

## 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<sup>1</sup> encryption, IEEE 802.1x (EAP-TLS)<sup>1</sup>, network access control, user access log, multi-level user

**Network protocols**  
IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS<sup>1</sup>, TLS<sup>1</sup>, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP<sup>®</sup>, 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<sup>®</sup> and AXIS Camera Application Platform; specifications at [axis.com](http://axis.com)  
One-click cloud connection  
ONVIF<sup>®</sup> Profile G, ONVIF<sup>®</sup> Profile M, ONVIF<sup>®</sup> Profile S, and ONVIF<sup>®</sup> Profile T, specification at [onvif.org](http://onvif.org)

**Video management systems**  
Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at [axis.com/vms](http://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](http://openssl.org)), and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto: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](http://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)<sup>2</sup>, IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS<sup>2</sup>, TLS v1.2/v1.3<sup>2</sup>, 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](http://axis.com/support/cybersecurity/resources)

To read more about Axis cybersecurity support, go to [axis.com/cybersecurity](http://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](http://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](http://openssl.org)), and cryptographic software written by Eric Young ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)).

## Weight

2050 g (4.5 lb)

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## 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

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## Optional accessories

For accessories, see [axis.com](http://axis.com)

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## Languages

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese

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## Warranty

5-year warranty, see [axis.com/warranty](http://axis.com/warranty)