COL-HUD-21 Q-SYS Plugin Guide

For Q-SYS Designer · Plugin version 1.0.6

The KanexPro COL-HUD-21 plugin lets a Q-SYS system control the COL-HUD-21 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. Every control has a pin, so it can be wired to UCI buttons, logic and scripts like any Q-SYS control, and the plugin reads the unit back so changes made on its front panel, remote or web page show in Q-SYS.

> **Before you start —** the Q-SYS Core must reach the COL-HUD-21 on TCP port 8000. Give the unit a fixed IP address (or a DHCP reservation).

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1. WHAT THE PLUGIN DOES

It controls: show, switch to a newly plugged-in source by itself, picture, analog sound out (dB), mute the analog sound out, power, keyboard, mouse and camera, they go to, line out plays, line in (a microphone) goes into, line in to the laptop's USB audio, EDID, HDCP, picture size, welcome screen, welcome screen after 60 s with no source, notice a new source by, when its source goes away, show, go to standby with no source after, lock the front buttons (on = locked), HDMI power saving, turn on and off with the switch, on after (s), off after (s), how, USB device ports' power, laptops on USB-C get the network.

It reads back: power, signal, test pattern, RS-232 speed, firmware, web page firmware, temperature (°C), running for (days:hours:min:sec).

Settings that only the unit's own web page has (its network, logins and firmware) stay on that page.

2. BEFORE YOU START

- ✓ Q-SYS Designer on a Windows computer, and a Q-SYS Core.
- ✓ The COL-HUD-21 on the same network as the Core, or routed to it, with TCP port 8000 open between them.
- ✓ The unit's IP address (front panel or its own web page).

3. INSTALL THE PLUGIN

1. Download **KanexPro-COL-HUD-21-QSYS-1.0.6.zip** from the COL-HUD-21 page on kanexpro.com (Resources) and unzip it.
2. Copy `KanexPro-COL-HUD-21.qplug` into `Documents\QSC\Q-Sys Designer\Plugins` on the Q-SYS Designer computer, or drag the file onto Designer's window.
3. Restart Q-SYS Designer. The plugin appears in Schematic Elements under **Plugins > KanexPro**.
4. Drag it into the design, select it and set its properties (section 4).
5. Save the design to the Core and run it. The plugin connects by itself and shows its state on its Status control.

> **One plugin per unit —** for two COL-HUD-21 units, add the plugin twice and give each its own IP address.

