

Control4

Control4 EA-1 Controller

Installation Guide



Supported models

- C4-EA1 Entertainment and Automation Controller, 1 Zone
- C4-EA1-V2 Entertainment and Automation Controller, 1 Zone, V2
- C4-EA1-1-V2 Entertainment and Automation Controller, 1 Zone, V2, Intl
- C4-EA1-POE-V2 Entertainment and Automation Controller, 1 Zone, V2 PoE

Box contents

The following items are included in the EA-1 controller box:

- EA-1 controller
- AC power cord (all versions except C4-EA1-POE-V2)
- IR emitters (4)
- External antennas (2) (C4-EA1-POE-V2, 1 external antenna)
- EA-1 Wall-Mount Bracket (C4-WMEA1), in PoE version only

Accessories available for purchase

- EA-1 Wall-Mount Bracket (C4-WMEA1)
- Rack Mount Kit (C4-EA1RMK1-BL or C4-EA1RMK2-BL)
- Control4 3.5 mm to DB9 Serial Cable (C4-CBL3.5-DB9B)

Requirements and specifications

- Note:** We recommend using Ethernet instead of WiFi for the best network connectivity.
- Note:** The Ethernet or WiFi network should be installed before starting the EA-1 controller installation.
- Note:** The EA-1 V2 and EA-1 V2 PoE require OS 2.10.2 or higher.

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

Additional resources

The following resources are available for more support.

- Control4 Knowledgebase: kb.control4.com and Dealer Forums: forums.control4.com
- Control4 Technical Support
- Control4 website: www.control4.com

Composer Pro documentation in online help or PDF format available on the Dealer Portal: ctrl4.co/docs

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 ou sortie de contact le logiciel désactive sortie. Si le périphérique USB ou le capteur de contact connecté ne semble pas s'allumer, retirez le périphérique du contrôleur.

Specifications

Inputs / Outputs	
Video out	1 video out—1 HDMI
Video	HDMI 1.4 output; HD 1080p, 50-60 Hz
Audio out	1 audio out—1 HDMI
Audio playback formats	AAC, AIFF, ALAC, FLAC, M4A, MP2, MP3, MP4/M4A, Ogg Vorbis, PCM, WAV, WMA
High-resolution audio playback	Up to 192 kHz / 24 bit
Network	
Ethernet	10/100/1000BaseT compatible (required for controller setup)
Power over Ethernet	802.3at-2009 (PoE+) / 25.5W (V2 PoE model only)
WiFi	Internal Wireless-N (2.4 GHz, 802.11n/g/b) (V1, V2, and V2 Intl) No WiFi (V2 PoE)
WiFi security	WPA/WPA2 (applicable models)
WiFi antenna	External reverse SMA connector (applicable models)
ZigBee Pro	802.15.4
ZigBee antenna	External reverse SMA connector
USB port	1 USB 2.0 port—500mA
Control	
IR out	4 IR out—5V 27mA max output 1 IR blaster—front
IR capture	1 IR receiver—front, 20-60 KHz
Serial out	2 serial out (shared with IR out 1 and 2)
Power	
Power requirements	100-240 VAC, 60/50Hz (V1, V2, and V2 Intl) PoE+ (V2 PoE)
Other	
Power consumption	Max: 18W, 61 BTUs/hour Idle: 9W, 30 BTUs/hour
Operating temperature	32°F - 104°F (0°C - 40°C)
Storage temperature	4°F - 158°F (-20°C - 70°C)
Fan dB level	Max: 35 dB
Dimensions (H x W x D)	1.13 x 7.5 x 5.0" (29 x 191 x 127 mm)
Weight	1.2 lb (0.54 kg)
Shipping weight	2.2 lb (1.0 kg)

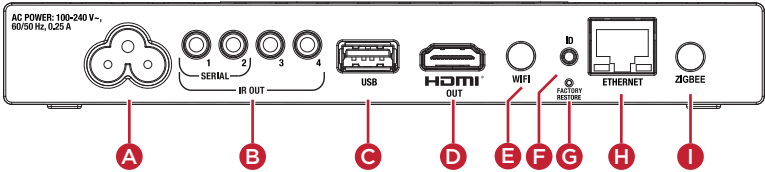
Front view



- A Data LED**—The Data LED shows solid red when the controller is streaming audio.
- B IR window**—IR blaster and IR receiver for learning IR codes.
- C Caution LED**—This LED shows solid red, then blinks blue during the boot process.
 - Note:** The Caution LED blinks orange during the factory restore process. See “Reset to factory settings” in this document.
- D Link LED**—The LED indicates that the controller has been identified in a Control4 Composer project and is communicating with Director.
- E Power LED**—The blue LED indicates that AC power is present. The controller turns on immediately after power is applied to it.

