AC12 one-door controller

Cloud-Managed Access Control for Standalone Doors

Overview

The AC12 one-door controller brings cloud-managed access control to standalone doors that would otherwise be difficult to secure with an electronic system. The AC12 is powered by a single PoE cable, minimizing the need for costly building modifications or long low-voltage cable runs between doors and IDF closets. Its compact form factor allows for easy installation in tight spaces while its low-profile design blends into most environments.

The AC12 can power most electronic locks and supports native in/out badging with any combination of Verkada and third-party readers. It also includes PoE passthrough, which can provide consistent data and power to any PoE+ peripheral device, such as a Verkada camera.

Like all Verkada access controllers, the AC12 works out of the box and is easy to deploy and manage from Verkada Command. The AC12 comes with a 10-year warranty.

Key features

Compact design

Powers one lock, two readers, a PoE peripheral, and common door accessories from a single, low-profile access control unit (ACU).

On-device reliability

Onboard storage and processing ensures the device will operate even if it has lost power or its internet connection.

Native in/out door support

Two reader ports support any combination of Verkada and third party readers for native in/out door support.

PoE Passthrough

PoE passthrough provides consistent power and data to any PoE+ peripheral device, such as a Verkada camera or alarm console.

Cloud-managed

Verkada Command empowers admins to manage their access control system from any device in nearly any location.

Flexible access credentials

End-users can deploy the credential method(s) that works for them including printed cards or the Verkada Pass mobile Bluetooth application.

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Power and network

Power Consumption	15W Max (on PoE), 28W Max (on PoE+) 60W Max (on PoE++ with PoE passthrough camera)	**Power Input**	IEEE 802.3af/at/bt PoE, PoE+, PoE++ (37VDC – 57VDC), 600mA maximum per pair; 12VDC with 2.5A minimum current
Inputs	2x REX inputs 1x DPI input 1x AUX input	**USB Connection**	5V USB power source
DC Power Output	1x 12VDC @ 100mA maximum	**Connectivity**	Ethernet: 10/100/1000 Mbps RJ-45 for network connection USB 2.0
PoE Output	IEEE 802.3af/at PoE, PoE+ (37VDC - 57VDC), 600mA maximum		

Reader and relay ports

Door Reader Ports [1]	2x 12VDC @ 250mA Verkada / RS-485 ports 2x 12VDC @ 250mA 2x Wiegand ports	**Relay Outputs (Aux Ports)**	1x dry relay for auxiliary output with maximum pass-through power of 24VDC @ 2A (resistive load)
Relay Outputs	1x wet or dry relay Wet relay switch-selectable power: 12VDC operation 700mA max, 24VDC operation 350mA max		

