

## AXIS P9117-PV Corner Camera

6 MP corner camera with no blind spots

AXIS P9117-PV delivers 360° panoramic view with no blind spots. This 6 MP corner-mounted camera includes Axis Lightfinder and Axis Forensic WDR for true colors and great details in challenging light or near darkness. AXIS TP9801 Cover Steel is also available as an accessory. Featuring a deep learning processing unit, it's possible to run powerful analytics on the edge. For instance, AXIS Object Analytics can detect and classify different objects of interest. With a built-in microphone, it's out-of-the-box-ready for AXIS Audio Analytics. Furthermore, Axis edge vault, a hardware-based cybersecurity platform, safeguards the device.

- > Full coverage and no blind spots
- > 6 MP with stereographic lens
- > Built-in microphone and Axis Audio Analytics
- > Vandal-resistant (IK10) and IP66-rated dust protection
- > Built-in cybersecurity with Axis edge vault



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## Camera

<b>Image sensor</b>	1/1.8" progressive scan RGB CMOS
<b>Lens</b>	1.1 mm, F2.2 <b>Overview (1:1) :</b> Horizontal field of view: 176° Vertical field of view: 176° <b>Corner View (4:3) :</b> Horizontal field of view: 115° Vertical field of view: 100° Fixed iris, fixed focus, IR corrected
<b>Day and night</b>	Automatic IR-cut filter
<b>Minimum illumination</b>	<b>Color:</b> 0.17 lux at 50 IRE, F2.2 <b>B/W:</b> 0.04 lux at 50 IRE, F2.2
<b>Shutter speed</b>	1/33500 s to 1/5 s
<b>Camera angle adjustment</b>	Digital roll: ±180°

## System on chip (SoC)

<b>Model</b>	ARTPEC-8
<b>Memory</b>	2048 MB RAM, 8192 MB Flash
<b>Compute capabilities</b>	Deep learning processing unit (DLPU)

## Video

<b>Video compression</b>	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
<b>Resolution</b>	<b>Overview:</b> 2160x2160 to 160x160 (1:1) <b>Corner View:</b> 2048x1536 to 320x240 (4:3) <b>Corner View:</b> 2048x1152 to 256x144 (16:9)
<b>Frame rate</b>	without WDR: 50/60 fps @ 50/60 Hz with WDR: up to 25/30 fps @ 50/60 Hz
<b>Video streaming</b>	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 Video streaming indicator
<b>WDR</b>	Forensic WDR: Up to 120 dB depending on scene
<b>Noise reduction</b>	Spatial filter (2D noise reduction) Temporal filter (3D noise reduction)
<b>Image settings</b>	Saturation, contrast, brightness, sharpness, local contrast, tone mapping, white balance, day/night threshold, exposure mode, exposure zones, compression, mirroring, dynamic text and image overlay, and polygon privacy mask
<b>Image processing</b>	Axis Zipstream, Forensic WDR
<b>Pan/Tilt/Zoom</b>	Digital PTZ of view areas, digital PT of corner, preset positions, guard tours

## Audio

<b>Audio features</b>	Automatic gain control Speaker pairing Audio privacy control
<b>Audio streaming</b>	Two-way (full duplex) Audio analytics even when audio streaming is off
<b>Audio input</b>	Input through speaker pairing or portcast technology 10-band graphic equalizer Built-in microphone (disabled by default): MEMS microphone
<b>Audio output</b>	Output through speaker pairing or portcast technology
<b>Audio encoding</b>	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 bit rate

## Network

<b>Network protocols</b>	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS <sup>a</sup> , HTTP/2, TLS <sup>a</sup> , QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP <sup>®</sup> , SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, DHCPv4/v6, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf), IEEE 802.1X (EAP-TLS), IEEE 802.1AR
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## System integration