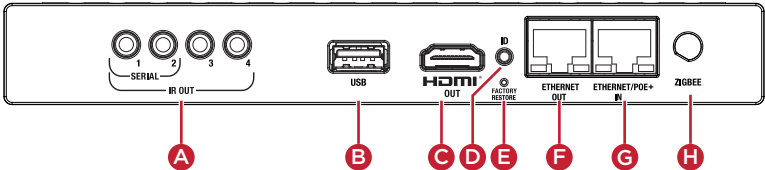
Back view

EA-1, EA-1 V2, and EA-1 V2 Intl



- A Power port**—AC power connector for an IEC 60320-C5 power cord.
- B SERIAL and IR OUT**—3.5 mm jacks for up to four IR emitters or for a combination of IR emitters and serial devices. Ports 1 and 2 can be configured independently for serial control (for controlling receivers or disc changers) or for IR control. See “Connecting the IR ports/serial ports” in this document for more information.
- C USB**—One port for an external USB drive (such as a USB stick formatted FAT32). See “Setting up external storage devices” in this document.
- D HDMI OUT**—An HDMI port to display navigation menus on a monitor or TV. Also an audio out over HDMI.
- E WIFI**—The antenna for the WiFi radio.
- F ID button**—Easily pressed button to identify the device in Composer Pro. The ID button on the EA-1 V2 is also an LED that displays feedback useful in a factory restore.
- G FACTORY RESTORE**—Restores the controller to its factory defaults.
- H ETHERNET**—RJ-45 jack for a 10/100/1000BaseT Ethernet connection.
- I ZIGBEE**—The antenna for the ZigBee radio.

EA-1 V2 PoE



- A SERIAL and IR OUT**—3.5 mm jacks for up to four IR emitters or for a combination of IR emitters and serial devices. Ports 1 and 2 can be configured independently for serial control (for controlling receivers or disc changers) or for IR control. See “Connecting the IR ports/serial ports” in this document for more information.
- B USB**—One port for an external USB drive (such as a USB stick formatted FAT32). See “Setting up external storage devices” in this document.
- C HDMI OUT**—An HDMI port to display navigation menus on a monitor or TV. Also an audio out over HDMI.
- D ID button**—Easily pressed button to identify the device in Composer Pro. The ID button on the EA-1 V2 is also an LED that displays feedback useful in a factory restore.
- E FACTORY RESTORE**—Restores the controller to its factory defaults.
- F ETHERNET OUT**—RJ-45 jack for a passthrough 10/100/1000BaseT Ethernet connection.
- G ETHERNET/POE+ IN**—RJ-45 jack for 10/100/1000BaseT Ethernet in and PoE+ power. The EA-1 V2 PoE does not have a line power option.
- H ZIGBEE**—The antenna for the ZigBee radio.

Installation instructions

To install the controller:

