AXIS P3827-PVE Panoramic Camera

True to life, 180° coverage, no blind spots

With 7 MP resolution and seamless stitching of all four images, this multisensor camera offers complete coverage and excellent image quality with incredible details up to 30 fps. It delivers 180° horizontal and 90° vertical coverage with no blind spots. Plus, it's possible to mount two cameras back-to-back for a complete 360° overview. Including horizon straightening, this product will give an excellent viewing experience, enabling to set the horizon in the image. Built on ARTPEC-8, this cost-effective camera supports advanced analytics based on deep learning on the edge. Additionally, built-in cybersecurity features prevent unauthorized access and safeguard your system.

> **7 MP multisensor camera with one IP address**
> **180° horizontal, 90° vertical coverage**
> **Seamlessly stitched realistic images**
> **Support for advanced analytics**
> **Horizon straightening**

AXIS P3827-PVE Panoramic Camera

Camera

Image sensor
4 x 1/2.8" progressive scan RGB CMOS
Pixel size 2.9 μm

Lens
Fixed 3.3 mm, F2.0
Horizontal field of view: 180°
Vertical field of view: 90°

Day and night
Automatic IR-cut filter
Hybrid IR filter

Minimum illumination
Color: 0.15 lux at 50 IRE, F2.0
B/W: 0.05 lux at 50 IRE, F2.0

Shutter speed
1/31500 s to 1.5 s

Camera adjustment
Pan ±180°
Tilt 0° to 50°
Roll ±5°

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
3712x1856 to 640x320

Frame rate
Up to 25/30 fps (50/60 Hz) in all resolutions

Video streaming
Up to 20 unique and configurable video streams[1]
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

Multi-view streaming
Up to 8 individually cropped out view areas

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

Image settings
Horizon straightening, saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, tone mapping, exposure mode, compression, dynamic text and image overlay, polygon privacy masks

Image processing
Axis Zipstream, Forensic WDR, Lightfinder

Pan/Tilt/Zoom
Digital PTZ

Audio

Audio features
AGC automatic gain control
Network speaker pairing

---

1. *We recommend a maximum of 3 unique video streams 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 streaming
Configurable duplex:
One-way (simplex, half duplex)
Two-way (half duplex, full duplex)

Audio input
Input for external unbalanced microphone, optional 5 V microphone power
Digital input, optional 12 V ring power
Unbalanced line input

Audio output
Output via network speaker pairing

Audio encoding
24bit LPCM, AAC-LC 8/16/32/48 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[2], HTTP/2, TLS[2], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP, 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®, 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
Privacy masks
Media clip

Event conditions
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 input status
Edge storage: recording ongoing, storage disruption, storage health issues detected
I/O: digital input, manual trigger, virtual input
MQTT: subscribe
Scheduled and recurring: schedule
Video: average bitrate degradation, day-night mode, live stream, tampering

Event actions
Audio clips: play, stop
Day-night mode
I/O: toggle I/O once, toggle I/O while the rule is active
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
Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email

Built-in installation aids
Pixel counter, 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*

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
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

---

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).*

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

Supply chain
TAA compliant

EMC
CISPR 35, CISPR 32 Class A, EN 55035,
EN 55032 Class A, EN 50121-4, EN 61000-6-1,
EN 61000-6-2, IEC 62236-4
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/IP67, IEC/EN 62262 IK10,
NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9),
MIL-STD-810H (Method 501.7, 502.7, 505.7, 506.6,
507.6, 509.7, 512.6)

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 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: Secure boot, Axis Edge Vault with Axis device ID, signed video, secure keystore (CC EAL4+, FIPS 140-2 level 2 certified hardware protection of cryptographic operations and keys)

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 aluminum casing
Polycarbonate hard-coated dome
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*.

Mounting
Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon) and for wall or ceiling mount
¾" (M25) conduit side entries

Power
Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4
Typical 12 W, max 18 W

---

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).*

Connectors

Network: Shielded RJ45 10BASE-T/100BASE-TX/
1000BASE-T PoE
I/O: Terminal block for two configurable supervised
inputs / digital outputs (12 V DC output, max load
50 mA)
Audio: 3.5 mm analog/digital mic/line in

Storage

Support for microSD/microSDHC/microSDXC card
Recording to network-attached storage (NAS)
For SD card and NAS recommendations see *axis.com*

Operating conditions

-40 °C to 55 °C (-40 °F to 131 °F)
Maximum temperature according to NEMA TS 2 (2.2.7):
74 °C (165 °F)
Start-up temperature: -40 °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: 169 mm(6.7 in)
ø 195 mm (7.7 in)
Effective Projected Area (EPA): 0.025 m^2 (0.27 ft^2)

Weight

2300 g (5.1 lb)

Box content

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

Optional accessories

AXIS T8415 Wireless Installation Tool
AXIS Surveillance Cards
AXIS TQ3102 Pendant Kit
AXIS TQ3101-E Pendant Kit
AXIS TQ3201-E Recessed Mount
AXIS T94V01C Dual Camera Mount
For more accessories, go to *axis.com/products/axis-
p3827-pve#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