<b>Application Programming Interface</b>	Open API for software integration, including VAPIX <sup>®</sup> , metadata and AXIS Camera Application Platform (ACAP); specifications at <a href="https://axis.com/developer-community">axis.com/developer-community</a> . ACAP includes Native SDK and Computer Vision SDK. One-click cloud connection ONVIF <sup>®</sup> Profile G, ONVIF <sup>®</sup> Profile M, ONVIF <sup>®</sup> Profile S, and ONVIF <sup>®</sup> Profile T, specifications at <a href="https://onvif.org">onvif.org</a> Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX.
<b>Video management systems</b>	Compatible with AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available at <a href="https://axis.com/vms">axis.com/vms</a>
<b>Onscreen controls</b>	Privacy masks Media clip
<b>Event conditions</b>	Audio: audio detection Device status: above operating temperature, above or below operating temperature, below operating temperature, within operating temperature, 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 MQTT: subscribe Scheduled and recurring: schedule Video: average bitrate degradation, day-night mode, tampering
<b>Event actions</b>	Day-night mode MQTT: publish Notification: HTTP, HTTPS, TCP and email Overlay text Recordings: SD card and network share SNMP traps: send, send while the rule is active Status LED Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email WDR mode
<b>Built-in installation aids</b>	Pixel counter, digital roll, level grid
<b>Analytics</b>	
<b>AXIS Object Analytics</b>	<b>Object classes:</b> humans, vehicles (types: cars, buses, trucks, bikes, other) <b>Features:</b> line crossing, object in area Up to 10 scenarios Metadata visualized with trajectories, color-coded bounding boxes and tables Polygon include/exclude areas ONVIF Motion Alarm event
<b>AXIS Audio Analytics</b>	<b>Features:</b> adaptive audio detection, audio classification <b>Audio classes:</b> scream, shout <b>Event metadata:</b> audio detections, classifications
<b>Metadata</b>	<b>Object data:</b> Classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates Confidence, position <b>Event data:</b> Producer reference, scenarios, trigger conditions <b>Audio data:</b> audio level
<b>Applications</b>	<b>Included</b> AXIS Object Analytics, AXIS Video Motion Detection, AXIS Audio Analytics, Active tampering alarm, Audio detection, Elevator door state detector <b>Supported</b> AXIS Camera Application Platform enabling installation of third-party applications, see <a href="https://axis.com/acap">axis.com/acap</a>

