

AXIS P1388-B Box Camera

8 MP indoor surveillance – barebone

With 8 MP resolution, a 1/1.8" sensor, Lightfinder 2.0, and Forensic WDR, AXIS P1388-B delivers exceptional image quality even in challenging light conditions. Including a deep learning processing unit, it offers support for advanced features and applications based on deep learning on the edge. AXIS Object Analytics can detect and classify different types of objects. Axis Edge Vault, a hardware-based cybersecurity platform, safeguards the device and protects sensitive information from unauthorized access. This lightweight barebone unit comes without lens and mounting for maximum flexibility. Ideal for various surveillance situations, it's also designed for use outdoors in a housing.

- > **Barebone unit ready to customize for specific needs**
- > **Exceptional images with 1/1.8" sensor**
- > **Lightfinder 2.0 and Forensic WDR**
- > **Analytics with deep learning**
- > **Built-in cybersecurity with Axis Edge Vault**



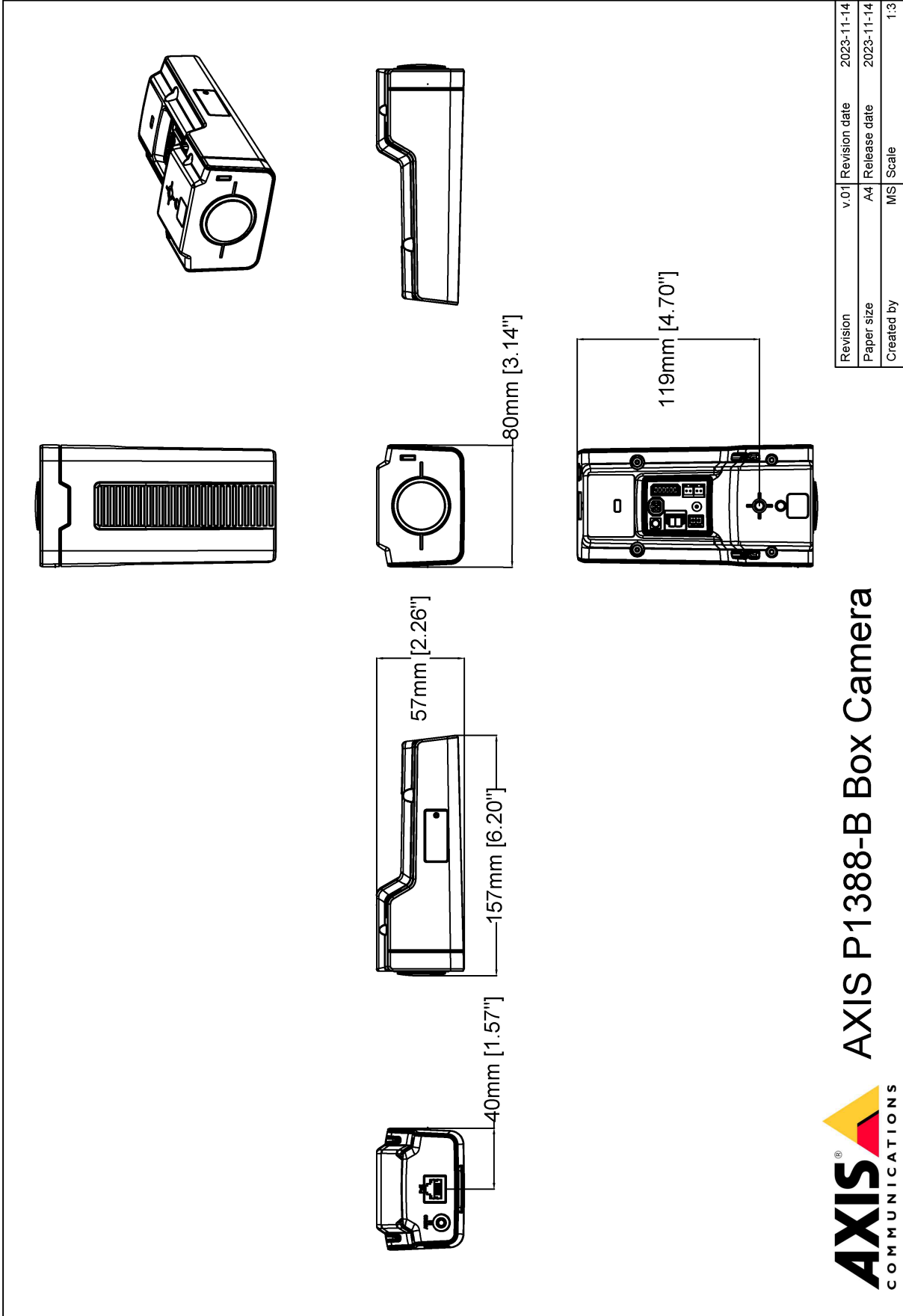
AXIS P1388-B Box Camera

Camera		Audio output	Output through speaker pairing
Image sensor	1/1.8" progressive scan RGB CMOS Pixel size 2.0 µm	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
Lens	Lens not included	Network	
Day and night	Automatically removable infrared-cut filter	Network protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS ^b , HTTP/2, TLS ^c , 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/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 IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS ^d , HTTP/2, TLS ^e , 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/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
Minimum illumination	4K 25/30 fps with Forensic WDR and Lightfinder 2.0: With optional F1.5 lens Color: 0.13 lux at 50 IRE, F1.5 B/W: 0.03 lux at 50 IRE, F1.5 4K 50/60 fps with Lightfinder 2.0: With optional F1.5 lens Color: 0.3 lux at 50 IRE, F1.5 B/W: 0.06 lux at 50 IRE, F1.5 4K 25/30 fps with Forensic WDR and Lightfinder 2.0: With optional F0.9 lens Color: 0.05 lux at 50 IRE, F0.9 B/W: 0.011 lux at 50 IRE, F0.9	System integration	
Shutter speed	1/66500 s to 2 s with 50 Hz 1/66500 s to 2 s with 60 Hz	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
System on chip (SoC)		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 .
Model	ARTPEC-8	Onscreen controls	Electronic image stabilization Day/night shift Defogging Wide dynamic range Video streaming indicator Autofocus Privacy masks Media clip
