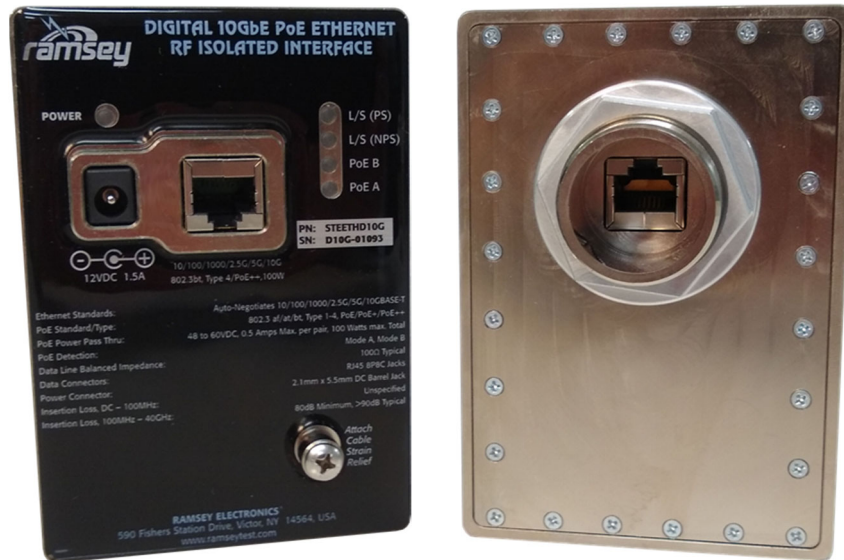


## DIGITAL 10GbE PoE ETHERNET RF ISOLATED INTERFACE

### STEETHD10G



### Overview

The STEETHD10G is a 10Gbps Ethernet RF Isolated Interface. It will auto-negotiate all BASE-T Ethernet data rates. These data rates include 10Mbps, 100Mbps, 1000Mbps, 2.5Gbps, 5Gbps, and 10Gbps. The filter is designed to pass these data rates while providing greater than 80dB RF isolation from 50MHz to 40GHz. When connected to devices with different maximum data rates, the STEETHD10G will auto-negotiate the fastest data rate supported by both devices.

STEETHD10G will pass PoE power source up through the 802.3bt Type 4 standard. The interface is rated at 0.5 amps per pair for a maximum of 2 amps and 100 watts.

### Applications

The primary application is for use in an RF Shielded Test Enclosure. The interface will also work well in RF Screen Room applications, or anywhere you need to pass Ethernet data and or PoE while maintaining RF isolation.

### Features

- RJ45 8P8C Input and Output connectors.
- Single Flange Nut for mounting.
- RF Gasket Washers to provide high quality RF bond.
- Includes 12VDC 2 Amp 24 Watt Switching Power supply with 5 different world power plugs.
- Port Savers.
- Strain Relief Post.



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## STEETHD10G Interface Specifications

### Power Requirements:

Voltage:	12VDC (10 to 15VDC).
Current:	1.5 Amps Maximum.
Watts:	18W Maximum.

### Ports

Pipe Data Port (PS):	RJ-45, 8P8C Jack.
Non-Pipe Data Port (NPS)	RJ-45, 8P8C Jack.
Power Port:	2.1mm x 5.5mm DC Jack, Center Positive.

### Indicators:

Power On:	Red, Lit when powered up.
Mode A PoE:	Amber, Lit when PoE Mode A is active.
Mode B PoE:	Amber. Lit when PoE Mode B is active.
Link Status, PS (Pipe Side):	Lit/Flashing when data is being passed.
Link Status, NPS (Label Side):	Lit/Flashing when data is being passed.

### Link Status Indicators:

10Mbps	Red.
100Mbps	Green.
1Gbps	Dark Blue.
2.5Gbps	Yellow.
5Gbps	Purple.
10Gbps	Light Blue.

### Compatible Data Protocols:

10BASE-T:	10Mbps, 802.3i.
100BASE-T:	100Mbps, 802.3u.
1000BASE-T:	1000Mbps, Gigabit, 802.3ab.
2.5GBASE-T:	2,500Mbps, 2.5Gbps, 802.3bz.
5GBASE-T:	5,000Mbps, 5Gbps, 802.3bz.
10GBASE-T:	10,000Mbps, 10Gbps, 802.3an.

### Communication:

Non-Pipe Data Port (Label Side):	Ethernet Connection to Outside of Enclosure.
Pipe Data Port:	Ethernet Connection to Inside of Enclosure.
Data Line Impedance:	100Ω Balanced, Typical.

### RF Isolation (Conductive Insertion Loss All Lines):

DC to 50MHz:	Unspecified.
50MHz to 40GHz:	>80dB Minimum, >90dB typical.



### PoE Power Delivery:

Mode of Operation: Passive, pass-thru only.  
Standard/Type: 802.3 af/at/bt, Type 1-4, PoE/PoE+/PoE++, pass-thru.  
PoE Input Voltage: 48 to 60VDC.  
PoE Pass-thru Current: 0.5 Amps Maximum per pair, 2 Amps Total.  
PoE Maximum Power: 100 Watts.

