



SUPER SPEED STEUSB 3.1 GEN 2 Type C RF ISOLATED INTERFACE

STEUSB3CC



Overview

The STEUSB3CC is a Single Channel Lab Grade USB 3.1 Gen 2 Type C RF Isolated Interface. It is designed to pass USB communications up to 10Gbps data speed while providing RF isolation from 1MHz to 40GHz. The conductive insertion loss will be greater than 80dB within this band. The unit also provides 5, 9, 15, or 20 volts DC at up to 3 amps of current for Power Delivery. This equates to a maximum of 60 watts of power available to be delivered to the load. The unit is fully backward compatible with all previous versions of USB communications.

Applications

The primary application is for use in an RF Shielded Test Enclosure. The STEUSB3CC allows USB 3.1 Gen 2 data to pass while maintaining an enclosure's 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 C Input and Output connectors
- Single Flange Nut for mounting
- Gasket Washers to provide high quality RF bond
- Includes 24VDC 6.67 Amp 160 Watt Switching Power supply, Foreign cords available
- Port Savers
- Strain Relief Post



STEUSB3CC Interface Specifications

Power Requirements:

Voltage:	24VDC
Current:	3.75A Maximum
Watts:	90W Maximum

Ports

Upstream Facing (UFP):	USB Type C, Computer port, Label Side
Downstream Facing (DFP):	USB Type C, Device port, Mounting Pipe Side
Power Connector:	4 Pin Power DIN, See dimensional drawing for pinout.

Compatible Data Protocols:

USB 1.0:	Low Speed, 1.5Mbps
USB 1.1:	Full Speed, 12Mbps
USB 2.0:	High Speed, 480Mbps
USB 3.0, USB 3.1 Gen 1:	SuperSpeed, 5Gbps
USB 3.1, USB 3.1 Gen 2:	SuperSpeed+, 10Gbps

Communication:

Computer Connection:	Upstream Facing Port
Device Connection:	Downstream Facing Port,
Data Line:	90 Ohm Typical, Balanced Impedance
USB2 Pairs:	480Mbps (HS), 12Mbps (FS), 1.5MBPS (LS)
USB3 Pairs:	10Gbps (SS+), 5Gbps (SS)

Power Delivery:

DFP:	Supports 4 Power Profiles Negotiated over CC1 and CC2 15W (5VDC @ 3A), High Voltage Indicator Off 27W (9VDC @ 3A), High Voltage Indicator On 45W (15VDC @ 3A), High Voltage Indicator On 60W (20VDC @ 3A), High Voltage Indicator On
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RF Isolation (Conductive Insertion Loss All Lines):

DC to 1MHz:	Unspecified
1MHz to 40GHz:	>80dB, >90dB typical



Physical:

Dimensions: 3.96" H (100.6mm) x 2.46" W (62.5mm) x 1.00" D (25.4mm),
Plus Pipe 0.900" D (22.9mm), and Strain Relief 0.36" D
(9.1mm).
Weight: 10.7oz (0.30kg)
Operating Temperature: 32° to 122°F (0° to 50°C)
Pipe Data: 0.9" Long, 1.0" - 20 Threaded Pipe with Flange Nut
Data Port/DFP Pwr: 2 Type - C Receptacles
Power Port: 4 Pin Power DIN, See dimensional drawing for pinout.
Indicators: Red LED, Power Indicator
Yellow LED, High Power (>5VDC) for DFP Power

Included Power Supply *:

Description: AC-DC Switching Power Supply
Ramsey Part Number: PS111
Voltage Input: 85 to 264VAC
Voltage Output: 24VDC
Input Current: 1.85 Amps @ 115VAC, 1 amp @ 230VAC
Output Current: 6.67 Amps
Output Power Max: 160 Watts
Input Frequency: 47 to 63Hz
Operating Temperature: -22° to 158°F (-30° to 70°C)
Input Connector: IEC60320/C14
Output Connector: 4 Pin Power DIN
Efficiency Level: VI

Included Power Cord *, Provided Standard, may be substituted for foreign use.

