

# AXIS M5526-E PTZ Camera

## Indoor and outdoor 4 MP with 10x zoom and focus recall

This affordably priced camera delivers great image quality in 4 MP with 10x optical zoom. It offers continuous 360° pan and autofocus ensures detailed, sharp images – every time. Compatible with all Axis PTZ mounts, it can be mounted both in- and outdoors. Built on ARTPEC-8, it includes a deep learning processing unit (DLPU) enabling improved processing and storage capabilities. And AXIS Object Analytics can detect and classify humans, vehicles, and types of vehicles. Furthermore, Axis Edge Vault safeguards your device and protects sensitive information from unauthorized access.

- > 4 MP and 10x optical zoom
- > Continuous 360° pan
- > Support for analytics with deep learning
- > Compact design
- > PoE or 24 V with audio and I/O connectivity







## AXIS M5526-E PTZ Camera

#### Camera

#### Image sensor

1/3" progressive scan RGB CMOS Pixel size 1.998 µm

#### Lens

4.7-47 mm, F1.6-3.0 Horizontal field of view: 59.1°-6.5° Vertical field of view: 35°-3.67° Autofocus, auto-iris, P-Iris control

#### Day and night

Automatic IR-cut filter

#### **Minimum illumination**

Color: 0.20 lux at 30 IRE, F1.6 B/W: 0.01 lux at 30 IRE, F1.6 Color: 0.25 lux at 50 IRE, F1.6 B/W: 0.01 lux at 50 IRE, F1.6

#### Shutter speed

1/17000 s to 0.2 s @ 25/30 fps 1/27000 s to 0.2 s @ 50/60 fps

#### Pan/Tilt/Zoom

Pan: 360° endless, 1.8°–150°/s Tilt: 0 to 90°, 1.8°–150°/s Zoom: 10x optical, 12x digital, Total 120x zoom Nadir flip, 100 preset positions, limited guard tour (max 100), control queue, on-screen directional indicator, spot focus

#### System on chip (SoC)

## Model

ARTPEC-8

Memory 1024 MB RAM, 8192 MB Flash

#### **Compute capabilities** Deep learning processing unit (DLPU)

#### Video

#### Video compression

H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG

#### Resolution

**16:9:** 2688x1512 to 320x180 **3:2:**1920 x1280 to 240x160 **4:3:** 1600x1200 to 160x120

#### Frame rate

Up to 50/60 fps (50/60 Hz) in all resolutions

#### Video streaming

Up to 20 unique and configurable video streams<sup>1</sup> Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265 Low latency mode Video streaming indicator

## Signal-to-noise ratio

>55 dB

#### WDR

Forensic WDR: Up to 120 dB depending on scene

#### Noise reduction

Spatial filter (2D noise reduction) Temporal filter (3D noise reduction)

#### Image settings

Saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, tone mapping, exposure mode, exposure zones, compression, rotation: 0°, 180°, text and image overlay, polygon privacy mask, mosaic privacy mask, chameleon privacy mask

Scene profiles: indoor, outdoor, forensic

#### Image processing

Axis Zipstream, Forensic WDR, Lightfinder 2.0

1. We recommend a maximum of 3 unique video streams per camera or channel, for optimized user experience, network bandwidth, and storage utilization. A unique video stream can be served to many video clients in the network using multicast or unicast transport method via built-in stream reuse functionality.

## Audio

#### Audio features

Automatic gain control Speaker pairing Spectrum visualizer<sup>2</sup>

#### Audio streaming

Configurable duplex: Two-way (half duplex, full duplex)

#### Audio input

10-band graphic equalizer Input for external unbalanced microphone, optional 5 V microphone power Unbalanced line input

#### Audio output

Output through speaker pairing Line output

#### Audio encoding

24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bitrate

## Network

#### **Network protocols**

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>3</sup>, HTTP/ 2, TLS<sup>3</sup>, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, UPnP<sup>®</sup>, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, 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), IEEE 802.1X (EAP-TLS), IEEE 802.1AR

## System integration

#### **Application Programming Interface**

Open API for software integration, including VAPIX<sup>®</sup>, metadata and AXIS Camera Application Platform (ACAP); specifications at *axis.com/developercommunity*.

One-click cloud connection

 $\mathsf{ONVIF}^{\circledast}$  Profile G,  $\mathsf{ONVIF}^{\circledast}$  Profile M,  $\mathsf{ONVIF}^{\circledast}$  Profile S, and  $\mathsf{ONVIF}^{\circledast}$  Profile T, specifications at <code>onvif.org</code>

## 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 Video streaming indicator Privacy masks Media clip Focus recall area

#### Edge-to-edge

Speaker pairing

## **Event conditions**

Audio: audio clip playing Device status: above/below operating temperature, fan failure, IP address blocked/removed, live stream active, network lost, new IP address, PTZ power failure, system ready, within operating temperature Edge storage: recording ongoing, storage disruption, storage health issues detected I/O: digital input, manual trigger, virtual input MQTT: stateless PTZ: PTZ control queue, PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready Scheduled and recurring: schedule Video: average bitrate degradation

## **Event actions**

Audio clips: play, stop Day-night mode Guard tour I/O: toggle I/O once, toggle I/O while the rule is active Images: FTP, SFTP, HTTP, HTTPS, network share and email MQTT: publish Notification: HTTP, HTTPS, TCP and email Overlay text Preset position Recordings SNMP traps: send, send while the rule is active Video clips: FTP, SFTP, HTTP, HTTPS, network share and email

#### **Built-in installation aids**

Pixel counter, level grid

2. Feature available with ACAP

<sup>3.</sup> 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).

