

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, 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

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 firmware, 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)

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| Required hardware | AXIS TU6004-E Cable, AXIS TU6005 Plenum Cable, AXIS F21 Sensor Unit, AXIS F4105-LRE Dome Sensor, AXIS F7225-RE Pinhole Sensor | Video management software | AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at axis.com/vms |
| Included accessories | Installation guide, Windows® decoder 1-user license | Languages | English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese |
| Optional accessories | AXIS Surveillance Cards TU6001 Connector 3-pin, TU6008 Connector 5-pin, TU6009 Connector 6-pin For more accessories, see axis.com | Warranty | 5-year warranty, see axis.com/warranty |