Compliance and availability

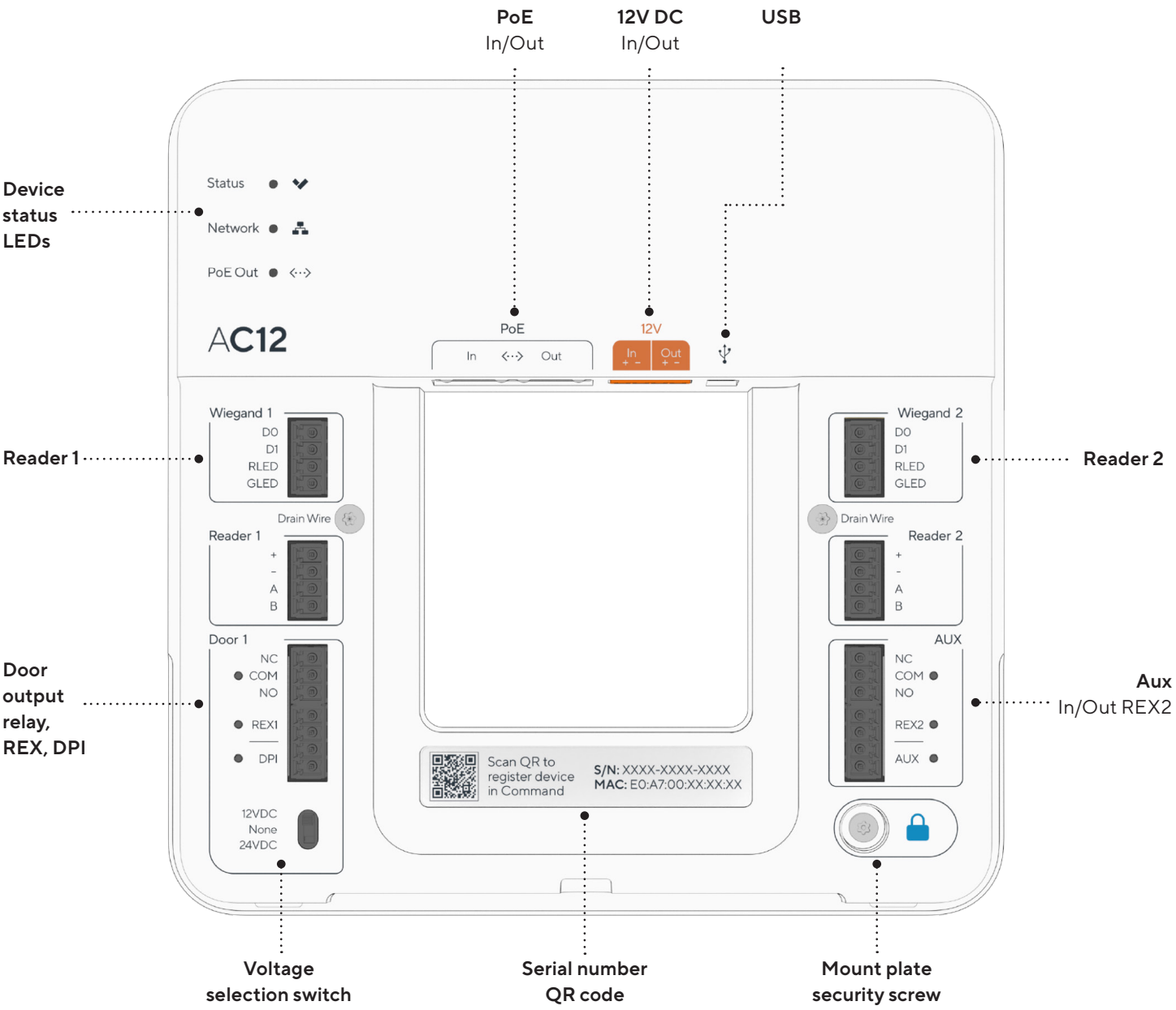
Availability	USA, CAN, UK, EU	**Compliance & Safety**	FCC Part 15B Class B, ICES-003 Class B, CE, UKCA, VCCI, RCM, UL 294, CAN-ULC 60839-11-1, UL 62368-1, and CSA C22.2 No. 62368-1, IK06, compliant with requirements of UL 2043, indoor use only, to be used in controlled, protected, and/or restricted access areas. Installation and operation of the electronic access control system (EACS) shall not prevent the functionality of the emergency exit functions.

General

Dimensions	Length: 175.5mm / 6.9in Width: 55.3mm / 2.2in Height: 175.4mm / 6.9in	**Mounting Options**	Wall, ceiling, or Plenum mount
Weight	1.3kg / 2.9lbs	**Operating Temperature**	0°C - 50°C (32°F - 122°F), 5 - 85% Humidity
Included Accessories	T10 security Torx screwdriver, mounting hardware kit	**Warranty**	10 years

