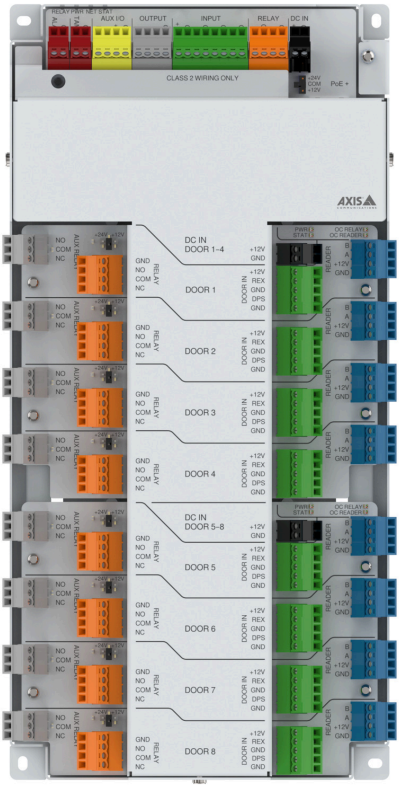
AXIS A1810-B Network Door Controller

Compact, cost-effective controller for up to 8 doors

This multi-door controller offers complete control for up to eight doors including support for up to 16 OSDP readers and 16 locks. Ideal for new and retrofit centralized installations with Axis or third-party cabinets. It offers a smaller footprint design than most door controllers on the market. Built-in lock power management simplifies installation. With support for OSDP readers and an optional accessory for Wiegand readers, this scalable door controller is optimized for both small and large installations. It can be used with AXIS Camera Station Secure Entry or partner solutions to provide an all-in-one video and access control management system.

- > Centralized control simplifies installation
- > Full control for up to eight doors
- > Onboard support for 16 OSDP readers and 16 locks
- > OSDP Verified for secure reader communication
- > Built-in cybersecurity features



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Door controller

Readers
Up to 16 OSDP and Wiegand[1] readers (multidrop[2]) per controller
OSDP Secure Channel supported, OSDP verified

Doors
8 doors, two relays supporting double locks per door
Support for integrating up to 16x ASSA ABLOY Aperio® wireless lock[2]

Credentials
Qualified for up to 250 000 credentials stored locally

Event buffer
Qualified for up to 250 000 events stored locally

Power

Input
Power over Ethernet (PoE) IEEE 802.3at, Type 2 Class 4 or
DC IN: 12 V DC, Typical 2 W [3], max 36 W
DOOR 1–4 (required): 12 V DC, Typical 0.5 W [3] , max 96 W
DOOR 5–8 (required): 12 V DC, Typical 0.5 W [3], max 96 W [4]

Power supply
Option 1[2]: Separate power supplies (See the power input section)
Option 2: Single power supply
12 V DC, max 250W[5]

I/O interface

Readers
DOOR 1–4 power out[6]: 4x 12 V DC output, combined total of max 2 A
DOOR 5–8 power out[6]: 4x 12 V DC output, combined total of max 2 A
Data: 8x OSDP/RS485 half duplex, multidrop[2]

Door input
DOOR 1–4 power out[6]: 4x 12 V DC output, combined total of max 400 mA
DOOR 5–8 power out[6]: 4x 12 V DC output, combined total of max 400 mA
DOOR 1–4 input: 4x REX and 4x door position sensor, digital input 0 to max 30 V DC, possible to supervise between 0–12 V DC (4 states)
DOOR 5–8 input: 4x REX and 4x door position sensor, digital input 0 to max 30 V DC, possible to supervise between 0–12 V DC (4 states)

Relays
RELAY: 1x form C relay, NO/NC
Dry: max 2 A at 30 V DC
Wet: DC output[6]: 12/24 V DC, jumper configurable
With PoE: max 150 mA at 12 V DC, max 50 mA at 24 V DC, max 1.8 W
With PoE+: max 920 mA at 12 V DC, max 420 mA at 24 V DC, max 11.04 W
With DC in: max 1900 mA at 12 V DC, max 1000 mA at 24 V DC, max 24 W
DOOR 1–4 RELAY: 4x form C NO/NC
Dry: max 4 A at 30 V DC
Wet: DC output[6]: 12/24 V DC, jumper configurable, total combined of max 3.8 A at 12 V DC or max 1.5 A at 24 V DC, max 46 W
DOOR 5–8 RELAY: 4x form C NO/NC
Dry: max 4 A at 30 V DC
Wet: DC output[6]: 12/24 V DC, jumper configurable, max 3.8 A at 12 V DC, max 1.5 A at 24 V DC, max 46 W
DOOR 1–4 AUX relay: 4x form C relay, NO/NC
Dry: max 2 A at 30 V DC
DOOR 5–8 AUX relay: 4x form C relay, NO/NC
Dry: max 2 A at 30 V DC

