

COLLABORATION — HUDDLE ROOM

2x1 Dual USB-C Huddle Room Switcher with USB 3.2 KVM

Connect Any Two USB-C Laptops — 4K60 4:4:4, 50W+50W PD Charging, Balanced Audio & Dual 1G Ethernet with 802.1x

The COL-HUD-21D is built for all-USB-C meeting rooms — two full-featured USB-C inputs let any two laptops share the room display, USB peripherals, and network access without a single adapter. Both ports deliver DP Alt mode 4K60 4:4:4 video, USB 3.2 Gen 1 (5Gbps) data, 1G Ethernet pass-through, and simultaneous charging — up to 100W when one laptop is connected, or 50W each when both are active.

Designed for organizations standardizing on USB-C across their device fleet, the COL-HUD-21D removes HDMI from the equation entirely. Balanced analog audio I/O, dual 1G Ethernet with 802.1x/VLAN, CEC/IR/RS-232 display control, and a Web GUI give IT teams the management and security controls they expect.

TABLE OF CONTENTS

1	Introduction	1
2	Features	1
3	Package Contents	2
4	Specifications	2
5	Operation Controls and Functions	3
6	Web GUI User Guide	3
7	Default Settings	3
8	API Commands	4
9	Application Example	4

FEATURES

- HDCP 2.3 and DP 1.4a compliant
- 2x1 huddle room switcher — dual USB-C inputs, HDMI output
- Both USB-C inputs with DP Alt mode 4K60 4:4:4, USB 3.2 Gen 1 (5Gbps), 1G Ethernet, and up to 100W charging (50W each when both connected)
- HDMI output up to 4K60 4:4:4 as specified in HDMI 2.0b
- Fast switching with auto and manual switching modes
- Auto switching with signal detection and 5V source detection
- USB 3.2 Gen 1 (5Gbps) host and local hub
- USB 3.2 Gen 1 (5Gbps) device port with 5V/1.5A power output
- Balanced/unbalanced analog audio embedding to USB audio
- Balanced/unbalanced analog audio de-embedding from USB or HDMI audio
- Advanced EDID management — 18 presets plus 2 user-defined profiles
- User-defined welcome screen and no-signal display image
- Dual 1G Ethernet ports with 802.1x and VLAN support
- IR eye for IR learning and control
- Auto display on/off control
- External device control via CEC, IR, RS-232, LAN, and GPIO
- Control via front panel buttons, RS-232, TCP/IP, and Web GUI



PACKAGE CONTENTS

- 1× 2×1 Dual USB-C Huddle Room Switcher
- 1× 24V/7.5A Power Supply
- 1× IR Blaster Cable (1.5m)
- 1× 3-pin Phoenix Connector (male)
- 2× 5-pin Phoenix Connector (male)
- 1× 6-pin Phoenix Connector (male)
- 4× Rubber Foot
- 2× Mounting Ear
- 4× Machine Screw M3×5
- 4× Machine Screw KM3×6
- 1× User Manual

DEFAULT SETTINGS

- IP Address: 192.168.0.100 (Static)
- TCP/IP Port: 8000 | Telnet Port: 23
- Web GUI: Admin/1234 • User/1234
- Auto switch mode: Input Signal
- Auto standby: 15 minutes
- RS-232: 115200-8N1
- Network mode: Separated (ETH1=control, ETH2=pass-through)
- HDMI Power Saving: On
- USB switch mode: Follow Video

SPECIFICATIONS

SPECIFICATION	VALUE
Technical	
HDMI Compliance	HDMI 2.0b
HDCP	HDCP 2.3
DP Compliance	DP 1.4a (both USB-C inputs)
USB Compliance	USB 3.2 Gen 1 (5Gbps)
Video Bandwidth	18Gbps
HDR Support	HDR, HDR10, HDR10+, Dolby Vision, HLG
Color Space	RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Color Depth	8/10/12-bit (8-bit at 4K60 4:4:4)
Audio (Digital)	LPCM, Dolby Digital/Plus/EX, Dolby TrueHD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
Audio (Analog)	LPCM 2CH, 32–192kHz
Audio S/N Ratio	>90dB @ 0dBu, 1kHz, A-weighted
Audio THD+N	<0.01% at +4dBu, 1kHz
ESD Protection	IEC 61000-4-2: ±8kV air / ±4kV contact
Connection	
Inputs	2× USB-C IN (24-pin); 1× L/R Audio In (5-pin 3.5mm phoenix)
Outputs	1× HDMI OUT (Type A); 1× USB Device (Type C); 2× USB Device (Type A); 1× L/R Audio Out (5-pin 3.5mm phoenix)
Control Ports	1× RS-232 (3-pin); 1× IR Out (3.5mm); 2× Ethernet (RJ45); 1× GPIO (6-pin); 1× Service (USB-C)
Physical	
Dimensions (W×D×H)	9.06" × 5.12" × 0.91" (230 × 130 × 23mm)
Net Weight	1.75 lbs (0.796kg)
Housing	Metal, Black
Power Supply	DC 24V/7.5A (AC 100–240V, 50/60Hz)
Power Consumption	37W (idle) / 145W (with 100W USB-C charging)
Operating Temperature	32°F–104°F (0°C–40°C)
Storage Temperature	-4°F–140°F (-20°C–60°C)
Operating Humidity	20–80% RH, non-condensing
Certifications	



