AXIS C1610-VE Network Sound Projector

Sleek, robust speaker for clear speech

This network sound projector features a clean and minimalistic design suited to both outdoor and indoor environments. Digital signal processing (DSP) ensures clear sound, and embedded audio management software lets users remotely coordinate security, safety, and operational messages alongside background music. Built-in memory supports prerecorded messages, and live speak lets personnel address events in real time. Built on open standards, this speaker supports integration with network video, access control, analytics, and VoIP (supporting SIP). This standalone unit connects directly to your standard network for a flexible, scalable, cost-effective audio solution. Furthermore, its IK11 vandal-resistant rating allows for placement almost anywhere.

> **Sleek, vandal-resistant design**
> **All-in-one, outdoor-ready speaker system**
> **Connects to standard network**
> **Simple installation with PoE**
> **Remote health testing**

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Audio hardware

Enclosure
One-way enclosure with 4-inch broadband dynamic cone speaker

Max sound pressure level
106 dB

Frequency response
200 Hz - 16 kHz

Coverage pattern
130° (at 2 kHz)

Input/output
Built-in microphone (can be disabled mechanically)

Built-in microphone specification
50 Hz - 15 kHz

Amplifier description
Built-in 7 W Class D amplifier

Digital signal processing
Built-in and pre-configured

Audio management

AXIS Audio Manager Edge
Built in:
– Zone management allowing you to divide up to 200 speakers into 20 zones.
– Content management for music and live/pre-recorded announcements.
– Scheduling to decide when and where to play content.
– Content prioritization to ensure urgent messages interrupt the schedule.
– Health monitoring for remote discovery of system errors.
– User management to control who has access to what features.
For more details, see the datasheet on *axis.com/products/axis-audio-manager-edge/support*

AXIS Audio Manager Pro
For larger and more advanced systems. Sold separately.
For specifications, see the datasheet on *axis.com/products/axis-audio-manager-pro/support*

AXIS Audio Manager Center
AXIS Audio Manager Center is a cloud service for remote access and management of multi-site systems. For specifications, see the datasheet on *axis.com/products/axis-audio-manager-center/support*

Audio software

Streaming
One-way/two-way with optional half-duplex echo cancellation. Mono.

Encoding
AAC LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Axis μ-law 16 kHz, WAV, Opus 8/16/48 kHz
MP3 in mono/stereo from 64 kbps to 320 kbps. Constant and variable bit rate.
Sampling rate from 8 kHz up to 48 kHz.

System integration

Application Programming Interface
Open API for software integration, including VAPIX® and AXIS Camera Application Platform (ACAP). One-click cloud connection

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*.

Mass notification
Singlewire InformaCast®, Intrado Revolution, Lynx, Alertus

Unified communication
Verified compatibility:
SIP clients: 2N, Yealink, Cisco, Linphone, Grandstream
PBX/SIP servers: Cisco Call Manager, Cisco BroadWorks, Avaya, Asterix, Grandstream
Cloud service providers: Webex, Zoom

SIP
Supported SIP features: Secondary SIP server, IPv6, SRTP, SIPS, SIP TLS, DTMF (RFC2976 and RFC2833), NAT (ICE, STUN, TURN)
RFC 3261: INVITE, CANCEL, BYE, REGISTER, OPTIONS, INFO
DTMF (RFC 4733/RFC 2833)

Event conditions
Audio: audio clip playing, speaker test result
Call: state, state change
Device status: IP address blocked/removed, new IP address, network lost, system ready, live stream active
Edge storage: recording ongoing, storage disruption, storage health issues detected
I/O: digital input, manual trigger, virtual input
MQTT: stateless
Scheduled and recurring: schedule

Event actions
Audio: run automatic speaker test
Audio clips: play, stop
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
Light and siren: run light profile, run light profile while the rule is active, stop activities
MQTT: publish
Notification: HTTP, HTTPS, TCP and email
Recordings: record audio, record audio while the rule is active
Security: erase configuration
SNMP traps: send, send while the rule is active