- Ensure that the home network is in place before starting system setup. An Ethernet connection to the local network is required for setup. The controller requires a network connection to use all of the features as designed. After initial configuration, Ethernet (recommended) or WiFi (no WiFi on the EA-1 PoE) can be used to connect the controller to web-based media databases, communicate with other IP devices in the home, and access Control4 system updates.
- Mount the controller near the local devices you need to control. The controller can be hidden behind a TV, mounted on a wall, placed in a rack, or stacked on a shelf. The EA-1 Wall-Mount Bracket is sold separately and designed for easy installation of the EA-1 controller behind a TV or on the wall. See the *EA-1/EA-3 Wall-Mount Bracket Installation Guide* (ctrl4.co/ea-wmb) for more details.
- Attach antennas to the **WIFI** and **ZIGBEE** antenna connectors.
- Connect the controller to the network.
 - Ethernet**—To connect using an Ethernet connection, connect the network cable into the controller’s RJ-45 port (labeled “Ethernet” or “Ethernet/PoE+ In”) and into the network port on the wall or at the network switch. On the EA-1 V2 PoE, connect the controller to a PoE+-enabled network switch or to a PoE+ power injector. An additional Ethernet-connected device can be connected to the Ethernet Out RJ-45 port.
 - WiFi**—To connect using WiFi, first connect the unit to Ethernet, and then use Composer Pro System Manager to reconfigure the unit for WiFi. The EA-1 V2 PoE does not support WiFi.
 - Important:** Do *not* install your EA controller on a 172.18.xxx.xxx subnet.
- Connect system devices. Attach IR and serial devices as described in “Connecting the IR ports/serial ports” and “Setting up IR emitters.”
- Set up any external storage devices as described in “Setting up external storage devices” in this document.
- Connect the power cord to the controller’s power port and then into an electrical outlet, or for the EA-1 PoE, power on the PoE-enabled network switch or PoE injector.

Connecting the IR ports/serial ports (optional)

The controller provides four IR ports, and ports 1 and 2 can be reconfigured independently for serial communication. If not used for serial, they can be used for IR. Connect a serial device to the controller using the Control4 3.5 mm-to-DB9 Serial Cable (C4-CBL3.5-DB9B, sold separately).

- The serial ports support baud rates between 1200 to 115200 baud for odd and even parity. The serial ports do not support hardware flow control.
- See Knowledgebase article #268 (dealer.control4.com/dealer/knowledgebase/article/268) for pinout diagrams.
- To configure a port for serial or IR, make the appropriate connections in your project using Composer Pro. See the *Composer Pro User Guide* for details.

- Note:** The serial ports can be configured as straight-through or null with Composer Pro. Serial ports by default are configured straight-through and can be changed in Composer by selecting *Enable Null-Modem Serial Port (1 or 2)*.

Setting up IR emitters

Your system may contain third-party products that are controlled through IR commands.

- Connect one of the included IR emitters to an **IR OUT** port on the controller.
- Place the stick-on emitter end onto the IR receiver on the Blu-ray player, TV, or other target device to drive IR signals from the controller to the targets.

Setting up external storage devices (optional)

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 or scanning the media in Composer Pro.

- Note:** We support only externally powered USB drives or solid state USB sticks. Self-powered USB drives are not supported.
- Note:** When using USB storage devices on an EA-1 controller, you can use only one partition with a 2 TB maximum size. This limitation also applies to the USB storage on other controllers.

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.

Troubleshooting

Reset to factory settings

 **Caution!** The factory restore process will remove the Composer project.

To restore the controller to the factory default image:

- 1 Insert one end of a paper clip into the small hole on the back of the controller labeled **FACTORY RESTORE**.
 - 2 Press and hold the **FACTORY RESTORE** button. The controller resets and the Caution LED changes to solid red.
 - 3 Hold the button until the Caution LED flashes double orange. This should take five to seven seconds. The Caution LED flashes orange while the factory restore is running. When complete, the Caution LED turns off and the device power cycles one more time to complete the factory restore process.
-  **Note:** On an EA-1 V2 controller, the ID button is also an LED that provides the same feedback as the Caution LED on the front of the controller.

Power cycle the controller

- 1 Press and hold the **ID** button for five seconds. The controller turns off and back on.

Reset the network settings

To reset the controller network settings to the default:

- 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 Caution LED (rear ID LED) appears solid orange and the Link and Power LEDs are solid blue, and then immediately release the button.
-  **Note:** In OS 2.10.1 and lower, the Caution LED appears solid blue during the network reset check. After updating to OS 2.10.2 and higher, the Caution LED appears orange during the network reset check.

LED status information

Data



Caution



Link



Power



 —Flashing LED

 —Solid LED

on EA-1 V2 models, the rear ID LED mirrors the front Caution LED.

			Just powered on
			Bootloader loaded
			Kernel loaded
			Network reset check
			Factory restore underway
			Factory restore fail
			Connected to Director
			Playing audio

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.



Regulatory/Safety information

To review regulatory information for your particular Control4 products, see the information located on the Control4 website at ctrl4.co/reg.

Warranty

Visit ctrl4.co/warranty for details.

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2018-08-13 DH