



The DJM Electronics **FOIL™** brand Ethernet filters are the only EMI/RFI filter on the market that offer 100dB performance from 10kHz to 10GHz and higher. Housed in a single, convenient filter package, **FOIL™** Ethernet Filters are the easiest and most reliable solution for bringing 10/100 and Gigabit Ethernet access to all varieties of shielded rooms and enclosures.

Standard signal line filters rely on capacitors and inductors to eliminate unwanted RF signals. However, these types of filters often eliminate the high frequencies that make up the sharp edges of high speed digital square wave signals thereby degrading the integrity of the signal. In order to avoid this side effect, it is necessary for standard signal line filters to have extended passbands that allow the higher frequencies to pass unimpeded. Even the best standard signal line filters offer only 70dB from 50MHz to 10GHz and will only work with 10Base-T. There are no Fast Ethernet (100Base-TX) or Gigabit Ethernet (1000Base-T) standard signal line filters available on the market. Also, it is important to note that standard signal line filters do not differentiate between Ethernet signals and undesirable signals. They act like a “hole” in the shielded enclosure to all signals – good and bad – within the passband.

Unlike standard signal line filters, **FOIL™** Ethernet Filters utilize a fiber optic isolation link (FOIL). The filter converts **ONLY** Ethernet packets, so there is no passband and no transmission of unwanted signals.

Standard Features:

- ◆ 100dB Performance from 10kHz to 10GHz+
- ◆ Fiber Optic Isolation Link (FOIL) technology
- ◆ Single, small, convenient filter package
- ◆ Single DC converter supplies all power requirements from outside of shielded enclosure
- ◆ Will not degrade network performance or increase network hop counts
- ◆ Auto-MDI/MDIX RJ-45 interface
- ◆ Autosenses and autoconverts between network protocols
- ◆ Autonegotiation for full duplex and half duplex

Two Models To Choose From:

10/100v2 Ethernet Filter..... \$650ea

Works with 10Base-T (Ethernet) and 100Base-TX (Fast Ethernet) networks

GigaFOIL™ Ethernet Filter..... \$1000ea

Works with 10Base-T, 100Base-TX and 1000Base-T (Gigabit Ethernet) networks

Optional threaded gang box and gray faceplate (pictured at right) available for additional \$25.



FOIL™ Ethernet Filters come in two models: the 10/100v2 and the new **GigaFOIL™** for Gigabit Ethernet. We guarantee that **FOIL™** Ethernet Filters will not interfere with the network, increase hop counts or degrade network performance (a common problem with standard signal line filters).

Performance:

- ◆ Insertion Loss: 100dB from 10kHz to 10GHz
- ◆ Shielding Effectiveness: 100dB at 1GHz

Communication Protocols:

- ◆ IEEE802.3 10Base-T (Ethernet)
- ◆ IEEE802.3u 100Base-TX/FX (Fast Ethernet)
- ◆ IEEE802.3ab 1000Base-T, and IEEE802.3z 1000Base-SX/LX (Gigabit Ethernet) [****GigaFOIL only**]
- ◆ Autosenses and autoconverts between protocols
- ◆ Autonegotiates half or full duplex

Ethernet Connections:

- ◆ Auto-MDI/MDIX RJ-45 Connector
- ◆ Category 5e cabling

Construction:

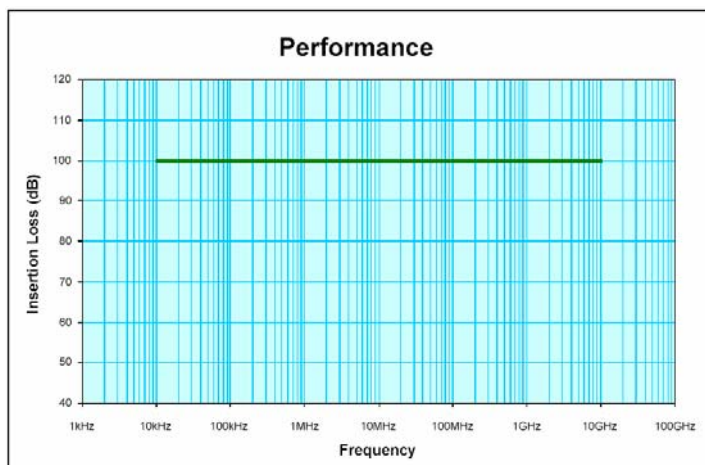
- ◆ 12 ga zinc plated cold rolled steel filter can
- ◆ 5.5" high x 3.0" wide x 2.5" deep
- ◆ 1" NPT threaded penetration w/brass mounting nut and mesh gasket

Environmental:

- ◆ Temperature: 0°C - 60°C (32°F - 140°F)
- ◆ Humidity: 10% - 90% (non condensing)

Power Requirements:

- ◆ Input: 100-240VAC; 50/60Hz
- ◆ Output: +5V / 2000 mA maximum
- ◆ DC plug type: center positive



Connector Pinout

Pin	10/100 Ethernet		Gigabit Ethernet	
	Name	Description	Name	Description
1	TX+	Transmit Data +	BI_DA+	Bi-directional pair A +
2	TX-	Transmit Data -	BI_DA-	Bi-directional pair A -
3	RX+	Receive Data +	BI_DB+	Bi-directional pair B +
4	n/c	Not connected	BI_DC+	Bi-directional pair C +
5	n/c	Not connected	BI_DC-	Bi-directional pair C -
6	RX-	Receive Data -	BI_DB-	Bi-directional pair B -
7	n/c	Not connected	BI_DD+	Bi-directional pair D +
8	n/c	Not connected	BI_DD-	Bi-directional pair D -

