USBHub3c
Industrial Programmable USB-C Hub

Test the limits*

*of USB and USB-PD

The **USBHub3c** from Acroname® is the world's first and only programmable USB Type-C® hub. It can automate validation, control, and test the limits of devices built on the Power Delivery (USB-PD) and USB specification. Simple software APIs allow control over all USB-PD modes and parameters, including intentional error states, connectivity options and real time measurements.

Being bus-powered or self-powered, the USBHub3c can be used in any environment. It is the only bus-powered USB hub that supports PD sourcing. Even better, Acroname's AnyPort™ technology allows the host (UFP) port to be assigned to any of the 6 numbered ports. Support for data and power role swaps including fast role swap.

Put simply:

The USBHub3c most capable USB Hub in the world.

Cross platform GUI tool to helps explore device capabilities and control everything in your USB-PD life.

Uses

- Mobile device test lab
- USB-PD validation test
- USB-C device production test
- Desktop daily-driver
- A/V conference rooms
- End-of-line battery charge
- Testing dual role data (DRD) devices
- Testing dual role power (DRP) devices

	Pro	Lab
USB BC 1.2	Yes	
Power Delivery (PD)	2, 3	
PD Source	3.0-20V up to 5A	Fixed 5V up to 3A
PD Sink	3.1-22V up to 5A	
PPS Variable Voltage Source	Yes	No
PPS Variable Voltage Sink	Yes	
Quick Charge®	2, 3, 4, 5	None
PD-Builder™	Yes	No
External Load Outputs	Available	
V_{bus} Override	Available	No
USB-PD Logging	Available	
NIST Traceable Certificate	Available	

Overview

8 USB-C (Type-C®) ports
- 6 USB 3.2 data ports
- 1 USB 2.0 control port
- 1 Dedicated power input port (back)

ESD protected to ±15kV

Screw lock on all USB-C connectors

Data Speeds

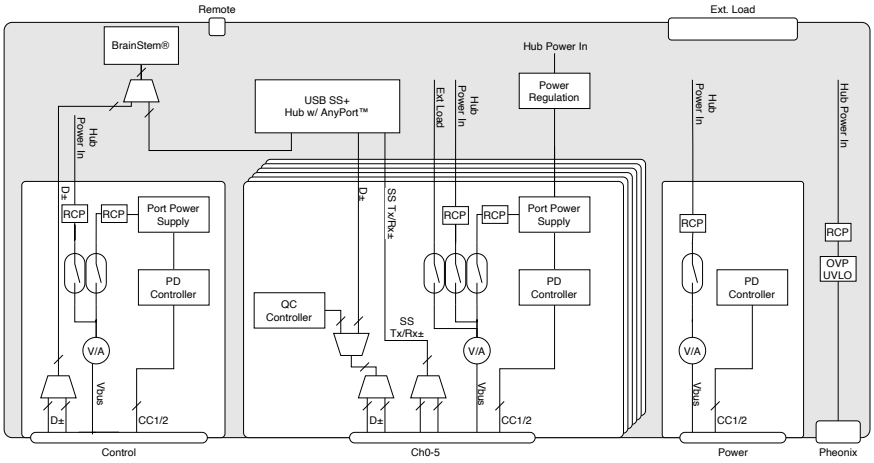
- USB 3.2 Gen2x1 10Gbps, Gen1x1 5Gbps, USB2.0/1.x 480Mbps, 12Mbps, 1Mbps
- Backward compatible with all USB devices
- AnyPort™ Configure any port as a host port (UFP)
- Cross platform: Windows, macOS, Linux including ARM

Power

- Full USB Power Delivery Support
  - PD v3.0 including PPS
  - Up to 100W on any port (20V at 5A)
  - 600W peak combined output power
- USB Battery Charge (BC 1.2) Support
- Programmable current limit
  - Circuit breaker or constant current mode
- Qualcomm Quick Charge®
  - QC2, QC3, QC4, QC5
  - FastCharge
- Dedicated power input USB-C port
- Optionally powered from any USB-C port
- Wide input voltage range up to 48VDC
- Auxiliary power output for sink testing

Programmable Control

- Fully managed hub control
- USB, RS232, and button control
- Simple, robust APIs in Python, C++, .NET, LabVIEW®
- Individual port on/off control; independent control of USB data, CC, V_{bus}
- High resolution V_{bus} and V_{conn} voltage and current measurements on all ports
- Control USB-PD and Quick Charge modes
- Automate cable orientation flipping



