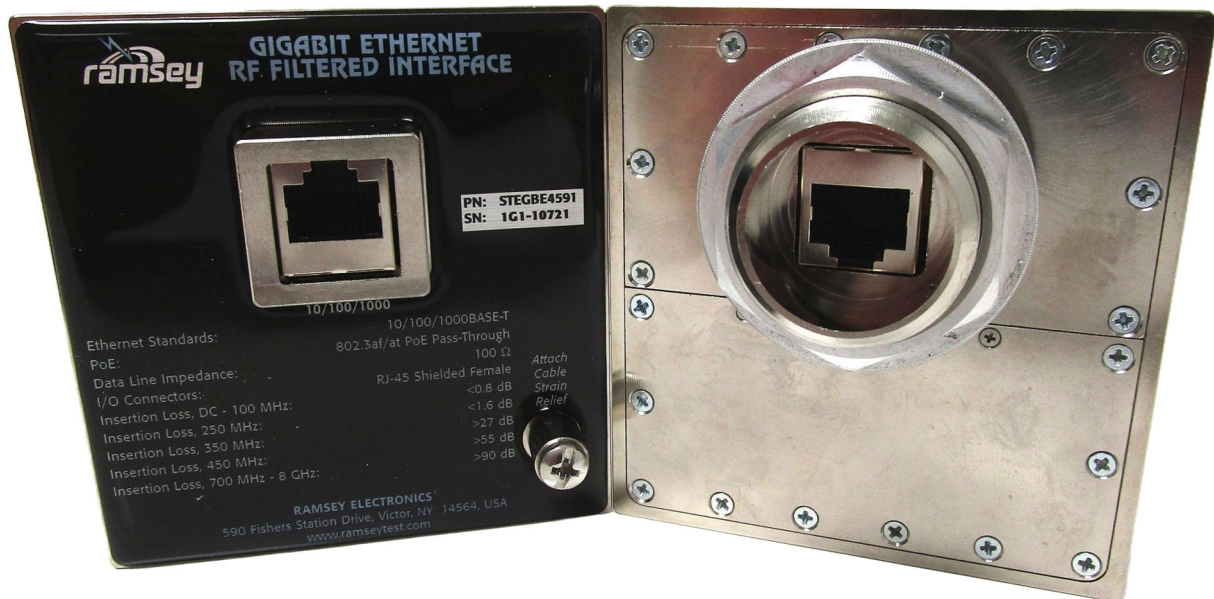


## GIGABIT PoE ETHERNET RF FILTERED INTERFACE

### STEGBE4591



### Overview

The STEGBE4591 is a Gigabit Ethernet RF Filtered interface. It will pass the following Ethernet Data rates 10Mbps, 100Mbps, and 1000Mbps (Gigabit). The filter is designed to pass these data rates while providing greater than 80dB RF isolation from 700MHz to 40GHz. It will also pass PoE at up to 0.5 amps per data line.

### Applications

The primary application is for use in an RF Shielded Test Enclosures. 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.

This interface can also be used for other digital applications like I2C, TTL, RS422, RS485, among others. It basically provides 8 filtered data line for you to use.

### Features

- Passive Filtering.
- RJ45 Input and Output connectors.
- Single Flange Nut for mounting.
- RF Gasket Washers to provide high quality RF bond.
- Port Savers.
- Strain Relief Post.



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## STEGBE4591 Interface Specifications

**Power Requirements:** None, Passive

**Ports:**

Pipe Data Port (PS):	RJ-45 Jack.
Non-Pipe Data Port (NPS)	RJ-45 Jack.

**Compatible Data Protocols:**

10BASE-T:	10Mbps, 802.3i.
100BASE-T:	100Mbps, 802.3u.
1000BASE-T:	1000Mbps, Gigabit, 802.3ab.

**Electrical:**

Non-Pipe Data Port (Label Side):	Ethernet Connection to Outside of Enclosure.
Pipe Data Port:	Ethernet Connection to Inside of Enclosure.
Data Lines:	8 each, DC to 250MHz RF Bandwidth.
Data Line Impedance:	100Ω Balanced, Typical.
DC Resistance:	<1.5 ohms per data line.

**PoE:**

Type:	Passive between PSE and PD.
Parameters:	802.3af (PoE) / 802.3at (PoE+).
DC Current:	0.5 Amps per data line maximum.
Mode:	A / B.

**Conductive Insertion Loss: (All Lines):**

DC to 50MHz:	Unspecified.
50 - 100MHz:	<0.8 dB.
250MHz:	<1.6 dB.
350MHz:	>27 dB.
450MHz:	>55 dB.
700MHz to 40GHz:	>80 dB, >90dB typical.

**Mechanical:**

Construction:	Milled Aluminum, Electroless Nickel Plated.
Dimensions:	3.4" (86.4mm)H x 3.25" (82.6mm)W x 2.1" (53.3mm)D.
Operating Temperature:	-13°F (-25°C) to +185°F (+85°C).
Weight:	0.75 lbs (0.3kg). With nut and RF gasket.
Mounting:	1.25"-18 UNF threaded pipe with matching nut.
Maximum Panel Thickness:	0.625" (15.9mm).



## STEGBE4591 Typical Conductive Insertion Loss Plots

