KVM-4X1MV4K Control4 Driver Guide

For Composer Pro · Driver version 1.0.0

The KanexPro KVM-4X1MV4K driver lets a Control4 system control the KVM-4X1MV4K over the network. It talks to the unit's own control port (TCP 8001): 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 KVM-4X1MV4K on TCP port 8001. Give the unit a fixed IP address (or a DHCP reservation).

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1. INSTALL THE DRIVER

1. Download **KanexPro-KVM-4X1MV4K-C4-1.0.0.zip** from the KVM-4X1MV4K page on kanexpro.com (Resources) and unzip it.
2. In Composer Pro, add the driver from the file `KanexPro-KVM-4X1MV4K-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 KVM-4X1MV4K units, add the driver twice and give each its own IP address.

2. PROPERTIES

DRIVER PROPERTIES	
IP Address	The KVM-4X1MV4K's address on the control network. Empty by default.
Port	8001 (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

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

#	Command	Parameters	What it does
1	**Show (single screen)**	Value (a list: HDMI 1, HDMI 2, HDMI 3, HDMI 4)	Sets the show (single screen). Choices: HDMI 1; HDMI 2; HDMI 3; HDMI 4.
2	**Layout**	Value (a list: Single screen, PIP, PBP, Triple ...)	Sets the layout. Choices: Single screen; PIP; PBP; Triple; Quad.

3	**Picture-in-picture position**	Value (a list: Left top, Left bottom, Right top, Right bottom)	Sets the picture-in-picture position. Choices: Left top; Left bottom; Right top; Right bottom.
4	**Picture-in-picture size**	Value (a list: Small, Middle, Large)	Sets the picture-in-picture size. Choices: Small; Middle; Large.
5	**Side-by-side arrangement**	Value (a list: Mode 1, Mode 2)	Sets the side-by-side arrangement. Choices: Mode 1; Mode 2.
6	**Side-by-side shape**	Value (a list: Full screen, 16:9)	Sets the side-by-side shape. Choices: Full screen; 16:9.
7	**Triple arrangement**	Value (a list: Mode 1, Mode 2)	Sets the triple arrangement. Choices: Mode 1; Mode 2.
8	**Triple shape**	Value (a list: Full screen, 16:9)	Sets the triple shape. Choices: Full screen; 16:9.
9	**Quad arrangement**	Value (a list: Mode 1, Mode 2)	Sets the quad arrangement. Choices: Mode 1; Mode 2.
10	**Quad shape**	Value (a list: Full screen, 16:9)	Sets the quad shape. Choices: Full screen; 16:9.
11	**Keyboard and mouse go to**	Value (a list: Window 1, Window 2, Window 3, Window 4)	Sets the keyboard and mouse go to. Choices: Window 1; Window 2; Window 3; Window 4.
12	**Change computer with mouse hotkeys**	State (a list: On, Off)	Change computer with mouse hotkeys: on or off.
13	**Move the mouse across windows to change computer**	State (a list: On, Off)	Move the mouse across windows to change computer: on or off.
14	**Outline the window with the keyboard and mouse**	State (a list: On, Off)	Outline the window with the keyboard and mouse: on or off.
15	**Show each window's input name**	State (a list: On, Off)	Show each window's input name: on or off.
16	**Switch to a new source by itself**	State (a list: On, Off)	Switch to a new source by itself: on or off.
17	**Sound from**	Value (a list: Window 1's source, HDMI 1 sound, HDMI 2 sound, HDMI 3 sound ...)	Sets the sound from. Choices: Window 1's source; HDMI 1 sound; HDMI 2 sound; HDMI 3 sound; HDMI 4 sound.
18	**Volume**	Level (0 to 100)	Sets the volume, from 0 to 100.
19	**Mute**	State (a list: On, Off)	Mute: on or off.
20	**Output resolution**	Value (a list: 4096x2160p60, 4096x2160p50, 3840x2160p60, 3840x2160p50 ...)	Sets the output resolution. Choices: 4096x2160p60; 4096x2160p50; 3840x2160p60; 3840x2160p50; 3840x2160p30, and 10 more.
21	**Picture mode**	Value (a list: Video, PC)	Sets the picture mode. Choices: Video; PC.
22	**With no source show**	Value (a list: Black screen, Blue screen)	Sets the with no source show. Choices: Black screen; Blue screen.

23	**Power**	Button (a list: On, Standby)	Presses the button you pick: On, Standby.

4. VARIABLES

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

#	Variable	Kind	What it holds
1	`INPUT`	text	Show (single screen)
2	`LAYOUT`	text	Layout
3	`PIP_POSITION`	text	Picture-in-picture position
4	`PIP_SIZE`	text	Picture-in-picture size
5	`PBP_MODE`	text	Side-by-side arrangement
6	`PBP_ASPECT`	text	Side-by-side shape
7	`TRIPLE_MODE`	text	Triple arrangement
8	`TRIPLE_ASPECT`	text	Triple shape
9	`QUAD_MODE`	text	Quad arrangement
10	`QUAD_ASPECT`	text	Quad shape
11	`USB_WINDOW`	text	Keyboard and mouse go to
12	`MOUSEKEYS`	on/off	Change computer with mouse hotkeys
13	`ROAMING`	on/off	Move the mouse across windows to change computer
14	`USB_BORDER`	on/off	Outline the window with the keyboard and mouse
15	`SOURCE_OSD`	on/off	Show each window's input name
16	`AUTO_SWITCH`	on/off	Switch to a new source by itself
17	`AUDIO`	text	Sound from
18	`VOLUME`	number	Volume
19	`MUTE`	on/off	Mute
20	`RESOLUTION`	text	Output resolution
21	`ITC`	text	Picture mode
22	`VKA`	text	With no source show
23	`POWER`	on/off	Readings Power
24	`BEEP`	on/off	Readings Beep
25	`VERSION`	text	Readings Firmware

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 8001 to the unit. Leave the Port property at 8001 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.