Digital I/O
Input connector
3x digital input, 0–30 V DC, possible to supervise between 0–12 V DC (4 states)
1x 12 V DC output[6], max 190 mA
Output connector
3x digital output[6], open drain, 0–30 V DC, max 100 mA
AUX I/O connector
2x configurable inputs or outputs
Input: digital input, 0–30 V DC, possible to supervise (parallel connection) between 0–12 V DC (4 states)
Output[6]: open drain, 0–30 V DC, max 100 mA
1x 12 V DC output[6], max 250 mA

1. *Requries additional accessory AXIS TA1101-B.*
2. *Not intended for UL 294.*
3. *The board's power consumption remains in idle mode when no other devices are connected.*
4. *To fulfil the power budget for door peripherals.*
5. *Split the power between DC inputs of the door controller with WAGO splitter.*
6. *All outputs have over current protection circuits with automatic retry.*

External
1x external tamper digital input, 0–30 V DC, possible to supervise between 0–12 V DC (4 states)
1x alarm digital input, 0–30 V DC, possible to supervise between 0–12 V DC (4 states)

Supervised input
Configurable input for Tamper, Alarm, I1–I3, REX, DPS, and AUX IO
Programmable end-of-line resistors (serial connection: 1 K, 2.2 K, 4.7 K and 10 K, parallel connection: 4.7 K and 22 K), 1 %, ¼ watt standard
One supervised input dedicated for cabinet tamper

Cable requirements

Wire size for connectors: CUL/UL: AWG 30–14[7]
DC power: AWG 16-14, qualified for up to 3 m (10 ft)
Relay: AWG 16-14, qualified for up to 200 m (656 ft)
Ethernet and PoE: STP CAT 5e or higher
Reader data (RS485): 1 twisted pair, AWG 26–14, qualified for up to 1000 m (3281 ft)
Reader powered by controller (RS485): AWG 22–14, qualified for up to 200 m (656 ft)[8]
I/Os as inputs: AWG 24–14, qualified for up to 200 m (656 ft)

System on chip (SoC)

Memory
512 MB RAM, 2 GB Flash

Network

Network protocols
IPv4, IPv6, HTTP, HTTPS[9], TLS[9], 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
AXIS Camera Application Platform (ACAP); specifications at *axis.com/developer-community*. ACAP includes Native SDK.
One-click cloud connection

Tamper detection
Reader tamper
Tilting, vibration

Approvals

Product markings
CE, FCC, ICES, KC, RCM, 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(A)/NMB(A)
Japan: VCCI Class A
Korea: KS C 9835, KS C 9832 Class A
USA: FCC Part 15 Subpart B Class A

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

Safety
CAN/CSA C22.2 No. 62368-1 ed. 3,
IEC/EN/UL 62368-1 ed. 3, RCM AS/NZS 62368.1:2022, UL 2043, UL 294

Cybersecurity
ETSI EN 303 645

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+), secure keystore, secure boot

Network security
IEEE 802.1X (EAP-TLS)[9], IEEE 802.1AR, HTTPS/HSTS[9], TLS v1.2/v1.3[9], Network Time Security (NTS), X.509 Certificate PKI, IP address filtering

7. *Not intended for UL 294.*
8. *Depending on the reader's voltage and current input range. Evaluated with AXIS A4120-E.*
9. *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).*

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
DIN rail mount, cabinet mount[10]

Connectors
Network: Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE
I/O: Terminal blocks for DC power, inputs/outputs, RS485, relay. Detachable and color coded connectors for ease of installation.
Wire size for connectors: CUL/UL: AWG 30–14

Operating conditions
-40 °C to 55 °C (-40 °F to 131 °F)
Conditional maximum temperature[11]: 70 °C (158°F)
UL 294: 0 °C to 55 °C (32 °F to 131 °F)
Humidity 10–85% RH (non-condensing)

Storage conditions
-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
1330 g (2.9 lb)

Box content
door controller, installation guide, connector kit (mounted), grounding kit, splicing connectors

Optional accessories
AXIS TA4711 Access Card
AXIS TA4712 Key Fob
AXIS TA1901 DIN Rail Clip
AXIS TA1101-B Wiegand OSDP Converter
AXIS TA1902 Access Control Connector Kit[12]
AXIS 30 W Midspan (POEA30U-1ATE)
AXIS 30 W Midspan AC/DC[12]
AXIS T8006 PS12[12]
For more accessories, go to *axis.com/products/axis-a1810-b*

