SW-4X2PS-70M Control4 Driver Guide

For Composer Pro · Driver version 1.0.2

The KanexPro SW-4X2PS-70M driver lets a Control4 system control the SW-4X2PS-70M 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 SW-4X2PS-70M 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-SW-4X2PS-70M-C4-1.0.2.zip** from the SW-4X2PS-70M page on kanexpro.com (Resources) and unzip it.
2. In Composer Pro, add the driver from the file `KanexPro-SW-4X2PS-70M-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 SW-4X2PS-70M units, add the driver twice and give each its own IP address.

2. PROPERTIES

DRIVER PROPERTIES	
IP Address	The SW-4X2PS-70M'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: 1.0.2.

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

3. PROGRAMMING COMMANDS

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

#	Command	Parameters	What it does
1	**Route**	Output (a list: All outputs, HDMI out 1, HDMI/HDBT out 2); Input (a list: USB-C 1, USB-C 2, HDMI 3, HDMI 4)	Sends the input you pick to the output you pick ("All outputs": every output at once).

2	**Layout**	Output (a list: HDMI out 1, HDMI/HDBT out 2); Value (a list: Auto, Single, Dual-LR, Dual-TB ...)	Sets the layout on the output you pick. Choices: Auto; Single; Dual-LR; Dual-TB; PIP-LT, and 18 more.
3	**Volume**	Level (0 to 100)	Sets the volume, from 0 to 100.
4	**Volume a step**	Value (a list: Down, Up)	Sets the volume a step. Choices: Down; Up.
5	**Mute the sound**	State (a list: On, Off)	Mute the sound: on or off.
6	**Volume (Out volume)**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4); Level (0 to 100)	Sets the volume on the output you pick, from 0 to 100.
7	**Mute**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4); State (a list: On, Off)	Mute: on or off on the output you pick.
8	**Blank picture and sound (AV mute)**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3); State (a list: On, Off)	Blank picture and sound (AV mute): on or off on the output you pick.
9	**Freeze the picture**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3); State (a list: On, Off)	Freeze the picture: on or off on the output you pick.
10	**Power**	Button (a list: On, Standby)	Presses the button you pick: On, Standby.
11	**Screen**	Button (a list: Screen on, Screen off)	Presses the button you pick: Screen on, Screen off.
12	**Presets**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5, 6, 7, 8.
13	**Save**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5, 6, 7, 8.
14	**Resolution**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3); Value (a list: Auto, 3840x2160p60, 3840x2160p50, 4096x2160p60 ...)	Sets the resolution on the output you pick. Choices: Auto; 3840x2160p60; 3840x2160p50; 4096x2160p60; 4096x2160p50, and 11 more.
15	**HDCP**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3); Value (a list: Auto, HDCP 1.4, HDCP 2.2)	Sets the HDCP on the output you pick. Choices: Auto; HDCP 1.4; HDCP 2.2.
16	**Output on**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3); State (a list: On, Off)	Output on: on or off on the output you pick.

