

AXIS M7116 Video Encoder

Cost-effective, 16-channel video encoder with Zipstream

AXIS M7116 is a cost-effective, 16 channel video encoder that adds the benefits of IP surveillance to analog camera systems. It supports standard resolution analog cameras as well as PTZ control over RS-485. This rack-mounted encoder features memory card slots for edge storage as well as support for intelligent analytics such as motion detection and active tampering alarm. Including Zipstream with H.264/H.265, it significantly reduces bandwidth and storage requirements without compromising image quality. Furthermore, it offers enhanced security features such as signed firmware and secure boot.

- > 30 fps on all 16 channels
- > PTZ control
- > Zipstream with support for H.264/H.265
- > Signed firmware and secure boot
- > Support for intelligent analytics



AXIS M7116 Video Encoder

System on chip (SoC)

Model

ARTPEC-7

Memory

1024 MB RAM, 512 MB Flash
Battery backed-up real-time clock

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

176x144/176x120 (PAL/NTSC) to 720x576/720x480 (PAL/NTSC)

Frame rate

25/30 fps in all resolutions
Up to 30 fps in quad view in full resolution

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
Quad view

Image settings

Rotation: 0°, 90°, 180°, 270°, de-interlace filter, compression, color, brightness, contrast, aspect ratio correction, mirroring of images, text and image overlay, polygon privacy mask, video termination, sharpness, noise reduction

Pan/Tilt/Zoom

Wide range of analog PTZ cameras supported, drivers included in the firmware
Up to 100 preset positions/camera, Guard tour, PTZ control queue
Supports Windows compatible joysticks

Network

IP address

Four IP address, one per four channels

Security

IP address filtering, HTTPS⁽¹⁾ encryption, IEEE 802.1x (EAP-TLS)⁽¹⁾, network access control, user access log, multi-level user

Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS⁽¹⁾, TLS⁽¹⁾, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, PTP, 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; specifications at axis.com
One-click cloud connection
ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at onvif.org

Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, and video management software from Axis' partners available at axis.com/vms.

Event conditions

Device status: IP address removed, network lost, new IP address, storage failure, system ready
Edge storage: recording ongoing, storage disruption
I/O: manual trigger, virtual input
MQTT subscribe
PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready
Scheduled and recurring: scheduled event
Video: average bitrate degradation, live stream open, tampering
Video encoder: video connected

1. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

Event actions

Guard tours, upload of images or video clips, notification, overlay text, preset positions, recordings, SNMP trap messages, status LED, video clips MQTT publish

Data streaming

Event data

Analytics

Applications

Included

AXIS Video Motion Detection, active tampering alarm Support for AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap

Approvals

EMC

EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, EN 55035, EN 61000-6-1, EN 61000-6-2

USA: FCC Part 15 Subpart B Class A

Canada: ICES-3(A)/NMB-3(A)

Australia/New Zealand: RCM AS/NZS CISPR 32 Class A

Japan: VCCI Class A

Korea: KC KN32 Class A, KC KN35

Safety

IEC/EN/UL 62368-1

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

Network

NIST SP500-267

Cybersecurity

ETSI EN 303 645, BSI IT Security Label

Cybersecurity

Edge security

Software: Signed OS, brute force delay protection, digest authentication and OAuth 2.0 RFC6749 Client Credential Flow/OpenID Authorization Code Flow for centralized ADFS account management, password protection, AES-XTS-Plain64 256bit SD card encryption
Hardware: Secure boot

Network security

IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)⁽²⁾, IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS⁽²⁾, TLS v1.2/v1.3⁽²⁾, 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

Metal casing 1U stand alone, rackmount or wallmount
Color: white NCS S 1002-B

Sustainability

PVC free

Power

max 26 W

Connectors

16 pcs analog video BNC inputs

1 pc 1000 BASE-TX Ethernet (RJ45)

4 pcs terminal block for RS485/RS422 serial communication (full duplex)

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

0 °C to 50 °C (32 °F to 122 °F)

Humidity 10–85% RH (non-condensing)

Storage conditions

–40 °C to 65 °C (–40 °F to 149 °F)

Humidity 5–95% RH (non-condensing)

Dimensions

44 x 145 x 440 mm (1.7 x 5.7 x 17.3 in)

2. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

Weight

2050 g (4.5 lb)

Included accessories

Installation guide, Windows® decoder 1-user license, DC input plug, 8 pcs 2-pin RS485/RS422 plugs, mains power supply, mounting and connector kit

Optional accessories

For accessories, see [axis.com](https://www.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](https://www.axis.com/warranty)