Memory	2048 MB RAM, 8192 MB Flash	Edge-to-edge	Microphone pairing Speaker pairing
Compute capabilities	Deep learning processing unit (DLPU)	Event conditions	Audio: audio detection, audio clip playing Device status: above/below/within operating temperature, IP address removed/blocked, new IP address, network lost, system ready, ring power overcurrent protection, live stream active Digital audio input status Edge storage: recording ongoing, storage disruption, storage health issues detected I/O: digital input, digital output, manual trigger, virtual input MQTT: stateless Scheduled and recurring: schedule Video: average bitrate degradation, day-night mode, tampering
Video		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: record, record while the rule is active SNMP traps: send, send while the rule is active Status LED: flash, flash while the rule is active Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email WDR mode
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	Built-in installation aids	
Resolution	3840x2160 to 160x90	Analytics	
Frame rate	With forensic WDR: Up to 25/30 fps (50/60 Hz) in all resolutions No WDR: Up to 50/60 fps (50/60 Hz) in all resolutions	Applications	Included: AXIS Object Analytics, AXIS Scene Metadata, AXIS Image Health Analytics, AXIS Live Privacy Shield ^f , AXIS Video Motion Detection Supported: Support for AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap
Video streaming	Up to 20 unique and configurable video streams ^a 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	AXIS Object Analytics	Object classes: humans, vehicles (types: cars, buses, trucks, bikes, other)
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	Contrast, brightness, sharpness, white balance, day/night threshold, tone mapping, exposure mode, exposure zones, defogging, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, text and image overlay, dynamic text and image overlay, privacy masks, polygon privacy mask, target aperture Scene profiles: forensic, vivid, traffic overview		
Image processing	Axis Zipstream, Forensic WDR, Lightfinder 2.0		
Pan/Tilt/Zoom	Digital PTZ, preset positions Preset position tour, control queue, on-screen directional indicator Guard tour (max 100)		
Audio			
Audio features	Automatic gain control Speaker pairing		
Audio streaming	Configurable duplex: One-way (simplex) 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 Built-in microphone (can be disabled)		