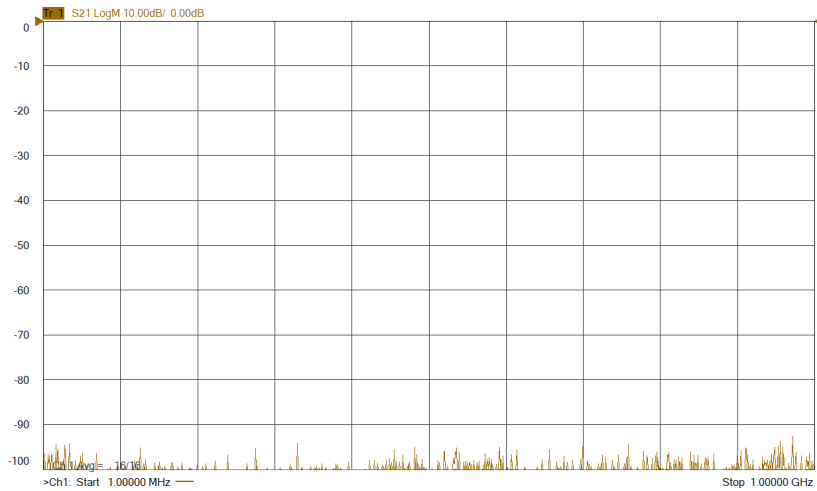
Description: North American Power cord
Ramsey Part Number: PS86
Cord: 18 AWG x 3 (Black, White, Green)
Plug: NEMA 5-15P
Connector: IEC60320/C-13 Straight
Rated: 125VAC, 10 Amps
Length: 98 Inches (2.5 Meters)

2x Included Data Cables * :

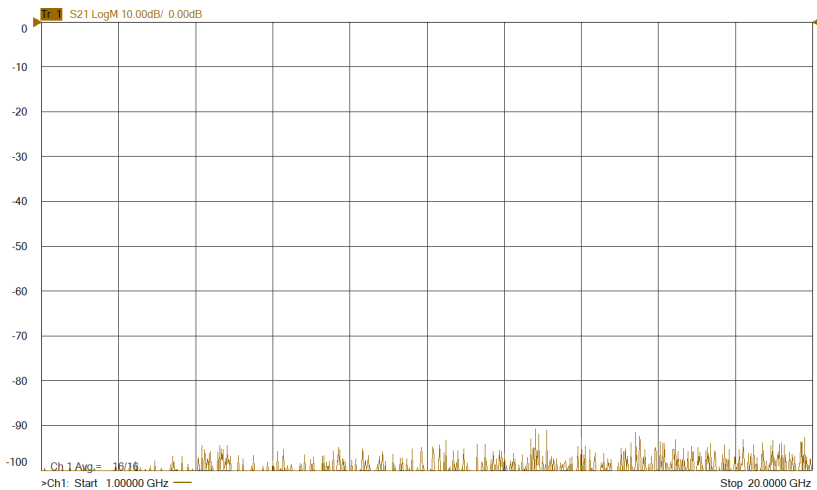
Description: USB 3.1 Gen 2 Male/Male 10Gbps Interface Cable
Ramsey Part Number: CABL51
Cable: Rated for USB3.1 Gen 2 (10Gbps)
Connectors: 2 Type C Male Connectors
Length: 39.37 Inches (1 Meter)

