

## Product Specification

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### CFM1-USB31-C Single Channel Lab Grade Type-C 10Gbps USB 3.1 Gen 2 Filter

Designed to reject frequencies greater than 200MHz while passing data between USB 2.0, USB 3.0 and USB 3.1 devices. Ideal for LTE band rejection. The unit supports SS+ (10Gbps), SS (5Gbps), HS (480Mbps), FS (12Mbps) and LS (1.5Mbps). Independently and simultaneously passes USB 2.0 and USB 3.1 data. The unit fully supports the reversible Type-C connection, functioning properly with any connector orientation.

The unit implements the Type-C protocol and supports the Power Delivery 3.0 specification including programmable power supply capability. The unit can negotiate sourced power at its Downstream Facing Port (DFP). The power profile is automatically negotiated over the DFP Type-C interface to provide up to 60 Watts of filtered power.

Isolation through the filter is typically 90 dB or greater from 200MHz through 8GHz on all signal and power lines. The unit is compatible with Type C smart cables.

#### Specifications:

##### Electrical:

Data line Balanced Impedance: 90Ω typ.  
Power In: 24 VDC, 3.75 A max

##### Power Pair:

VBUS: 200MHz - 8000MHz > 80dB rejection

DFP: Supports 4 power profiles negotiated over CC1 and CC2 pins at 5V [available when no host is connected (dedicated charge mode)]

- 15 W [5 V @ 3 A]
- 27 W [9 V @ 3 A]
- 45 W [15 V @ 3A]
- 60 W [20 V @ 3 A]

##### USB 2 and USB 3 data pairs:

USB 2 pair supports HS (480Mbps), FS (12Mbps) and LS (1.5Mbps)

USB 3 pairs support SS+ (10Gbps), SS (5Gbps)

All Pairs: 200MHz - 8000MHz > 80dB rejection

##### Control:

CC1, CC2: 200MHz - 8000MHz > 80 dB rejection

SBU1, SBU2: 200MHz - 8000MHz > 80 dB rejection

##### Indicator LEDs:

Red: Power OK

Yellow: DFP High Voltage Output (Indicates > 5V negotiated at DFP)

##### Physical:

Dimensions: 4.0"L x 3.25"W x 0.935"D, plus pipe

Connectors:

USB Type-C receptacles

DC Power Jack, accepts 2.5 mm ID x 5.5 mm OD plug

Mounting: 0.9" long, 1.0"-20 threaded pipe with nut and lock washer

