

ACTIV™ AUDIO **Ethernet Electromagnetic Interference (EMI) Filter**



Unmatched Filtering Performance

The ACTIV™ AUDIO EMI Filter is the most advanced and effective EMI filter for streaming audio available on the market. Utilizing proprietary Digital Signal Processing (DSP) techniques, the ACTIV™ AUDIO filter faithfully reproduces streaming audio packets without undesirable or extraneous interference. The filter rejects unwanted signals from 50Hz and below all the way up to 40GHz at better than 100dB – that's a noise reduction of 99.99999999%! Military grade passive filtering technology further ensures that digital music packets traverse the filter in complete and

absolute isolation from each other and the outside world. Signal lines are balanced perfectly throughout the multilayered cards to avoid disturbing the fast rise times required by digital square wave signals. The result is a pristine digital output far surpassing the results of fiber-based solutions or any other EMI filter.

Superior Precision and Reliability

Each ACTIV™ AUDIO Filter is constructed with the highest grade electrical components, starting with a super accurate, ultra stable high speed crystal clock which drives the specially developed DSP circuitry and Ethernet chipset. To protect the digital signal integrity and sensitive circuitry of the filter, incoming power is also filtered, conditioned and protected against deviations from exact voltage and current levels. The circuit cards are then mounted in a sleek, protective housing machined from solid aluminum stock. The housing not only provides physical protection to the filter components, but is also an integral contributor to the filter's effectiveness. The unique structure of the housing effectively disrupts undesirable emissions from propagating through the filter while simultaneously providing low impedance pathways for interference to be directed to ground.

The ACTIV™ AUDIO EMI Filter
Unleash Pristine Audio.

Specifications

Filter Performance	Shielding Effectiveness	Not Applicable
	Insertion Loss	>100dB from 100Hz to 40GHz (typical)
	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)
Safety and Regulatory	File Number	E362686
	Standards	UL 62368-1 CAN/CSA C22.2 No. 62368-1 EN IEC 62368-1:2020+A11:2020 IEC 62368-1:2018 GB 4943.1-2022 AS/NZS 62368.1:2022 RoHS 2011/65/EU RoHS 2015/863 REACH SVHC CA Prop 65 FCC 47 CFR Part 15b ICES-003 Issue 7 EN 55032:2015+A11 EN 55035:2017+A11 EN 61000-3-2:2014 EN 61000-3-3:2013+A1;A2 ICES-Gen Issue 1 + A1:2021
Environmental	Operating Temperature	0°C - 40°C (32°F - 104°F) Continuous
	Humidity	5% - 90% (non-condensing)
Construction	Filter Housing	Aluminum w/Electroless Plated Nickel
	Power Requirements	+12VDC / 2A Minimum; Marked "LPS" or "Class 2" only. Center Positive
	Dimensions	5.77" x 3.00" x 0.93"
	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