



IPR-10G2-SDI

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

IPR-10G2-SDI receives SMPTE ST 2110 audio and video over 10 GigE, and then de-encapsulates the data to output baseband SDI video. Associated audio from the SMPTE ST 2110 stream is likewise extracted, synchronized, and embedded into the SDI 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.

IPR-10G2-SDI includes dual 3G-SDI mirrored outputs with embedded 8-channel audio output and stereo audio output.

The analog/tri-level reference input allows the baseband output of IPR-10G2-SDI to be locked to the timing of the baseband environment at destination. Supports seamless integration into existing baseband environments such as master control, trucks or edit suites.

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

Video Formats

- (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

- 4:2:2, 10-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
 - SMPTE ST 2022-7 dual stream input for hitless switching
 - Rx support for Narrow/Wide, Gapped/Linear Modes

Audio Input IP

- SMPTE ST 2110
 - Up to 16-channels audio, 24-bit per channel, 48 kHz synchronous
 - 1 ms or 125 µs packet interval

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

Video Output Digital

- 2x 3G SDI BNC (single source, mirrored output)
 - Frame syncing to facility clock
 - Concealment of errors due to packet loss

Audio Output Digital

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

Audio Output Analog

- 2x RCA analog audio
 - Levels at -10 dBu (nominal)

Reference

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

IP Clock

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

User Interface

- 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)

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

Weight

- 0.6 lb (0.3 kg)

Power

- 5-20 VDC Regulated, 13 Watts, Power supply required (DWP-U-R1 included with purchase)

Environment

- 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)