KVM-4X1MV4K Q-SYS Plugin Guide

For Q-SYS Designer · Plugin version 1.0.5

The KanexPro KVM-4X1MV4K plugin lets a Q-SYS system control the KVM-4X1MV4K over the network. It talks to the unit's own control port (TCP 8001): 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 KVM-4X1MV4K on TCP port 8001. 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 (single screen), layout, picture-in-picture position, picture-in-picture size, side-by-side arrangement, side-by-side shape, triple arrangement, triple shape, quad arrangement, quad shape, keyboard and mouse go to, change computer with mouse hotkeys, move the mouse across windows to change computer, outline the window with the keyboard and mouse, show each window's input name, switch to a new source by itself, sound from, volume, mute, output resolution, picture mode, with no source show, power.

It reads back: power, beep, firmware.

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 KVM-4X1MV4K on the same network as the Core, or routed to it, with TCP port 8001 open between them.
- ✓ The unit's IP address (front panel or its own web page).

3. INSTALL THE PLUGIN

1. Download **KanexPro-KVM-4X1MV4K-QSYS-1.0.5.zip** from the KVM-4X1MV4K page on kanexpro.com (Resources) and unzip it.
2. Copy `KanexPro-KVM-4X1MV4K.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.

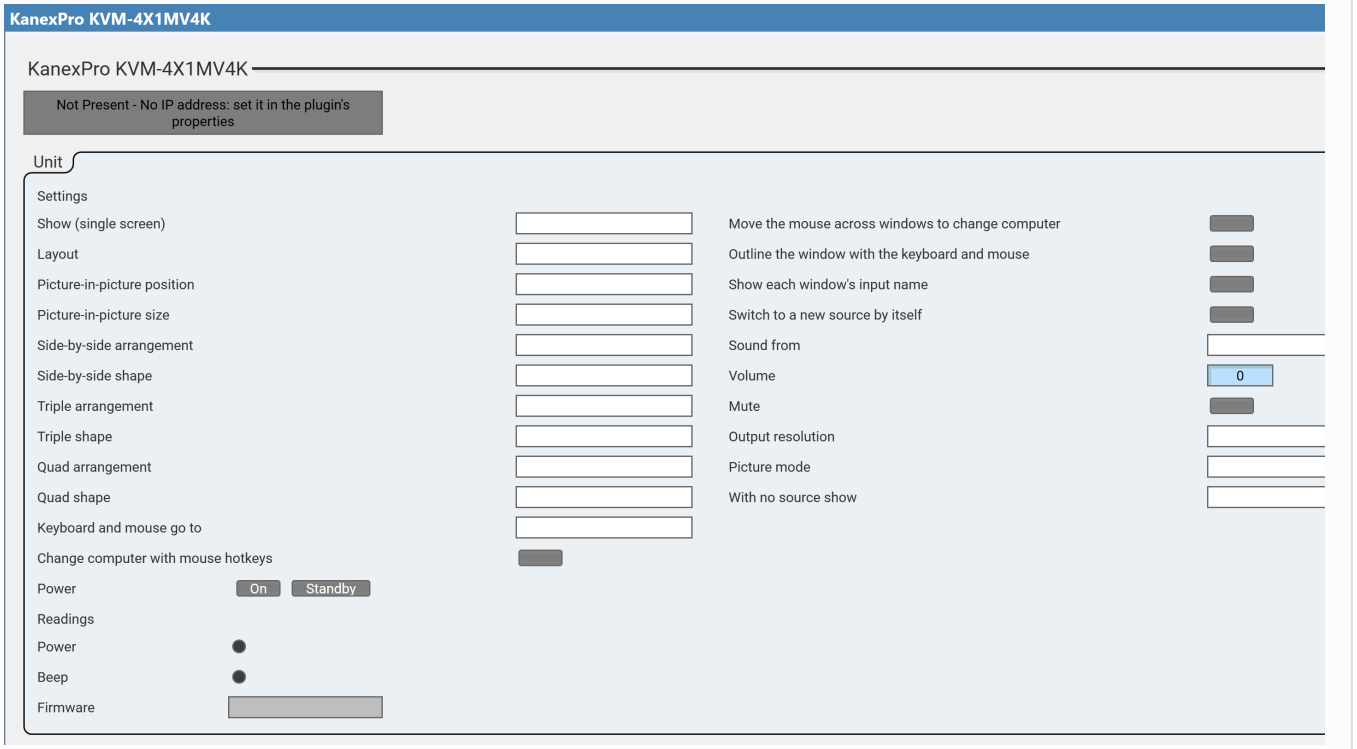
> **One plugin per unit —** for two KVM-4X1MV4K units, add the plugin twice and give each its own IP address.

