AXIS Q2112-E Thermal Camera

Outstanding high-resolution detection and verification

Ideal for perimeter security, this high-resolution thermal camera offers reliable detection and verification 24/7 all while protecting privacy. It features a powerful sensor with extremely high thermal sensitivity for a low false alarm rate. And there's a choice of five lens options. It can be mounted on a positioning unit for 360° unobstructed views. AXIS Perimeter Defender is available for enhanced protection. Built on a powerful platform, it's possible to add third-party analytics. With edge-to-edge technology, you can easily integrate and trigger other devices such as a network speaker. Furthermore, Axis Edge Vault safeguards your device and protects sensitive information from unauthorized access.

- > High-resolution detection, low false alarm rate
- > Lens options available
- > Flexible mounting options
- > Support for powerful analytics
- > Built-in cybersecurity with Axis Edge Vault

AXIS Q2112-E Thermal Camera

Camera

Variants	AXIS Q2112-E 10 mm AXIS Q2112-E 19 mm AXIS Q2112-E 25 mm AXIS Q2112-E 35 mm AXIS Q2112-E 60 mm
Image sensor	Uncooled microbolometer 640x480 pixels, pixel size 17 µm. Spectral range: 8-14 µm
Lens	Athermalized **10 mm**, F1.2 Horizontal field of view: 63° Near focus distance: 2.8 m (9.2 ft) **19 mm**, F1.0 Horizontal field of view: 31° Near focus distance: 8.5 m (28 ft) **25 mm**, F1.0 Horizontal field of view: 24° Near focus distance: 18.5 m (61 ft) **35 mm**, F1.2 Horizontal field of view: 17° Near focus distance: 33 m (108 ft) **60 mm**, F1.2 Horizontal field of view: 10° Near focus distance: 84 m (276 ft)
Sensitivity	NETD <20 mK @25 °C, F1.0
Pan/Tilt	Supporting guard tour with up to 256 preset positions (positioning unit sold separately)

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	Sensor is 640x480. Image can be scaled up to 800x600.
Frame rate	Up to 8.3 fps or 30 fps depending on model
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 Video streaming indicator
Image settings	Contrast, brightness, sharpness, local contrast, exposure zones, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, text and image overlay, polygon privacy mask, electronic image stabilization, multiple color palettes
Image processing	Axis Zipstream

Audio

Audio features	AGC automatic gain control Network speaker pairing Spectrum visualizer[b]
Audio streaming	Configurable duplex: Two-way (half duplex, full duplex)
Audio input	10-band graphic equalizer 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 Line output
Audio 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[c], HTTP/2, TLS[d], 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)

System integration

Application Programming Interface	Open API for software integration, including VAPIX® 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	Electronic image stabilization Video streaming indicator Privacy masks Media clip Heater
Edge-to-edge	Speaker pairing
Event conditions	Audio: audio detection, audio clip playing 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, tampering
Event actions	Audio clips: play, stop I/O: toggle I/O once, toggle I/O while the rule is active MQTT: publish Notification: HTTP, HTTPS, TCP, and email Overlay text Pre- and post-alarm video or image buffering for recording or upload Recordings: SD card and network share SNMP traps: send, send while the rule is active Status LED: flash 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 Video Motion Detection, AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard, active tampering alarm, audio detection **Supported** AXIS Perimeter Defender Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*

Approvals

Product markings	CSA, UL/cUL, CE, KC, VCCI, RCM
Supply chain	TAA compliant
EMC	CISPR 35, CISPR 32 Class A, EN 50121-4, EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2 **Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A **Canada:** ICES(A)/NMB(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. 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[e],

	ISO 21207 Method B , MIL-STD-810H (Method 501.7, 502.7, 505.7, 506.6, 507.6, 509.7, 510.7, 512.6, 514.8, 516.8, 521.4)[f], 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

Cybersecurity

Edge security	**Software:** Signed firmware, 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 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)[g], IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS[h], TLS v1.2/v1.3[i], 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[j] Aluminum 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*.
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 2 Class 4 Typical 5.2 W, max 25.5 W 10–28 V DC, typical 4.6 W, max 25.5 W
Connectors	Network: RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE I/O: Terminal block for two supervised and two unsupervised configurable inputs / digital outputs (12 V DC output, max. load 50 mA) Audio: 3.5 mm mic/line in, 3.5 mm line out Serial communication: RS485/RS422, 2 pcs, 2 pos, full duplex, terminal block Power: DC input, terminal block
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	-40 °C to 60 °C (-40 °F to 140 °F) Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)
Dimensions	For the overall product dimensions, see the dimension drawing in this datasheet.
	Effective Projected Area (EPA): 0.05 m^2 (0.48 ft^2)
Weight	**10 mm, 19 mm, 25 mm, 35 mm**: 3.3 kg (7.3 lb) **60 mm**: 3.5 kg (7.7 lb)
Box content	Camera, installation guide, terminal block connectors, connector guard, cable gaskets, owner authentication key
Optional accessories	AXIS TQ1818-E Positioning Unit, AXIS TQ1003-E Wall Mount For more accessories, go to *axis.com/products/axis-q2112-e#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, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
Warranty	5-year warranty, see *axis.com/warranty*
Export control	This product is subject to export control regulations, and you should always comply with all applicable national and international export or re-export control regulations.
Part numbers	Available at *axis.com/products/axis-q2112-e#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.
Materials	Renewable carbon-based plastic content: 7% (recycled: 2%, bio-based: 5%)[k] 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*

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. *Feature available with ACAP*
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 (eay@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 (eay@cryptsoft.com).*
e. *Excluding front window*
f. *514.8 and 516.8 only applicable to 60mm lens variant.*
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 (eay@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 (eay@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 (eay@cryptsoft.com).*
j. *Excluding front window*
k. *Applicable to 10mm, 19mm, 25mm, and 35mm.*