



SUPER SPEED STEUSB 3.1 GEN 2 RF ISOLATED INTERFACE

STEUSB312



Overview

The STEUSB312 is a USB 3.1 Gen 2 RF Isolated Interface designed to pass USB communications at 10 Gbps speed while providing RF isolation from 200MHz to 40GHz. The conductive insertion loss will be greater than 85 dB within this band. The unit also provides 5 volts DC at up to 1.5 amps while providing data, up to 2.2 amps with no host (dedicated charge mode). The unit is fully backward compatible with previous versions of USB communications.

Applications

The primary application is for use in an RF Shielded Test Enclosure. The STEUSB312 allows USB 3.1 Gen 2 data to pass while maintaining an enclosure RF isolation. The interface will also work well in RF Screen Room applications, or anywhere you need to pass USB data and maintain RF isolation.

Features

- USB Type B input connector
- USB Type A output connector
- Single Flange Nut for Bonding
- Gasket Washers to provide high quality RF bond
- Includes 12 VDC 2 Amp Switching Power supply
- Port Savers
- Strain Relief Post



STEUSB312 Interface Specifications

Power Requirements:

Voltage: 10 to 15VDC, Typically 12VDC Via provided Switching Power Supply
Current: 2A Maximum
Power Connector: 5.5mm x 2.1mm DC Jack, Center Positive

Power/ Charger Pair:

BC v1.2 Mode: Up to 1.5A at 5VDC (Available with and without host connected.)
Dedicated Charge: Up to 2.2A at 5VDC (Available when no host is connected.)

Indicators:

Red: Power On
Amber: On in Dedicated Charge Mode (no host detected)

Communication:

Data Line: 90 Ohm, Balanced Impedance
USB2 Pairs: 480Mbps (HS), 12Mbps (FS), 1.5Mbps (LS)
USB3 Pairs: 10Gbps (SS+), 5Gbps (SS)

Communication/Downstream Power Connectors:

Input, Non-pipe side: USB3.1 Gen2 Type B, normal computer port, data only.
Output, Pipe Side: USB3.1 Gen2 Type A, normal device port, data and BC v1.2 or Dedicated Charge available.

RF Isolation (Conductive Insertion Loss All Lines):

DC to 200MHz: Unspecified
200MHz to 8GHz: >90dB typical
8GHz to 40GHz: >85B typical

Physical:

Dimensions: 4.96" H (100.6mm) x 3.25" W (82.6mm) x 0.935" (23.7mm) D,
Plus Pipe and Strain Relief
Pipe Data: 0.9" Long, 1.0" - 20 Threaded Pipe with Flange Nut.
Strain Relief Data: 0.480" (12.2mm) Long x 0.350" (8.98mm) Diameter
Weight: 1lb (0.45kg)
Operating Temp: 0 to 50C, 32 to 122F

