FILTER 10G ETHERNET FILTER

ETS-Lindgren's 10G Ethernet Filter is the most advanced and effective EMI filter for Ethernet available on the market. The filter is designed to pass Ethernet speeds from 10 Megabits to 10 Gigabits. Invisible to connected network devices, the 10G Ethernet Filter will auto negotiate to the fastest data rate supported by both end points. Utilizing proprietary Digital Signal Processing (DSP) techniques, the filter reproduces the Ethernet signals without unwanted or extraneous interference. The 10G Ethernet Filter provides better than 100 dB rejection of unwanted signals from 50Hz to 40GHz. Military grade passive filtering technology ensures that Ethernet packets traverse the filter in isolation from each other and outside signals, resulting in a superior digital output far surpassing the filtering capabilities of any other EMI filters available.

Each 10G Ethernet Filter is constructed with high quality electrical components, starting with an extremely accurate, ultra-stable high speed crystal clock which drives the specially developed DSP circuitry and Ethernet chipset. The filter incorporates ESD and transient voltage suppressors, inrush current limiters, and gas discharge tubes to protect against unanticipated voltage and/or current surges. The 10G Ethernet Filter is mounted in a rugged protective housing machined from solid aluminum stock, providing physical protection to the filter components, shielding from undesirable emissions propagating through the filter, and low impedance pathways for interference to be directed out of the filter. Between the housing and protection circuitry, the 10G Ethernet Filter is suitable for nearly any environment ranging from climate-controlled commercial use to harsh and unforgiving military applications.

The filter is available in three models: 10G Ethernet Filter, 10G Ethernet Filter-HW, 10G Ethernet Filter-POE, and 10G Ethernet Filter-POE-HW. The 10G Ethernet Filter model requires an outlet near the filter to provide power to the filter, where the 10G Ethernet Filter-HW can be hardwired directly to building power, and the 10G Ethernet Filter-POE suitable for power over Ethernet applications.

MODEL 10G ETHERNET FILTER

- **Three Models:**
  - **10G Ethernet Filter**
  - **10G Ethernet Filter HW for hard wired applications**
  - **10G Ethernet Filter-POE for power over Ethernet applications**
- **DSP technology provides unmatched EMI filtering**
- **Military grade passive filtering techniques maintain clean and sharp signals**
- **Highest quality electrical components deliver long service life**
- **Rugged protective housing insure reliability in any environment**

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Filter Performance	
Shielding Effectiveness	100dB from 10kHz to 40GHz
Insertion Loss	100dB from 0.05kHz to 40GHz
Radiated and Conducted Emissions	Exceeds MIL-STD-461 CE102 Exceeds MIL-STD-461 RE102 Exceeds FCC Part 15 A, B Exceeds EN 55022 Class A, B
Network Performance	
Auto MDI/MDI-X	Automatically detects and configures MDI or MDI-X.
Auto Negotiation	Input and output automatically configure 10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps or 10Gbps
Hot Pluggable	Can be plugged in/out without affecting filter or other links.
Auto Link Restoration	Automatically re-establishes network link after a link loss.
Communication Standards	IEEE802.3i 10Base-T (Ethernet) IEEE802.3u 100Base-T (Fast Ethernet) IEEE802.3ab 1000Base-T (Gigabit Ethernet) IEEE802.3an 10GBase-T (10G Ethernet) IEEE802.3bz 2.5GBase-T/5GBase-T (2.5G/5G Ethernet)
Power Over Ethernet Standard (POE model only)	802.3bt Type 3, 4PPoE or PoE++
Maximum Power (POE model only)	600mA Per Pair 54VDC; 60 Watts 6 Power Class Levels
Safety and Regulatory	
Standards	UL 62368-1* CSA C22.2 No. 62368-1* EN 62368-1* IEC 62368-1:2020+A11:2020* RoHS 2011/65/EU* RoHS 2015/863* REACH SVHC * CA Prop 65* FCC 47 CFR Part 15.247*AEI* ICES-003:2020 Ed. 7* EN 55032:2015+A11* EN 55035:2017+A11* EN 61000-3-2:2014* EN 61000-3-3:2013+A1;A2* EN 6100-4-2,3,4,5,6,8,11* *Except POE and POE-HW models.

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Environmental	
Operating Temperature	0ºC - 40ºC (32ºF - 104ºF) Continuous
Humidity	5% - 90% (non condensing)
Construction	
Filter Housing	Aluminum w/Electroless Plated Nickel
Power Requirements	Standard and HW Models: +12VDC TYP / 2A MIN; Marked “LPS” or “Class 2” only. Center Positive POE Model: +24VDC TYP / 3.75A MIN; Marked “LPS” or “Class 2” only. Center Positive
Dimensions	Standard and HW Models: 6.76” x 3.00” x 1.30” 1" NPS Threaded Penetration: 1”, 3" or Custom Length POE Model: 7.1” x 4.6” x 2.3”
Connectors	RJ-45 8P8C Jack (x2) 2.1mm x 5.5mm DC Barrel Jack
Indicator LEDs	Power – Red When Power is Present Link Status (Input/Output) - 10Mbit - Red - 100Mbit - Green - 1Gbit – Dark Blue - 2.5Gbit - Yellow - 5Gbit - Purple - 10Gbit – Light Blue

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