## Analytics

## Applications

#### Included

AXIS Object Analytics, AXIS Scene Metadata, AXIS Video Motion Detection, active tampering alarm, audio detection, gatekeeper

#### 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, other) Scenarios: line crossing, object in area, time in area, crossline counting, ccupancy in area Up to 10 scenarios Other features: triggered objects visualized with trajectories, color-coded bounding boxes and tables 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, UKCA, CE, KC, EAC, VCCI, RCM

#### EMC

EN 55035, EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, 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

CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3, 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 IK09 Network

NIST SP500-267

#### Cybersecurity

ETSI EN 303 645, BSI IT Security Label, FIPS-140

## 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, Axis Cryptographic Module (FIPS 140-2 level 1)

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 To read more about Axis cybersecurity support, go to axis.com/cybersecurity

#### General

#### Casing

IP66-, and IK09-rated Polycarbonate hard-coated dome Plastic casing 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 3 Typical 4.2 W, max 12.95 W 20–28 V DC, typical 3.8 W, max 11.7 W Features: power meter

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 (eay@cryptsoft.com).

#### Connectors

Network: Shielded RJ45 10BASE-T/100BASE-TX PoE I/O: 6-pin terminal block Audio: 4-pin terminal block Power: DC input, terminal block

#### 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: -20 °C to 50 °C (-4 °F to 122 °F) Humidity: 15–100% RH (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): 0.021 m<sup>2</sup> (0.23 ft<sup>2</sup>)

#### Weight

1.0 kg (2.2 lb)

#### Box content

Camera, installation guide, bayonet adapter, terminal block connectors, connector guard, owner authentication key

#### **Optional accessories**

AXIS T91 Mounting Accessories, AXIS T94P01L Recessed Mount Kit, AXIS T8415 Wireless Installation Tool, AXIS Surveillance Cards For more accessories, go to *axis.com/products/axism5526-e#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-m5526-e#partnumbers

## 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: 16% (recycled) Screened for conflict minerals in accordance with OECD guidelines To read more about sustainability at Axis, go to *axis. com/about-axis/sustainability* 

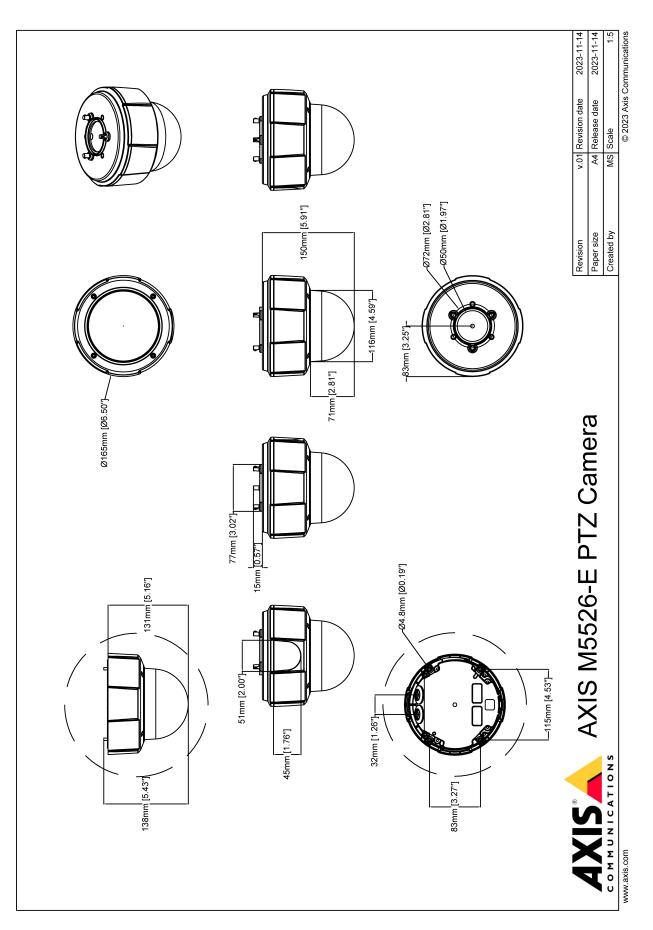
## **Environmental responsibility**

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

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

	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	96 m (314.9 ft)	938 m (3076.6 ft)
Observe	63 px/m (19 px/ft)	38 m (124.6 ft)	373 m (1223.4 ft)
Recognize	125 px/m (38 px/ft)	19 m (62.3 ft)	186 m (610.1 ft)
ldentify	250 px/m (76 px/ft)	10 m (32.8 ft)	93 m (305.0 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.



## 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 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 certified hardware-based FIPS 140 Criteria or 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.

#### **Forensic WDR**

Axis cameras with wide dynamic range (WDR) technology make the difference between seeing important forensic details clearly and seeing nothing but a blur in challenging light conditions. The difference between the darkest and the brightest spots can spell trouble for image usability and clarity. Forensic WDR effectively reduces visible noise and artifacts to deliver video tuned for maximal forensic usability.

#### 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* 

