

ACTIV-HDMI High-Definition Multimedia Interface Electromagnetic Interference (EMI) Filter



The ACTIV HDMI electromagnetic interference (EMI) Filter is the most advanced and effective EMI filter for HDMI available on the market. The filter is designed to pass audio, video, display data, control, power and signaling between an HDMI source and compatible device while blocking external interference. Utilizing proprietary Digital Signal Processing (DSP) techniques, the filter passes HDMI Ethernet and four balanced, differential signaling data pairs at a combined data rate of up to 48 Gbps in support of the HDMI v2.1 standard while providing greater than 80dB of insertion loss from 500MHz to beyond 18GHz. The filter is also backwards compatible with HDMI versions 2.0 and 1.4

Military grade passive filtering technology ensures that audio, video and data signals 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 filtering capabilities of any other EMI filters.

Each ACTIV HDMI Filter is constructed with the highest quality electrical components, starting with a super accurate, ultra stable high speed crystal clock which drives the specially developed DSP circuitry and HDMI chipset. To protect against unanticipated voltage and/or current surges, the filter incorporates ESD and transient voltage suppressors, inrush current limiters, and gas discharge tubes. ACTIV HDMI EMI Filters are mounted in a rugged 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 out of the filter.

Features:

- Proprietary DSP technology provides unmatched EMI filtering
- Military grade passive filtering techniques maintain clean and sharp signals
- Highest quality electrical components deliver long service life

**The ACTIV-HDMI EMI Filter
The critical choice when blocking EMI is paramount.**

Specifications

Filter Performance	Shielding Effectiveness	>80dB from 500MHz to 18GHz (Measured using a method based on IEEE 299-2006)
	Insertion Loss	>80dB from 500MHz to 18GHz (Measured using a method based on MIL-STD-220B)
	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
Electrical Performance	Data Line Impedance	100 Ω Typical
	Data Lines	4x Video Data/Clock 1x HDMI Ethernet
	Communication Standards	HDMI 1.4 HDMI 2.0 HDMI 2.1
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 TYP / 2A MIN; Marked "LPS" or "Class 2" only. Center Positive
	Dimensions	3.96" x 3.15" x 0.85" 1" NPS Threaded Penetration (1.32" \varnothing x 1", 3" or Custom Length)
	Connectors	2x HDMI Type A Receptacle (Female) 2.1mm x 5.5mm DC Barrel Jack
	Indicator LEDs	Power – Red When Power is Present

Drawing

