MMX-16X16AUD Control4 Driver Guide

For Composer Pro · Driver version 1.0.1

The KanexPro MMX-16X16AUD driver lets a Control4 system control the MMX-16X16AUD 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 MMX-16X16AUD 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-MMX-16X16AUD-C4-1.0.1.zip** from the MMX-16X16AUD page on kanexpro.com (Resources) and unzip it.
2. In Composer Pro, add the driver from the file `KanexPro-MMX-16X16AUD-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 MMX-16X16AUD units, add the driver twice and give each its own IP address.

2. PROPERTIES

DRIVER PROPERTIES	
IP Address	The MMX-16X16AUD'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: 1.0.1.

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

3. PROGRAMMING COMMANDS

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

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

2	**Send a picture**	Output (a list: Output 1, Output 2, Output 3, Output 4 ...); State (a list: On, Off)	Send a picture: on or off on the output you pick.
3	**Power**	Button (a list: On, Standby)	Presses the button you pick: On, Standby.
4	**Presets**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5, 6, 7, 8.
5	**Save**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5, 6, 7, 8.
6	**Scaler**	Output (a list: Output 1, Output 2, Output 3, Output 4 ...); Value (a list: Bypass, 4K to 1080p, Auto)	Sets the scaler on the output you pick. Choices: Bypass; 4K to 1080p; Auto.
7	**EDID**	Input (a list: Input 1, Input 2, Input 3, Input 4 ...); Value (a list: 1080p,Stereo Audio 2.0, 1080p,Dolby/DTS 5.1, 1080p,HD Audio 7.1, 1080i,Stereo Audio 2.0 ...)	Sets the EDID on the input you pick. Choices: 1080p,Stereo Audio 2.0; 1080p,Dolby/DTS 5.1; 1080p,HD Audio 7.1; 1080i,Stereo Audio 2.0; 1080i,Dolby/DTS 5.1, and 34 more.
8	**Sound back from the screen (ARC)**	Output (a list: Output 1, Output 2, Output 3, Output 4 ...); State (a list: On, Off)	Sound back from the screen (ARC): on or off on the output you pick.
9	**Clear a preset**	Button (a list: 1, 2, 3, 4 ...)	Presses the button you pick: 1, 2, 3, 4, 5, 6, 7, 8.
10	**Lock the front panel**	State (a list: On, Off)	Lock the front panel: on or off.
11	**Beep**	State (a list: On, Off)	Beep: on or off.
12	**Front screen stays lit**	Value (a list: Off, Always on, 15 seconds, 30 seconds ...)	Sets the front screen stays lit. Choices: Off; Always on; 15 seconds; 30 seconds; 60 seconds.

4. VARIABLES

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

#	Variable	Kind	What it holds
1	`ROUTE_OUT1`	text	Output 1 Source
2	`ROUTE_OUT2`	text	Output 2 Source
3	`ROUTE_OUT3`	text	Output 3 Source
4	`ROUTE_OUT4`	text	Output 4 Source
5	`ROUTE_OUT5`	text	Output 5 Source
6	`ROUTE_OUT6`	text	Output 6 Source

7	ROUTE_OUT7	text	Output 7 Source
8	ROUTE_OUT8	text	Output 8 Source
9	ROUTE_OUT9	text	Output 9 Source
10	ROUTE_OUT10	text	Output 10 Source
11	ROUTE_OUT11	text	Output 11 Source
12	ROUTE_OUT12	text	Output 12 Source
13	ROUTE_OUT13	text	Output 13 Source
14	ROUTE_OUT14	text	Output 14 Source
15	ROUTE_OUT15	text	Output 15 Source
16	ROUTE_OUT16	text	Output 16 Source
17	STREAM_OUT1	on/off	Output 1 Send a picture
18	STREAM_OUT2	on/off	Output 2 Send a picture
19	STREAM_OUT3	on/off	Output 3 Send a picture
20	STREAM_OUT4	on/off	Output 4 Send a picture
21	STREAM_OUT5	on/off	Output 5 Send a picture
22	STREAM_OUT6	on/off	Output 6 Send a picture
23	STREAM_OUT7	on/off	Output 7 Send a picture
24	STREAM_OUT8	on/off	Output 8 Send a picture
25	STREAM_OUT9	on/off	Output 9 Send a picture
26	STREAM_OUT10	on/off	Output 10 Send a picture
27	STREAM_OUT11	on/off	Output 11 Send a picture
28	STREAM_OUT12	on/off	Output 12 Send a picture
29	STREAM_OUT13	on/off	Output 13 Send a picture
30	STREAM_OUT14	on/off	Output 14 Send a picture
31	STREAM_OUT15	on/off	Output 15 Send a picture
32	STREAM_OUT16	on/off	Output 16 Send a picture
33	SCALER_OUT1	text	Output 1 Scaler
34	SCALER_OUT2	text	Output 2 Scaler
35	SCALER_OUT3	text	Output 3 Scaler
36	SCALER_OUT4	text	Output 4 Scaler
37	SCALER_OUT5	text	Output 5 Scaler
38	SCALER_OUT6	text	Output 6 Scaler
39	SCALER_OUT7	text	Output 7 Scaler
40	SCALER_OUT8	text	Output 8 Scaler
41	SCALER_OUT9	text	Output 9 Scaler
42	SCALER_OUT10	text	Output 10 Scaler
43	SCALER_OUT11	text	Output 11 Scaler
44	SCALER_OUT12	text	Output 12 Scaler
45	SCALER_OUT13	text	Output 13 Scaler

