

Active USB-C to USB-C Adapter

Panel Mount | USB-C Extension | DP Alt Mode | PD Pass

FireNEX™-UDC

Data Sheet



Features

- Unidirectional USB C to C, female to female active coupling with active repeater
- Extend USB-C passive cable up to 10m
- Active boost USB 3.2 Gen 2 signal up to 10Gbps data rate
- Backward compatible with USB 3.0/2.0
- Active boost DisplayPort signal up to HBR3 at 8.1Gbps per lane
- Bidirectional USB PD 3.1 pass through up to 240W at 48V/5A
- USB Bus Powered, no additional power input required
- D-series type panel mount Ready
- Metal enclosure body for maximum durability and EMI protection
- Plug and Play for Windows, Mac and Linux OS

Ordering Information

PN	Configuration
FIRENEXUDC-10G	2-Lane Display + USB 3.2/2.0
FIRENEXUDC-DP	4-Lane Display + USB 2.0

Dimensional Drawing

Specification

USB

USB 3.2 Gen 2 (AKA USB 3.2 Gen 2x1, USB 3.1 Gen 2)	10 Gbps
USB 3.2 Gen 1 (AKA USB 3.1 Gen 1, USB 3.0)	5 Gbps
USB 2.0/1.1	Fully Compatible

DISPLAY

4 Lane – DP v 1.4 (HBR3 Source & Device)	Up to one 8K@60Hz, or two 4K@60Hz (USB 2.0 Only in 4-Lane DP Mode)
2 Lane – DP v1.4 (HBR3 Source & Device)	Up to one 4K@60Hz, or two 2K@60Hz (USB 3.2 support in 2-Lane DP Mode)

Power Delivery

Max. Voltage	48 V
Max. Current	5 A

MECHANICAL

Panel Mount Style	Neutrik D-Series
Upstream Port - Host	USB-C Female
Downstream Port - Device	USB-C Female

ENVIRONMENTAL

Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity	10% to 90% relative humidity, non-condensing

COMPLIANCE

EMC	FCC, CE
Environmental	RoHS, REACH

SUPPORT

Warranty	1-year Manufacture Warranty
----------	-----------------------------

Product Images



FAQ:

1. Q: What's the maximum cable length to use with FireNEX-UDC?

A: FireNEX-UDC is tested to work with passive USB-C cable up to 5 meter on both sides. Active USB-C cable is tested to work with FireNEX-UDC up to 15 meter at one side.

2. Q: Does FireNEX-UDC require power?

A: FireNEX-UDC is bus powered, require no additional power supply. FireNEX-UDC itself consumes less than 1.5W at full load.

3. Q: Is FireNEX-UDC backward compatible with USB 2.0 or USB 3.0 peripherals?

A: Yes, FireNEX-UDC is backward compatible to USB 2.0/3.0 and ensures USB 2.0 and USB 3.0 signal integrity at extended length.

4. Q: Do the USB-C ports of FireNEX-UDC support flippable plug-in?

A: The cable plug into FireNEX-UDC can be flipped, if one side of the cable using Newnex special C to C cable. If both sides are using standard wiring USB-C cable, the cables need to be pin to pin straight through.

5. Q: Can I connect FireNEX-UDC to Active Optical Cable (AOC) or Active Extension Cable to reach longer distance?

A: Yes, FireNEX-UDC can be used with active USB-C cable. Note that some AOC draw power from VCONN, in this case, the other side of USB-C cable needs to use with Newnex special USB C to C Cable.

6. Q: Do I have to use Newnex special USB-C cable with FireNEX-UDC?

A: You can use any USB-IF compliant USB-C cable with FireNEX-UDC. However Newnex cable has the following advantage of 1) superior SI for longer range 2) reversible plug-in support 3) compatible with VCONN powered AOC

Accessories:

PN	Description	Note
U4S5C01C04SW20	Special C to C Locking, 2m	1. This cable is only compatible with FireNEX-UDC 2. This cable can only be placed at one-side of FireNEX-UDC The other side needs to be a standard USB-C cable
U4SLC01C04SW40	Special C to C Locking, 4m	
Standard USB-C Cable	https://newnex.com/usb-type-c-products.php	
Active USB-C Cables	https://newnex.com/usb-active-cables.php	

Installation

1. Standalone coupling



2. Host side panel mount



3. Device side panel mount