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

Warranty
5-year warranty, see *axis.com/warranty*

Part numbers
Available at *axis.com/products/axis-a1810-b#part-numbers*

Sustainability

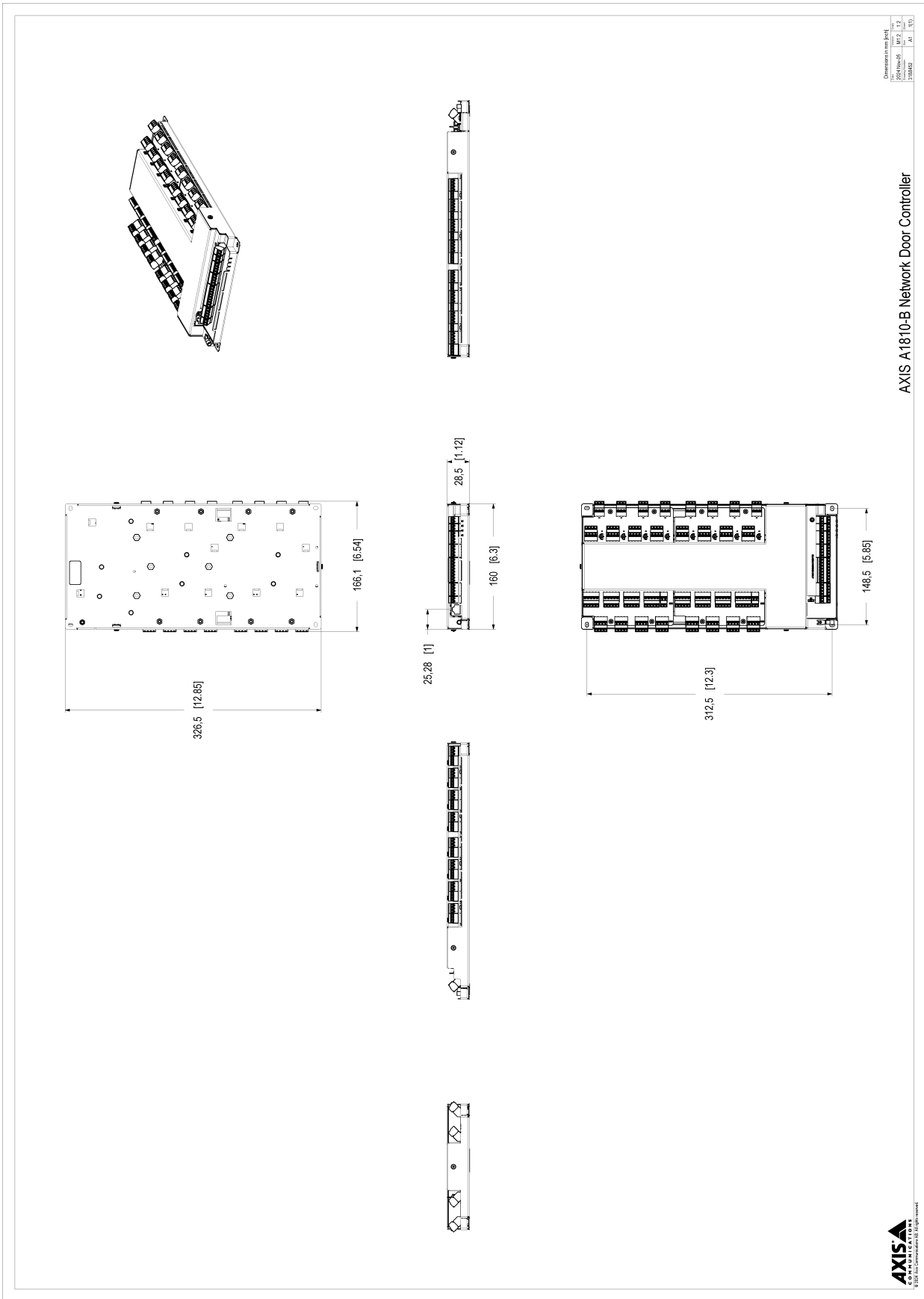
Substance control
PVC free
RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018
REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see *echa.europa.eu*

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*

10. If UL 294 is required, mount the device in a UL-listed enclosure with Tamper Switch.
11. Only DC IN as a power source. The lock(s) should be externally powered. Dry contact only.
12. 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*