### Physical:

Dimensions: 4.50" H (114.3mm) x 3.13" W (79.4mm) x 1.34" D (34mm), Plus Pipe and Strain Relief.  
Maximum Panel Thickness: 0.375" (9.5mm) With 0.25" (6.5mm) spacer.  
Weight: 20oz (0.67kg).  
Operating Temperature: 32° to 122°F (0° to 50°C).  
Pipe Data: 1.0" Long, 1.25"-18 UNEF-2A Threaded Pipe w/Flange Nut.

### Included Power Supply \*:

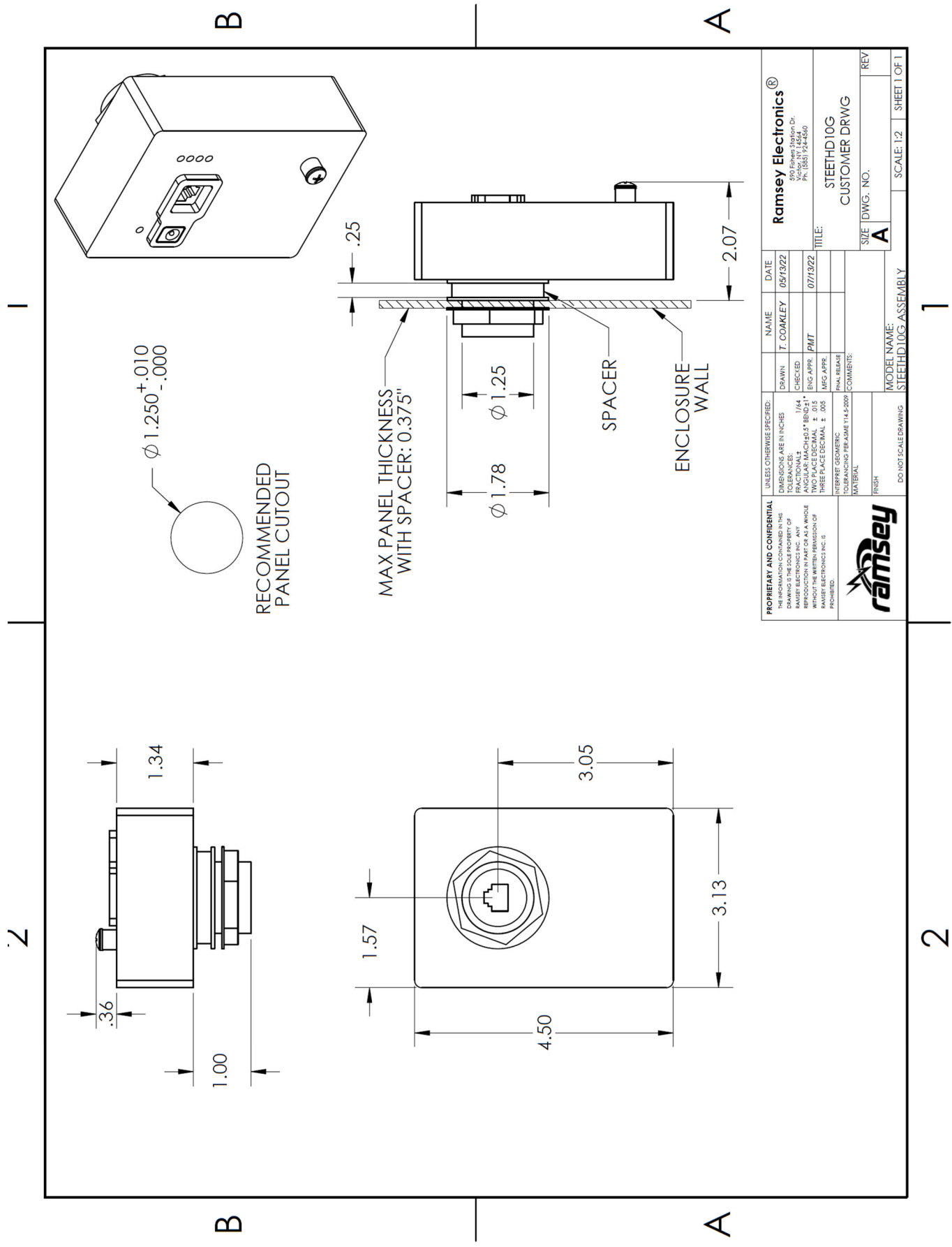
Description: AC-DC Switching Power Supply.  
Ramsey Part Number: PS105.  
Voltage Output: 12VDC.  
Output Current: 2.0 Amps.  
Voltage Input: 90 to 264VAC.  
Input Current: 0.58 Amp.  
Output Power Max: 24 Watts.  
Input Frequency: 47 to 63Hz.  
Output Connector: 2.1mm x 5.5mm x 9.5mm DC Power Plug  
Input Connector: Interchangeable blades, US, Europe, United Kingdom, Australia, and China.  
Operating Temperature: 32° to 104°F (0° to 40°C).  
Safety Approvals: 62368, UL/cUL, EN, J, AS/NZS, UKCA  
RoHS: Yes.  
Efficiency Level: VI.

