

JRE HDMI-2

Dual HDMI 1.4 (and higher) Filtered Interface

Two independent HDMI channels in one housing — patented phasing rejects wireless RF without touching your video.



Two complete HDMI filters in a single machined housing

AT A GLANCE

- **Two fully independent HDMI channels** in one housing — a second display or capture device costs one mounting footprint instead of two
- **Not a low-pass filter** — a patented signal-phasing topology (two US patents) discriminates balanced differential video from common-mode RF instead of attenuating both
- **HDMI 1.4 and higher compliant**, including HDMI Ethernet (HEC), ARC, CEC and HEAC, over standard Type-A connectors
- **80 dB** conducted attenuation per channel, 50 MHz to over 6 GHz; insertion loss under 5 dB on data lines
- **No inherent data-speed limit** — achievable rate is set by total cable attenuation, not by the filter
- **Fully passive** — no active silicon, no firmware, nothing that could be subverted in a data-side attack
- Two HDMI Type-A male-to-male jumpers included, one per channel · 100% made in USA

DESCRIPTION

The JRE HDMI-2 is a fully passive dual HDMI filtered interface built into a single machined-aluminum housing that gives exceptional RF shielding on every data and control line. The two channels are completely independent — each a full HDMI filter in its own right — and both are compliant with HDMI 1.4 and higher, including the Ethernet, ARC, CEC and HEAC channels.

It works on an entirely different principle from older HDMI bulkheads. The earlier approach was a shielded feedthrough with no real filtering, where isolation depended on the cable shield alone. Nor can you simply low-pass filter HDMI: as rates climbed, the video signal moved up into the same band

as the interfering RF, so a low-pass filter attenuates both. Our patented design exploits the fact that HDMI data travels as balanced differential pairs while interfering RF appears as common mode, rejecting the RF and passing the video clean.

Neither channel has a speed limit of its own; each looks electrically like about 2 metres of HDMI cable, and total attenuation of filter plus cables sets the achievable rate. For everyday HDMI that is a non-issue; for higher-rate versions and longer runs, use an active cable on the external side. Every specification here is measured with the filter installed in an enclosure.

RF PERFORMANCE

Conducted attenuation	80 dB
Frequency range	50 MHz – 6 GHz+
Insertion loss, data lines	< 5 dB
Isolation, in test system	80 dB
Per channel, both channels independent.	

LOW FREQUENCY LINES

DC resistance	0.1 Ω max
1 MHz	–20 dB
10 MHz – 6 GHz	–80 dB

ELECTRICAL & CONNECTOR

Channels	Two, independent
Compliance	HDMI 1.4 and higher
Channels carried	HEC, ARC, CEC, HEAC
Data line balanced impedance	90 Ω typ.
Power capability	HDMI std or 50 VDC @ 1 A
HDMI inside / outside	Type A female x2

DIMENSIONS & MOUNTING

Outside	3.2" H × 3.2" W × 0.8" D
Cables	80 × 80 × 20 mm
Mounting screws	Two Type A M-M incl.
Clearance hole	4-40, included
Drilling template included. Each channel presents roughly 2 m of equivalent cable.	0.1285" (#30 / 3.3 mm)

COMPATIBILITY

Works with any JRE RF shielded test enclosure or screen room. JRE's enclosure line provides superior RF isolation from 10 MHz to over 6 GHz, covering the full range of commercial, private and government communications systems. Only need one HDMI port? See the JRE HDMI-1. Cable length and active-cable guidance is in the USB-3 and USB-C Special Considerations white paper at jretest.com.