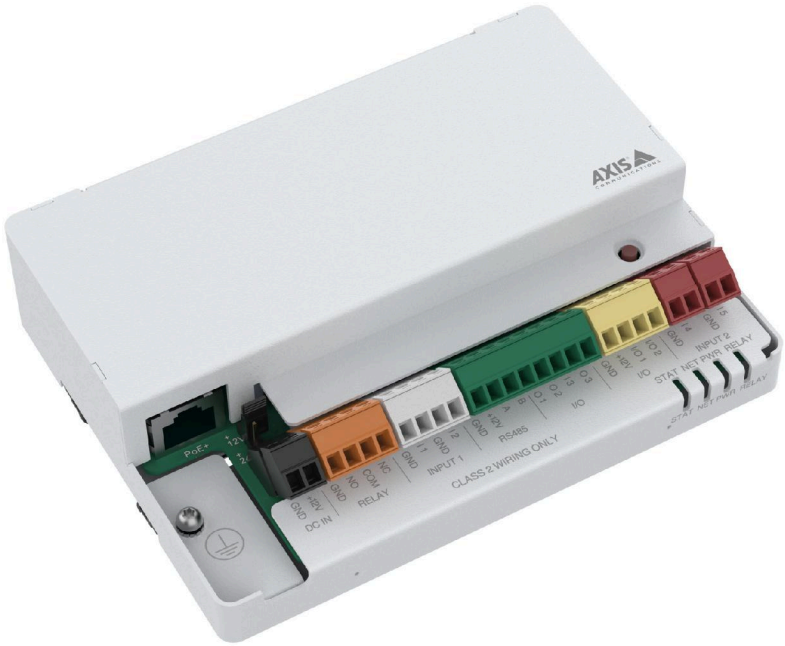
# AXIS A9210 Network I/O Relay Module

## I/O module for extended functionality

AXIS A9210 offers 10 I/O ports including 2 configurable I/Os, 5 inputs, 3 outputs, and 1 form C relay output, allowing you to extend the functionality of any Axis product or third-party system. You can monitor inputs from cameras, analytics, alarm buttons, environmental sensors, and more, so you can detect and respond to system events. This scalable device offers flexible installation and can be installed anywhere. It's easy to integrate with third-party advanced security systems such as VMSs, and alarm and intrusion systems. Furthermore, with multi-drop technology, you can add up to 16 AXIS A9910 I/O relay expansion modules for even more I/O functionality.

- > 10 I/O ports, included inputs are supervised
- > 1 form C relay, wet or dry
- > Supports up to 128 I/Os and 64 relays through AXIS A9910 with one IP connection[d]
- > Based on Axis open platforms—VAPIX® and ACAP
- > Axis Edge Vault safeguards the device



# AXIS A9210 Network I/O Relay Module

## I/O interface

**Configurable I/Os**
**I/O**: 2x I/O (I/O 1, I/O 2), configurable inputs or outputs
**Digital input**: 0 to max 30 V DC, possible to supervise between 0–12 V (4 states)[1]
Programmable end-of-line resistors, 1 K, 2.2 K, 4.7 K and 10 K, 1%, ¼ watt standard
**Digital output**: Open drain, 0 to max 30 V DC, max 100 mA
**Power out I/O**: 1x 12 V DC output, max 50 mA

**Inputs**
5x input (I 1, I 2, I 3, I 4, I 5)
0 to max 30 V DC, possible to supervise between 0–12 V (4 states)[1]
Programmable end-of-line resistors, 1 K, 2.2 K, 4.7 K and 10 K, 1 %, ¼ watt standard

**Outputs**
3x output (O 1, O 2, O 3)
Open drain, max 30 V, 100 mA each

**Relays**
1x form C relay, NO/NC, max 2 A, max 30 V DC
**Power out relay**: 12/24 V DC, max 24 W
With PoE: max 350 mA at 12 V DC, max 150 mA at 24 V DC, max 4.5 W
With PoE+: max 1100 mA at 12 V DC, max 500 mA at 24 V DC, max 14 W
With DC in: max 2000 mA at 12 V DC, max 1000 mA at 24 V DC, max 24 W

**RS485**
1x port, half duplex, Modbus[2]
**Power out RS485**: 1x 12 V DC output, default 200 mA (490 mA hardware verified by UL 294)
Supports up to 16 AXIS A9910 I/O relay expansion modules
Supports up to 64 Modbus sensors (in multidrop and with 16 expansion modules)