17	**EDID**	Input (a list: USB-C 1, USB-C 2, HDMI 3, HDMI 4); Value (a list: Auto (HDBT or HDMI or HDBT+HDMI), Copy HDMI Out 1, Copy HDMI Out 2, Copy HDBT Out 2 ...)	Sets the EDID on the input you pick. Choices: Auto (HDBT or HDMI or HDBT+HDMI); Copy HDMI Out 1; Copy HDMI Out 2; Copy HDBT Out 2; 4K2K60_444, Stereo Audio 2.0, and 12 more.
18	**Accept HDCP**	Input (a list: USB-C 1, USB-C 2, HDMI 3, HDMI 4); State (a list: On, Off)	Accept HDCP: on or off on the input you pick.
19	**Detect a new source by**	Value (a list: Signal, Source 5V)	Sets the detect a new source by. Choices: Signal; Source 5V.
20	**When the source goes, switch to**	Output (a list: HDMI out 1, HDMI/HDBT out 2); Value (a list: Next input, USB-C 1, USB-C 2, HDMI 3 ...)	Sets the when the source goes, switch to on the output you pick. Choices: Next input; USB-C 1; USB-C 2; HDMI 3; HDMI 4, and 1 more.
21	**Auto switching shows**	Output (a list: HDMI out 1, HDMI/HDBT out 2); Value (a list: Single source, Multiview)	Sets the auto switching shows on the output you pick. Choices: Single source; Multiview.
22	**Two sources**	Output (a list: HDMI out 1, HDMI/HDBT out 2); Value (a list: Dual-LR (Left-by-Right), Dual-TB (Top-by-Bottom), PIP-LT (Left-by-Top), PIP-LB (Left-by-Bottom) ...)	Sets the two sources on the output you pick. Choices: Dual-LR (Left-by-Right); Dual-TB (Top-by-Bottom); PIP-LT (Left-by-Top); PIP-LB (Left-by-Bottom); PIP-RT (Right-by-Top), and 2 more.
23	**Three sources**	Output (a list: HDMI out 1, HDMI/HDBT out 2); Value (a list: Triple-L (Left), Triple-R (Right), Triple-T (Top), Triple-B (Bottom) ...)	Sets the three sources on the output you pick. Choices: Triple-L (Left); Triple-R (Right); Triple-T (Top); Triple-B (Bottom); Triple User Defined.
24	**Four sources**	Output (a list: HDMI out 1, HDMI/HDBT out 2); Value (a list: Quad-L (Left), Quad-R (Right), Quad-T (Top), Quad-B (Bottom) ...)	Sets the four sources on the output you pick. Choices: Quad-L (Left); Quad-R (Right); Quad-T (Top); Quad-B (Bottom); Quad-S (Square), and 1 more.
25	**Window border**	Win (a list: Window 1, Window 2, Window 3, Window 4); Value (a list: Off, Black, Red, Green ...)	Sets the window border. Choices: Off; Black; Red; Green; Blue, and 5 more.

26	**Plays the sound of**	N (a list: Main in 1, Main in 2); Value (a list: Follow the output's picture, USB-C 1, USB-C 2, HDMI 3 ...)	Sets the plays the sound of. Choices: Follow the output's picture; USB-C 1; USB-C 2; HDMI 3; HDMI 4.
27	**Level**	Input (a list: USB-C 1, USB-C 2, HDMI 3, HDMI 4); Level (0 to 100)	Sets the level on the input you pick, from 0 to 100.
28	**Mute (In mute)**	Input (a list: USB-C 1, USB-C 2, HDMI 3, HDMI 4); State (a list: On, Off)	Mute: on or off on the input you pick.
29	**Plays**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4); Value (a list: Main in 1, Main in 2, Line in, Dante in)	Sets the plays on the output you pick. Choices: Main in 1; Main in 2; Line in; Dante in.
30	**Mix**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4); Value (a list: Stereo, Left, Right, Left and right)	Sets the mix on the output you pick. Choices: Stereo; Left; Right; Left and right.
31	**Delay (ms)**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4); Value (a list: 0, 1, 2, 3 ...)	Sets the delay (ms) on the output you pick. Choices: 0; 1; 2; 3; 4, and 46 more.
32	**EQ**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4); Value (a list: Flat, Custom 1, Custom 2, Custom 3 ...)	Sets the EQ on the output you pick. Choices: Flat; Custom 1; Custom 2; Custom 3; Custom 4, and 1 more.
33	**Reset the EQ**	Output (a list: HDMI out 1, HDMI/HDBT out 2, Out 3, Out 4)	Press to reset the EQ on the output you pick.
34	**Receiver shows**	Value (a list: HDBT in, HDMI in)	Sets the receiver shows. Choices: HDBT in; HDMI in.
35	**Receiver switches by itself**	State (a list: On, Off)	Receiver switches by itself: on or off.
36	**Receiver detects a source by**	Value (a list: Source 5V, Signal)	Sets the receiver detects a source by. Choices: Source 5V; Signal.
37	**Receiver USB device ports' 5V**	Value (a list: Force off, Force on, Follow host)	Sets the receiver USB device ports' 5V. Choices: Force off; Force on; Follow host.
38	**Turn the screen on and off by itself**	State (a list: On, Off)	Turn the screen on and off by itself: on or off.
39	**Turn it off after no source for**	Value (a list: 5 sec, 10 sec, 30 sec, 1 min ...)	Sets the turn it off after no source for. Choices: 5 sec; 10 sec; 30 sec; 1 min; 5 min, and 1 more.