*** Due to availability, included parts may be substituted without notice.**

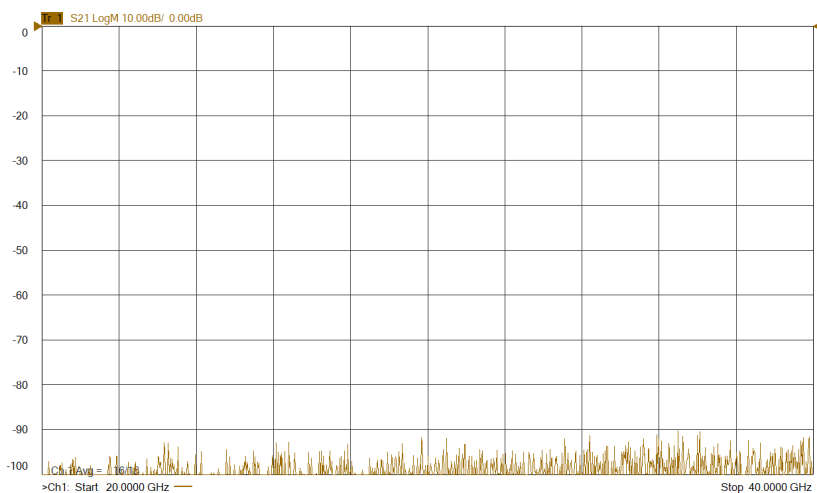
Power Line Typical Insertion Loss Plots



1MHz ~ 1GHz

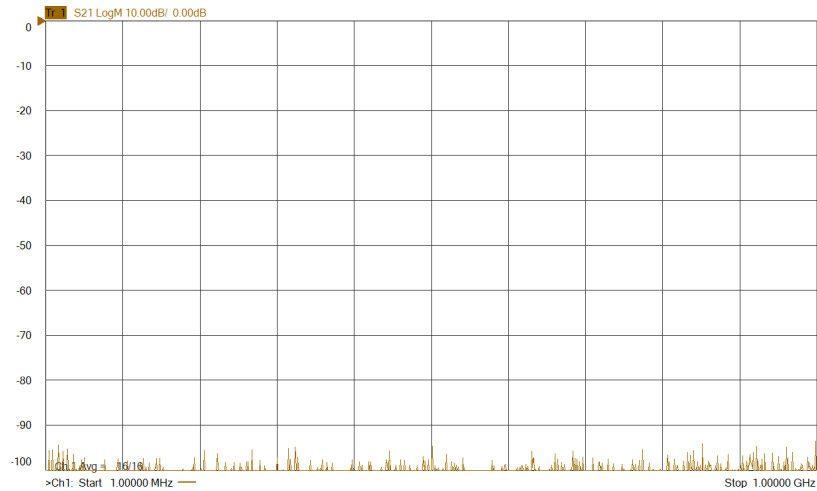


1GHz ~ 20GHz

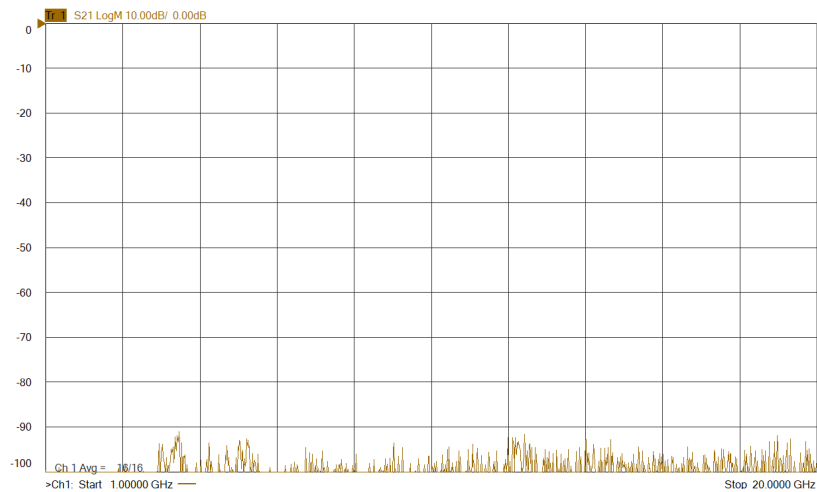


20GHz ~ 40GHz

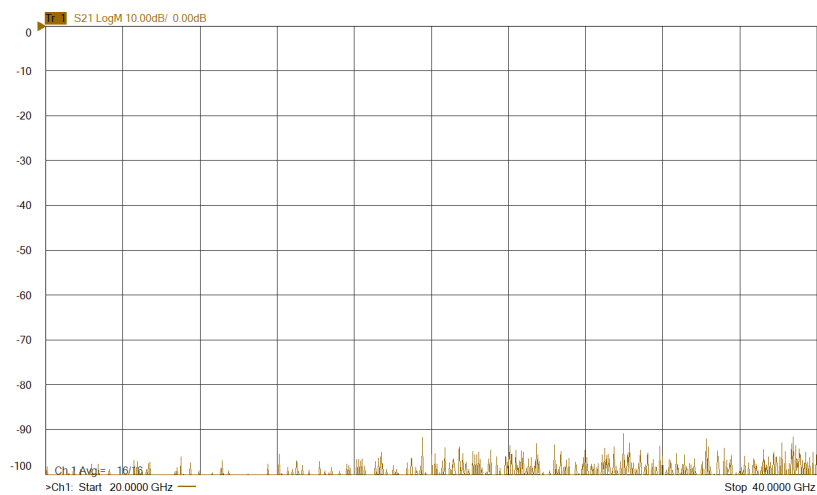
High Speed Data Lines Typical Insertion Loss Plots



