



# Hi5-4K Plus

Pristine 3G-SDI to HDMI 2.0 Conversion



## Overview

AJA's Hi5-4K-Plus preserves your vision with pristine image fidelity and HFR support up to 60p for 4K/UltraHD SDI to HDMI 2.0 conversion needs. The Hi5-4K-Plus can also generate HDR metadata in accordance with HDMI v2.0a/CTA-861.3 and includes HLG support.

Hi5-4K-Plus provides a simple monitoring connection from professional 4K devices using Quad 3G-SDI, Quad 1.5G-SDI, or Dual 3G-SDI outputs to displays with HDMI 2.0 inputs, for cost-effective monitoring for 4:4:4/4:2:2 60p professional workflows.

## Features

- Convert Quad-3G-SDI to HDMI 2.0b at up to 4K 60p
- Support for 4:4:4/4:2:2/4:2:0 HDMI 2.0b output
- HDR signaling metadata pass-through and optional override
- HDR support for HDR10 and HLG
- Embedded audio support 8-channel 24-bit
- Embedded audio pass-through of AC-3 (Dolby Digital) and E-AC-3 (Dolby Digital Plus) compressed audio, including DD+ Atmos (aka DD+ JOC)

- Configure via USB port and supplied Mini-Config software
- Uses 5-20VDC power ([DWP-U-R1 universal power supply included](#))
- Five year warranty

## Connectivity

The latest generation of affordable 4K monitors utilize an HDMI 2.0 connection, which allows a full 4K signal to be passed over a single cable. Typical professional 4K workflows use four SDI cables to carry the full resolution image, making it difficult to incorporate these newer monitors. Hi5-4K-Plus is an easy-to-use converter that bridges the gap between these two worlds for seamless integration.



## HDR

HDR or High Dynamic Range, provides the ability to display a wider and richer range of colors, much brighter whites, and much deeper, darker blacks than standard signals allow. This gives your imagery a more 'dynamic' look and allows for natural true to life colors to be communicated to your audience.



Hi5-4K-Plus provides this support for your 4K/UltraHD/HD HDR pipelines to HDMI compatible displays by generating HDR metadata in accordance with HDMI v2.0a/CTA-861.3. Hi5-4K-Plus also provides support for Hybrid Log-Gamma (HLG) HDR displays over HDMI.

## 4K and UltraHD

Typical 4K signals use a resolution of 4096x2160 pixels while UltraHD signals measure 3840x2160. This difference can prevent some monitors from being used either in full 4K workflows or in UltraHD workflows. Hi5-4K-Plus can compensate for these resolution differences, allowing UltraHD monitors to be used in 4K productions and vice versa.

Hi5-4K-Plus also supports High Frame Rate (HFR) inputs. 4K/UltraHD signals at 50 or 60 fps can be fed into Hi5-4K-Plus and output at up to 60p for viewing with appropriate HDMI 2.0 capable displays.



## Audio

Up to 8-channels of embedded audio in the incoming SDI signal are carried through



seamlessly into the HDMI output, ensuring your audio is always in sync and can be easily played back on the connected monitor.

## HD Support

Not every job is a 4K job. When you're not working in 4K, Hi5-4K-Plus can still be a useful tool for converting HD-SDI to HDMI. A single HD-SDI signal coming into the Hi5-4K-Plus will be sent out as an HD resolution HDMI signal, much like AJA's Hi5-3G Mini-Converter.

# Tech Specs

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## Video Formats

- (SD) 720 x 480i
- (4K) 4096 x 2160p
- (UltraHD) 3840 x 2160p
- (2K) 2048 x 1080p
- (HD) 1920 x 1080p
- (HD) 1920 x 1080i
- (HD) 1280 x 720p
- (SD) 720 x 576i

**Note:** Raster and Frame Rate Dependent, please see Hi5-4K-Plus Video Formats in Documents and Manual

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## Video Input Digital

- 4x 3G-SDI BNC, SMPTE-259/292/424
- YCbCr 4:2:2/4:4:4
- RGB 4:4:4, SMPTE or Full level
- 8 or 10-bit
- Two Sample Interleave (2SI) or Square Division (Quadrant) pixel mapping
- 4x 3 Gb SDI (Level A or B Dual Link)
  - (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (4K) 4096 x 2160PsF\* 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (Ultra HD) 3840 x 2160PsF\* 23.98, 24, 25, 29.97, 30
- 4x 1.5 Gb SDI
  - (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30
  - (4K) 4096 x 2160PsF 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30
  - (UltraHD) 3840 x 2160PsF 23.98, 24, 25, 29.97, 30
- 2x 3 Gb SDI (Level B Dual Stream)
  - (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30

- (4K) 4096 x 2160PsF 23.98, 24, 25, 29.97, 30
- (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30
- (UltraHD) 3840 x 2160PsF 23.98, 24, 25, 29.97, 30
- 1x 3 Gb SDI (Level A or B Dual Link)
  - (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (2K) 2048 x 1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
  - (HD) 1920 x 1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920 x 1080i 50, 59.94, 60
  - (HD) 1280 x 720p\*\* 50, 59.94, 60
- 2x 1.5 Gb SDI (Dual Link HD-SDI), SMPTE-372
  - (HD) 1920 x 1080p 50, 59.94, 60
- 1x 1.5 Gb SDI
  - (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30
  - (2K) 2048 x 1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920 x 1080p 23.98, 24, 25, 29.97, 30
  - (HD) 1920 x 1080PsF 23.98, 24, 25, 29.97, 30
  - (HD) 1920 x 1080i 50, 59.94, 60
  - (HD) 1280 x 720p 50, 59.94, 60
- 1x 270 Mb SDI
  - (SD) 625i 50
  - (SD) 525i 59.94

\*PsF is Level B Dual Link

\*\*1280 x 720p is Level A Only

## Video Output Digital

- 1x HDMI Type A connector\*, HDMI v2.0b
- HDR infoframe generation with pass-through or override for Colorimetry and Transfer Characteristic
- YCbCr 4:2:2/4:4:4/4:4:2:0
- RGB 4:4:4, SMPTE or Full level
- 8 or 10-bit (HFR 4K/UltraHD 4:4:4 limited to 8-bit)
- (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1920 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1920 x 1080i 50, 59.94, 60
- (HD) 1280 x 720p 50, 59.94, 60
- (SD) 720 x 576i 50
- (SD) 720 x 480i 59.94

\*If a connected monitor doesn't support HDMI protocol the unit automatically switches to DVI protocol (which does not pass audio)

## Audio Pass-Through Formats

- PCM
  - Dolby Digital (AC-3)
  - Dolby Digital Plus (E-AC-3), including Atmos Immersive Sound (JOC)
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## Audio Input Digital

- SDI embedded audio, 24-bit (SD limited to 20-bit), 16-channel
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## Audio Output Digital

- HDMI embedded audio, 24-bit, 8-channel
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## User Interface

- USB port used with supplied cable and Mini-Config software application to configure the device via Mac or Windows.
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## Size (w x d x h)

- 5.76" x 4.02" x 0.90" (146.31 x 102.11 x 22.86 mm)
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## Weight

- 0.6 lb (0.3 kg)
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## Power

- 5-20VDC regulated, 12 watts, power supply required, included with purchase
  - AC Adapter: 100-240VAC, 50/60 Hz, universal input
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## 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)

**Note:** Hi5-4K-Plus uses approximately 12.0 watts of power and convection cooling. It will be very warm to the touch, which is normal. When installing the unit, mount in a location where it has access to air for proper cooling. Do not stack the Hi5-4K-Plus with other Mini-Converters.