



# IPR-10G2-HDMI

The IPR-10G2-HDMI Mini-Converter is designed to bridge SMPTE ST 2110 networks to HDMI, with support up to UltraHD 50p or HD 60p.

**\$1675 US MSRP**

IPR-10G2-HDMI receives SMPTE ST 2110 audio and video over 10 GigE, and then de-encapsulates the data to output baseband HDMI video. Associated audio from the SMPTE ST 2110 stream is likewise extracted, synchronized, and embedded into the HDMI output. Simultaneously, analog stereo audio is available via the dual RCA outputs.

2x 10 GigE SFP+ cages are provided, allowing "hitless switching"\* redundancy protection (ST 2022-7) for critical distribution and monitoring applications.

The analog/tri-level reference input allows the baseband output of IPR-10G2-HDMI to be locked to the timing of the baseband environment at destination. IPR-10G2-HDMI includes a full-size HDMI 1.4b video output for seamless integration into existing baseband environments such as master control, trucks, edit suites, multi-viewer applications and HDMI displays.

\*Hitless switching via ST 2022-7 is supported up to 1080p 60 (UltraHD is not supported)

<https://www.aja.com/products/ipr-10g2-hdmi>

## Video Formats

- (UltraHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50
- (2K) 2048x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1920x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1920x1080i 50, 59.94
- (HD) 1280x720p 50, 59.94, 60
- (SD) 625i 50
- (SD) 525i 59.94

## Video Quality

- Up to 1080 60p, 4:2:2, 10-bit, YCbCr/RGB uncompressed
- Up to UltraHD 30p, 4:2:2, 8-bit, YCbCr uncompressed
- Up to UltraHD 50p, 4:2:0, 8-bit, YCbCr uncompressed
- Up to 2K 60p, 4:2:2, 8-bit, YCbCr uncompressed

## Discovery, Registration and Control

- NMOS discovery and control according to standards IS-04 v1.3 and IS-05 v1.1
- Ember+ control (no discovery, control only)
- AJA REST API control (discovery via SSDP or MDNS)
- LLDP (Link Layer Discovery Protocol)
- Supported over dedicated management Ethernet port and in-band over media ports

## Media Transport Interfaces

- SMPTE ST 2110 (-10, -20, -21, -30)
  - 2x SFP+ Cages - SFPs not included
- Recommended 10 GigE SFP+ modules:
  - Arista Networks SFP-10G-SR Compatible 10GBASE-SR
  - Fiberstore SFP-10GSR-85 10G SFP+ 850nm
  - Finisar FTLX1471D3BCL (for single mode 1310nm)
  - Mellanox MFM1T02A-SR 850nm 10G

**Note:** Maximum supported SFP+ power is 500 mW per SFP+ cage

## Video Input IP

- SMPTE ST 2110
  - Single channel video input up to UltraHD
  - SMPTE ST 2022-7 dual stream input for hitless switching\*
  - Rx support for Narrow/Wide, Gapped/Linear Modes

\*Hitless switching via ST 2022-7 is supported up to 1080p 60 (UltraHD is not supported)

## Audio Input IP

- SMPTE ST 2110
  - Up to 16-channels\* audio, 24-bit per channel, 48 kHz synchronous

- 1 ms or 125  $\mu$ s packet interval

\*Streams with up to 16-channels are received, but only the first 8 are output

## Video Output Digital

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- 1x HDMI Standard Type A connector
  - HDMI v1.4b 24/30-bits per pixel
  - Frame syncing to facility clock\*
  - Concealment of errors due to packet loss\*

\*Frame syncing and error concealment functionality supported up to 1080p 60 (UltraHD is not supported)

## Audio Output Digital

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- Up to 8-channel, HDMI embedded audio, 24-bit per channel, 48 kHz synchronous

## Audio Output Analog

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- 2x RCA analog audio
  - Levels at -10 dBu (nominal)
  - Can only select audio channels 1-8

## Reference

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- 1x BNC
  - Analog/tri-level reference input
  - Allows baseband output of IPR-10G2-HDMI to be locked to the facility baseband clock

\*Reference functionality support is up to 1080p 60 (UltraHD is not supported)

## IP Clock

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- PTP support compliant with PTP PTPv2, PTPv3 / IEEE 1588-2008
- SMPTE ST 2059-1 compliant

## User Interface

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- 1x RJ-45 for 10/100/1000 Base-T Ethernet
  - Web and REST clients supported for remote network setup and configuration
- 1x USB 2.0 Mini-B connector
  - AJA eMini-Setup supported for network setup and configuration via local desktop computer
- Web and REST configuration is also supported in-band over media ports

## Size (w x d x h)

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- 5.07" x 0.94" x 5.06" (128.8 x 23.9 x 128.4 mm)

## Weight

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- 0.6 lb (0.3 kg)

## Power

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- 5-20VDC Regulated, 13 Watts, universal power supply included

## Environment

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- Safe Operating Temperature: 0 to 40 C (32 to 104 F)
- Safe Storage Temperature (Power OFF): -40 to 60 C (-40 to 140 F)
- Operating Relative Humidity: 10-90% noncondensing
- Operating Altitude: <3,000 meters (<10,000 feet)