1MHz ~ 1GHz

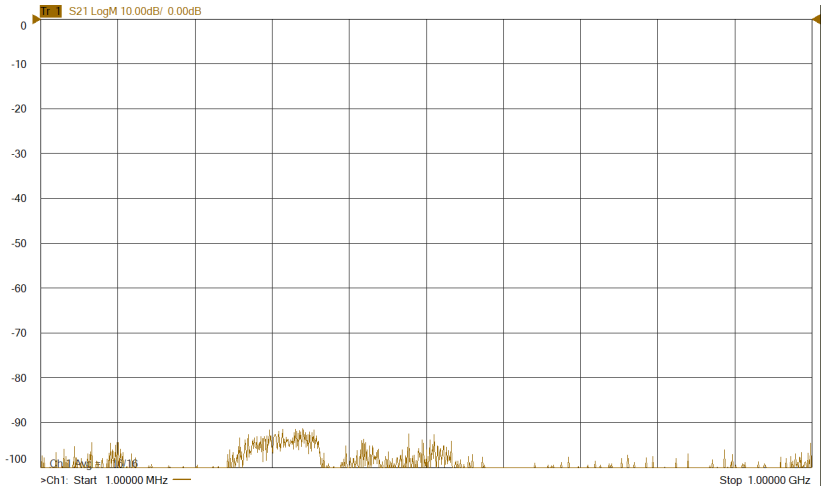


1GHz ~ 20GHz

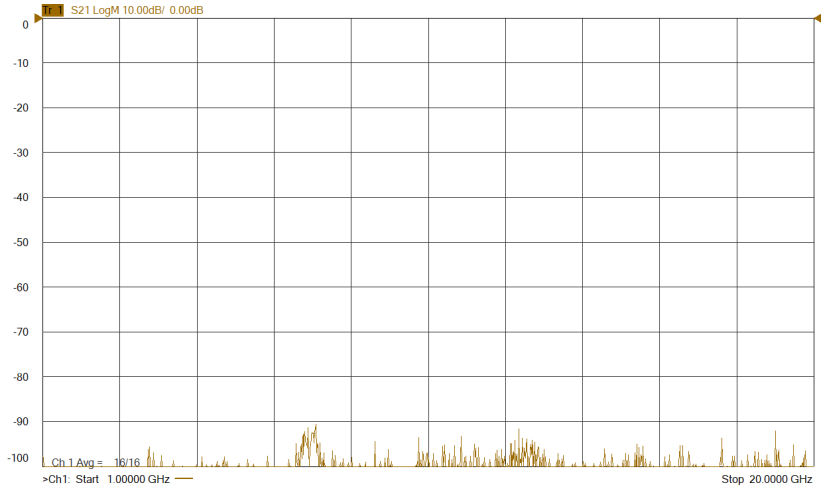


20GHz ~ 40GHz

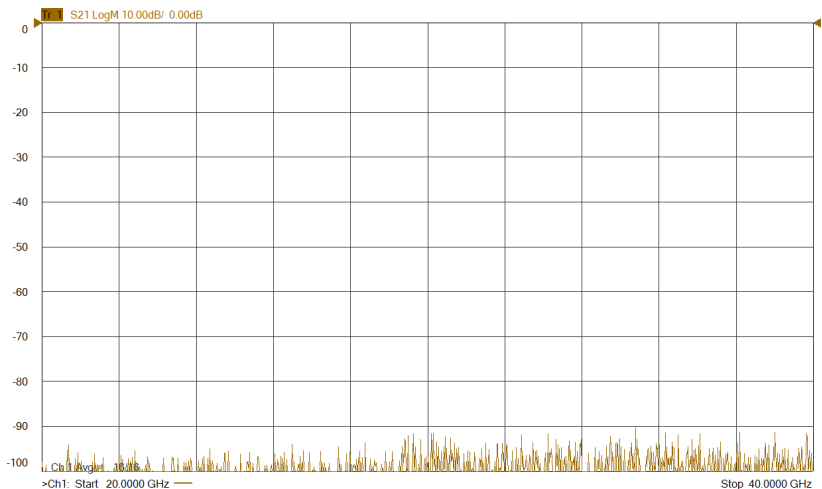
Super Speed Data Lines Typical Insertion Loss Plots



