

AXIS Q2111-E Thermal Camera

Reliably detect and verify regardless of weather and light

Ideal for perimeter protection, this robust, halogen-free camera can detect and verify regardless of weather and light conditions even in low-contrast scenes. This ARTPEC8-based camera enables proactive surveillance and a powerful platform to run advanced AI analytics. And AXIS Perimeter Defender is available for enhanced protection. It features four I/O ports and with edge-to-edge technology you can connect, for instance, a horn speaker to enable audio alarms. Furthermore, Axis Edge Vault safeguards the device and offers FIPS 140-2 Level 2 certified key storage and operations. AXIS Q2111-E comes with a 60 mm lens for long distance detection and can be mounted on a pan tilt-unit for Guard Tour and flexible positioning.

- > [60 mm lens for long distance detection](#)
- > [Support for AXIS Perimeter Defender](#)
- > [Built-in cybersecurity with Axis Edge Vault](#)
- > [Robust and halogen-free](#)
- > [Can be mounted on a pan-tilt unit](#)



AXIS Q2111-E Thermal Camera

Camera		Media clip Heater
Image sensor	Uncooled microbolometer 384x288 pixels, pixel size 17 µm. Spectral range: 8-14 µm	Edge-to-edge Speaker pairing
Lens	Athermalized Horizontal field of view: 6.2°, F1.25 Minimum focus distance: 84 m (276 ft)	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
Sensitivity	NETD <20 mK @25C, F1.0	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
Pan/Tilt	Supporting guard tour with up to 256 preset positions (positioning unit sold separately)	Built-in installation aids Pixel counter, level grid
System on chip (SoC)		Analytics
Model	ARTPEC-8	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
Memory	2048 MB RAM, 8192 MB Flash	Approvals
Compute capabilities	Deep learning processing unit (DLPU)	Product markings CSA, UL/cUL, CE, KC, VCCI, RCM
Video		Supply chain TAA compliant
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	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, IEC 62236-4 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
Resolution	Sensor is 384x288. Image can be scaled up to 768x576.	Safety CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3
Frame rate	Up to 8.3 fps or 30 fps depending on model	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, 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), NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)
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	Network NIST SP500-267
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	Cybersecurity
Image processing	Axis Zipstream	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)
Audio		Network security IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2), IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,
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, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP ^d , 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 . ACAP includes Native SDK and Computer Vision SDK. 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 Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available at axis.com/vms	
Onscreen controls	Electronic image stabilization Video streaming indicator Privacy masks	

	HTTPS/HSTS, TLS v1.2/v1.3, Network Time Security (NTS), X.509 Certificate PKI, host-based firewall	Box content	Camera, installation guide, TORX® T30 bit, TORX® T20 screwdriver, terminal block connectors, connector guard, cable gaskets, owner authentication key
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>	Optional accessories	AXIS T99A12 Positioning Unit, AXIS TQ1003-E Wall Mount For more accessories, go to axis.com/products/axis-q2111-e#accessories
General		System tools	AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator Available at axis.com
Casing	<p>IP66/IP67-, NEMA 4X-, and IK10-rated^d 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.</p>	Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 2 Class 4 Typical 4.6 W, max 25.5 W 8–28 V DC, typical 4.1 W, max 25.5 W	Warranty	5-year warranty, see axis.com/warranty
Connectors	<p>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</p>	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.
Storage	<p>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</p>	Part numbers	Available at axis.com/products/axis-q2111-e#part-numbers
Operating conditions	<p>–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)</p>	Sustainability	
Storage conditions	<p>–40 °C to 65 °C (–40 °F to 149 °F) Humidity 5–95% RH (non-condensing)</p>	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.</p>
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)	Materials	<p>Renewable carbon-based plastic content: 18% (recycled: 5%, bio-based: 13%) Screened for conflict minerals in accordance with OECD guidelines To read more about sustainability at Axis, go to axis.com/about-axis/sustainability</p>
Weight	3.5 kg (7.7 lb)	Environmental responsibility	<p>axis.com/environmental-responsibility Axis Communications is a signatory of the UN Global Compact, read more at unglobalcompact.org</p>

- 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.
- Feature available with ACAP
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (eyay@cryptsoft.com).
- Excluding front window