AXIS I7020 Network Intercom

Sleek indoor intercom for clean environments

This indoor intercom delivers excellent audio quality with echo cancellation and noise reduction. Extensively tested for chemical detergents, it can withstand daily wipe-downs with strong cleaning fluids. Additionally, this device meets the requirements of ISO 14644-1 to ensure air cleanliness. It's easy to install and fits into 2-gang installation boxes. It's also easy to integrate with Axis and third-party VMSs. Furthermore, Axis Edge Vault, a hardware-based cybersecurity platform, safeguards the device and protects sensitive information from unauthorized access.

> **Superior echo cancellation, and noise reduction**
> **ISO 14644-1 Class 3-9 Certified**
> **Compatible with 2-gang installation boxes**
> **Open platform for easy integration**
> **Built-in cybersecurity with Axis Edge Vault**

SIP

AXIS I7020 Network Intercom

System on chip (SoC)

Model
CV25

Memory
2 GB RAM, 1 GB Flash

Audio

Audio features
Echo cancellation, noise reduction, wind reduction, beamforming

Audio streaming
Two-way (full duplex)

Audio input
2x built-in microphones (can be disabled), line input

Audio output
Built-in speaker – max 85 dBSPL (at 1 m / 39 in)
Line output

Audio encoding
LPCM 16 kHz, AAC 8/16 kHz, G.711 A-law, G.711 µ-law, G.722, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz
Configurable bitrate

Lock control

Lock integration
Integration with AXIS A9801 Security Relay: 350 mA at 12 V DC
Integration with OSDP reader
Integrated entry list with up to 50 credentials

Network

Network protocols
IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[1], HTTP/2, TLS[1], 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), IEEE 802.1X (EAP-TLS), IEEE 802.1AR

System integration

Application Programming Interface
Open API for software integration, including VAPIX®, metadata and AXIS Camera Application Platform (ACAP); specifications at *axis.com/developer-community*.
One-click cloud connection

VoIP
Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX.
Tested with various SIP software such as Cisco and Grandstream
Tested with various PBX software such as Cisco, Avaya and Asterisk
AXIS Parallel Call Forking, AXIS Sequential Call Forking
Supported SIP features: secondary SIP server, IPv6, SRTP, SIPS, SIP TLS, DTMF (RFC2976 and RFC2833), NAT (ICE, STUN, TURN), contact list, parallel call forking, sequential call forking
Supported codecs: PCMU, PCMA, Opus, L16/16000, L16/8000, speex/8000, speex/16000, G.726-32, G.722

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*.

Edge-to-edge
Camera pairing

Event conditions
Application
Audio: audio detection, audio clip playing
Call: state, state change
Device status: above/below/within operating temperature, casing open, IP address blocked/removed, live stream active, new IP address, network lost, system ready, shock detected, RFID tag detected
Digital audio input status
Edge storage: recording ongoing, storage disruption, storage health issues detected
I/O: digital input/output, manual trigger, relay or digital output, virtual input
MQTT: subscribe
Scheduled and recurring: schedule

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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 (eay@cryptsoft.com).*

Event actions

Audio clips: play, stop
Calls: answer call, end call, make call
I/O: toggle I/O once, toggle I/O while the rule is active
LEDs: flash status LED, flash status LED while the rule is active
MQTT: publish
Notification: HTTP, HTTPS, TCP and email
Recordings: SD card and network share
Security: erase configuration
SNMP traps: send, send while the rule is active

Analytics

Applications
Included
Active tampering alarm, audio detection
Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*

Approvals

Product markings
CSA, UL/cUL, CE, KC, VCCI, RCM

Supply chain
TAA compliant

EMC
CISPR 35, CISPR 32 Class A, EN 55035,
EN 55032 Class A, EN 61000-6-1, EN 61000-6-2
Australia/New Zealand: RCM AS/NZS CISPR 32 Class A
Canada: ICES(A)/NMB(A)
Japan: VCCI Class A
Korea: KS C 9835, KS C 9832 Class A
USA: FCC Part 15 Subpart B Class A

Safety
CAN/CSA C22.2 No. 62368-1 ed. 3,
IEC/EN/UL 62368-1 ed. 3

Environment
IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6,
IEC 60068-2-14, IEC 60068-2-27, IEC/EN 60529 IP65,
ISO 14644-14 grade 3-9

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
Hardware: Axis Edge Vault cybersecurity platform Secure element (CC EAL 6+), system-on-chip security (TEE), Axis device ID, secure keystore, secure boot, encrypted filesystem (AES-XTS-Plain64 256bit)

Network security
IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)[2],
IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, 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
IP65- and NEMA 4X-rated
Stainless steel and zink casing
Color: grey NCS S 1002-B

Mounting
Recessed mounting using US 2-Gang-, 4 inch square installation boxes or AXIS TI8202 Recessed Mount
Wall mounting using AXIS TI8602 Wall Mount
Wall mounting with conduit pipe using AXIS TI8602 Wall Mount and AXIS TI8603 Conduit Adapter

Power
Power over Ethernet (PoE) IEEE 802.3at Type 2 Class 4
Typical 3 W, max 25.5 W
Power out: 4.8 W
Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3
Typical 3 W, max 12.7 W
Power out: disabled with PoE Class 3
Relay rating: 30 V, 0.7 A

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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).*

Connectors

Network: Shielded RJ45 10BASE-T/100BASE-TX/
1000BASE-T PoE
I/O: Terminal block for two configurable supervised
inputs / digital outputs (12 V DC output, max load
50 mA)[3], and 1 relay
Audio: 4-pin terminal block for audio input and output
Serial communication: RS485, half duplex/2-wire[3]

Storage

Support for microSD/microSDHC/microSDXC card
Support for SD card encryption (AES-XTS-Plain64
256bit)
Recording to network-attached storage (NAS)
For SD card and NAS recommendations see *axis.com*

Operating conditions

Temperature: 0 °C to 45 °C (32 °F to 113 °F)
Humidity: 10–85% RH (condensing)

Storage conditions

Temperature: -40 °C to 65 °C (-40 °F to 149 °F)
Humidity: 5–95% RH (non-condensing)

Dimensions

For the overall product dimensions, see the dimension
drawing in this datasheet.

