SW-5X1PS-70M Control4 Driver Guide

For Composer Pro · Driver version 1.0.2

The KanexPro SW-5X1PS-70M driver lets a Control4 system control the SW-5X1PS-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-5X1PS-70M on TCP port 8000. Give the unit a fixed IP address (or a DHCP reservation).

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1. INSTALL THE DRIVER

1. Download **KanexPro-SW-5X1PS-70M-C4-1.0.2.zip** from the SW-5X1PS-70M page on kanexpro.com (Resources) and unzip it.
2. In Composer Pro, add the driver from the file `KanexPro-SW-5X1PS-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-5X1PS-70M units, add the driver twice and give each its own IP address.

2. PROPERTIES

DRIVER PROPERTIES	
IP Address	The SW-5X1PS-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

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

#	Command	Parameters	What it does
1	**Show**	Value (a list: USB-C 1, USB-C 2, HDMI 3, HDMI 4 ...)	Sets the show. Choices: USB-C 1; USB-C 2; HDMI 3; HDMI 4; HDMI 5.
2	**Layout**	Value (a list: Single, PIP, PBP, Triple ...)	Sets the layout. Choices: Single; 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, Medium, Large)	Sets the picture-in-picture size. Choices: Small; Medium; Large.
5	**Side by side: split**	Value (a list: Two equal halves, One big, one small)	Sets the side by side: split. Choices: Two equal halves; One big, one small.
6	**Side by side: fit**	Value (a list: Fill the screen, Keep 16:9)	Sets the side by side: fit. Choices: Fill the screen; Keep 16:9.
7	**Three windows: split**	Value (a list: Half and two quarters, One big, two small)	Sets the three windows: split. Choices: Half and two quarters; One big, two small.
8	**Three windows: fit**	Value (a list: Fill the screen, Keep 16:9)	Sets the three windows: fit. Choices: Fill the screen; Keep 16:9.
9	**Four windows: split**	Value (a list: Four equal, One big, three small)	Sets the four windows: split. Choices: Four equal; One big, three small.
10	**Four windows: fit**	Value (a list: Fill the screen, Keep 16:9)	Sets the four windows: fit. Choices: Fill the screen; Keep 16:9.
11	**Border**	Win (a list: Window 1, Window 2, Window 3, Window 4); Value (a list: Off, Black, Red, Green ...)	Sets the border. Choices: Off; Black; Red; Green; Blue, and 5 more.
12	**Blank picture and sound (AV mute)**	State (a list: On, Off)	Blank picture and sound (AV mute): on or off.
13	**Freeze the picture**	State (a list: On, Off)	Freeze the picture: on or off.
14	**Switch to a newly plugged-in source by itself**	State (a list: On, Off)	Switch to a newly plugged-in source by itself: on or off.
15	**When the source goes, switch to**	Value (a list: Auto, USB-C 1, USB-C 2, HDMI 3 ...)	Sets the when the source goes, switch to. Choices: Auto; USB-C 1; USB-C 2; HDMI 3; HDMI 4, and 1 more.
16	**Output resolution**	Value (a list: Auto, 3840x2160p60, 3840x2160p50, 4096x2160p60 ...)	Sets the output resolution. Choices: Auto; 3840x2160p60; 3840x2160p50; 4096x2160p60; 4096x2160p50, and 10 more.
17	**HDCP**	Output (a list: HDMI OUT, HDBT OUT); 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.
18	**Picture mode**	Value (a list: Video mode, PC mode)	Sets the picture mode. Choices: Video mode; PC mode.
19	**Volume**	Level (0 to 100)	Sets the volume, from 0 to 100.
20	**Volume a step**	Value (a list: Down, Up)	Sets the volume a step. Choices: Down; Up.

21	**Mute the sound**	State (a list: On, Off)	Mute the sound: on or off.
22	**Volume (Out volume)**	Output (a list: HDMI OUT, HDBT OUT, Out 3); Level (0 to 100)	Sets the volume on the output you pick, from 0 to 100.
23	**Mute**	Output (a list: HDMI OUT, HDBT OUT, Out 3); State (a list: On, Off)	Mute: on or off on the output you pick.
24	**Plays**	Output (a list: HDMI OUT, HDBT OUT, Out 3); Value (a list: Main In (HDMI/USB-C In), Line In, Dante In)	Sets the plays on the output you pick. Choices: Main In (HDMI/USB-C In); Line In; Dante In.
25	**Mix**	Output (a list: HDMI OUT, HDBT OUT, Out 3); Value (a list: Stereo, Left, Right, Left and right)	Sets the mix on the output you pick. Choices: Stereo; Left; Right; Left and right.
26	**Delay (ms)**	Output (a list: HDMI OUT, HDBT OUT, Out 3); 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.
27	**Main In plays the sound of**	Value (a list: Window 1 (follows the picture), USB-C 1, USB-C 2, HDMI 3 ...)	Sets the main In plays the sound of. Choices: Window 1 (follows the picture); USB-C 1; USB-C 2; HDMI 3; HDMI 4, and 1 more.
28	**Level**	Input (a list: USB-C 1, USB-C 2, HDMI 3); Level (0 to 100)	Sets the level on the input you pick, from 0 to 100.
29	**Mute (In mute)**	Input (a list: USB-C 1, USB-C 2, HDMI 3); State (a list: On, Off)	Mute: on or off on the input you pick.
30	**EQ**	Output (a list: HDMI OUT, HDBT OUT, Out 3); 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.
31	**Reset the EQ**	Output (a list: HDMI OUT, HDBT OUT, Out 3)	Press to reset the EQ on the output you pick.
32	**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, Copy HDBT OUT, 4K2K60_444, Stereo Audio 2.0 ...)	Sets the EDID on the input you pick. Choices: Auto (HDBT or HDMI or HDBT+HDMI); Copy HDMI OUT; Copy HDBT OUT; 4K2K60_444, Stereo Audio 2.0; 4K2K30_444, Stereo Audio 2.0, and 11 more.

