

# AXIS F9111 Main Unit

Single-channel modular unit with audio and I/O

AXIS F9111 is designed for use with a single sensor unit in discreet video surveillance applications. It delivers excellent video quality even in challenging and low light conditions. Ideal for emergency vehicles and buses, it features ignition control functionality with controlled shutdown to ensure you don't drain the vehicle's battery. Based on a divided network camera concept, it uses sensors and cables (up to 30 m/ 98 ft) from Axis with SMA-FAKRA connectors to withstand vibrations and ensure a ruggedized installation. Furthermore, Axis Edge Vault protects your Axis device ID and simplifies authorization of Axis devices on your network.

- > [1080p at 60 fps or 720p at 180 fps](#)
- > [Rugged design and connectors](#)
- > [Multiple sensor and cable options](#)
- > [Support for 2-way audio and I/O](#)
- > [Zipstream, Lightfinder, Forensic WDR](#)



# AXIS F9111 Main Unit

## System on chip (SoC)

<b>Model</b>	ARTPEC-7
<b>Memory</b>	1024 MB RAM, 512 MB Flash

<b>Compute capabilities</b>	Machine learning processing unit (MLPU)
-----------------------------	---

## Video

<b>Video compression</b>	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
--------------------------	---

<b>Resolution</b>	1920x1080 HDTV 1080p
-------------------	----------------------

<b>Frame rate</b>	Up to 30 fps for 1080p (WDR mode) Up to 60 fps for 1080p Up to 180 fps for 720p
-------------------	---

<b>Video streaming</b>	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 Video streaming indicator
------------------------	--

<b>Image settings</b>	Contrast, brightness, sharpness, Forensic WDR, fixed orientation aid, white balance, tone mapping, exposure control, exposure zones, compression, rotation: 0°, 90°, 180°, 270°, mirroring, polygon privacy mask, control queue
-----------------------	---

## Audio

<b>Audio streaming</b>	Two-way, full duplex
------------------------	----------------------

<b>Audio encoding</b>	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
-----------------------	--

<b>Audio input/output</b>	2x external microphone input or line input, 1x line output, ring power, digital audio input
---------------------------	---

## Network

<b>Network protocols</b>	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS, HTTP/2, TLS, 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, RTCP, DHCP, SSH, SIP, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf)
--------------------------	--

## System integration

<b>Application Programming Interface</b>	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at <a href="http://axis.com">axis.com</a> One-click cloud connection ONVIF® Profile G and ONVIF® Profile S, specification at <a href="http://onvif.org">onvif.org</a>
--	--

<b>Event conditions</b>	Device status, digital audio, edge storage, I/O, PTZ, scheduled event, video
-------------------------	--

<b>Event actions</b>	Play audio clip, toggle I/O, send images, MQTT publish, send notifications, overlay text, power saving mode, recordings, SNMP trap messages, status LED, video clips
----------------------	--

<b>Data streaming</b>	Event data
-----------------------	------------

## Analytics

<b>AXIS Object Analytics</b>	Object classes: humans, vehicles Features: line crossing, object in area, crossline counting <sup>BETA</sup> , occupancy in area <sup>BETA</sup> Up to 10 scenarios Metadata visualized with color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
------------------------------	--

<b>Applications</b>	<b>Included</b> AXIS Object Analytics AXIS Video Motion Detection, audio detection <b>Supported</b> Tampering alarm Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>
---------------------	---

## Cybersecurity

<b>Edge security</b>	<b>Software:</b> Signed firmware, brute force delay protection, digest authentication, password protection, AES-XTS-Plain64 256bit SD card encryption <b>Hardware:</b> Axis Edge Vault cybersecurity platform Secure element (CC EAL 6+), Axis device ID, secure keystore, signed video, secure boot
----------------------	--

<b>Network security</b>	IEEE 802.1X (EAP-TLS), IEEE 802.1AR, HTTPS/HSTS, TLS v1.2/v1.3, Network Time Security (NTS), X.509 Certificate PKI, IP address filtering
-------------------------	--

<b>Documentation</b>	<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 <a href="http://axis.com/support/cybersecurity/resources">axis.com/support/cybersecurity/resources</a> To read more about Axis cybersecurity support, go to <a href="http://axis.com/cybersecurity">axis.com/cybersecurity</a>
----------------------	---

## General

<b>Casing</b>	IP3X-rated Aluminum casing Color: black NCS S 9000-N
---------------	--

<b>Sustainability</b>	PVC free
-----------------------	----------

<b>Power</b>	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 10-48 V DC, typical 11 W, max 25.5 W
--------------	---

<b>Connectors</b>	RJ45 for 10BASE-T/100BASE-TX/1000BASE-T PoE FAKRA for sensor units 6-pin terminal block for 4x configurable I/Os (12 V DC output), max load 50 mA 3.5 mm mic/line in, 3.5 mm line out 5-pin terminal block RS232/RS485 3-pin terminal block for 10-48 V DC input
-------------------	---

<b>Storage</b>	Support for microSD/microSDHC/microSDXC card and encryption Recording to network-attached storage (NAS) For SD card and NAS recommendations see <a href="http://axis.com">axis.com</a>
----------------	--

<b>Operating conditions</b>	-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 10-95% RH (non-condensing)
-----------------------------	---

<b>Storage conditions</b>	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)
---------------------------	--

<b>Approvals</b>	EMC CISPR 24, EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), VCCI Class A, RCM AS/NZS CISPR 32 Class A, KC KN32 Class A, KC KN35, EAC, ECE R10 rev.05 (E-mark) <b>Safety</b> CAN/CSA C22.2 No. 62368-1, IEC/EN/UL 62368-1, UN ECE R118, IS 13252
------------------	---

<b>Environment</b>	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-64, IEC TR 60721-4-5 Class 5M3, IEC/EN 60529 IP3X, IEC/EN 61373 Category 1 Class B, NEMA TS 2 (2.2.7-2.2.9)
--------------------	---

<b>Network</b>	NIST SP500-267
----------------	----------------

<b>Dimensions</b>	51 x 120 x 120 mm (2 x 4.7 x 4.7 in)
-------------------	--------------------------------------

<b>Weight</b>	650 g (1.4 lb)
---------------	----------------

<b>Required hardware</b>	AXIS TU6004-E Cable, AXIS TU6005 Plenum Cable, AXIS F21 Sensor Unit, AXIS F4105-LRE Dome Sensor, AXIS F7225-RE Pinhole Sensor
--------------------------	---

<b>Included accessories</b>	Installation guide, Windows® decoder 1-user license
-----------------------------	---

<b>Optional accessories</b>	AXIS Surveillance Cards TU6001 Connector 3-pin, TU6008 Connector 5-pin, TU6009 Connector 6-pin For more accessories, see <a href="http://axis.com">axis.com</a>
-----------------------------	---

<b>Video management software</b>	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at <a href="https://axis.com/vms">axis.com/vms</a>	Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
<b>Languages</b>	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional	<b>Warranty</b> 5-year warranty, see <a href="https://axis.com/warranty">axis.com/warranty</a>