40	**Turn it on and off with**	Value (a list: CEC, RS-232, CEC and RS-232)	Sets the turn it on and off with. Choices: CEC; RS-232; CEC and RS-232.
41	**USB switching**	Value (a list: Follow video, Manual, Auto (switch on USB 5V))	Sets the USB switching. Choices: Follow video; Manual; Auto (switch on USB 5V).
42	**USB devices go to**	Value (a list: USB-C 1, USB-C 2, USB host 3, USB host 4)	Sets the USB devices go to. Choices: USB-C 1; USB-C 2; USB host 3; USB host 4.
43	**USB device ports' 5V**	Value (a list: Force off, Force on, Follow host)	Sets the USB device ports' 5V. Choices: Force off; Force on; Follow host.
44	**Laptops on USB-C reach the network**	Value (a list: All USB-C inputs, USB-C 1, USB-C 2, None)	Sets the laptops on USB-C reach the network. Choices: All USB-C inputs; USB-C 1; USB-C 2; None.
45	**Clear a preset**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5, 6, 7, 8.
46	**Lock the front buttons (on = locked)**	State (a list: On, Off)	Lock the front buttons (on = locked): on or off.
47	**Beep**	State (a list: On, Off)	Beep: on or off.
48	**IR remote**	State (a list: On, Off)	IR remote: on or off.
49	**Fan**	Value (a list: Auto, 25%, 50%, 75% ...)	Sets the fan. Choices: Auto; 25%; 50%; 75%; 100%.

4. VARIABLES

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

#	Variable	Kind	What it holds
1	`VOLUME`	number	Volume
2	`MUTE`	on/off	Mute the sound
3	`AUTO_MODE`	text	Detect a new source by
4	`MAIN_AUDIO_N1`	text	Main in 1 Plays the sound of
5	`MAIN_AUDIO_N2`	text	Main in 2 Plays the sound of
6	`OUT_AUDIO_OUT1`	text	HDMI out 1 Plays
7	`OUT_AUDIO_OUT2`	text	HDMI/HDBT out 2 Plays
8	`OUT_AUDIO_OUT3`	text	Out 3 Plays
9	`OUT_AUDIO_OUT4`	text	Out 4 Plays
10	`RX_INPUT`	text	Receiver shows
11	`RX_AUTO`	on/off	Receiver switches by itself
12	`RX_AUTO_MODE`	text	Receiver detects a source by
13	`RX_USB_POWER`	text	Receiver USB device ports' 5V
14	`AUTO_POWER`	on/off	Turn the screen on and off by itself
15	`AUTO_POWER_TIMER`	text	Turn it off after no source for

16	AUTO_POWER_VIA	text	Turn it on and off with
17	USB_MODE	text	USB switching
18	USB_HOST	text	USB devices go to
19	USB_POWER	text	USB device ports' 5V
20	USBC_NET	text	Laptops on USB-C reach the network
21	FRONT_LOCK	on/off	Lock the front buttons (on = locked)
22	BEEP	on/off	Beep
23	IR	on/off	IR remote
24	FAN	text	Fan
25	POWER	on/off	Readings Power
26	RX_HDMI5V	text	Readings Something on the receiver's HDMI input
27	RX_HOST5V	text	Readings Something on the receiver's USB host port
28	TEMP	text	Readings Temperature (°C)
29	UPTIME	text	Readings Running for (days:hours:min:sec)
30	FIRMWARE	text	Readings Firmware
31	IP_MODE	text	Readings IP mode
32	IP	text	Readings Address
33	SUBNET	text	Readings Subnet mask
34	GATEWAY	text	Readings Gateway
35	TCP_PORT	text	Readings Control port
36	TELNET_PORT	text	Readings Telnet port

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.