Leaders in USB test automation

ACRONAME

USBHub3c
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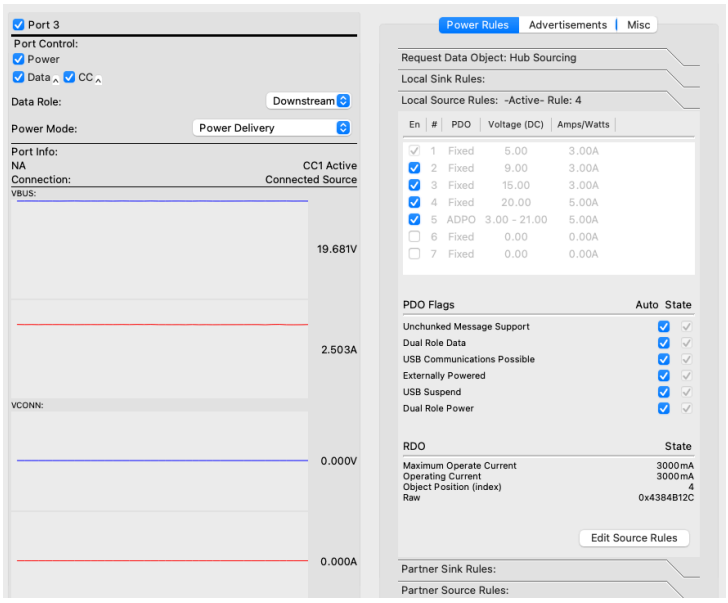
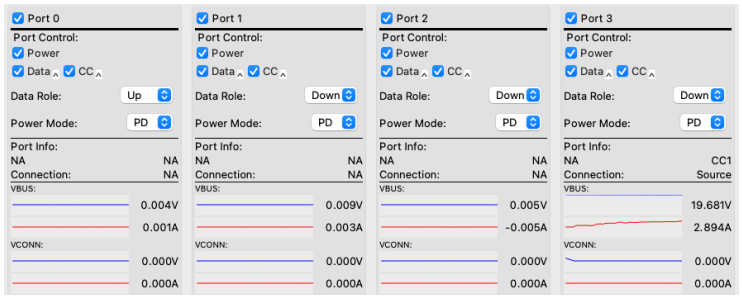
Control everything*

*about USB and USB-PD





User Interface

Fast and intuitive graphical interface provides control and visibility into all interactions and functionality. Software is free and available for Windows, macOS and Linux distributions.

Software Extensions

PD-Builder: Powerful editing capabilities to ensure your device responds to PD requests. Allows for customizing PDO including custom modes and VDMs. Copy and emulate sourcing profiles of PD supplies.

V_{bus} Override: Override USB-PD control of V_{bus} voltage and current settings. Test device over- and under-voltage. Each port can also be used as a programmable power supply.

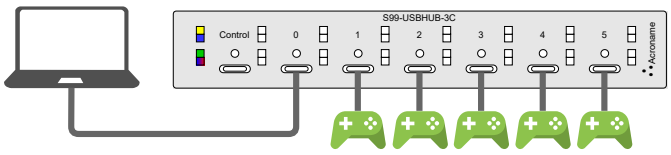
External Load Outputs

Test power output by configuring any port as a PD sink and connecting an e-load to the external load connector.

PD Logging

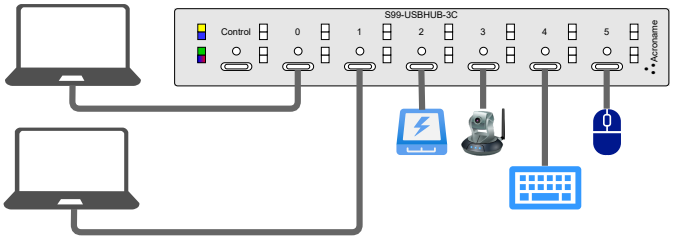
Monitor Power Delivery (PD) traffic on CC1 or CC2. Message decoding, including power negotiation, alternate mode negotiation, VDM data display. Capture and display PD 3.0 Extended Messages.

Functional Test USB-C Devices



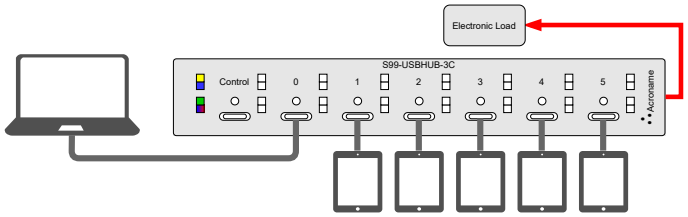
Charge and verify data connectivity and throughput. Verify PD negotiation with automated cable flip.

Multiple Computer Testing



Testing multiple devices against different computer systems is easily done using AnyPort™ technology. Software control to select which port becomes an upstream facing port enables better regression systems and testing for product reliability.

Dual-Role Device Testing



Automate data role swapping for validating products that can act as both a USB host and peripheral as well as a power source or sink through USB-PD protocol. USB-C Hub's Power Delivery negotiation can facilitate changes to a DUT's V_{bus} exercisable with an electronic load.

What's in the box

- USBHub3c
- 100W USB-C PD AC power supply (US-spec)
- Two (2) standard USB-C-C, 70cm, 10Gbps, 5A cables with locking screws
- Phoenix-compatible screw terminal
- One (1) USB-C to USB-A

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