CR-EXPAND1 Control4 Driver Guide

For Composer Pro · Driver version 1.0.0

The KanexPro CR-EXPAND1 driver lets a Control4 system control the CR-EXPAND1 over the network. It talks to the unit's own control port (TCP 8000): no other KanexPro software and no RS-232 cable are needed. Each control is a programming command, and each reading is a variable that follows changes made on the unit's front panel, remote or web page.

> **Before you start —** the Control4 controller must reach the CR-EXPAND1 on TCP port 8000. Give the unit a fixed IP address (or a DHCP reservation).

TABLE OF CONTENTS

1. Install the driver
2. Properties
3. Programming commands
4. Variables
5. Troubleshooting

1. INSTALL THE DRIVER

1. Download **KanexPro-CR-EXPAND1-C4-1.0.0.zip** from the CR-EXPAND1 page on kanexpro.com (Resources) and unzip it.
2. In Composer Pro, add the driver from the file `KanexPro-CR-EXPAND1-C4.c4z` (Driver > Add or Update Driver, or drag the file in).
3. Add it to the project in the room where the unit is.
4. Select it and set its properties (section 2). **Connection** shows Connected once it reaches the unit.

> **One driver per unit —** for two CR-EXPAND1 units, add the driver twice and give each its own IP address.

2. PROPERTIES

DRIVER PROPERTIES	
IP Address	The CR-EXPAND1's address on the control network. Empty by default.
Port	8000 (TCP), the unit's control port. Change it only if the unit's own web page was set to another port.
Poll Interval	How often, in seconds, the driver reads the unit back. Default 10; 0 reads it only after a change from Control4.
Debug Mode	On prints every command and reply to the Lua output.
Connection	Read only: Connected, Connecting, Not connected (and why), Refused (and which command), or No IP address.
Driver Version	Read only: 1.0.0.

Action: **Reconnect** connects again at once.

3. PROGRAMMING COMMANDS

3 commands. Use them in Composer's Programming view, from any event.

#	Command	Parameters	What it does
1	**On**	Ch (a list: Relay 1, Relay 2); State (a list: On, Off)	On: on or off.
2	**I/O port**	Value (a list: Input, Output)	Sets the i/O port. Choices: Input; Output.
3	**Output high**	State (a list: On, Off)	Output high: on or off.

4. VARIABLES

`STATUS` is the Connection text. The others follow the unit, whoever changes it:

#	Variable	Kind	What it holds
1	`RELAY_CH1`	on/off	Relay 1 On
2	`RELAY_CH2`	on/off	Relay 2 On
3	`IO_MODE`	text	I/O port
4	`IO_OUT`	on/off	Output high
5	`VERSION`	text	Readings Firmware
6	`IO_IN`	text	Readings I/O input

5. TROUBLESHOOTING

Connection says Not connected.
Check the IP Address property against the unit's address (its front panel or its own web page). A unit on DHCP may have moved: give it a fixed address or a DHCP reservation. The driver tries again every 5 seconds by itself; the Reconnect action tries at once.

The address is right, but it still does not connect.
The Control4 controller and the unit must reach each other: the same network or VLAN, or a route between them. A firewall or switch ACL between them must allow TCP port 8000 to the unit. Leave the Port property at 8000 unless the unit's own web page was set to another port.

Connection says Refused, and names a command.
The unit refused that change. It may be in standby: turn it on first.

Changes made on the unit do not show in Control4.
Set Poll Interval above 0. Changes made on the unit's front panel, remote or web page then show in its variables within that many seconds.

I need to see what the driver sends.
Set Debug Mode to On: the Lua output in Composer shows every command sent and every reply.