Built-in installation aids
Test tone verification and identification

Functional monitoring
Auto Speaker Test (verification via built-in microphone)

Approvals

EMC
EN 55032 Class B, EN 50121-4, EN 61000-6-1, EN 61000-6-2, IEC 62236-4, EN 55024
Australia/New Zealand: RCM AS/NZS CISPR 32 Class B
Canada: ICES-3(B)/NMB-3(B)
Japan: VCCI Class B
Korea: KC KN32 Class B, KC KN35
USA: FCC Part 15 Subpart B Class B
Railway: IEC 62236-4

Safety
IEC/EN/UL 62368-1, IEC/EN/UL 60950-22

Environment
IEC 62262 IK11, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-78, IEC/EN 60529 IP66, NEMA 250 Type 4X, MIL-STD-810G 509.5, ISO 21207 (Method B), ISO 4892-2

Cybersecurity
ETSI EN 303 645, BSI IT Security Label

Network

Network protocols
IPv4/v6[1], HTTP, HTTPS[2], SSL/TLS[2], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP[TM], SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, PTP, RTSP, RTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCP, ARP, SOCKS, SSH, NTCIP, SIP

Cybersecurity

Edge security
Software: Digest authentication and OAuth 2.0 RFC6749 Client Credential Flow/OpenID Authorization Code Flow for centralized ADFS account management, password protection

Network security
IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)[2], 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*

System on chip (SoC)

Model
NXP i.MX 6SoloX

Memory
512 MB RAM, 512 MB Flash

General

Casing
Impact-resistant aluminum, IP66-, IK11-, NEMA 4X-, and MIL-STD-810G 509.5-rated.

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1. *Audio synchronization with IPv4 only.*
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).*

Power
Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1
Class 3 (typical 4.5 W, max 12.95 W)

Connectors
RJ45 10BASE-T/100BASE-TX PoE
I/O: 4-pin 2.5 mm terminal block for 2x supervised
configurable I/Os

LED indicators
Status LED, front-facing LED

Storage
Support for microSD/microSDHC/microSDXC card
Max. size 1 TB
For SD card recommendations see *www.axis.com*

Reliability
Designed for 24/7 operation.

Operating conditions
-40°C to 55 °C (-40 °F to 131 °F)
Humidity 10-100% RH (condensing)

Storage conditions
-40 °C to 65 °C (-40 °F to 149 °F)
Humidity 5-95% RH (condensing)

Dimensions
Ø203 X 105 mm (Ø8.0 x 4.1 in)

Weight
4.1 kg (9.0 lb)

Box content
Speaker, installation guide, Owner Authentication Key,
AXIS Connector Guard A, Cable shoe

Optional accessories
AXIS T91B47 Pole Mount, AXIS T91F67 Pole Mount,
Cable Gland M20x1.5, RJ45, Cable Gland A M20,
AXIS Power over Ethernet Midspans, T94R01B Corner
Bracket, T94P01B Corner Bracket, T94S01P Conduit
Back Box
For more 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*
Available at *axis.com/products/axis-c1610-ve#part-numbers*

