



ROUTEBRIDGE

MULTI-BRAND VIDEO ROUTING · ONE PLUGIN

Route video like audio. One plugin drives your AV Access AV-over-IP system, AV Access HDMI matrix, or MuxLab matrix — same look, same routing grid, same license. Pick the model, enter an IP, press a crosspoint.

V1.0.0

Q-SYS DESIGNER 9.12+

4 DEVICE MODELS

PERPETUAL LICENSE

1	Stage Left	IN 1	IN 2	IN 3	IN 4	IN 1
2	Stage Right	IN 1	IN 2	IN 3	IN 4	IN 2
3	Lobby Screen	IN 1	IN 2	IN 3	IN 4	IN 4
4	Recording Feed	IN 1	IN 2	IN 3	IN 4	IN 2

What is RouteBridge?

RouteBridge puts a **video routing matrix** inside Q-SYS. One plugin, **four supported devices** — you pick the model in Properties and the plugin rebuilds itself around it: right pages, right buttons, right protocol. Press a crosspoint, the video routes. **The grid always tells the truth** — it re-syncs from the device every few seconds.

PICK YOUR DEVICE — THE MODEL PROPERTY

MODEL	WHAT IT IS	CONNECTION
AV Access — 4KIP200 (AV over IP)	Encoders + decoders on the network	Auto-discovery + one IP per box. Any size (1–32 in / out).
AV Access — 4KMX44-H2	4×4 HDMI matrix	One IP, port 23. Presets, EDID, auto-CEC.
MuxLab — 500444	4×4 HDMI matrix 4K/60	One IP, port 23. EDID, HDCP, scaler, cascade.
MuxLab — 500412	4×4 HDBT matrix PoC	One IP, port 4001. EDID, HDCP, digital audio.

SETUP — ONCE, IN DESIGNER

1

Drop it in

Drag RouteBridge from the plugin list into your design.

2

Pick the model

In Properties, set **Model** to your device. Pages and controls adapt instantly.

3

Point at the device

Matrices: enter the **IP** (Host or MxIP). AV over IP: press **DISCOVER** — boxes appear by themselves.

4

Push & route

Push to the Core. The plugin connects on its own and reconnects after any power cut.

THE ROUTING GRID — SAME ON EVERY MODEL

ELEMENT	WHAT IT DOES
One row per output	An output (or decoder screen) and its source buttons.
IN buttons	Press one — that input routes to this output. One source per output, always.
CURRENT	What the device says is really routed — updated live from the device.
STATUS (top right)	Connected, Disconnected, or NO LICENSE.

Remote control: every button and field is also a **pin** — route from a UCI, a schedule or any external logic exactly as if you pressed the grid.

4KIP200 — Discover & Route

Encoders (TX) send video onto the network, decoders (RX) play it on screens. RouteBridge finds them **by itself**.

HOW DISCOVERY PLAYS OUT

1 · DISCOVER	2 · POOL	3 · ASSIGN	4 · ONLINE
Press the button — the network is scanned	Every box found appears in the Discovery page	Pick "TX 1" or "RX 2" per box, press ASSIGN	The box connects and joins the routing grid

Do it once. Assignments are saved with the design. On the Discovery page you can also give a box a **fixed IP** (SET+REBOOT) before assigning it — recommended for installs.

THE PAGES

PAGE	WHAT YOU DO THERE
Routing	The matrix: one row per decoder, one button per encoder. X = disconnect that screen. CURRENT SOURCE shows the live route.
Encoders	Per TX: IP, alias, hostname, MAC, firmware, HDCP toggle, reboot, factory reset.
Decoders	Per RX: same info, plus display power (CEC), forced resolution and color space .
Discovery	The pool: every box found, its IP config, and the ASSIGN buttons.
Tools	The fun stuff — see below.

THE TOOLS PAGE — PER DECODER

TOOL	WHAT IT DOES
RS232 pass-through	Type a command, press ► — it comes out of the decoder's serial port (115200 8N1). H = send as hex. Drive projectors and displays with no extra wiring.
CEC	Send any CEC command to the screen. Store your ON / OFF commands with SAVE — the DSP power toggle then uses them.
Video wall	Set ROWS × COLS and this screen's position, press ► SET . X CLR returns to single screen.
Rotation & crop	Rotate the output (0/90/180/270°) or crop the source image.
OSD text	Show a text overlay on the screen (position, size) — great for room names or warnings. CLR removes it.

4KMX44-H2 & MuxLab

One box, one IP, 4×4 routing. Enter the address, the plugin connects and stays connected.

AV ACCESS 4KMX44-H2 — PAGES

PAGE	WHAT YOU DO THERE
Matrix	The 4×4 grid, plus per output: AUDIO mute, SCALER on/off, CEC PWR — power the screen straight from the grid.
Inputs / EDID	Per input: HDCP on/off and the EDID preset (13 choices — 12 Smart EDID is the safe default).
System	Auto-CEC (screens power off by themselves after 1–30 min without signal), presets 1–3 (SAVE / LOAD a full routing), network config, reboot, factory reset.