Warranty

5-year warranty, see *axis.com/warranty*

Part numbers

Available at *axis.com/products/axis-p3827-pve#part-
numbers*

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
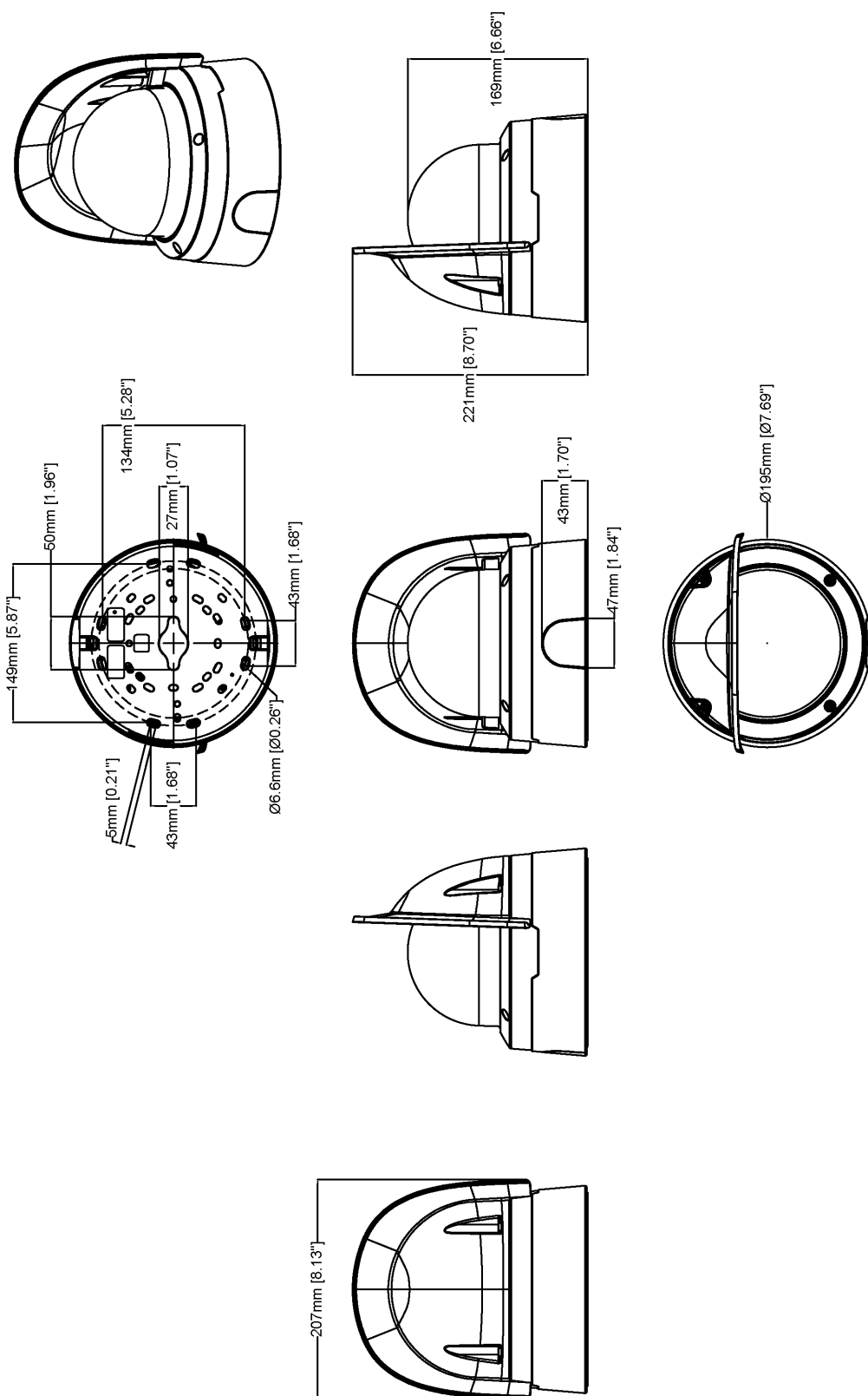UUID, see *axis.com/partner.*

Materials

Renewable carbon-based plastic content: 19%
(biobased)
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*

Dimension drawing

AXIS P3827-PVE Panoramic Camera

Dimensions:
- 169mm [6.66"]
- 221mm [8.70"]
- 134mm [5.28"]
- 50mm [1.96"]
- 27mm [1.07"]
- 43mm [1.68"]
- 149mm [5.87"]
- 5mm [0.21"]
- 43mm [1.68"]
- Ø6.6mm [Ø0.26"]
- 43mm [1.70"]
- 47mm [1.84"]
- Ø195mm [Ø7.69"]
- 207mm [8.13"]

www.axis.com

AXIS COMMUNICATIONS

Revision	v.01	Revision date	2023-02-13
Paper size	A4	Release date	2022-04-01
Created by	MF	Scale	1:5

© 2023 Axis Communications

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.

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.

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.

Horizon straightening

Horizon straightening is a feature in panoramic multisensor cameras that compensates for any physical tilt of the camera, thereby removing distortion and enabling the horizon to be straight even though it is not in the middle of the image. All objects and lines that are vertical in real life stay vertical also in the image.

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.*

For more information, see *axis.com/glossary*

AXIS ®
COMMUNICATIONS