CA-1 Hub and Automation Controller, V2

Installation Guide

Supported model

- C4-CA1-V2   Hub & Automation Controller, CA-1, V2

Introduction

The Control4® CA-1 Hub & Automation Controller enables control of lights, security systems, sensors, door locks, and other devices controlled by IP, Zigbee, Z-Wave®, or serial connections. The controller has a fast processor, external antenna for Zigbee® radio, an internal slot for a Z-Wave™ module (sold spearately), and can be powered by PoE. This controller is perfect for home, apartments, and other installations that do not require IR control or audio streaming.

After you install and configure the controller with other Control4 devices, your customers can control their system using the Control4 apps, system remote controls, touch screens, or other Control4-supported interface devices (sold separately).

Box contents

- CA-1 Hub & Automation Controller, V2
- External power supply with international plug adaptors
- Antennas (1 for Zigbee)

Accessories available for purchase

- Z-Wave Module - Region H (C4-ZWH)
- Z-Wave Module - Region U (C4-ZWU)
- Z-Wave Module - Region E (C4-ZWE)

Warnings

⚠️ Caution! To reduce the risk of electrical shock, do not expose this apparatus to rain or moisture.

AVERTISSEMENT ! Pour réduire le risque de choc électrique, n'exposez pas cet appareil à la pluie ou à l'humidité.

⚠️ Caution! In an over-current condition on USB, the software disables the output. If the attached USB device does not appear to power on, remove the USB device from the controller.

AVERTISSEMENT ! Dans une condition de surintensité sur USB le logiciel désactive la sortie. Si le périphérique USB connecté ne semble pas s'allumer, retirez le périphérique du contrôleur.

Requirements and specifications

📝 Note: The Ethernet should be installed before starting the CA-1 controller installation.

📝 Note: The software required to configure this device is Composer Pro. See the *Composer Pro User Guide* (ctrl4.co/cpro-ug) for details.

Specifications

Model number	C4-CA1-V2
Connections	
Network	Ethernet—10/100BaseT compatible (required for controller setup)
Zigbee Pro	802.15.4
Zigbee antenna	External reverse SMA connector
USB port	2 USB 2.0 ports-500mA
Serial out	1 serial out RJ45 port (RS-232)
Z-Wave	Integrated Z-Wave slot accepts Control4 Z-Wave modules (sold separately)
Music services	Requires Triad One for audio output. Does not support Spotify Connect, ShairBridge, or My Music scanning.
Power	
Power requirements	5V DC 3A, external power supply included
Power supply	AC power supply accepts 100-240V at 50-60 Hz (0.5A)
PoE	802.3af (<13W)
Power consumption	Max 15W (51 BTU/hr)
Miscellaneous	
Operating temperature	32˚ - 104˚ F (0˚ - 40˚ C)
Storage temperature	4˚ - 158˚ F (-20˚ - 70˚ C)
Dimensions (L x W x H)	5.5" × 5.5" × 1.25" (14 × 14 × 3.8 cm)
Weight	0.65 lb (0.3 kg)
Shipping weight	1.5 lb (0.68 kg)

Additional resources

The following resources are available for more support.

- Control4 Knowledgebase and Tech Community: ctrl4.co/tc
- Control4 Technical Support: ctrl4.co/techsupport
- Control4 website: www.control4.com
- Composer Pro documentation in online help or PDF format available on the Dealer Portal under Support: ctrl4.co/docs
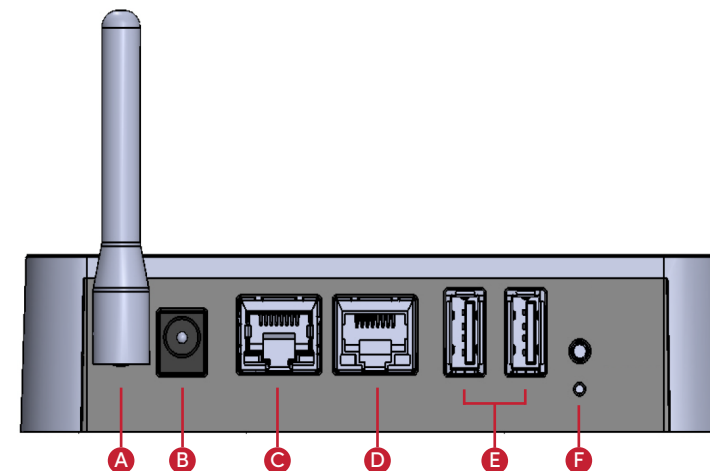- Z-Wave documentation: ctrl4.co/z-wave

Front view

A **Status LED**—The RGB status LED gives system status feedback. See "Troubleshooting" in this document for LED status information.

B **Z-Wave port**—Removable plastic cover on top of the controller with a Z-Wave port underneath for a Control4 Z-Wave module.