## Power

**Power in**: 12 V DC, max 36 W, or
Power over Ethernet (PoE) IEEE 802.3at, Type 2 Class 4

## Cable requirements

**Wire size for connectors**: CSA: AWG 28–16, CUL/UL: AWG 30–14
**DC power**: AWG 18-16 , qualified for up to 3 m (10 ft)
**Relay**: AWG 18-16, qualified for up to 30 m (98 ft)
**Ethernet and PoE**: STP CAT 5e or higher, qualified for up to 100 m (328 ft)
**I/Os as inputs**: AWG 24, qualified for up to 200 m ( 656 ft)
**RS485**: 1 twisted pair with shield, 120 ohm impedance, qualified for up to 1000 m (3281 ft)

## System on chip (SoC)

**Memory**
512 MB RAM, 1 GB Flash

## Network

**Network protocols**
IPv4, IPv6, HTTP, HTTPS[3], TLS[3], QoS Layer 3 DiffServ, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv1/v2/v3, DHCPv4/v6, SOCKS, SSH, MQTT v3.1.1, Syslog

## 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*. ACAP includes Native SDK.
One-click cloud connection

**Video management systems**
Compatible with AXIS Camera Station, video management software from Axis' Application Development Partners available at *axis.com/vms*

1. *For more information, go to help.axis.com/axis-a9210*
2. *Not intended for UL 294*
3. *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 conditions
Device status: IP address blocked, IP address removed, new IP address, network lost, system ready, movement detected
I/O: digital input, manual trigger, virtual input
MQTT: subscribe
Scheduled and recurring: schedule

### Event actions
MQTT: publish
Notification: HTTP, HTTPS, TCP and email
SNMP traps: send, send while the rule is active
Status LED

### Tamper detection
Tilting, vibration

## Approvals

### Product markings
CE, RCM, UKCA, UL/cUL, VCCI, WEEE

### Supply chain
TAA compliant

### EMC
CISPR 35, CISPR 32 Class A, EN 55035,
EN 55032 Class A, EN 50130-4, 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
CAN/CSA C22.2 No. 62368-1 ed. 3
IEC/EN/UL 62368-1 ed. 3, RCM AS/NZS 62368.1:2022, UL 294, UL 2043

### 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

## Cybersecurity

### Edge security
**Software:** Signed firmware, brute force delay protection, digest authentication, password protection
**Hardware:** Axis Edge Vault cybersecurity platform
Secure element (CC EAL 6+), Axis device ID, secure keystore, secure boot, encrypted filesystem (AES-XTS-Plain64 256bit)

### Network security
IEEE 802.1X (EAP-TLS)[4], IEEE 802.1AR, HTTPS/HSTS[4], TLS v1.2/v1.3[4], Network Time Security (NTS), X.509 Certificate PKI, IP address filtering

### 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
Steel
Color: white NCS S 1002-B

### Mounting
Wall mount
DIN rail mount

### Connectors
Network: Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE
I/O: Terminal blocks for DC power, inputs/outputs, relay. Detachable and color coded connectors for ease of installation.
Wire size for connectors: CSA: AWG 28–16, CUL/UL: AWG 30–14

### Operating conditions
-40 °C to 55 °C (-40 °F to 131 °F)
Conditional maximum temperature[5]: 70 °C (158 °F)
**UL 294**: 0 °C to 55 °C (32 °F to 131 °F)
Humidity: 10–85% RH (non-condensing)

4. *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).*
5. *The lock(s) should be externally powered. Onboard reader power with max 500 mA at 12 V DC.*

### Storage conditions
Temperature: -40 °C to 70 °C (-40 °F to 158 °F)
Humidity: 5–95% RH (non-condensing)

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

### Weight
466 g (1 lb)

### Box content
I/O module, installation guide, connector kit (mounted), grounding kit

### Optional accessories
AXIS A9910 I/O Relay Expansion Module
AXIS TA1901 DIN Rail Clip
AXIS TA1902 Access Control Connector Kit[6]
AXIS T98A15-VE Surveillance Cabinet[6]
AXIS TQ1808-VE Surveillance Cabinet[6]
AXIS TA9001 Wall Mount Bracket
AXIS 30 W Midspan
AXIS 30 W Midspan AC/DC[6]
AXIS T8006 PS12[6]
For more accessories, go to *axis.com/products/axis-a9210*