	<p>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</p>
AXIS Image Health Analytics	<p>Detection settings: Tampering: blocked image, redirected image Image degradation: blurred image, underexposed image Other features: sensitivity, validation period</p>
AXIS Scene Metadata	<p>Object classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates Object attributes: confidence, position</p>
Approvals	
Product markings	UL/cUL, UKCA, CE, KC, EAC, VCCI, RCM
EMC	<p>CISPR 35, CISPR 32 Class A, EN 55035, EN 55032 Class A, EN 50121-4, EN 61000-6-1, EN 61000-6-2 Japan: VCCI Class A Korea: KS C 9835, KS C 9832 Class A USA: FCC Part 15 Subpart B Class A</p>
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
Network	NIST SP500-267, IPv6 USGv6
Cybersecurity	ETSI EN 303 645, FIPS 140 ETSI EN 303 645, BSI IT Security Label, FIPS 140
Cybersecurity	
Edge security	<p>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 Hardware: Axis Edge Vault cybersecurity platform Secure element (CC EAL 6+), Axis device ID, secure keystore, signed video, secure boot</p>
Network security	<p>IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)⁹, IEEE 802.1AR, HTTPS/HSTS^h, TLS v1.2/v1.3^l, Network Time Security (NTS), X.509 Certificate PKI, IP address filtering IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)^j, IEEE 802.1AR, HTTPS/HSTS^k, TLS v1.2/v1.3^l, Network Time Security (NTS), X.509 Certificate PKI, IP address filtering</p>
Documentation	<p><i>AXIS OS Hardening Guide</i> <i>Axis Vulnerability Management Policy</i> <i>Axis Security Development Model</i> 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</p>
General	
Casing	<p>Aluminum casing Weathershield with black anti-glare coating Color: white NCS S 1002-B, black NCS S 9000-N</p>
Mounting	¼"-20 UNC tripod screw thread
Power	<p>Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 4.61 W, max 12.13 W 10-28 V DC, typical 4.53 W, max 11.14 W</p>
Connectors	<p>Network: Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE I/O: 6-pin 2.5 mm terminal block for 2 supervised alarm inputs and 2 outputs (12 V DC output, max load 50 mA) Audio: 3.5 mm mic/line in Serial communication: RS485/RS422, 2 pcs, 2 pos, full duplex, terminal block Power: DC input, terminal block Lens: i-CS connector (compatible with P-Iris and DC-iris) AXIS T92G20 connector</p>
Storage	<p>Support for microSD/microSDHC/microSDXC card Support for SD card encryption (AES-XTS-Plain64 256bit)</p>

	<p>Recording to network-attached storage (NAS) For SD card and NAS recommendations see axis.com</p>
Operating conditions	<p>-10 °C to 55 °C (14 °F to 131 °F) Humidity 10-85% RH (non-condensing)</p>
Storage conditions	<p>-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)</p>
Dimensions	For the overall product dimensions, see the dimension drawing in this datasheet.
Weight	395 g (0.9 lb)
Box content	Camera, installation guide, terminal block connectors, owner authentication key
Optional accessories	<p>AXIS Microphones, AXIS Midspans AXIS CS mount lenses AXIS T8415 Wireless Installation Tool AXIS Surveillance Cards For more accessories, go to axis.com/products/axis-p1388-b#accessories</p>
System tools	<p>AXIS Site Designer, AXIS Device Manager, AXIS Device Manager Extend, product selector, accessory selector, lens calculator Available at axis.com</p>
Languages	<p>English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese</p>
Warranty	5-year warranty, see axis.com/warranty
Part numbers	Available at axis.com/products/axis-p1388-b#part-numbers
Sustainability	
Substance control	<p>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</p>
Materials	<p>Renewable carbon-based plastic content: 3% (bio-based) Screened for conflict minerals in accordance with OECD guidelines To read more about sustainability at Axis, go to axis.com/about-axis/sustainability</p>
Environmental responsibility	<p>axis.com/environmental-responsibility Axis Communications is a signatory of the UN Global Compact, read more at unglobalcompact.org</p>
	<p>a. 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. b. 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). c. 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). d. 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). e. 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). f. Available for download g. 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). h. 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). i. 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). j. 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). k. 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). l. 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).</p>

Dimension drawing



Revision	v.01	Revision date	2023-11-14
Paper size	A4	Release date	2023-11-14
Created by	MS	Scale	1:3

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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://www.axis.com/solutions/edge-vault).

Electronic image stabilization

Electronic image stabilization (EIS) provides smooth video in situations where a camera is subject to vibrations. Built-in gyroscopic sensors continuously detect the camera's movements and vibrations, and they automatically adjust the frame to ensure you always capture the details you need. Electronic image stabilization relies on different algorithms for modeling camera motion, which are used to correct the images.

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.

For more information, see [axis.com/glossary](https://www.axis.com/glossary)