46	SCALER_OUT14	text	Output 14 Scaler
47	SCALER_OUT15	text	Output 15 Scaler
48	SCALER_OUT16	text	Output 16 Scaler
49	EDID_IN1	text	Input 1 EDID
50	EDID_IN2	text	Input 2 EDID
51	EDID_IN3	text	Input 3 EDID
52	EDID_IN4	text	Input 4 EDID
53	EDID_IN5	text	Input 5 EDID
54	EDID_IN6	text	Input 6 EDID
55	EDID_IN7	text	Input 7 EDID
56	EDID_IN8	text	Input 8 EDID
57	EDID_IN9	text	Input 9 EDID
58	EDID_IN10	text	Input 10 EDID
59	EDID_IN11	text	Input 11 EDID
60	EDID_IN12	text	Input 12 EDID
61	EDID_IN13	text	Input 13 EDID
62	EDID_IN14	text	Input 14 EDID
63	EDID_IN15	text	Input 15 EDID
64	EDID_IN16	text	Input 16 EDID
65	ARC_OUT1	on/off	Output 1 Sound back from the screen (ARC)
66	ARC_OUT2	on/off	Output 2 Sound back from the screen (ARC)
67	ARC_OUT3	on/off	Output 3 Sound back from the screen (ARC)
68	ARC_OUT4	on/off	Output 4 Sound back from the screen (ARC)
69	ARC_OUT5	on/off	Output 5 Sound back from the screen (ARC)
70	ARC_OUT6	on/off	Output 6 Sound back from the screen (ARC)
71	ARC_OUT7	on/off	Output 7 Sound back from the screen (ARC)
72	ARC_OUT8	on/off	Output 8 Sound back from the screen (ARC)
73	ARC_OUT9	on/off	Output 9 Sound back from the screen (ARC)
74	ARC_OUT10	on/off	Output 10 Sound back from the screen (ARC)
75	ARC_OUT11	on/off	Output 11 Sound back from the screen (ARC)
76	ARC_OUT12	on/off	Output 12 Sound back from the screen (ARC)
77	ARC_OUT13	on/off	Output 13 Sound back from the screen (ARC)
78	ARC_OUT14	on/off	Output 14 Sound back from the screen (ARC)
79	ARC_OUT15	on/off	Output 15 Sound back from the screen (ARC)
80	ARC_OUT16	on/off	Output 16 Sound back from the screen (ARC)
81	FRONT_LOCK	on/off	Lock the front panel
82	BEEP	on/off	Beep
83	LCD	text	Front screen stays lit
84	SIGNAL_IN1	on/off	Input 1 Signal

85	SIGNAL_IN2	on/off	Input 2 Signal
86	SIGNAL_IN3	on/off	Input 3 Signal
87	SIGNAL_IN4	on/off	Input 4 Signal
88	SIGNAL_IN5	on/off	Input 5 Signal
89	SIGNAL_IN6	on/off	Input 6 Signal
90	SIGNAL_IN7	on/off	Input 7 Signal
91	SIGNAL_IN8	on/off	Input 8 Signal
92	SIGNAL_IN9	on/off	Input 9 Signal
93	SIGNAL_IN10	on/off	Input 10 Signal
94	SIGNAL_IN11	on/off	Input 11 Signal
95	SIGNAL_IN12	on/off	Input 12 Signal
96	SIGNAL_IN13	on/off	Input 13 Signal
97	SIGNAL_IN14	on/off	Input 14 Signal
98	SIGNAL_IN15	on/off	Input 15 Signal
99	SIGNAL_IN16	on/off	Input 16 Signal
100	CONNECTED_OUT1	on/off	Output 1 Connected
101	CONNECTED_OUT2	on/off	Output 2 Connected
102	CONNECTED_OUT3	on/off	Output 3 Connected
103	CONNECTED_OUT4	on/off	Output 4 Connected
104	CONNECTED_OUT5	on/off	Output 5 Connected
105	CONNECTED_OUT6	on/off	Output 6 Connected
106	CONNECTED_OUT7	on/off	Output 7 Connected
107	CONNECTED_OUT8	on/off	Output 8 Connected
108	CONNECTED_OUT9	on/off	Output 9 Connected
109	CONNECTED_OUT10	on/off	Output 10 Connected
110	CONNECTED_OUT11	on/off	Output 11 Connected
111	CONNECTED_OUT12	on/off	Output 12 Connected
112	CONNECTED_OUT13	on/off	Output 13 Connected
113	CONNECTED_OUT14	on/off	Output 14 Connected
114	CONNECTED_OUT15	on/off	Output 15 Connected
115	CONNECTED_OUT16	on/off	Output 16 Connected
116	POWER	on/off	Readings Power
117	IP_MODE	text	Readings IP mode
118	IP	text	Readings Address
119	SUBNET	text	Readings Subnet mask
120	GATEWAY	text	Readings Gateway

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.