



Control4 CORE-5 Controller Installation Guide



Supported model

- C4-CORE5 Control4 CORE-5 Hub & Controller

Box contents

The following items are included in the box:

- CORE-5 controller
- AC power cord
- IR emitters (6)
- Rack ears (2, pre-installed on the CORE-5)
- Rubber feet (2, in box)
- External antennas (2)
- Terminal blocks for contacts and relays

Accessories sold separately

- Control4 3-Meter Wireless Antenna Kit (C4-AK-3M)
- Control4 Dual-Band WiFi USB Adapter (C4-USBWIFI OR C4-USBWIFI-1)
- Control4 3.5 mm to DB9 Serial Cable (C4-CBL3.5-DB9B)

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 or contact output the software disables the output. If the attached USB device or contact sensor does not appear to power on, remove the 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.
- Caution!** If this product is used as a means to open and close a garage door, gate, or similar device, use safety or other sensors to ensure safe function. Follow appropriate regulatory and safety standards governing project design and installation. Failure to do so may result in property damage or personal injury.

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 you install the CORE-5 controller.
- Note:** The CORE-5 requires OS 3.3 or higher.
- Composer Pro is required to configure this device. See the *Composer Pro User Guide* (ctrl4.co/cpro-ug) for details.

Specifications

	Inputs / Outputs
Video out	1 video out—1 HDMI
Video	HDMI 2.0a; 3840x2160 @ 60Hz (4K); HDCP 2.2 and HDCP 1.4
Audio out	7 audio out—1 HDMI, 3 stereo analog, 3 digital coax
Audio playback formats	AAC, APTX, ALAC, FLAC, M4A, MP2, MP3, M9A/M4A, Ogg Vorbis, PCM, WAV, WMA
High-res audio playback	Up to 192 kHz / 24 bit
Audio in	2 audio in—1 stereo analog, 1 digital coax
Audio delay on audio in	Up to 3.5 seconds, depending on network conditions
Digital signal processing	Digital coax in—1 pre-amp
	Audio out 1/2/3 (analog)—Balance, volume, loudness, 6-band PEQ, mono/stereo, test signal, mute
	Digital coax out 1/2/3—Volume, mute
Signal-to-noise ratio	<-118 dBFS
Total harmonic distortion	0.00023 (<10 dB)
	Network
Ethernet	1 10/100/1000BaseT compatible port (required for controller setup).
WiFi	Optional Dual-Band WiFi USB Adapter (2.4 GHz, 5 GHz, 802.11ac/a/g/n/s)
WiFi security	WPA/WPA2
ZigBee Pro	802.15.4
ZigBee antenna	External reverse SMA connector
Z-Wave	Z-Wave 700 series
Z-Wave antenna	External reverse SMA connector
USB port	2 USB 3.0 ports—500mA
	Control
IR OUT	8 IR out—5V 27mA max output
IR capture	1 IR receiver—front; 20-60 KHz
SERIAL OUT	4 Serial out—2 DB9 ports and 2 shared with IR out 1-2
Contact	12VDC 125mA maximum output
Relay	4 relay—AC: 38V, 2A maximum voltage across relay; DC: 24V, 2A maximum voltage across relay
	Power
Power requirements	100-240 VAC, 60/50Hz
Power consumption	Max: 40W, 136 BTU/hr/hour Idle: 15W, 51 BTU/hr/hour
	Other
Operating temperature	32°F to 104°F (0°C to 40°C)
Storage temperature	4°F to 158°F (-20°C to 70°C)
Dimensions (H x W x D)	1.65 x 17.4 x 9.92" (42 x 442 x 252 mm)
Weight	5.9 lbs (2.68 kg)
Shipping weight	9 lbs (4.08 kg)

Additional resources

The following resources are available for more support:

- Control4 CORE series help and information: ctrl4.co/core
- Snap One Tech Community and Knowledgebase: tech.ctrl4.com
- Control4 Technical Support
- Control4 website: www.ctrl4.com

Front view



- A Activity LED**—The LED indicates that the controller is streaming audio.
- B IR window**—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 flashes 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 connected. The controller turns on immediately after power is applied to it.

