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





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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 ±110°, tilt ±75°, rotation ±170°

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, RTCP, 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 (eay@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)
¼"-20 UNC tripod screw thread
½" (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 (eay@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
OptimizedIR 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 (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.

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