

AXIS P4705-PLVE Panoramic Camera

Dual-sensor with 360° IR and deep learning

This dual-sensor, multidirectional camera offers 2*2 MP at 30 fps. It features Lightfinder and Forensic WDR for sharp, clear images in challenging or poor light conditions. Built on ARTPEC-8, this high-performance camera includes a deep learning processing unit enabling improved processing and storage capabilities. It also allows you to collect and analyze even more data than before – on the edge. Plus, it delivers valuable metadata facilitating fast, easy, and efficient forensic search capabilities in live or recorded video. And, with flexible positioning of both varifocal camera heads plus, remote zoom and focus capabilities, it ensures fast and cost-effective installation.

- > **2*2 MP, multidirectional camera, with one IP address**
- > **Support for analytics with deep learning on both sensors**
- > **360° IR illumination**
- > **2.5x zoom**
- > **Axis Lightfinder and Forensic WDR**



AXIS P4705-PLVE Panoramic Camera

Camera

Image sensor

2 x 1/2.8" progressive scan RGB CMOS

Lens

Varifocal, 3.3–8.1 mm, F1.9–3.2
Horizontal field of view: 107°–39°
Vertical field of view: 55°–22°
Diagonal field of view: 131°–45°
Minimum focus distance: 0.5 m (1.6 ft)
Fixed iris, IR corrected, remote zoom and focus

Day and night

Automatically removable infrared-cut filter

Minimum illumination

Color: 0.15 lux at 50 IRE, F1.9
B/W: 0 lux at 50 IRE, F1.9
0 lux with IR illumination on

Shutter speed

1/20000 s to 1.5 s with 60/50 Hz

Camera adjustment

Pan $\pm 110^\circ$, tilt $\pm 75^\circ$, rotation $\pm 170^\circ$

System on chip (SoC)

Model

ARTPEC-8

Memory

2048 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

2x 1920x1080 (2x HDTV 1080p) to 2x 640x360

Frame rate

Up to 60/50 fps (60/50 Hz) 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
Low latency mode

WDR

Forensic WDR: Up to 120 dB depending on scene

Image settings

Saturation, contrast, brightness, sharpness, Forensic WDR, white balance, day/night threshold, tone mapping, exposure mode, exposure zones, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, dynamic text and image overlay, 8 polygon privacy masks per channel

Audio

Streaming

Audio in, simplex
Two-way audio via edge-to-edge technology

External microphone input or line input, ring power, digital audio input, automatic gain control

Network speaker pairing

Audio features through portcast technology: two-way audio connectivity, voice enhancer

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 bit rate

Network

Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS⁽¹⁾, HTTP/2, TLS⁽¹⁾, 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, 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® and AXIS Camera Application Platform; specifications at axis.com/developer-community

One-click cloud connection

ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at onvif.org

Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, and video management software from Axis' partners available at axis.com/vms.

Onscreen controls

IR illumination
Autofocus
Privacy mask
Play media clip

Edge-to-edge

Siren and light pairing

Event conditions

Analytics, virtual inputs through API

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, ring power overcurrent protection, live stream active, casing open

Digital audio: digital signal contains Axis metadata, digital signal has invalid sample rate, digital signal missing, digital signal okay

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, live stream open, tampering

Event actions

Overlay text, day/night mode, flash status LED

Audio clips: play, stop

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

MQTT: publish

Notification: HTTP, HTTPS, TCP and email

Pre- and post-alarm video or image buffering for recording or upload

Record video: SD card and network share

SNMP traps: send, send while the rule is active

Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email

Built-in installation aids

Pixel counter, remote zoom and focus, level grid

Analytics

Applications

Included

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

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

1. 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).

AXIS Object Analytics

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

Scenarios: line crossing, object in area, crossline counting, occupancy in area, time in area

Up to 10 scenarios, with up to 5 scenarios per channel

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

EMC

CISPR 35, CISPR 32 Class A, EN 55035,

EN 55032 Class A, EN 50121-4, 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

Railway: IEC 62236-4

Safety

CAN/CSA C22.2 No. 60950-22,

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

IEC/EN 62471, IEC/EN/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/IP67, IEC/EN 62262:2002 IK10,

MIL-STD-810H (Method 501.7, 502.7, 505.7, 506.6,

507.6, 509.7, 512.6)⁽²⁾, NEMA 250 Type 4X,

NEMA TS 2 (2.2.7-2.2.9)

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), AES-XTS-Plain64 256bit SD card encryption

Hardware: Axis Edge Vault cybersecurity platform TPM 2.0 (CC EAL4+, FIPS 140-2 Level 2), 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)⁽³⁾, IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS⁽³⁾, TLS v1.2/v1.3⁽³⁾, 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-, IP67-, NEMA 4X- and IK10-rated

Polycarbonate hard-coated dome

Aluminum and plastic casing, weathershield

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

Mounting

Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon)

1/4"-20 UNC tripod screw thread

1/2" (M20) conduit side entry

Sustainability

PVC and BFR/CFR free, 7% recycled plastics, 2% bioplastics

2. Method 505.7 with weathershield

3. 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).

Power

Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3
Typical 6.2 W, max 12.95 W
Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4
Typical 8.3 W, max 17.5 W

Connectors

Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE
3.5 mm mic/line in

IR illumination

Optimized IR with power-efficient, long-life 850 nm IR LEDs
PoE Class 3: range of reach 15 m (50 ft) or more depending on the scene
PoE Class 4: range of reach 30 m (98 ft) or more depending on the scene

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

-30 °C to 50 °C (-22 °F to 122 °F)
Maximum temperature according to NEMA TS 2 (2.2.7):
74 °C (165 °F)
Start-up temperature: -30 °C
Humidity 10–100% RH (non-condensing)

Storage conditions

-40 °C to 65 °C (-40 °F to 149 °F)
Humidity 5–95% RH (non-condensing)

Dimensions

Height: 88 mm (3.5 in)
Width: 133 mm (5.2 in)
Length: 208 mm (8.2 in)

Weight

975 g (2.1 lb)

Included accessories

Installation guide, Windows® decoder 1-user license, connector kit, weathershield, connector guard

Optional accessories

Black casing, smoked dome, conduit adapters,
AXIS T94N02 Pendant Kit
AXIS T8415 Wireless Installation Tool
AXIS Surveillance Cards
For more accessories, see 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

Detect, Observe, Recognize, Identify (DORI)

	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	43.9 m (144 ft)	110.0 m (360.8 ft)
Observe	63 px/m (19 px/ft)	17.4 m (57.1 ft)	43.7 m (143 ft)
Recognize	125 px/m (38 px/ft)	8.8 m (29 ft)	22.0 m (72.2 ft)
Identify	250 px/m (76 px/ft)	4.4 m (14 ft)	11.0 m (36.1 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.