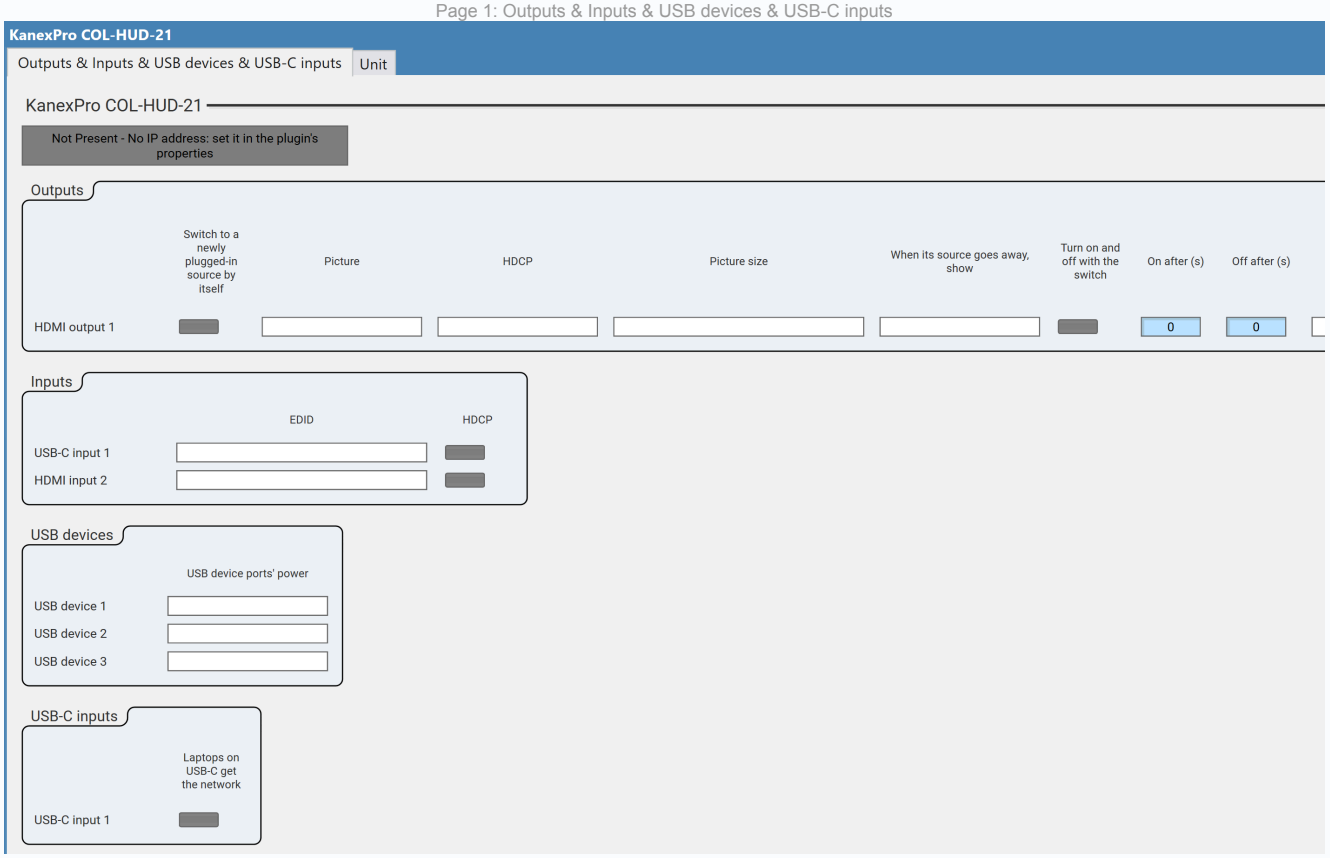
4. PROPERTIES

PLUGIN PROPERTIES	
IP Address	The COL-HUD-21's address on the control network. Empty by default.