1MHz ~ 1GHz

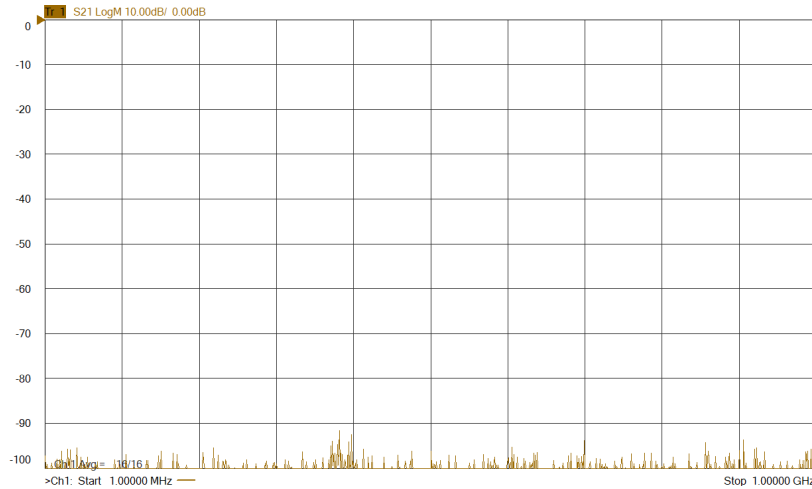


1GHz ~ 20GHz

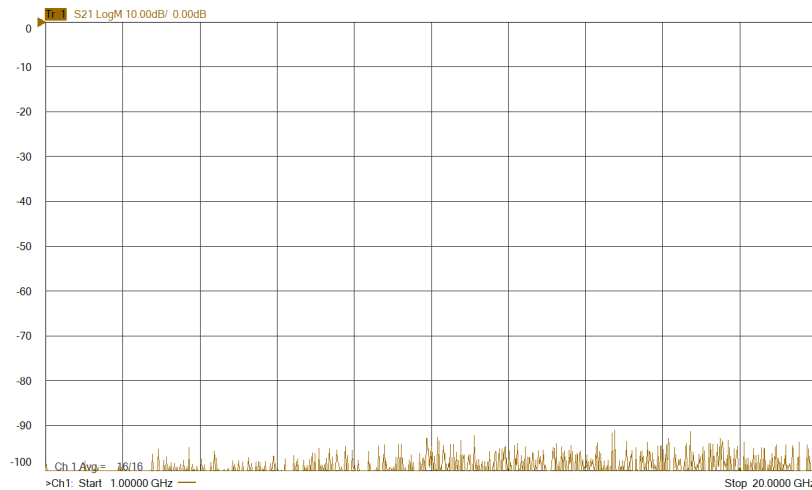


20GHz ~ 40GHz

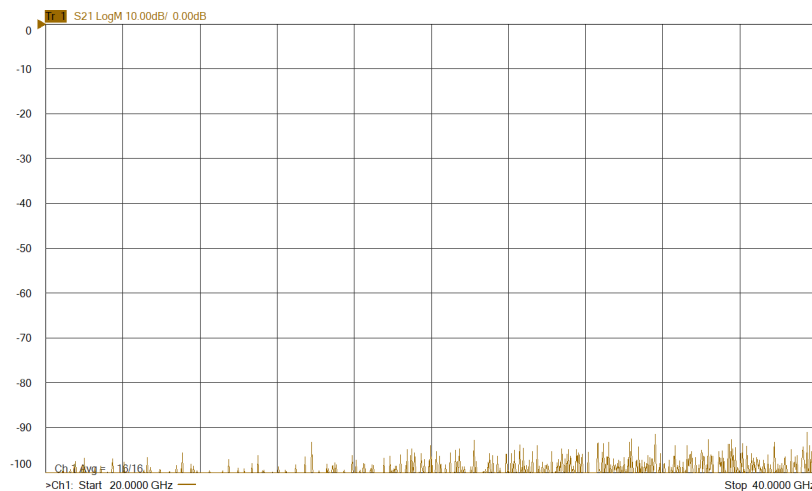
CC Lines Typical Insertion Loss Plots



1MHz ~ 1GHz



1GHz ~ 20GHz



20GHz ~ 40GHz

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