### 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-a9210#part-numbers*

## Sustainability

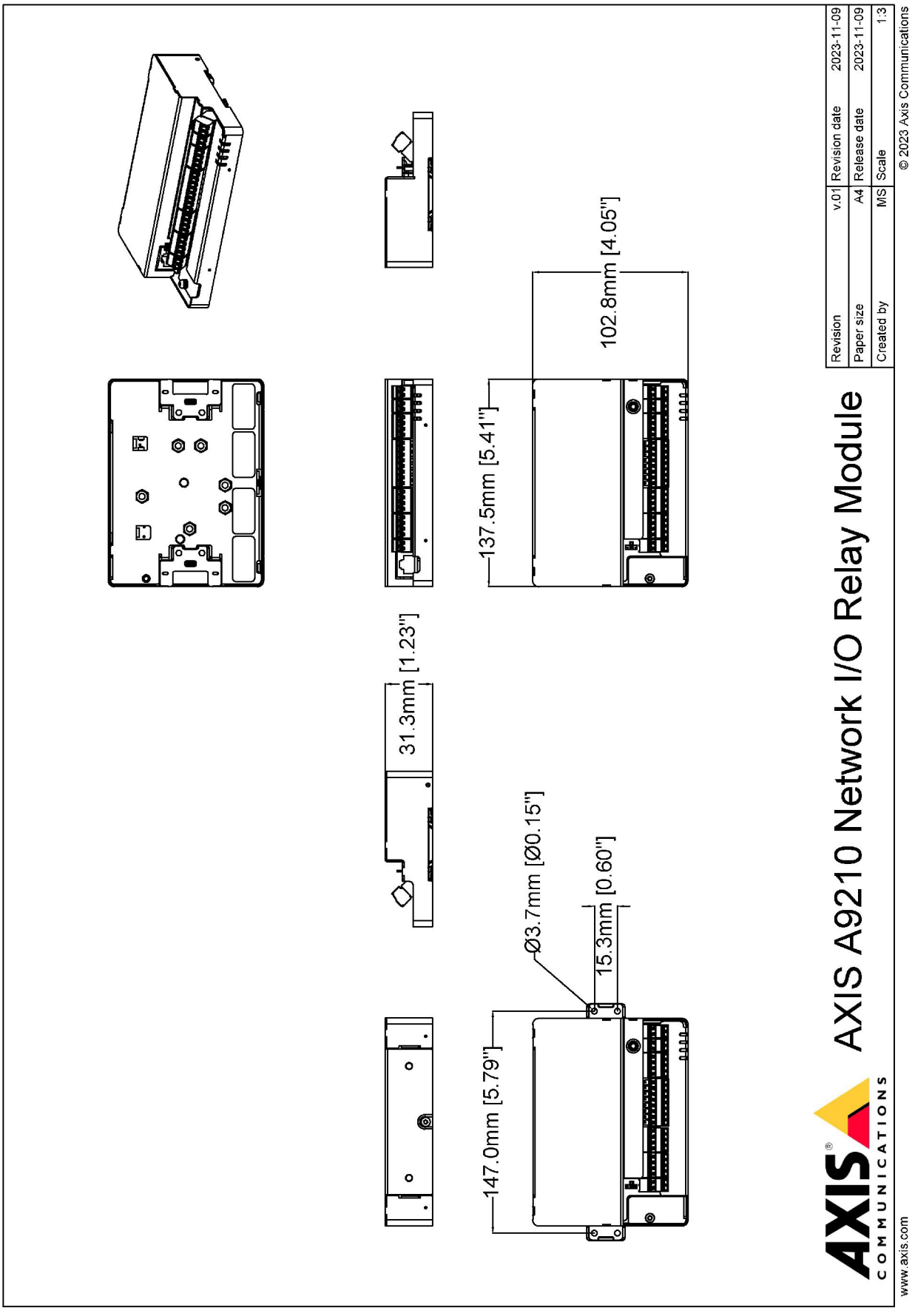
### Substance control
PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard JS709
RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018
REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see *echa.europa.eu*

### Materials
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*

6. *Not intended for UL 294*

## Dimension drawing



## 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*.

For more information, see *axis.com/glossary*