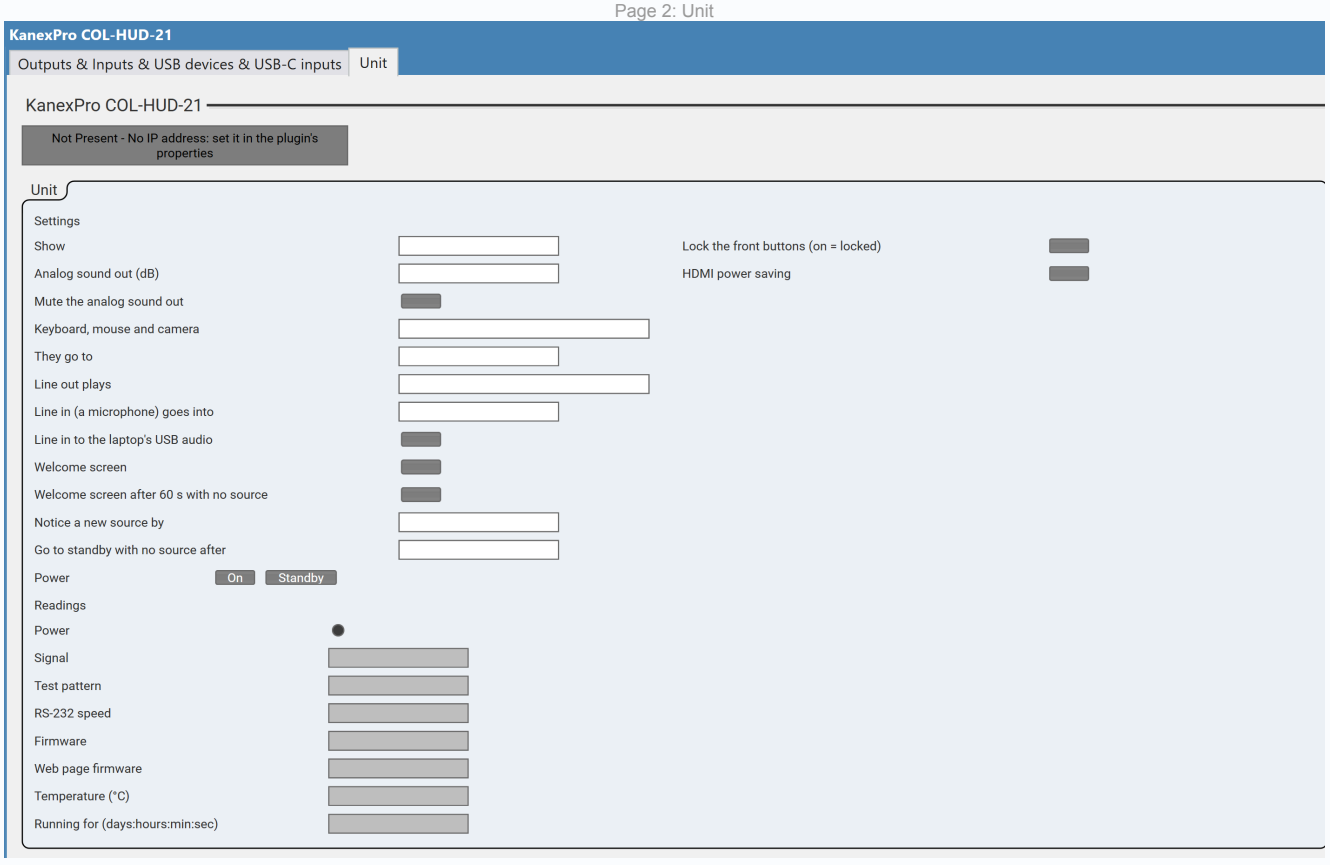
Port	8000 (TCP), the unit's control port. Change it only if the unit's own web page was set to another port.
Poll Interval	How often, in seconds, the plugin reads the unit back. Default 10; 0 reads it only after a change from Q-SYS.

5. THE PLUGIN IN Q-SYS DESIGNER

Page 1: Outputs & Inputs & USB devices & USB-C inputs



Page 2: Unit



The COL-HUD-21 plugin's control panel in Q-SYS Designer

6. CONTROLS

42 controls. Where a control is repeated for each input or output, it is listed once.