### 2 Included Data Cables \* :

Description: CAT7, 10Gbps, 600MHz.  
Ramsey Part Number: CABL45.  
Cable: CAT7, 28AWG(1P+AL-Foil)\*4+DRAIN+B.  
Connectors: 2x, 8P8C Plug.  
Contact Resistance: 3Ω Maximum.  
Insulation Resistance: 5MΩ Minimum.  
Length: 7 Feet.

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

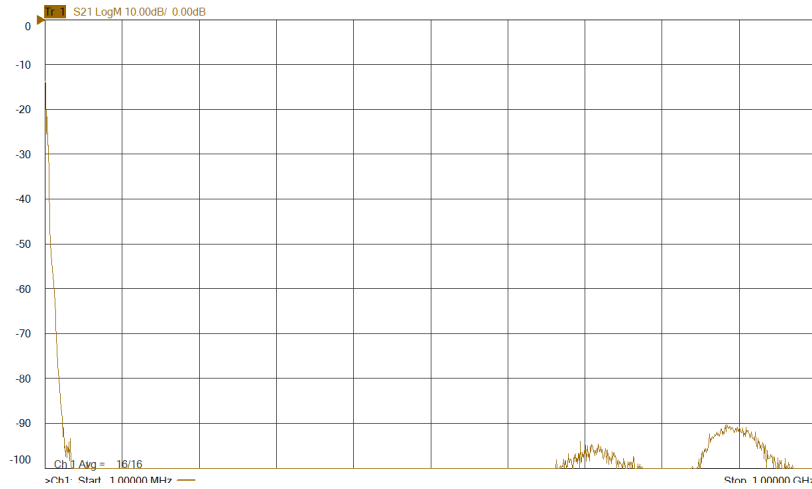
# STEETHD10G Dimensional Drawing



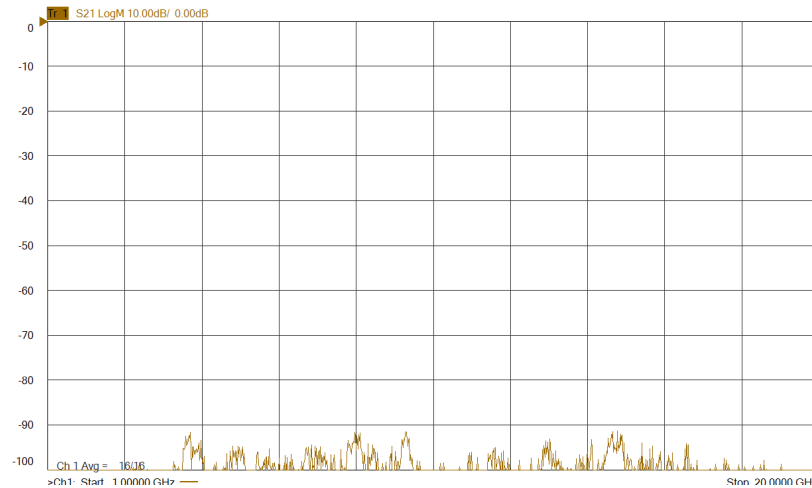
1MHz ~ 1GHz

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MODEL NAME: STEETHD10G ASSEMBLY			TITLE: STEETHD10G CUSTOMER DRWG	SIZE: DWG. NO. A	SCALE: 1:2	SHEET 1 OF 1

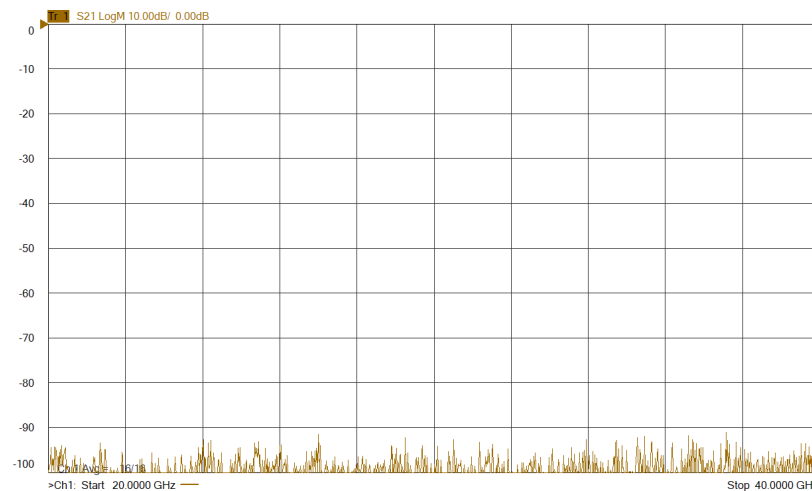
# Typical Conductive Insertion Loss Plots



1MHz ~ 1GHz



1GHz ~ 20GHz



20GHz ~ 40GHz

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