Tools

Design
AXIS Site Designer
Available at *axis.com*

Installation
AXIS Device Manager, product selector, accessory
selector
Available at *axis.com*
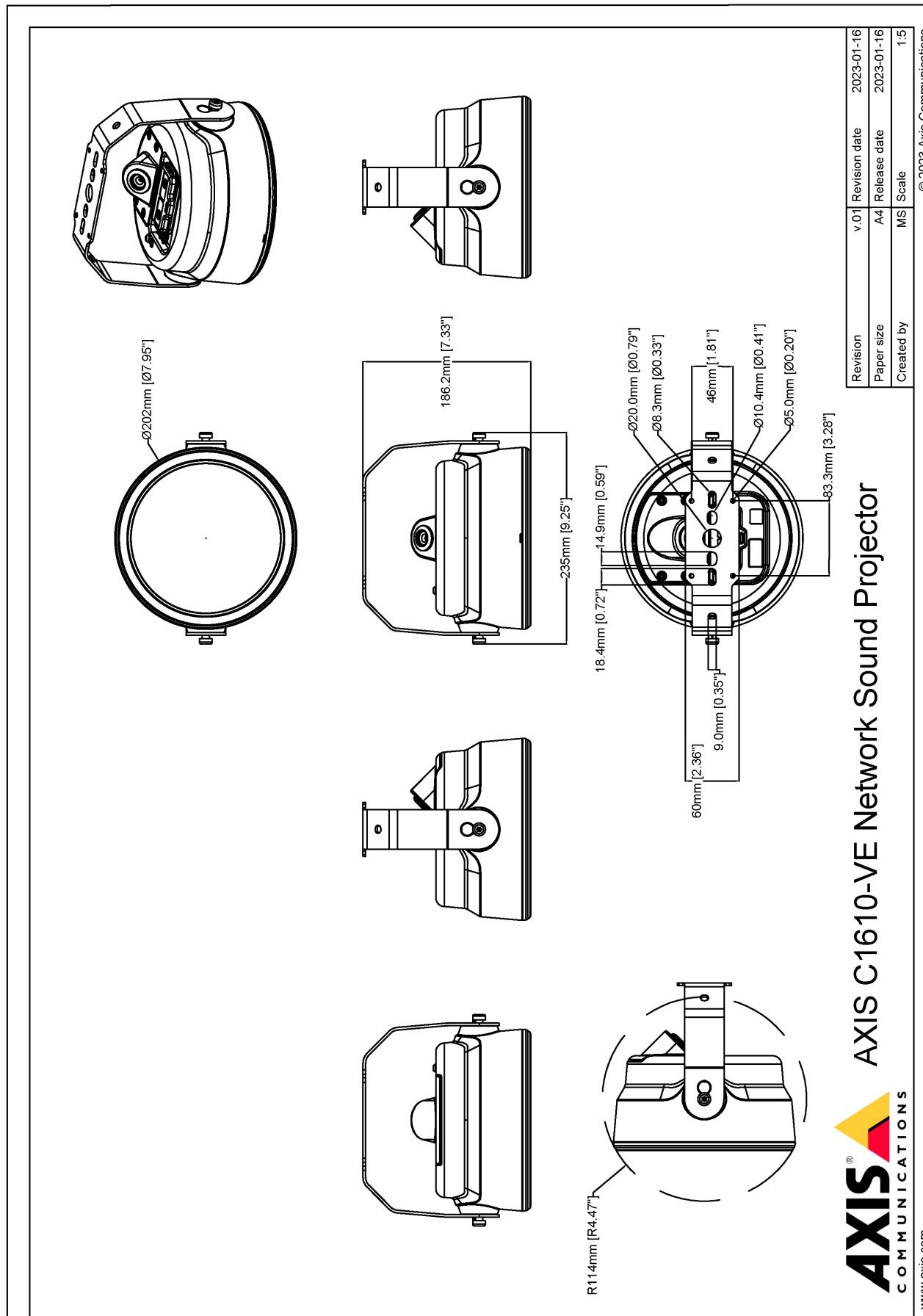
Sustainability

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 axis.com/partner.

Materials
Renewable carbon-based plastic content: 26%
(recycled: 0%, bio-based: 26%, carbon capture based:
0%)
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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Revision	v.01	Revision date	2023-01-16
Paper size	A4	Release date	2023-01-16
Created by	MS	Scale	1:5

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Ø202mm [Ø7.95"]

186.2mm [7.33"]
235mm [9.25"]

Ø20.0mm [Ø0.79"]
Ø8.3mm [Ø0.33"]
46mm [1.81"]
Ø10.4mm [Ø0.41"]
Ø5.0mm [Ø0.20"]
83.3mm [3.28"]
14.9mm [0.59"]
18.4mm [0.72"]
9.0mm [0.35"]
60mm [2.36"]

R114mm [R4.47"]

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