33	**Receiver shows**	Value (a list: HDBT in, HDMI in)	Sets the receiver shows. Choices: HDBT in; HDMI in.
34	**Receiver switches by itself**	State (a list: On, Off)	Receiver switches by itself: on or off.
35	**Receiver detects a source by**	Value (a list: TMDS, 5V)	Sets the receiver detects a source by. Choices: TMDS; 5V.
36	**Receiver USB device ports' 5V**	Value (a list: Force off, Force on, Follow)	Sets the receiver USB device ports' 5V. Choices: Force off; Force on; Follow.
37	**USB switching**	Value (a list: Auto (switch on USB 5V), Manual, Follow video (HDMI 3 with USB host 3))	Sets the USB switching. Choices: Auto (switch on USB 5V); Manual; Follow video (HDMI 3 with USB host 3).
38	**USB devices go to**	Value (a list: USB-C 1, USB-C 2, USB host 3)	Sets the USB devices go to. Choices: USB-C 1; USB-C 2; USB host 3.
39	**USB device ports' 5V**	Value (a list: Force off, Force on, Follow)	Sets the USB device ports' 5V. Choices: Force off; Force on; Follow.
40	**Laptops on USB-C reach the network**	State (a list: On, Off)	Laptops on USB-C reach the network: on or off.
41	**Screen**	Button (a list: Screen on, Screen off)	Presses the button you pick: Screen on, Screen off.
42	**Turn the screen on and off by itself**	State (a list: On, Off)	Turn the screen on and off by itself: on or off.
43	**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.
44	**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.
45	**On**	Port (a list: Local RS-232 (switch), Remote RS-232 (HDBT receiver)); State (a list: On, Off)	On: on or off.
46	**Presets**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5.
47	**Save**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5.
48	**Clear a preset**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5.
49	**Power**	Button (a list: On, Standby)	Presses the button you pick: On, Standby.
50	**Lock the front buttons (on = locked)**	State (a list: On, Off)	Lock the front buttons (on = locked): on or off.
51	**Beep**	State (a list: On, Off)	Beep: on or off.

52	**IR remote**	State (a list: On, Off)	IR remote: on or off.
53	**Power the receiver over the HDBT cable (PoE)**	State (a list: On, Off)	Power the receiver over the HDBT cable (PoE): on or off.
54	**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	`INPUT`	text	Show
2	`MULTIVIEW`	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: split
6	`PBP_ASPECT`	text	Side by side: fit
7	`TRIPLE_MODE`	text	Three windows: split
8	`TRIPLE_ASPECT`	text	Three windows: fit
9	`QUAD_MODE`	text	Four windows: split
10	`QUAD_ASPECT`	text	Four windows: fit
11	`BORDER_WIN1`	text	Window 1 Border
12	`BORDER_WIN2`	text	Window 2 Border
13	`BORDER_WIN3`	text	Window 3 Border
14	`BORDER_WIN4`	text	Window 4 Border
15	`AVMUTE`	on/off	Blank picture and sound (AV mute)
16	`FREEZE`	on/off	Freeze the picture
17	`AUTO_SWITCH`	on/off	Switch to a newly plugged-in source by itself
18	`FALLBACK`	text	When the source goes, switch to
19	`RESOLUTION`	text	Output resolution
20	`HDCP_OUT1`	text	HDMI OUT HDCP
21	`HDCP_OUT2`	text	HDBT OUT HDCP
22	`ITC`	text	Picture mode
23	`VOLUME`	number	Volume
24	`MUTE`	on/off	Mute the sound
25	`MAIN_AUDIO`	text	Main In plays the sound of
26	`EDID_IN1`	text	USB-C 1 EDID
27	`EDID_IN2`	text	USB-C 2 EDID
28	`EDID_IN3`	text	HDMI 3 EDID
29	`EDID_IN4`	text	HDMI 4 EDID
30	`EDID_IN5`	text	HDMI 5 EDID
31	`RX_INPUT`	text	Receiver shows

32	RX_AUTO	on/off	Receiver switches by itself
33	RX_AUTO_MODE	text	Receiver detects a source by
34	RX_USB_POWER	text	Receiver USB device ports' 5V
35	USB_MODE	text	USB switching
36	USB_HOST	text	USB devices go to
37	USB_POWER	text	USB device ports' 5V
38	AUTO_POWER	on/off	Turn the screen on and off by itself
39	AUTO_POWER_VIA	text	Turn it on and off with
40	AUTO_POWER_TIMER	text	Turn it off after no source for
41	SERIAL_ENABLE_PORT1	on/off	Local RS-232 (switch) On
42	SERIAL_ENABLE_PORT2	on/off	Remote RS-232 (HDBT receiver) On
43	FRONT_LOCK	on/off	Lock the front buttons (on = locked)
44	POWER	on/off	Readings Power
45	WINDOWS_IN1	text	USB-C 1 Windows
46	WINDOWS_IN2	text	USB-C 2 Windows
47	WINDOWS_IN3	text	HDMI 3 Windows
48	WINDOWS_IN4	text	HDMI 4 Windows
49	WINDOWS_IN5	text	HDMI 5 Windows
50	RX_HDMI5V	text	Readings Receiver HDMI input 5V
51	RX_HOST5V	text	Readings Receiver USB host 5V
52	FIRMWARE	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 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.