Back view

A **Zigbee**—External antenna connector for Zigbee radio.

B **Power port**—Power connection for external power supply.

C **ETHERNET (PoE)**—RJ-45 port for 10/100BaseT Ethernet network connection. Network connection used for configuration and device control. Supports PoE.

D **SERIAL**—RJ-45 port for serial communications. Can be used for RS-232 communication for device control.

E **USB**—Two USB 2.0 ports for external USB drives (e.g., FAT32-formatted devices). See "Setting up external storage devices" in this document.

F **ID / RESET buttons**—Buttons used to identify the device in Composer Pro and reset the controller. See "Troubleshooting" in this document.

Installing the controller

Requirements:

- Ensure that the home network is in place before starting system setup.
- A wired connection to the network is required for initial controller setup.
- The controller requires a network connection to use all of the features as designed. When connected, the controller can communicate with other IP devices in the home and access Control4 system updates.
- Composer Pro software version 2.10.0 or newer is required for configuration.

Mounting options:

- On-wall—The controller can be mounted to the wall using screws. Remove the rubber feet, measure the distance between them, and insert 2 screws into the wall so that the heads are about 1/4 to 1/2 inch from the wall. Position the holes on the back of the controller over the screw heads and slide the controller onto the screws.
- DIN rail—The controller can be mounted to the wall using a section of DIN rail channel. Mount the rail to the wall, and then attach the controller to the rail.

✅ Important: The CA-1 is not rated to be installed inside an electrical panel. DIN-rail installation is only intended for a wall-mount or other section of DIN rail outside of an electrical panel.

Connecting the controller

1 Connect the controller to the network by plugging a network cable into the controller's RJ-45 port (labeled **Ethernet (PoE)**) from the network port on the wall or at the network switch.

2 Attach serial devices as described in "Connecting the serial port." Serial port is only used for controlling external devices, the controller must be connected over Ethernet to set up the Control4 programming.

3 Connect any external storage devices (USB) as described in "Setting up external storage devices" in this document.

4 Connect the power cord to the controller's power port and then into an electrical outlet (if the controller is not powered by PoE).

Connecting the serial port (optional)

The controller includes one RJ-45 serial port that can be configured for RS-232 serial communication.

The following serial communication configurations are supported:

- RS-232—Hardware flow control, up to 115,200 Kbps. (TXD, RXD, CTS, RTS, GND)

To set up the serial port:

1 Connect a serial device to the controller using Cat5/Cat6 cable and an RJ-45 connector.
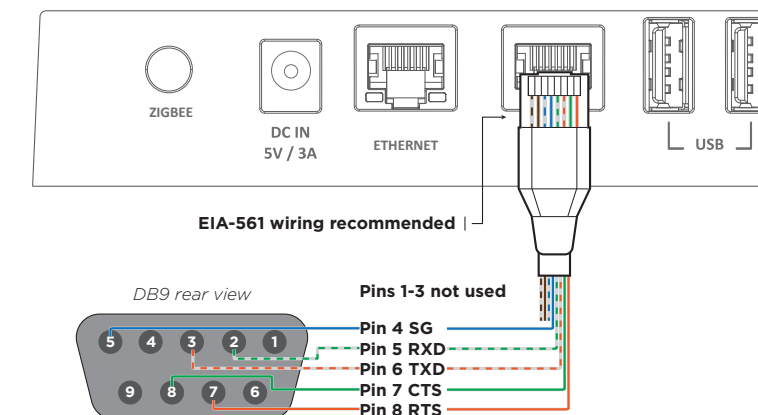
✅ Important: The serial port pinout follows the EIA/TIA-561 serial wiring standard. Use the wiring shown in the diagram below. Many pre-built DB9 to RS-232 cables, including network switch console cables, will not work.

2 To configure the serial port settings, make the appropriate connections in your project using Composer Pro. See the *Composer Pro User Guide* for details.

📝 Note: Serial settings are defined in the device driver in Composer. Serial settings (baud, parity, and serial port type) are automatically configured when a device driver is connected in Composer Pro to the serial port connection of the CA-1 driver.