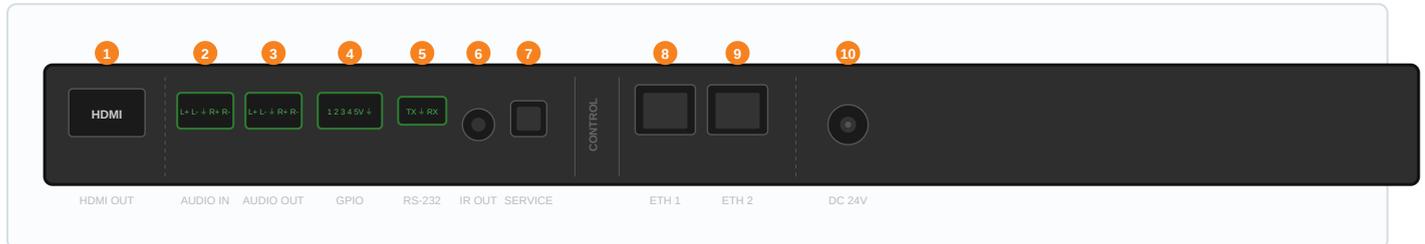
OPERATION CONTROLS AND FUNCTIONS

Front Panel



NO.	NAME	FUNCTION DESCRIPTION
1	Power LED	Green: operating normally. Red: standby.
2	IR	IR receiving window. Used for IR learning.
3	Display ON/OFF	Enable or disable display output. Control type configurable via Web GUI (CEC/IR/RS-232).
4	IN1/IN2/AUTO	Short press: Switch between USB-C IN1 and IN2. Long press (3s): Toggle auto switching; AUTO LED illuminates.
5	USB-C IN1	DP Alt mode 4K60 4:4:4, USB 3.2 Gen 1, 1G Ethernet, 100W charging (50W when both active). Requires DP Alt mode on source.
6	USB-C IN2	Identical spec to IN1: DP Alt mode 4K60 4:4:4, USB 3.2 Gen 1, 1G Ethernet, 50W–100W charging.
7	USB Devices 1/2	USB-A downstream, 5V/1.5A. Cameras, keyboards, speakerphones. Switch with active host.
8	USB Device 3	USB-C downstream, 5V/1.5A.

Rear Panel



NO.	NAME	FUNCTION DESCRIPTION
1	HDMI OUT	HDMI Type-A output. Connect to room display or projector.
2	L/R Audio In	5-pin 3.5mm phoenix. Balanced/unbalanced input. Embeds to USB audio only (no HDMI input on this model).
3	L/R Audio Out	5-pin 3.5mm phoenix. De-embedded from HDMI output or USB audio.
4	GPIO	6-pin 3.5mm phoenix. 4 GPIO pins as input or output via Web GUI/API.
5	RS-232	3-pin 3.5mm phoenix. Default 115200-8N1. API control.
6	IR Out	3.5mm mini-jack. Connect IR blaster for display control.
7	Service	USB-C firmware update and USB API control port.
8	Ethernet 1	1G RJ45. Default: TCP/IP and Web GUI. 802.1x/VLAN.
9	Ethernet 2	1G RJ45. Default: USB-C pass-through. Switch Mode: TCP/IP too.
10	DC 24V	DC 24V/7.5A power input.