## Approvals

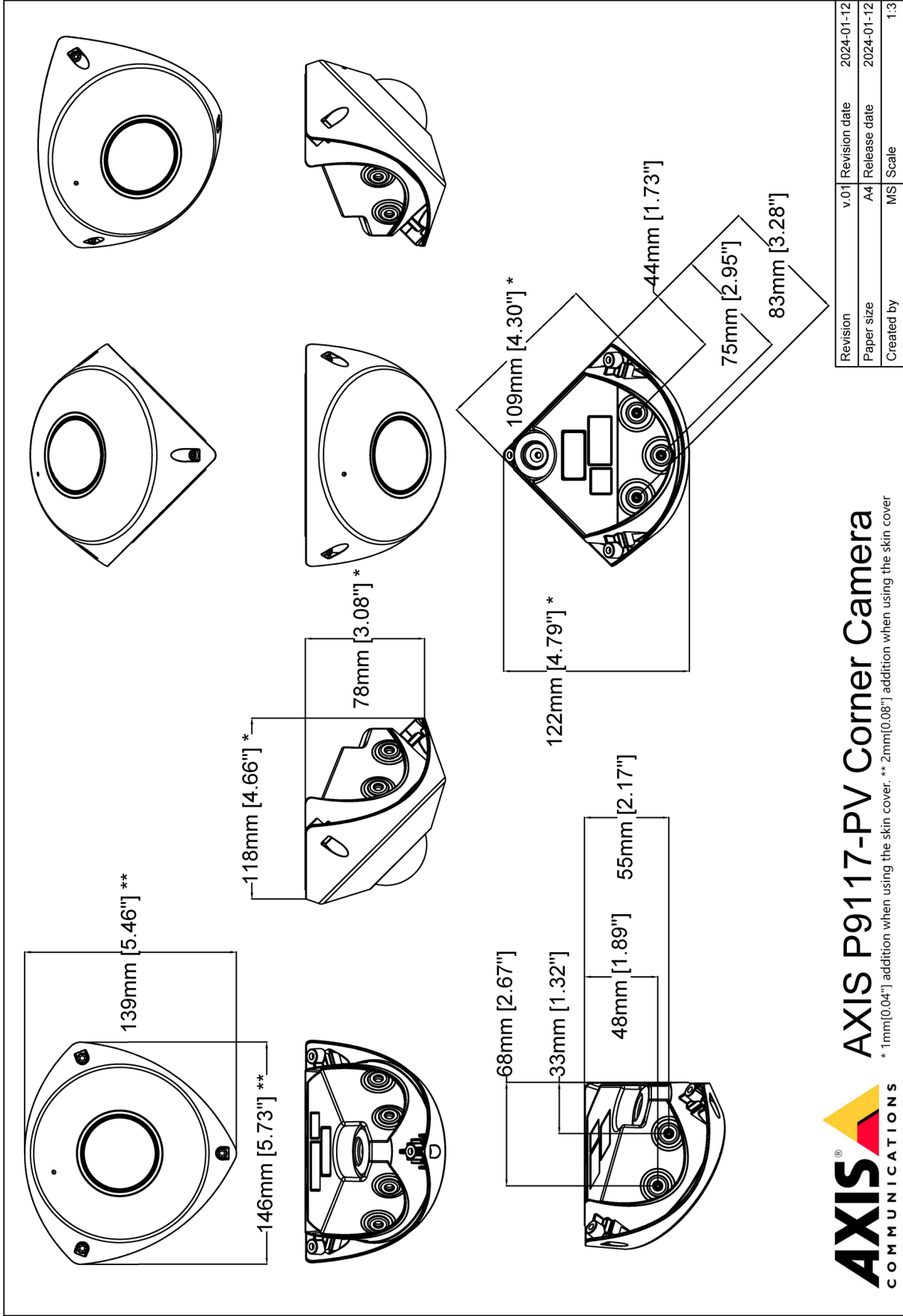
**Product markings** BIS, CE, ICES, KC, RCM, UKCA, UL/cUL, VCCI, WEEE

<b>Supply chain</b>	TAA compliant
<b>EMC</b>	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
<b>Safety</b>	IEC/EN/UL 62368-1 ed. 3, CAN/CSA C22.2 No. 62368-1 ed. 3, IS 13252
<b>Environment</b>	IEC/EN 60529 IP66, IEC/EN 62262 Class IK10, IEC 60721-3-5 Class 5M3 (Vibration, Shock) IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78
<b>Network</b>	NIST SP500-267
<b>Cybersecurity</b>	
<b>Edge security</b>	<b>Software:</b> Signed firmware, brute force delay protection, digest authentication, password protection, AES-XTS-Plain64 256bit SD card encryption <b>Hardware:</b> 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)
<b>Network security</b>	IEEE 802.1X (EAP-TLS) <sup>a</sup> , IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS <sup>a</sup> , TLS v1.2/v1.3 <sup>a</sup> , Network Time Security (NTS), X.509 Certificate PKI, host-based firewall
<b>Documentation</b>	<i>AXIS OS Hardening Guide</i> <i>Axis Vulnerability Management Policy</i> <i>Axis Security Development Model</i> To download documents, go to <a href="https://axis.com/support/cybersecurity/resources">axis.com/support/cybersecurity/resources</a> To read more about Axis cybersecurity support, go to <a href="https://axis.com/cybersecurity">axis.com/cybersecurity</a>
<b>General</b>	
<b>Casing</b>	IP66, IK10-rated Polycarbonate hard-coated dome Color: White NCS S 1002-B For repainting instructions and impact on warranty, contact your Axis partner
<b>Mounting</b>	Corner mounting on 3 or 2 surfaces (wall + wall or wall + ceiling)
<b>Power</b>	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 3.7 W, max 5.3 W
<b>Connectors</b>	Network: Shielded RJ45 10BASE-T/100BASE-TX PoE Audio: Audio and I/O connectivity via AXIS T61 Mk II Audio and I/O Interfaces with portcast technology
<b>Storage</b>	Support for microSD/microSDHC/microSDXC card Recording to network-attached storage (NAS) For SD card and NAS recommendations, see <a href="https://axis.com">axis.com</a>

