# COL-HUD-21D Q-SYS Plugin Guide

For Q-SYS Designer · Plugin version 1.0.6

**The KanexPro COL-HUD-21D plugin lets a Q-SYS system control the COL-HUD-21D 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-21D on TCP port 8000. Give the unit a fixed IP address (or a DHCP reservation).

## TABLE OF CONTENTS

1. What the plugin does
2. Before you start
3. Install the plugin
4. Properties
5. The plugin in Q-SYS Designer
6. Controls
7. Status
8. Troubleshooting

## 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-21D 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-21D-QSYS-1.0.6.zip** from the COL-HUD-21D page on kanexpro.com (Resources) and unzip it.
2. Copy `KanexPro-COL-HUD-21D.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-21D units, add the plugin twice and give each its own IP address.

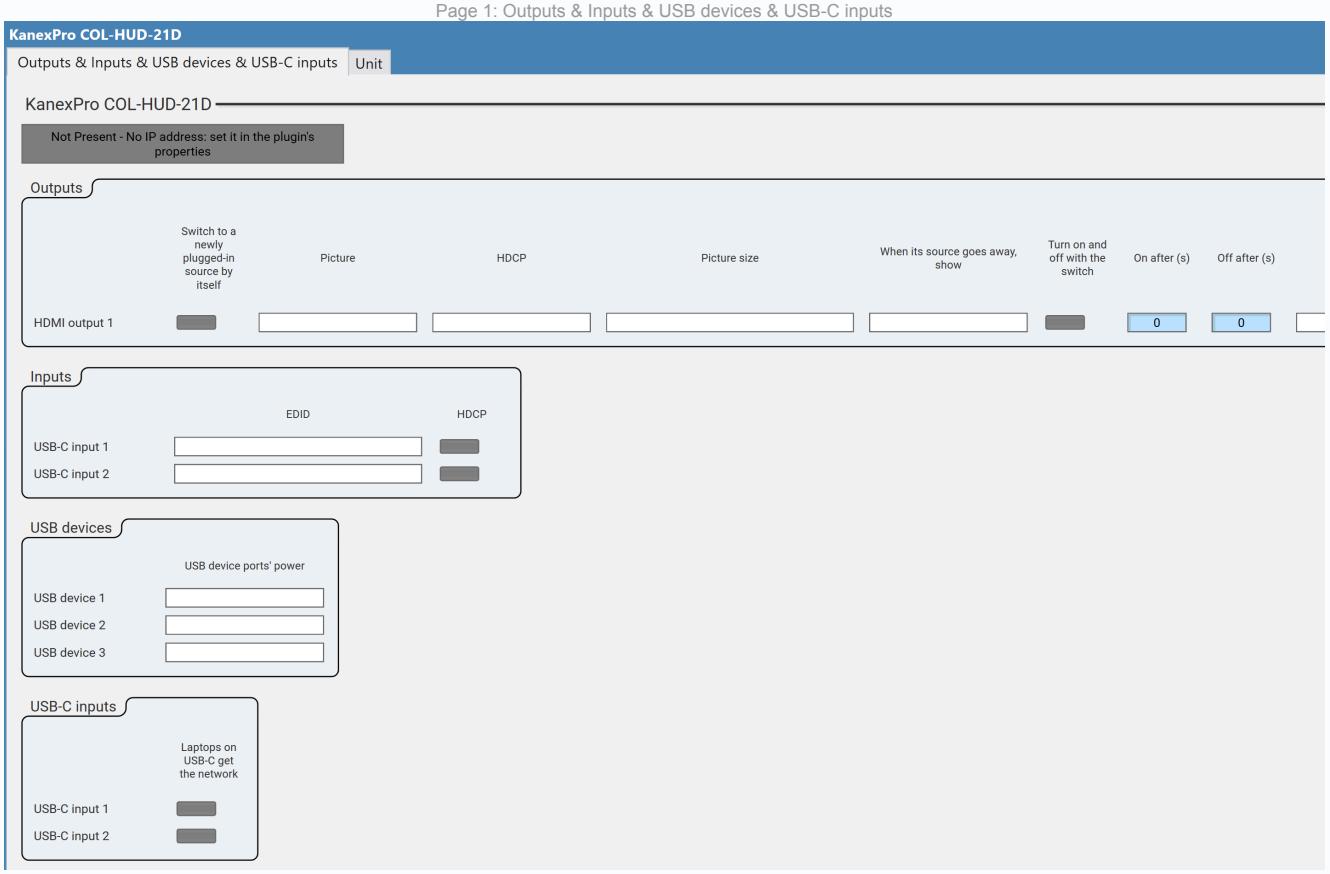
