

AAC-LC 8/16/32/48 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, HTTPS², HTTP/2, TLS², 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, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf)

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

Day/night shift
Wide dynamic range
IR illumination
Privacy masks
Media clip
Heater

Edge-to-edge

Speaker pairing

Event conditions

Device status: above/below/within operating temperature, IP address blocked, IP address removed, live stream active, network lost, new IP address, system ready

Edge storage: recording ongoing, storage disruption, storage health issues detected

I/O: manual trigger, virtual input is active

MQTT: stateless

Scheduled and recurring: schedule

Video: average bitrate degradation, day-night mode, tampering

Event actions

Day-night mode: use day-night mode while the rule is active

Illumination: use lights, use lights while the rule is active

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

MQTT: send MQTT publish message

Notification: HTTP, HTTPS, TCP and email

Overlay text: use, use while the rule is active

Recordings: record video, record video while the rule is active

Security: erase configuration

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: set, set while the rule is active

Built-in installation aids

Pixel counter, level grid

Analytics

Applications

Included

AXIS Object Analytics, AXIS Scene Metadata, AXIS Live Privacy Shield³, AXIS Video Motion Detection, active tampering alarm

Supported

Support for AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap

2. 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).

3. Available for download

AXIS Object Analytics

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

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

Approvals

Product markings

CSA, UL/cUL, BIS, CE, KC, EAC, VCCI, RCM, BSMI

Supply chain

TAA compliant

EMC

EN 55024, EN 55035, EN 55032 Class A, EN 61000-6-1, EN 61000-6-2

Australia/New Zealand: RCM AS/NZS CISPR 32 Class A

Canada: ICES(A)/NMB(A)

Japan: VCCI Class A

Korea: KC KN35, KC KN32 Class A, KS C 9835,

KS C 9832 Class A

USA: FCC Part 15 Subpart B Class A

Safety

IEC/EN/UL 62368-1 ed. 3, IEC/EN 62471 risk group exempt, UL 60950-22, 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 IP66, IEC/EN 62262 IK08, NEMA 250 Type 4X

Network

NIST SP500-267

Cybersecurity

ETSI EN 303 645, BSI IT Security Label

Cybersecurity

Edge security

Software: Signed firmware, 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

Hardware: Axis Edge Vault cybersecurity platform Secure element (CC EAL 6+, FIPS 140-3 Level 3), 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),

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

IP66-, NEMA 4X- and IK08-rated

Polycarbonate hard-coated window

Plastic casing

Color: white NCS S 1002-B, black NCS S 9000-N

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 3

Typical 4.3 W, max 10.5 W

Features: power meter

Connectors

Network: RJ45 10BASE-T/100BASE-TX PoE

IR illumination

Optimized IR with power-efficient, long-life 850 nm IR LEDs

Range of reach 20 m (65 ft) or more depending on the scene

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).

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: -30 °C to 50 °C (-22 °F to 122 °F)
Maximum temperature according to NEMA TS 2 (2.2.7):
74 °C (165 °F)
Humidity: 10–100% 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.
Effective Projected Area (EPA): 0.008 m² (0.03 ft²)

Weight

390 g (0.9 lb)

Box content

Camera, installation guide, connector guard, cable gaskets, owner authentication key

Optional accessories

AXIS TM3212 Recessed Mount, AXIS TM3213 Recessed Mount, AXIS TM3824-E Weathershield, AXIS T94B01P Conduit Back Box, AXIS T94B02D Pendant Kit
AXIS T8415 Wireless Installation Tool
AXIS Surveillance Cards
For more accessories, go to axis.com/products/axis-m3128-lve#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-m3128-lve#part-numbers

Sustainability

Substance control

PVC free
RoHS in accordance with EU RoHS Directive 2011/65/EU/ and 2015/863, and standard EN IEC 63000:2018
REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see echa.europa.eu

Materials

Renewable carbon-based plastic content: 49%
(recycled: 6%, bio-based: 43%)
Screened for conflict minerals in accordance with OECD guidelines
To read more about sustainability at Axis, go to axis.com/about-axis/sustainability

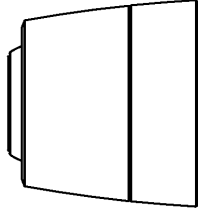
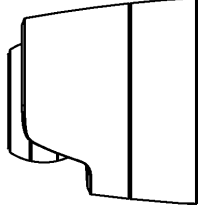
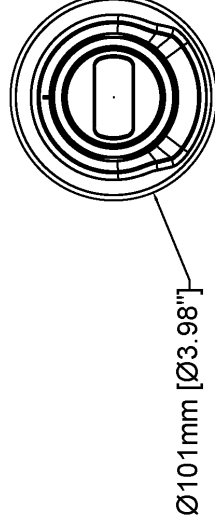
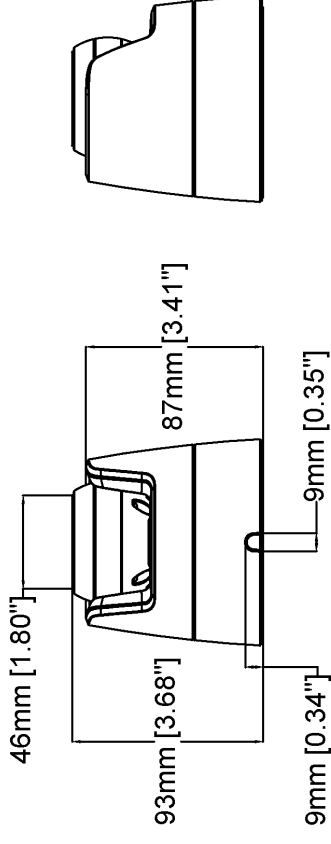
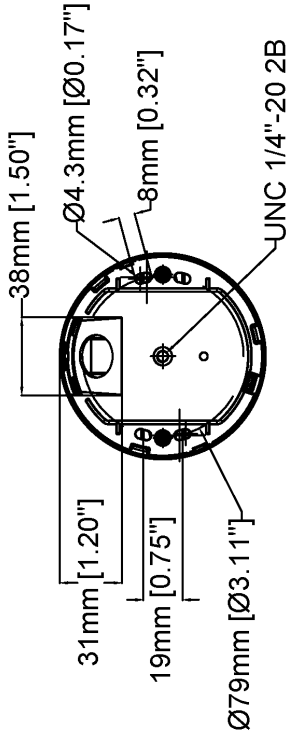
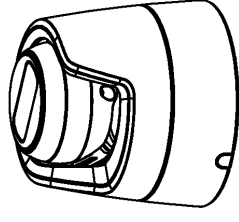
Environmental responsibility

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

Detect, Observe, Recognize, Identify (DORI)

	DORI definition	Distance
Detect	25 px/m (8 px/ft)	80 m (262 ft)
Observe	63 px/m (19 px/ft)	31.7 m (104.0 ft)
Recognize	125 px/m (38 px/ft)	16 m (52 ft)
Identify	250 px/m (76 px/ft)	8 m (26 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.



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Revision	v.01	Revision date	2024-06-04
Paper size	A4	Release date	2024-06-04
Created by	MS	Scale	1:3

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.

To read more about Axis Edge Vault, go to axis.com/solutions/edge-vault.

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.