WEB GUI

Connect ETHERNET 1 to a PC. Default IP: **192.168.0.100**. Login: **Admin / 1234**. Pages: Information, Preset, Control, Input, Output, USB, Display, Network, System



Scan for product page

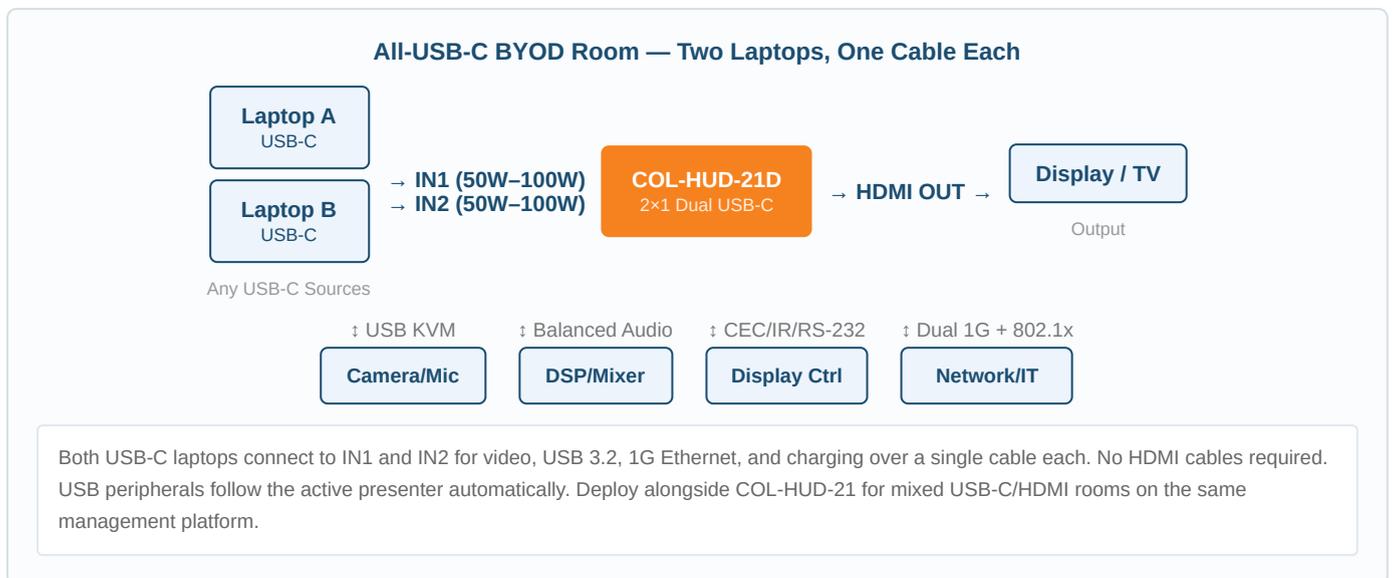
888.975.1368 | support@kanexpro.com | kanexpro.com
 Enable DP Alt Mode for video. When both laptops are connected, charging is 50W per port. 100W available only one port is active.

API COMMANDS (KEY COMMANDS)

RS-232: 115200-8N1 | TCP/IP Port: 8000 | Telnet Port: 23

COMMAND	FUNCTION	COMMAND	FUNCTION
set output 1 from 1	Route USB-C IN1 to HDMI OUT	set input 0 edid 1	Auto EDID (all inputs)
set output 1 from 2	Route USB-C IN2 to HDMI OUT	set input 0 edid 2	4K60 PCM 2ch (all inputs)
set output 1 auto switch 1	Enable auto switching	set output 1 video 1	Output: auto resolution
set display 1 power 1	Display power on	set output 1 video 3	Force 1080p downscale
set display 1 power 0	Display power off	set net mode 1	Separated mode (default)
set usb switch mode 1	USB follows video	set net mode 2	Switch mode
set usb switch mode 3	USB auto switch	set preset save 1	Save preset 1
get ipconfig	Get current IP address	set preset recall 1	Recall preset 1
power on / power off	Power on/standby	set gpio 1 value 3	GPIO 1 output high (5V)
status	Get full device status	reset	Factory defaults

APPLICATION EXAMPLE



TROUBLESHOOTING

Q: No video from USB-C laptop?

Verify the laptop supports DisplayPort Alt Mode over USB-C. Not all USB-C ports carry video. Set EDID to 1080P60 to rule out resolution mismatch.

Q: Laptop is only charging at 50W instead of 100W?

When both USB-C IN ports are active, each delivers 50W. Disconnect the second laptop to restore 100W on the active port. This is by design for simultaneous dual-source operation.

Q: No audio from the analog output?

Note: audio embedding to HDMI is not available on COL-HUD-21D (no HDMI input). Set analog audio embed to USB audio in Web GUI > Control. De-embedding from HDMI output is fully supported.

Q: Cannot access Web GUI?

Connect to ETHERNET 1. Default IP: 192.168.0.100. Set PC to same subnet. Use 'get ipconfig' via RS-232 if IP has changed.

