



Acroname's USB-C-Switch Pro is an industrial **40 Gbps USB4** port selector able to connect:

- One of up to four devices to one host
- One device to one of up to four hosts.

This is not a hub — it directly connects and redrives signals from a common port to one of 4 mux channels.

USB-C-Switch Pro supports pass-through USB Power Delivery Extended Power Range (**USB PD EPR**) up to **240 W** with support for **PPS**, **AVS**, and up to **8K@120 Hz DisplayPort Alt mode video**. Connect with USB-C, Ethernet, or RS-232, and control via HubTool, web interface, or API.

## Benefits

Streamline USB compliance and manufacturing test by multiplexing devices and test equipment. Automate repetitive tasks like **plug-unplug** and **cable flip** with optional **Universal Orientation Cable (UOC)**.

Interactively debug complex USB-C connections with the ability to log, decode, and inject **USB-PD** and **SBU / DisplayPort Aux** messages.

Automatic switching enables **Bring Your Own Meeting (BYOM)** in conference rooms with a single cable handling video, audio, network, and power.

## Applications

- USB-PD EPR validation and interoperability testing including Dual Role Data (DRD) and Dual Role Power (DRP) devices
- USB-C end-product test, firmware load, and debug
- Conference Room USB solutions
- Automotive head unit test and development: supports Apple CarPlay™ and Android Auto™
- USB-C device bringup
- PD and DisplayPort SBU/AUX debugging

## Features

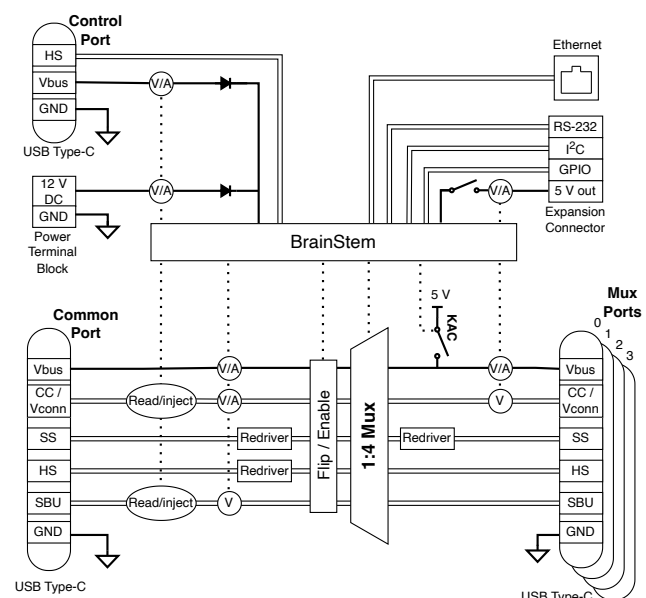
- Supports USB4 devices up to 40 Gbps with 240 W USB PD EPR pass-through
- Manual and automatic priority-based port switching
- Supports DisplayPort 2.1 Alt mode UHBR20 (up to 2 x 8k@120Hz)
- USB-C cable flip emulation and detection with auto flip
- Enable Split Mode to independently route signal groups
- Log, decode, and inject USB-PD messages and SBU / DisplayPort Aux traffic
- Optional Keep-Alive Charging (KAC) power on inactive ports
- Read, plot, and log voltages and currents including:

## Industrial-Strength Hardware

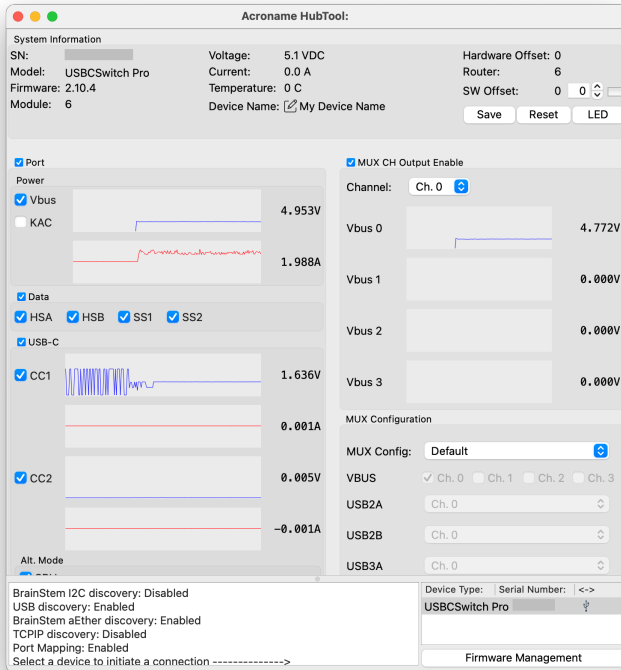
Pin	Measurement	Port
Vbus	Voltage and Current	All ports
CC & Vconn	Voltage	All ports
	Current	Common port