Back view



- A Power plug port**—AC power receptacle for an IEC 60320-C13 power cord.
- B Contact/relay port**—Connect up to four relay devices and four contact sensor devices to the terminal block connector. Relay connections are COM, NC (normally closed), and NO (normally open). Contact sensor connections are +12, SIG (signal), and GND (ground).
- C ETHERNET**—RJ-45 jack for a 10/100/1000 BaseT Ethernet connection.
- D USB**—Two port for an external USB drive or the optional Dual-Band WiFi USB Adapter. See "Set up external storage devices" in this document.
- E HDMI OUT**—An HDMI port to display system menus. Also an audio out over HDMI.
- F ID and FACTORY RESET**—ID button to identify the device in Composer Pro. The ID button on the CORE-5 is also an LED that displays feedback useful during a factory restore.
- G ZWAVE**—Antenna connector for the Z-Wave radio
- H SERIAL**—Two serial ports for RS-232 control. See "Connecting the serial ports" in this document.
- I IR / SERIAL**—Eight 3.5 mm jacks for up to eight IR emitters or for a combination of IR emitters and serial devices. Ports 1 and 2 can be configured independently for serial control or for IR control. See "Setting up emitters" in this document for more information.
- J DIGITAL AUDIO**—One digital coax audio input and three output ports. Allows audio to be shared over the local network to other Control4 devices. Our push audio (OUT 1/2/3) shared with other Control4 devices or from digital audio sources (local media or digital streaming services such as TuneIn).
- K ANALOG AUDIO**—One stereo audio input and three output ports. Allows audio to be shared (IN 1) over the local network to other Control4 devices. Outputs audio (OUT 1/2/3) shared from other Control4 devices or from digital audio sources (local media or digital streaming services such as TuneIn).
- L ZIGBEE**—Antenna for the Zigbee radio.

Installing the controller

To install the controller:

- Ensure that the home network is in place before starting system setup. The controller requires a network connection, Ethernet (recommended) or WiFi (with optional adapter), to use all of the features as designed. When connected, the controller can access web-based media databases, communicate with other IP devices in the home, and access Control4 system updates.
- Mount the controller in a rack or stacked on a shelf. Always allow plenty of ventilation. See "Mounting the controller in a rack" in this document.

- Connect the controller to the network.

- Ethernet**—To connect using an Ethernet connection, plug the data cable from the home network connection into the controller's RJ-45 port (labeled **ETHERNET**) and the network port on the wall or at the network switch.
- WiFi**—To connect using WiFi, first connect the controller to Ethernet, and then use Composer Pro System Manager to reconfigure the controller for WiFi.

- 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.
- Power up the controller. Plug the power cord into the controller's power plug port and then into an electrical outlet.

Mounting the controller in a rack

Using the pre-installed rack-mount ears, the CORE-5 can easily be mounted in a rack for convenient installation and flexible rack placement. The pre-installed rack-mount ears can even be reversed to mount the controller facing the rear of the rack, if needed.

To attach the rubber feet to the controller:

- Remove the two screws in each of the rack ears on the bottom of the controller. Remove the rack ears from the controller.
- Remove the two additional screws from the controller case and place the rubber feet on the controller.
- Secure the rubber feet to the controller with three screws in each rubber foot.

Pluggable terminal block connectors

For the contact and relay ports, the CORE-5 makes use of pluggable terminal block connectors which are removable plastic parts that locks in individual wires (included).

To connect a device to the pluggable terminal block:

- Insert one of the wires required for your device into the appropriate opening in the pluggable terminal block you reserved for that device.
- Use a small flat-blade screwdriver to tighten the screw and secure the wire in the terminal block.

Example: To add a motion sensor (see Figure 3), connect its wires to the following contact openings:

- Power input to +12V
- Output signal to SIG
- Ground connector to GND

Note: To connect dry contact closure devices, such as doorbells, connect the switch between +12 (power) and SIG (signal).