1. Note: each of the two reader ports can power a maximum of one reader with current consumption of at most 250mA.

Controller highlights



Introduction

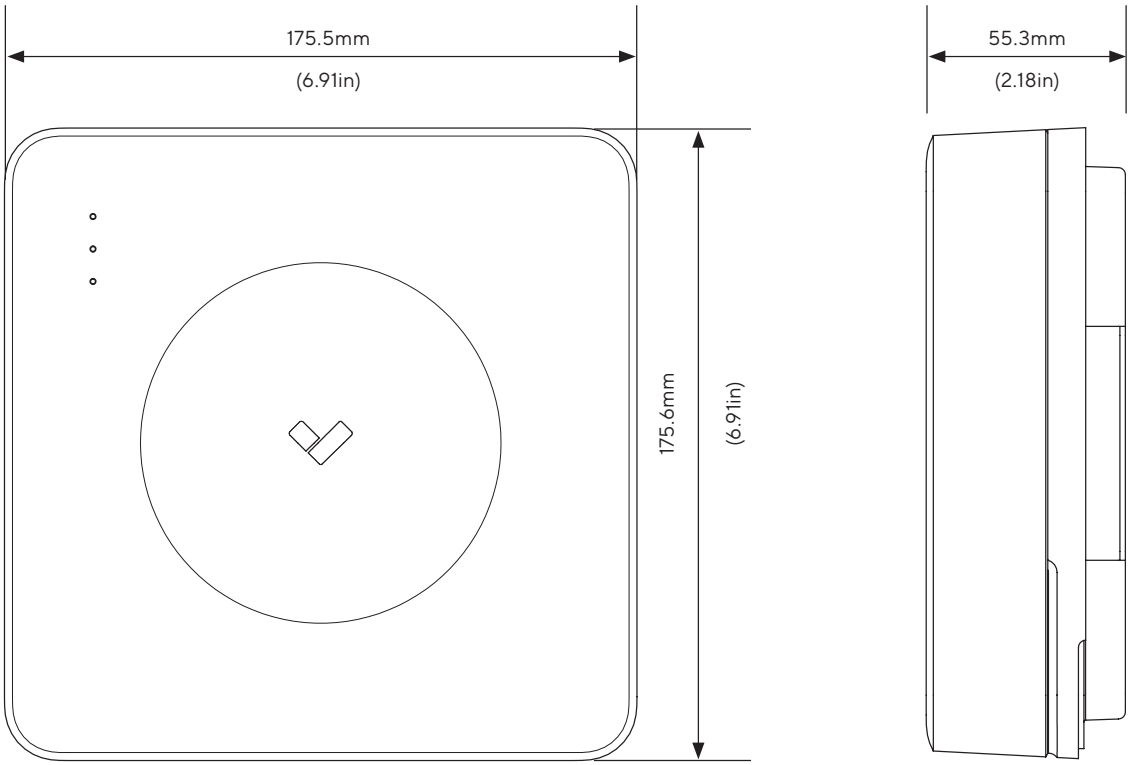
AC12 Power Options

This chart outlines the available power options on the AC12. All power outputs and inputs of this controller are Power-Limited/Class 3.

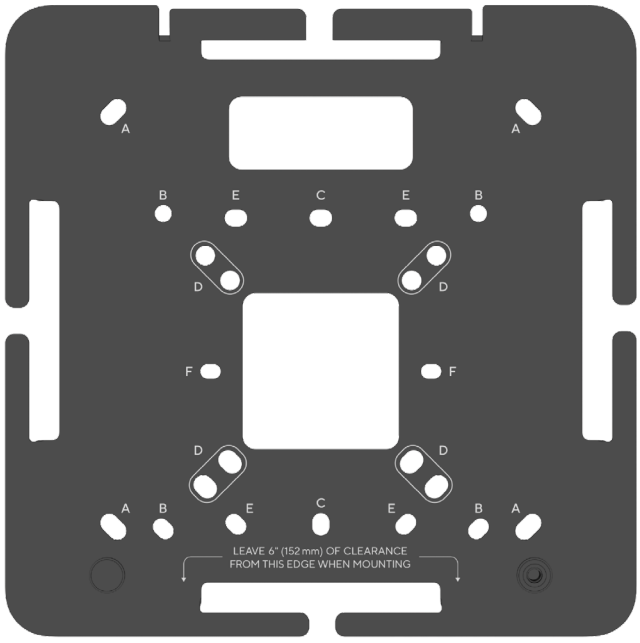
	PoE++	PoE++ In/Out Door	PoE+	PoE	DC Only
Reader 1	12VDC, 250mA maximum	12VDC, 250mA maximum	12VDC, 250mA maximum	12VDC, 250mA maximum	12VDC, 250mA maximum
Reader 2	No	12VDC, 250mA maximum	12VDC, 250mA maximum	12VDC, 250mA maximum	12VDC, 250mA maximum
Wet Lock	12VDC, 700mA maximum or 24VDC, 350mA maximum	12VDC, 700mA maximum or 24VDC, 350mA maximum	12VDC, 700mA maximum or 24VDC, 350mA maximum	12VDC, 500mA maximum or 24VDC, 250mA maximum	12VDC, 700mA maximum or 24VDC, 350mA maximum
USB	No	5VDC, 250mA maximum	5VDC, 250mA maximum	No	5VDC, 250mA maximum
DC Power Out	12VDC, 100mA maximum	12VDC, 100mA maximum	12VDC, 100mA maximum	No	12VDC, 100mA maximum
PoE Out	Up to 30W	Up to 27W	Connectivity only, no power	Connectivity only, no power	Connectivity only, no power

Product specifications

Product dimensions



Mounting options



Verkada ACC-WA-30W/12V Switching Power Supply

Verkada's ACC-WA-30W/12V switching power supply power strip provides 30 watts of power for the AC12 one-door controller.