- Active SuperSpeed redrivers on common and mux ports for loss compensation
- Certified to withstand  $\pm 15\text{kV}$  ESD strikes (IEC61000-4-2 level 4)
- Bus powered via Control port or directly powered via 12 V DC pluggable euro-style terminal block (included)
- DIN rail mountable with optional kit
- Screw retention on all USB-C, DC power, and external IO connectors

## Block Diagram

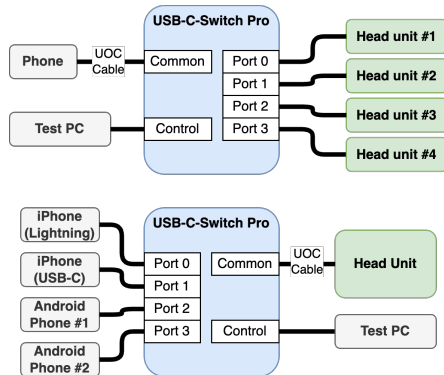


## Connectivity and Software



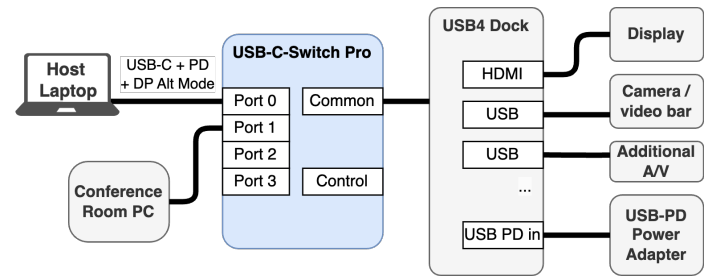
- Control and monitor through HubTool Application, web interface, or API (C, C++, Python, LabView, .NET, RESTful)
- Connect over USB-C, Ethernet, RS-232 (Extron compatible) or I<sup>2</sup>C
- Control I<sup>2</sup>C peripherals and one 5 V switchable output

## Apple CarPlay and Android Auto Testing and Development



- Sequentially test a head unit against iOS and Android phones, test across **multiple head units** or **multiple devices**
- Emulate cable flip and plug-unplug cycles
- Debug USB-PD negotiation and device charging issues

## Host Switching for One-Cable A/V



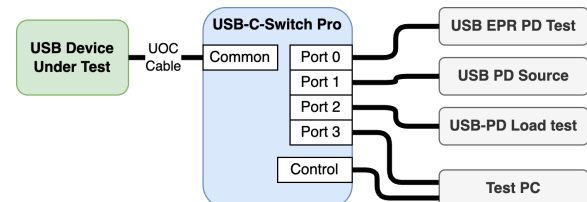
Host switching enables a laptop to easily connect to conference room A/V equipment.

- When a laptop is connected, it automatically becomes the USB host, with DisplayPort, camera, room audio, network, and power connection through one USB cable
- Peripherals reconnect to the conference room PC automatically when the laptop disconnects

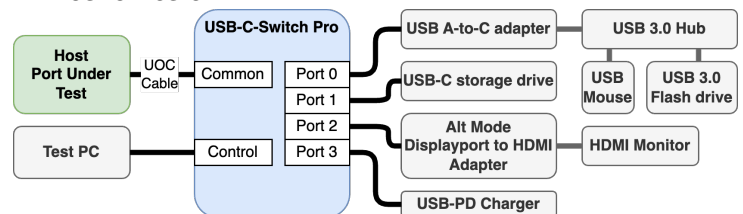
## Compliance and Interoperability Testing

Streamline USB-PD compliance and interoperability testing by automating device and lab equipment connections:

- Connect multiple pieces of test equipment sequentially to one device under test



- Connect multiple ports or devices sequentially to one host or tester



- No-touch cable flip and virtual plug-unplug

## Made for custom solutions

We built the USB-C-Switch Pro with maximum flexibility to help solve unique USB-C challenges across high power and data rates. Use HubTool to interactively control, monitor, and debug — or automate your solution with the BrainStem API.

The USB-C-Switch Pro is ready for the test lab, conference room, factory floor, or anywhere that requires high-performance USB-C switching and monitoring.