Serial port pinout and wiring recommendation

RS-232 pinout

EIA-561 wiring recommended

DB9 rear view

5	4	3	2	1
9	8	7	6	

Pins 1-3 not used
Pin 4 SG
Pin 5 RXD
Pin 6 TXD
Pin 7 CTS
Pin 8 RTS

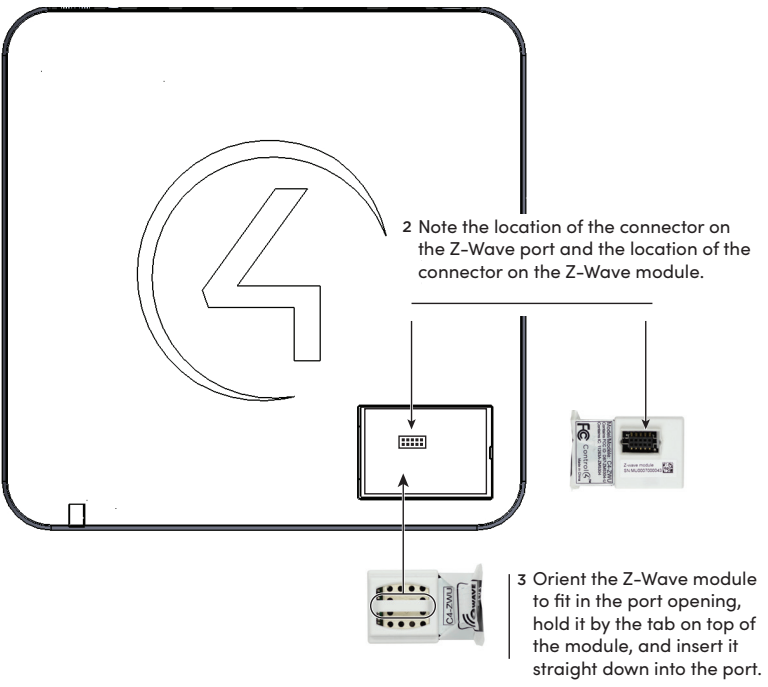## Installing a Z-Wave module (optional)

An optional Z-Wave module can be added to the Z-Wave port on top of the controller. Z-Wave Modules are specific to your region. See the *Z-Wave Setup Guide* for software configuration and more information (ctrl4.co/z-wave-sg)

To install the a Z-Wave module into the controller:

✅ **Important:** Power off the controller before you install the Z-Wave Module.

1 Using a small flathead screwdriver, remove the small plastic cover on top of the Z-Wave module.

2 Note the location of the connector on the Z-Wave port and the location of the connector on the Z-Wave module.

3 Orient the Z-Wave module to fit in the port opening, hold it by the tab on top of the module, and insert it straight down into the port.

4 Replace the plastic cover.

Setting up external storage devices

You can store and access media from an external storage device, for example, a network hard drive or USB memory device, by connecting the USB drive to the USB port and configuring the media in Composer Pro.

📝 Note: Media scanning is not supported on the CA-1 controller.

📝 Note: We support only externally-powered USB drives or solid state USB sticks. USB-powered external hard drives are not supported.

📝 Note: When using USB storage devices with the CA-1 controller you can only use one partition with a 2TB maximum size. This limitation applies to USB storage devices with all other controllers also.

Composer Pro driver information

Use Auto Discovery and SDDP to add the driver to the Composer project. See the *Composer Pro User Guide* for details.

📝 Note: A CA-1 controller may only run as Director in a single-controller project. CA-1 controllers may be used as secondary controllers in projects with other controllers that can be a Director in a multiple-controller project.

📝 Note: The CA-1 controller requires OS 2.10.1 or higher.

Connecting Z-Wave and Zigbee devices

All software configuration including connecting Zigbee and Z-Wave devices is done with Composer Pro. See the *Composer Pro User Guide* for more information.

Troubleshooting

Reset to factory settings

⚠️ Caution! The factory reset process will remove the Composer project.

To restore the controller to the factory default image, perform the following steps:

1 Insert one end of a paper clip into the small hole on the back of the controller labeled **RESET**.

2 Press and hold the **RESET** button, the controller will reset and the Status LED will go solid red.

3 Hold the button until the LED blinks double yellow. This should take five to seven seconds. The LED will blink yellow while the factory restore is running. When complete, the LED will turn off and the device will reset to complete the factory restore process.

Power cycle the controller

Press and hold the **ID** button for five seconds. The controller will restart.

Reset the network settings

To reset the controller network settings to the default, follow these steps:

1 Disconnect power to the controller.

2 While pressing and holding the **ID** button on the back of the controller, power on the controller.

3 Hold the **ID** button until the LED is solid orange, then immediately release the button.

4 If during the boot sequence the LED stays orange, press and hold the **ID** button until the LED blinks blue, and then release it.

LED troubleshooting guide

LED legend: ● = solid   ✴ = flashing (4 Hz)

(Hz = flashes a second)   ✴ = flashing (1 Hz)   ✴ = flashing (1/2 Hz)

Status LED

● Power up	● No IP address
✴ Controller is booting	✴ Controller is updating
● Reset check	✴ Update error
● Boot complete	✴ Factory restore in progress
● Connected to Director (link)	✴ Factory restore error
✴ USB over-current detected	

More help

For the latest version of this document and to view additional materials, open the URL below or scan the QR code on a device that can view PDFs.

MOST RECENT VERSION

ctrl4.co/ca1v2-ig

MORE INFO ON CA-1 CONTROLLERS

ctrl4.co/ca1v2

Legal, Warranty, and Regulatory/Safety information

Visit snapone.com/legal for details.

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