## 4. PROPERTIES

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

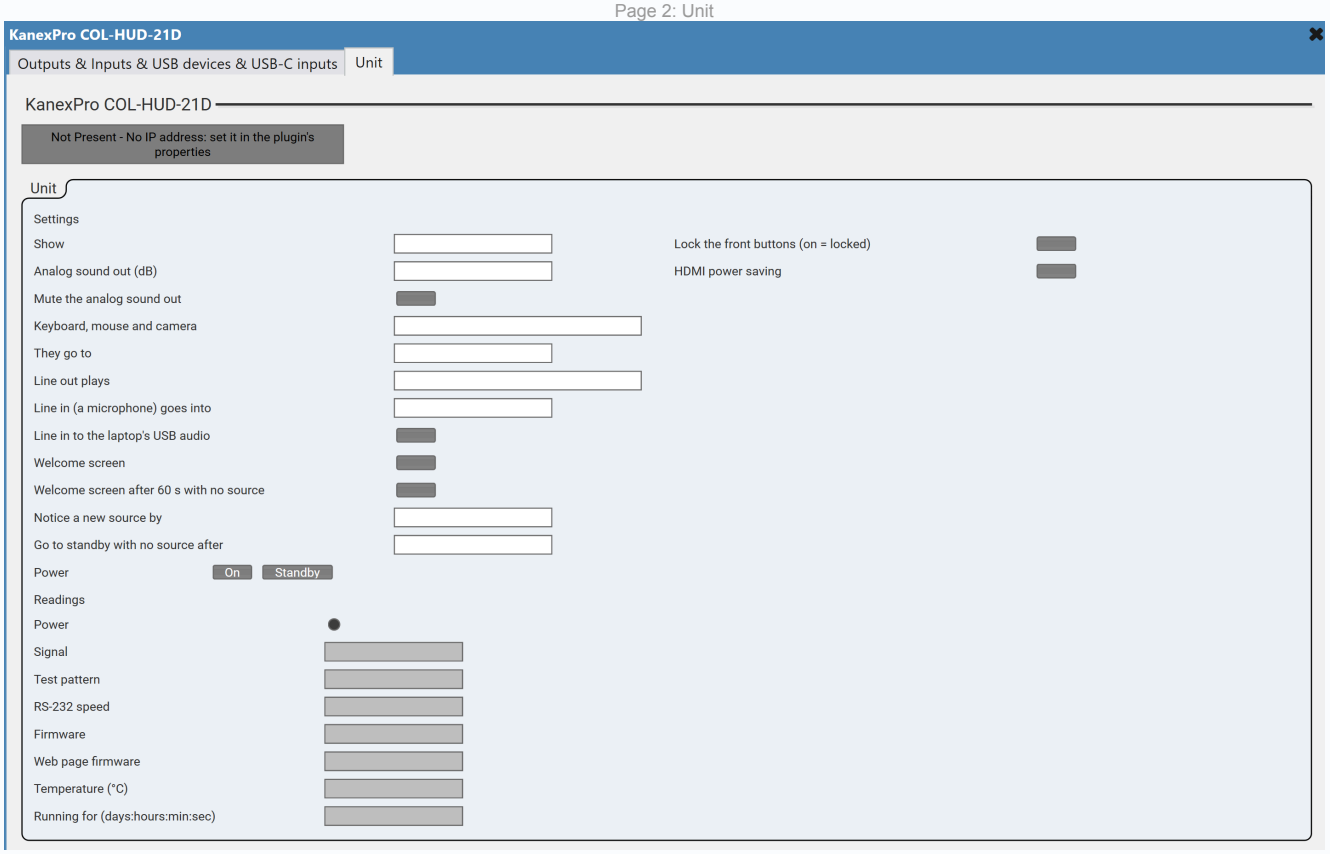
| | |
|---|---|
| **Port** | 8000 (TCP), the unit's control port. Change it only if the unit's own web page was set to another port. |
| **Poll Interval** | How often, in seconds, the plugin reads the unit back. Default 10; 0 reads it only after a change from Q-SYS. |

## 5. THE PLUGIN IN Q-SYS DESIGNER

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




Page 2: Unit




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

## 6. CONTROLS

43 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; USB-C 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-C input 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; USB-C 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; USB-C 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.