Key features

- 12 VDC output voltage
- 30 watts continuous output power
- DOE Standard level VI and CoC Tier 2 efficiency

Tech Specs

Electrical specifications - input and output

AC Input Voltage Rating	100Vac to 240Vac	**AC Input Frequency**	47Hz to 63Hz
AC Input Voltage Range	90 Vac to 264 Vac	**Output Current**	2.5 Adc max
AC Input Current	0.8Arms max @ 120VAC 0.5Arms max @ 240VAC	**Output Ripple**	120mVp-p max
Output Voltage	12 Vdc	**Line and Load Regulation**	+-5%

Mechanical and general

Output Power	30 watts continuous	**Efficiency**	DOE Standard level VI and CoC Tier 2
Over Current Protection	Auto restart mode without damage	**Turn on Delay Time**	3S max. @ full load 115 Vac / 60 Hz
		Over Voltage Protection	20V max.the output should be auto restart during the OVP condition

Tech Specs

Environmental

Operating Temperature	0°C - 40°C (30°F -104°F)	**Storage Temperature**	-20°C - 75°C (-4°F - 175°F)
Operating Relative Humidity	20% to 90%	**Storage Relative Humidity**	20% to 95%

Safety and operational

Safety Requirement	UL62368-1 CE, UL/CUL UKCA NRCAN	**EMI Requirement**	FCC Class B, ICES003
EMS	(1) EN61000-4-2, 3, 4, 5, 6, 8, 11	**Insulation Resistance**	Input to output: > 7 M ohm. 500VDC Input to F.G. > 7 M ohm. 500VDC

Mechanical

Input Connector	IEC C14	**Output Connector**	Two tin plated wires
Output Cable Length	1500mm (59.06in)	**Dimension**	Length: 103.4mm (4.07in) Width: 42mm (1.65in) Height: 28.7mm (1.12in)
Weight	160g (0.35lb)		

Verkada ACC-POE-60W High Surge (HS) POE++ Injector

Verkada's ACC-POE-60W high surge PoE++ injector converts two inputs – a power cable and an Ethernet cable – to a single PoE ++ port (IEEE 802.3bt/at/af standard) with up to 60W of power and 6kV 100kHz Transient Ring Wave. The ACC-POE-60WHS is designed to power the AC12 one-door controller, but it is also backwards compatible and safe to use with any IEEE 802.3at/af Verkada devices. The ACC-POE-60WHS comes with a US power cord (for US customers) and a UK power cord (for Europe customers) and is wall mountable.

Key features

- IEEE 802.bt compliant (type 4, class 6 - 60W maximum)
- IEEE 802.3at/af backward compatible
- Output power of 60W over 4-pairs
- Supports 10/100/1000 Base-T applications
- Safe: low-power devices receive only the power they need
- Automatic detection and protection of non-standard Ethernet terminals

Tech Specs

Electrical specifications –input

AC Input Operating Voltage	100VAC to 240VAC	**AC Input Frequency**	47Hz to 63Hz
AC Input Current	1.5Arms maximum at 90VAC and maximum load		

Electrical specifications – output

Output	+56VDC (nominal) +1/-3V (57-53VDC)	**DC Output Current Maximum Load**	535mA for IEEE802.3bt
Turn On Delay Time	7 sec Max @ Min. load including detection @ 120VAC 60 Hz	**DC Output Current Maximum Load**	1.07A for IEEE802.3bt type 4, class 6 (PoE++)
		Efficiency	DOE Standard level VI, Average Efficiency

1. Includes line, load regulation and temperature and voltage measured within 5cm of the output RJ45 connector.

Tech Specs

Mechanical and general

Dimensions	Length: 103.4mm (4.07in) Width: 42mm (1.65in) Height: 28.7mm (1.12in)	**Weight**	270g (0.59lb)
AC Inlet	IEC320 C14	**Output Connector**	Female RJ45

LED states indicators

Solid Green	Detection/Connection Valid & Output "ON"	**Blink Red (short, slow)**	Waiting for valid Connection/Detection
Blink Red (long, fast)	Fault Condition (Over Current or Shorted)	**Blink Red & Green**	Detection is Invalid

Safety requirements

UL	UL62368-1 ed3	**CB**	IEC 62368-1:2020+A11:2020
CUL	CAN/CSA C22.2 No.62368-1:19	**CE**	EN 62368-1:2020+A11:2020

Environment

Vibration	Frequency range: 10~55Hz Amplitude 2G over entire frequency range. Sweep 1 minute for X, Y, Z axis, each cycle: 20	**Operating Temperature**	-20°C - 40°C (-4°F - 104°F)
EMC	IEC61000-4-2, 3, 4, 5, 6, 11, IEC61000-3-2 UL294 Eighth Edition (6kV 100kHz Transient Ring Wave) - for PoE only	**Relative Humidity**	Operation 10% to 90% Storage 5% to 95%
MTBF	For 25°C Ambient Temperature Operation MTBF>100K hrs @ max Load MIL-HDBK-217F	**EMI**	EN55032, EN55035,FCC Part 15, ICES-003, AS/NZS CISPR 32,Class B