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. And it requires just one video management software (VMS) license. Ideal for emergency vehicles and buses, it features ignition control with controlled shutdown. AXIS Sensor Metrics Dashboard ACAP comes pre-installed in this main unit. The ACAP gathers information from the connected sensor devices and stores the data directly on the main unit SD–card. The built-in accelerometer alerts you if the vehicle deviates from normal movement. 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

> Accelerometer, GPS, modbus support

> Built-in cybersecurity with Axis Edge Vault

AXIS F9111 Main Unit

System on chip (SoC)	
Model	ARTPEC-7
Memory	1024 MB RAM, 512 MB Flash
Compute capabilities	Machine learning processing unit (MLPU)

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	1920x1080 HDTV 1080p
Frame rate	Up to 30 fps for 1080p (WDR mode) Up to 60 fps for 1080p Up to 180 fps for 720p
Video streaming	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
Image settings	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	
Audio streaming	Two-way, full duplex
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
Audio input/output	2x external microphone input or line input, 1x line output, ring power, digital audio input

Network	
Network protocols	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	
Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* One-click cloud connection ONVIF® Profile G and ONVIF® Profile S, specification at *onvif.org*
Event conditions	Device status, digital audio, edge storage, I/O, PTZ, scheduled event, video
Event actions	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
Data streaming	Event data

Analytics	
Applications	Included AXIS Object Analytics, AXIS Scene Metadata AXIS Video Motion Detection, audio detection AXIS Sensor Metrics Dashboard: GPS over serial: Protocol: NMEA 0183, Port mode: RS232 Modbus over serial: Protocol: Modbus RTU, Port mode: RS485 2-wire Modbus over IP: Protocol: Modbus TCP, Port mode: Ethernet on switch **Supported** Tampering alarm Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
AXIS Object Analytics	**Object classes:** humans, vehicles **Scenarios:** line crossing, object in area, crossline counting, occupancy in area Up to 10 scenarios **Other features:** triggered objects visualized with color-coded bounding boxes

Polygon include/exclude areas
Perspective configuration
ONVIF Motion Alarm event

AXIS Scene Metadata	**Object classes:** humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates **Object attributes:** confidence, position

Approvals	
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, EAC, ECE R10 rev.05 (E-mark) **Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A **Canada:** ICES-3(A)/NMB-3(A) **Japan:** VCCI Class A **Korea:** KC KN32 Class A, KC KN35 **USA:** FCC Part 15 Subpart B Class A
Safety	CAN/CSA C22.2 No. 62368-1, IEC/EN/UL 62368-1, UN ECE R118, IS 13252
Environment	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)
Network	NIST SP500-267
Cybersecurity	ETSI EN 303 645

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, AES-XTS-Plain64 256bit SD card encryption **Hardware:** Axis Edge Vault cybersecurity platform Secure element (CC EAL 6+), Axis device ID, secure keystore, signed video, secure boot
Network security	IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2), IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS, TLS v1.2/v1.3, 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	IP3X-rated Aluminum casing Color: black NCS S 9000-N
Sustainability	PVC free
Power	Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4 10–48 V DC, typical 11 W, max 25.5 W
Connectors	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
Storage	Support for microSD/microSDHC/microSDXC card and encryption 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 10–95% RH (non-condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)
Dimensions	51 x 120 x 120 mm (2 x 4.7 x 4.7 in)
Weight	650 g (1.4 lb)

Required hardware	AXIS TU6004-E Cable, AXIS TU6005 Plenum Cable, AXIS F21 Sensor Unit, AXIS F4105-LRE Dome Sensor, AXIS F7225-RE Pinhole Sensor
Included accessories	Installation guide, Windows® decoder 1-user license
Optional accessories	AXIS Surveillance Cards TU6001 Connector 3-pin, TU6008 Connector 5-pin, TU6009 Connector 6-pin For more accessories, see *axis.com*

Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at *axis.com/vms*
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*

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