



# IPT-10G2-SDI

IPT-10G2-SDI is designed to bridge 3G-SDI video sources into SMPTE ST 2110 networks.

The IPT-10G2-SDI receives baseband video plus up to 16 embedded audio channels over 3G-SDI, then encapsulates the data for output as SMPTE ST 2110 over 10 GigE. Associated audio from the video stream is extracted, synchronized, and embedded into the SMPTE ST 2110 stream. Alternatively stereo audio can be fed into the stream from the dual RCA inputs.

2x 10 GigE SFP+ cages are provided, allowing “hitless switching” (ST 2022-7) redundancy protection for critical contribution and transmission environments.

<https://www.aja.com/products/ipt-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

- 10-bit, 4:2:2, 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 Digital

- 1x 3G SDI BNC (single source, with loop through)
  - Up to 1080 60p, 4:2:2, 10-bits/pixel, YCbCr

## Audio Input Digital

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

## Audio Input Analog

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

## Video Output IP

- SMPTE ST 2110
  - Single video channel output
  - SMPTE ST 2022-7 dual stream output for hitless switching
  - Tx support for Narrow, Gapped Mode

## Audio Output IP

- SMPTE ST 2110
  - Up to 8-channels audio, 24-bit per channel, 48 kHz synchronous
  - 1 ms or 125 µs packet interval

## Reference

- 1x BNC
  - Reference Out connector generates an analog/tri-level reference output synchronized to the PTP clock
  - Used to lock baseband sources/devices to PTP, so video arriving at the IP transmitter is properly timed

## IP Clock

- PTP support compliant with PTP PTPv2 / 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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- 5-20 VDC Regulated, 13 Watts, Power supply required (DWP-U-R1 included with purchase)

## 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)