MUXLAB 500444 / 500412 — PAGES

PAGE	WHAT YOU DO THERE
Routing	The 4×4 grid with CONNECT / REFRESH , editable input & output labels.
Inputs	Per input EDID preset (33 choices on 500444, 5 on 500412).
Outputs	Per output: HDCP mode, scaler (500444), cascade (500444), digital audio .
System	Network config (IP / mask / gateway / port / DHCP) and factory reset.

500412 note: the older HDBT model has no scaler / cascade / remote network commands — those controls simply do nothing on it, by design. Everything else is identical.

GOOD TO KNOW — THE RULES, BY DESIGN

One source per output. Always. Pressing a crosspoint releases the others on that row — that's the interlock, like an audio router.

The device is the boss. Every few seconds RouteBridge asks the device what is really routed and repaints the grid. If someone routes from the device's own panel or app, your grid follows.

Reconnection is automatic. Power cut, cable pulled, device rebooted — RouteBridge retries every 10 s until it's back. You never press anything.

Status & License

THE STATUS FIELD

STATUS	MEANING
CONNECTED / ONLINE	Talking to the device. On 4KIP200 it shows how many TX + RX are online.
CONNECTING...	Trying to reach the device — check the IP if it stays here.
DISCONNECTED	Lost the device — auto-reconnect is already retrying (every 10 s).
NO LICENSE	On a physical Core without a valid key. Monitoring still works; routing is blocked.

LICENSE

EVAL MODE Designer emulation: everything works, free, no key needed. Design and rehearse at will.	NO LICENSE Physical Core: enter your key (RB-XXXX-XXXX-XXXX) in the plugin's License Key property. Without it, the plugin watches but won't route. Keys are locked to one Core — contact BV Factory with the Core ID shown in the license strip. Perpetual, no subscription.
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One key covers the whole Core. Use as many RouteBridge instances as you like — all four device models — on the same licensed Core.

THE PINS — THE ONES YOU'LL ACTUALLY USE

PIN	DIRECTION	USE
MtxSel n / MxSel n	In + Out	The crosspoints — set from a UCI or script, read back the live route.
RxSource / OutCurrent / MxOutSrc	Out	The confirmed source per output — text, straight from the device.
Status / StatusText	Out	Connection health for your supervision page.
RxDispPwr / MxCecPwr	In + Out	Screen power over CEC — wire it to your room on/off macro.
MxPresetLoad 1–3	In	(4KMX44) Recall a full routing with one trigger.
Rs232Send / Rs232Trigger	In	(4KIP200) Serial command out of any decoder.

Quick Recipes

Set it up once — then it's one press per route.

I WANT...	SETUP
Route camera 2 to the lobby screen from a UCI button	Wire the UCI button to the right MtxSel crosspoint pin — identical to pressing the grid.
A "show mode" one-touch preset (4KMX44-H2)	Route everything by hand once, press SAVE 1 . Wire your macro to MxPresetLoad 1 — full routing recalled in one trigger.
Screens off at night, on at 8 AM	Schedule a script that sets RxDispPwr (or MxCecPwr) — the plugin sends the CEC commands.
A 2×2 video wall (4KIP200)	Tools page: on each of the 4 decoders set ROWS 2 · COLS 2 · its position · ▶ SET . Route the same encoder to all four.
"No signal" text on a screen	Tools page: type the message in OSD TEXT , press SHOW . CLR removes it.
A projector without a network card	Route video to its decoder and drive it via RS232 pass-through from the same box.

TROUBLESHOOTING

PROBLEM	FIX
Grid presses do nothing	On a physical Core: check the license strip. NO LICENSE = enter a valid RB- key in Properties.
Status stuck on CONNECTING	Wrong IP, or the device isn't reachable from the Core's LAN. Ping it from the Core's network, check the port isn't blocked.
DISCOVER finds nothing (4KIP200)	Discovery uses UDP broadcast — Core and boxes must be on the same subnet/VLAN. Fallback: type the box IPs directly into the TX/RX IP fields.
Crosspoint won't light (4KIP200)	The encoder's MAC is still unknown. Wait a few seconds after connect, or type the MAC into the TX MAC field.
A button snaps back to another input	Not a bug — the device reported the real route and the grid follows the device. Something else re-routed it.
Picture but no image change after EDID / HDCP change	Sources can need a re-plug (hot-plug) after EDID changes. Re-route the input or power-cycle the source.
Scaler / cascade buttons dead (MuxLab)	You're on a 500412 — that model doesn't support them. Normal.

Need a key, another Forge, or a Bridge?

bvfactory.dev

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