4. PROPERTIES

PLUGIN PROPERTIES	
IP Address	The KVM-4X1MV4K's address on the control network. Empty by default.
Port	8001 (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



The KVM-4X1MV4K plugin's control panel in Q-SYS Designer

6. CONTROLS

28 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 (single screen)**	the unit	Sets the show (single screen). Choices: HDMI 1; HDMI 2; HDMI 3; HDMI 4.
2	**Layout**	the unit	Sets the layout. Choices: Single screen; PIP; PBP; Triple; Quad.
3	**Picture-in-picture position**	the unit	Sets the picture-in-picture position. Choices: Left top; Left bottom; Right top; Right bottom.
4	**Picture-in-picture size**	the unit	Sets the picture-in-picture size. Choices: Small; Middle; Large.
5	**Side-by-side arrangement**	the unit	Sets the side-by-side arrangement. Choices: Mode 1; Mode 2.
6	**Side-by-side shape**	the unit	Sets the side-by-side shape. Choices: Full screen; 16:9.
7	**Triple arrangement**	the unit	Sets the triple arrangement. Choices: Mode 1; Mode 2.
8	**Triple shape**	the unit	Sets the triple shape. Choices: Full screen; 16:9.
9	**Quad arrangement**	the unit	Sets the quad arrangement. Choices: Mode 1; Mode 2.
10	**Quad shape**	the unit	Sets the quad shape. Choices: Full screen; 16:9.
11	**Keyboard and mouse go to**	the unit	Sets the keyboard and mouse go to. Choices: Window 1; Window 2; Window 3; Window 4. Each window's computer is the one on that window's HDMI input.
12	**Change computer with mouse hotkeys**	the unit	Turns the change computer with mouse hotkeys on or off.

13	**Move the mouse across windows to change computer**	the unit	Turns the move the mouse across windows to change computer on or off.
14	**Outline the window with the keyboard and mouse**	the unit	Turns the outline the window with the keyboard and mouse on or off.
15	**Show each window's input name**	the unit	Turns the show each window's input name on or off.
16	**Switch to a new source by itself**	the unit	Turns the switch to a new source by itself on or off.
17	**Sound from**	the unit	Sets the sound from. Choices: Window 1's source; HDMI 1 sound; HDMI 2 sound; HDMI 3 sound; HDMI 4 sound.
18	**Volume**	the unit	Sets the volume, from 0 to 100.
19	**Mute**	the unit	Turns the mute on or off.
20	**Output resolution**	the unit	Sets the output resolution. Choices: 4096x2160p60; 4096x2160p50; 3840x2160p60; 3840x2160p50; 3840x2160p30, and 10 more.
21	**Picture mode**	the unit	Sets the picture mode. Choices: Video; PC.
22	**With no source show**	the unit	Sets the with no source show. Choices: Black screen; Blue screen.
23	**Power**	buttons 1 to 2	On: turns the unit on. Standby: puts the unit in standby.
24	**Power**	the unit	Lit when the unit reports power.
25	**Beep**	the unit	Lit when the unit reports beep.
26	**Firmware**	the unit	Shows the unit's firmware.

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 8001 to the unit. Also leave the Port property at 8001 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.