#	Control	Where	What it does
0	**Status**	the plugin	Shows whether the plugin is connected to the unit, and why not (section 7).
1	**Show**	the unit	Sets the show. Choices: USB-C input 1; HDMI input 2.
2	**Switch to a newly plugged-in source by itself**	each output	Turns the switch to a newly plugged-in source by itself on or off on each output.
3	**Picture**	each output	Sets the picture on each output. Choices: On; Off; AV mute.
4	**Analog sound out (dB)**	the unit	Sets the analog sound out (dB). Choices: -50; -49; -48; -47; -46, and 46 more.
5	**Mute the analog sound out**	the unit	Turns the mute the analog sound out on or off.
6	**Power**	buttons 1 to 2	On: turns the unit on. Standby: puts the unit in standby.
7	**Keyboard, mouse and camera**	the unit	Sets the keyboard, mouse and camera. Choices: Follow the screen's source; Choose below; The last one plugged in.
8	**They go to**	the unit	Sets the they go to. Choices: USB-C input 1; USB host 2. Used when Keyboard, mouse and camera is set to Choose below.
9	**Line out plays**	the unit	Sets the line out plays. Choices: HDMI output 1's sound; USB audio.
10	**Line in (a microphone) goes into**	the unit	Sets the line in (a microphone) goes into. Choices: Off; USB-C input 1; HDMI input 2.
11	**Line in to the laptop's USB audio**	the unit	Turns the line in to the laptop's USB audio on or off.
12	**EDID**	each input	Sets the EDID on each input. Choices: Auto (copy the screen); 4K60 4:4:4, 2ch PCM; 4K60 4:4:4, 5.1ch; 4K60 4:4:4, 7.1ch; 4K30 4:4:4, 2ch PCM, and 15 more. What each input tells the source it can show. Your own EDID files are loaded on the switch's own web page.
13	**HDCP**	each input	Turns the HDCP on or off on each input.
14	**HDCP**	each output	Sets the HDCP on each output. Choices: Follow the screen; Always HDCP 1.4; Always HDCP 2.2; Signal management.
15	**Picture size**	each output	Sets the picture size on each output. Choices: Auto (fit the screen); Pass through; Always 1080p; Test pattern.
16	**Welcome screen**	the unit	Turns the welcome screen on or off.
17	**Welcome screen after 60 s with no source**	the unit	Turns the welcome screen after 60 s with no source on or off.
18	**Notice a new source by**	the unit	Sets the notice a new source by. Choices: Its picture; 5 V on the cable.
19	**When its source goes away, show**	each output	Sets the when its source goes away, show on each output. Choices: Next input; Previous input; USB-C input 1; HDMI input 2.
20	**Go to standby with no source after**	the unit	Sets the go to standby with no source after. Choices: Never; 5 min; 10 min; 15 min; 30 min, and 1 more.
21	**Lock the front buttons (on = locked)**	the unit	Turns the lock the front buttons (on = locked) on or off.
22	**HDMI power saving**	the unit	Turns the HDMI power saving on or off.
23	**Turn on and off with the switch**	each output	Turns the turn on and off with the switch on or off on each output.
24	**On after (s)**	each output	Sets the on after (s) on each output, from 0 to 1200.
25	**Off after (s)**	each output	Sets the off after (s) on each output, from 0 to 1200.

26	**How**	each output	Sets the how on each output. Choices: CEC; IR; RS-232. IR codes are learned at the switch's front IR window, and RS-232 strings set, on the switch's own web page.
27	**USB device ports' power**	each d	Sets the USB device ports' power on each d. Choices: Follow the host; Always on (5 V); Off.
28	**Laptops on USB-C get the network**	each u	Turns the laptops on USB-C get the network on or off on each u.
29	**Power**	the unit	Lit when the unit reports power.
30	**Signal**	the unit	Shows the unit's signal.
31	**Test pattern**	the unit	Shows the unit's test pattern.
32	**RS-232 speed**	the unit	Shows the unit's RS-232 speed.
33	**Firmware**	the unit	Shows the unit's firmware.
34	**Web page firmware**	the unit	Shows the unit's web page firmware.
35	**Temperature (°C)**	the unit	Shows the unit's temperature (°C).
36	**Running for (days:hours:min:sec)**	the unit	Shows the unit's running for (days:hours:min:sec).

7. STATUS

STATUS CONTROL	
OK (green)	Connected to the unit and reading it back.
Initializing (blue)	Connecting. It tries again every few seconds by itself.
Fault (red)	Not connected, with the reason: the unit does not answer, or the connection was refused or closed.
Compromised (orange)	Connected, but the unit refused the last change. The text names it. The control returns to what the unit reports at the next read.
Not Present (grey)	No IP address is set in the plugin's properties.

8. TROUBLESHOOTING

The Status control shows Fault and it does not connect.
Check the IP address: find the unit's address on its front panel or its own web page and compare it with the plugin's IP Address property. A unit on DHCP may have moved; give it a fixed address or a DHCP reservation.

The address is right, but it still does not connect.
Check the network path. The Core and the unit must reach each other: the same network or VLAN, or a route between them. From a computer on the Core's network, the unit's web page should open at its address.

Could a firewall be blocking it?
Yes. A firewall or switch ACL between the Core and the unit must allow TCP port 8000 to the unit. Also leave the Port property at 8000 unless the unit's own web page was set to another port.

It connects, but a change does not happen.
The Status control shows Compromised and names the command the unit refused. The unit may be in standby: turn it on first.

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