Weight

800 g (1.8 lb)

Box content

Intercom, installation guide, RESISTORX® L-key,
terminal block connector, owner authentication key

Optional accessories

AXIS TI8202 Recessed Mount
AXIS TI8602 Wall Mount
AXIS TI8603 Conduit Adapter
AXIS TI8906 Glass Replacement Kit
AXIS TI8907 Face Plate Replacement
AXIS A9801 Security Relay
AXIS TI8904 Induction Loop
For more accessories, go to *axis.com/products/axis-
i7020#accessories*

System tools

AXIS Site Designer, AXIS Device Manager, product
selector, accessory selector
Available at *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*

Part numbers

Available at *axis.com/products/axis-i7020#part-
numbers*

Sustainability

Substance control

PVC free, BFR/CFR free in accordance with JEDEC/ECA
Standard JS709
RoHS in accordance with EU RoHS Directive 2011/65/
EU/ and EN 63000:2018
REACH in accordance with (EC) No 1907/2006. For SCIP
UUID, see *echa.europa.eu*

Materials

Renewable carbon-based plastic content: 42%
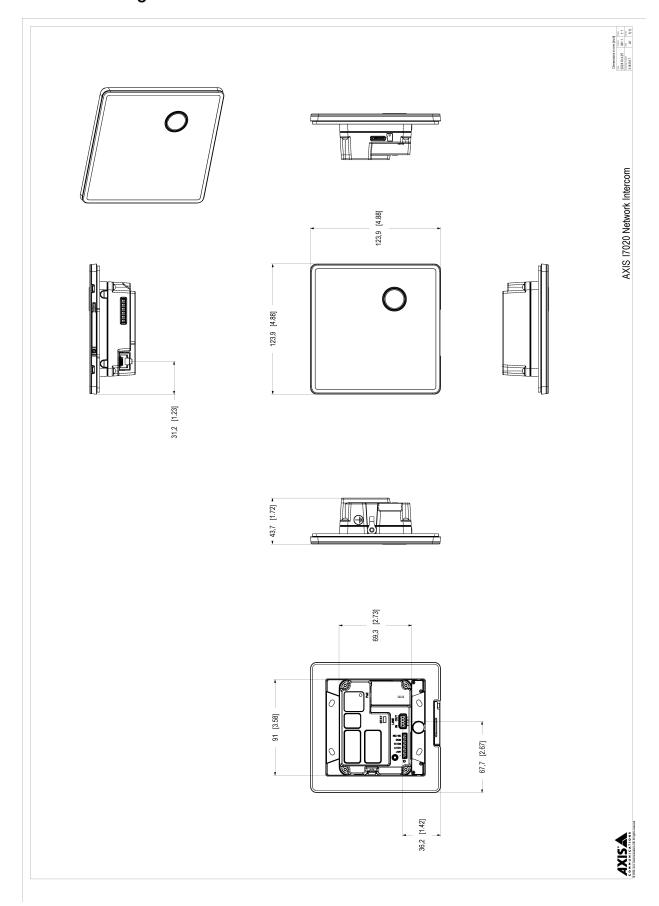(recycled: 34%, bio-based: 8%)
Screened for conflict minerals in accordance with OECD
guidelines
To read more about sustainability at Axis, go to *axis.
com/about-axis/sustainability*

Environmental responsibility

axis.com/environmental-responsibility
Axis Communications is a signatory of the UN Global
Compact, read more at *unglobalcompact.org*

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3. *One connector for I/O or RS485 usage*

Dimension drawing

123.9 [4.88]

123.9 [4.88]

31.2 [1.23]

43.7 [1.72]

69.3 [2.73]

91 [3.58]

67.7 [2.67]

36.2 [1.42]

Highlighted capabilities

Axis Edge Vault

Axis Edge Vault is the hardware-based cybersecurity platform that safeguards the Axis device. It forms the foundation that all secure operations depend on and offer features to protect the device's identity, safeguard its integrity and protect sensitive information from unauthorized access. For instance, **secure boot** ensures that a device can boot only with **signed OS**, which prevents physical supply chain tampering. With signed OS, the device is also able to validate new device software before accepting to install it. And the **secure keystore** is the critical building-block for protecting cryptographic information used for secure communication (IEEE 802.1X, HTTPS, Axis device ID, access control keys etc.) against malicious extraction in the event of a security breach. The secure keystore and secure connections are provided through a Common Criteria or FIPS 140 certified hardware-based cryptographic computing module.

To read more about Axis Edge Vault, go to *axis.com/ solutions/edge-vault.*

Entry list

Entry list enables simple and convenient credential-based management, limited to 50 credentials.