AXIS P7316 Video Encoder

Full-featured, 16-channel video encoder

AXIS P7316 is a full-featured, 16-channel video encoder that adds IP benefits to any analog camera system. It supports standard and HD analog cameras up to 4K resolution as well as PTZ control over RS485. This rack-mounted encoder features support for two-way audio and intelligent analytics such as motion detection and active tampering alarm. An SFP slot enables long-distance fiber-optic connection and network redundancy. AXIS P7316 includes Zipstream with support for H.264/H.265 to drastically reduce bandwidth and storage requirements. Furthermore, it offers built-in cybersecurity features such as signed firmware and secure boot.

> **Support for HD analog cameras up to 4K**
> **PTZ control**
> **2-way audio and configurable I/O**
> **Zipstream with support for H.264/H.265**
> **Signed firmware and secure boot**

ONVIF® | GMST

AXIS P7316 Video Encoder

System on chip (SoC)

Model
4x ARTPEC-7

Memory
4x 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)
High definition TVI, high definition CVI and high definition analog HD (1280x720 and 1920x1080)
4x one channel for resolutions above 1080p (1920x1080)[1]

Frame rate
25/30 fps in all resolutions up to 1080p
Up to 30 fps in quad view in full resolution 1080p
4x one channel Quad HD up to 25/30 fps
4x one channel 4K up to 15 fps

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
Compatible with Coaxitron® by Pelco

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
8 analog or digital external microphone input or line input, and 4 line output

Network

IP address
Four IP address, one per four channels

Security
IP address filtering, HTTPS[2] encryption,
IEEE 802.1x (EAP-TLS)[2], network access control,user access log, multi-level user, Axis Edge Vault with Axis device ID

Network protocols
IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[2], TLS[2], 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, 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)

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1. *When you enable one channel for resolutions above 1080p (1920x1080), it disables channel 3 in that section.*
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 (eay@cryptsoft.com).*

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, AXIS Camera Station 5, 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

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
Australia/New Zealand: RCM AS/NZS CISPR 32 Class A
Canada: ICES-3(A)/NMB-3(A)
Japan: VCCI Class A
Korea: KS C 9835, KS C 9832 Class A
USA: FCC Part 15 Subpart B Class A

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)[3], IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS[3], TLS v1.2/v1.3[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*

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General

Casing
Metal casing 1U stand alone, rackmount or wallmount
Color: NCS S 5502-B

Sustainability
PVC free

Power
max 32 W

Connectors
16 pcs analog video BNC inputs
8 pcs 3.5 mm mic/line in
4 pcs 3.5 mm audio line out
1 pc 1000 BASE-TX Ethernet (RJ45)
1 pc auxiliary ethernet (RJ45)
1 pc Gbps SFP slot
4 pcs terminal block for up to 4 configurable external
input/output
4 pcs terminal block for RS485/RS422 serial
communication (full duplex)
1 pc DC input terminal block

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)

Weight
2100 g (4.6 lb)

Included accessories
Installation guide, Windows® decoder 1-user license,
mains power supply, mounting kit (incl 2 mount
brackets and 4 rubber feet) and connector kit (8 pcs 2-
pin RS485/RS422 plugs, 4 pcs 6-pin I/O plugs)

Optional accessories
For accessories, see *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*

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