<b>Operating conditions</b>	-15 °C to 50 °C (5 °F to 122 °F) Humidity 10–85% RH (non-condensing) Maximum operating temperature (intermittent): 55 °C (131 °F) Minimum startup temperature: -15 °C (5 °F)
<b>Storage conditions</b>	-40 °C to 65 °C (-40 °F to 149 °F)
<b>Dimensions</b>	Height: 92 mm (3.62 in) Width: 146 mm (5.75 in) Depth: 122 mm (4.80 in)
<b>Weight</b>	760 g (1.68 lb)
<b>Box content</b>	Camera, installation guide, RJ45 tool mounting, extra screw gaskets, extra cable gasket, owner authentication key
<b>Optional accessories</b>	AXIS TP9801 Cover Steel AXIS TP9601 Conduit Top Box AXIS T6101 Mk II Audio and I/O Interface AXIS T6112 Mk II Audio and I/O Interface AXIS T864 PoE+ over Coax Series 2N® 2WIRE AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, go to <a href="https://axis.com/products/axis-p9117-pv#accessories">axis.com/products/axis-p9117-pv#accessories</a>
<b>System tools</b>	AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator Available at <a href="https://axis.com">axis.com</a>
<b>Languages</b>	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Traditional Chinese, Portuguese, Polish
<b>Warranty</b>	5-year warranty, see <a href="https://axis.com/warranty">axis.com/warranty</a>
<b>Part numbers</b>	Available at <a href="https://axis.com/products/axis-p9117-pv#part-numbers">axis.com/products/axis-p9117-pv#part-numbers</a>
<b>Sustainability</b>	
<b>Substance control</b>	PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard J5709 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 <a href="https://axis.com/partner">axis.com/partner</a> .
<b>Materials</b>	Renewable carbon-based plastic content: 73% (recycled) Screened for conflict minerals in accordance with OECD guidelines To read more about sustainability at Axis, go to <a href="https://axis.com/about-axis/sustainability">axis.com/about-axis/sustainability</a>
<b>Environmental responsibility</b>	<a href="https://axis.com/environmental-responsibility">axis.com/environmental-responsibility</a> Axis Communications is a signatory of the UN Global Compact, read more at <a href="https://unglobalcompact.org">unglobalcompact.org</a>

a. 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)).

# Dimension drawing



## AXIS P9117-PV Corner Camera

\* 1mm[0.04"] addition when using the skin cover. \*\* 2mm[0.08"] addition when using the skin cover

Revision	v.01	Revision date	2024-01-12
Paper size	A4	Release date	2024-01-12
Created by	MS	Scale	1:3

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

Center	DORI definition	Distance
Detect	25 px/m (8 px/ft)	21.3 m (69.9 ft)
Observe	63 px/m (19 px/ft)	8.5 m (27.9 ft)
Recognize	125 px/m (38 px/ft)	3.6 m (11.8 ft)
Identify	250 px/m (76 px/ft)	2.1 m (6.9 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.

Corner	DORI definition	Distance
Detect	25 px/m (8 px/ft)	30.2 m (99.1 ft)
Observe	63 px/m (19 px/ft)	12.0 m (39.4 ft)
Recognize	125 px/m (38 px/ft)	6.0 m (19.7 ft)
Identify	250 px/m (76 px/ft)	3.0 m (9.8 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 Corner 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 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](https://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](https://axis.com/glossary)