CONVERT

Converters for Desktop Product Line Catalog

April 2011

Because it matters.

AJA® VIDEO SYSTEMS

Power Supplies for D- and H-Series Converters

Specifications

- 100-240v, 50/60Hz Universal input
- 5 volt regulated output
- 10 watt capacity
- Circular, latching output connector with gold-plated pins

DWP

A robust design, the DWP is a miniature high quality power supply for all of AJA's stand-alone products. Custom manufactured for AJA, the DWP is so small it does not cover the adjacent socket in power strips. With a 2x power over-rating and a molded, twist-lock circular connector with gold-plated pins, the DWP meets the high reliability requirements of the professional video industry.

Specifications

- 100-240v, 50/60Hz Universal input
- 5 volt regulated output

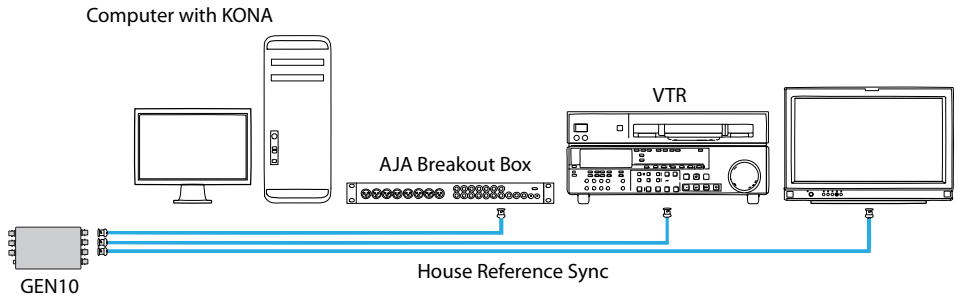
DWP-U

The DWP-U is an in-line universal input version which can accept a power cord anywhere in the world.

GEN10 HD/SD Sync Generator

The GEN10 is a cost effective and flexible SD/HD/AES sync generator. The GEN10 features 7 outputs including 2 groups of independently controlled SD/HD sync outputs and 1 AES-11 output. The SD outputs can be switched between Color Black or Color Bars. HD tri-level sync can be switched between 19 different HD formats including all that are in use today. The AES-11 output can be switched between SILENCE and TONE. All outputs are in sync with each-other and are sourced from an accurate master time base.

Example



Using genlock helps properly synchronize various pieces of video equipment so that issues with sync, timing and phase do not occur. The GEN10 is an ideal way to synchronize a variety of post-production items since it has multiple outputs and these outputs can be configured for either HD or SD formats.

In this example, reference from the GEN10 is being routed to a capture card breakout box, a VTR and a video monitor in order to genlock all of the items.

Features

- HD Tri-level sync generation
- SD Color Black or Color Bars
- Two groups of independently switchable outputs allows simultaneous HD and SD sync generation
- AES-11 output switchable between silence and tone
- Multiple outputs can synchronize entire systems without requiring a Sync DA
- 5-18VDC Power
- External Dip Switch Configuration
- 5 Year Warranty

Specifications

HD Sync::
- Tri-level

SD Sync:
- Color Black • 75% Color Bars

AES:
- AES-11, 48KHz, Silent or 1KHz Tone (-20dBFS for NTSC, -18dBFS for PAL)

Accuracy:
- 3 ppm

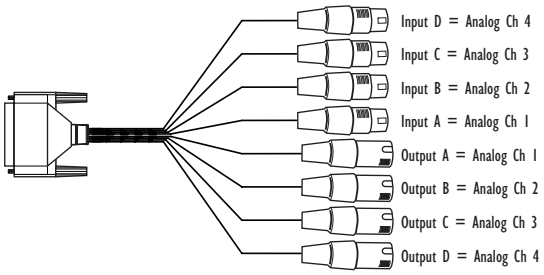
Formats:
- 525i, 625i
  720p23.98/24/25/29.97/30/60
  1080i50/59.94/60
  1080psF23.98/24/25/29.97/30
  1080p23.98/24/25/29.97/30

User Controls:
- External Dipswitch)

Size:
- 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

Power:
- +5-18VDC, 2 watts
  Requires Power Supply

HD10AMA HD/SD-SDI 4 Channel Analog Audio Embedder/Disembedder

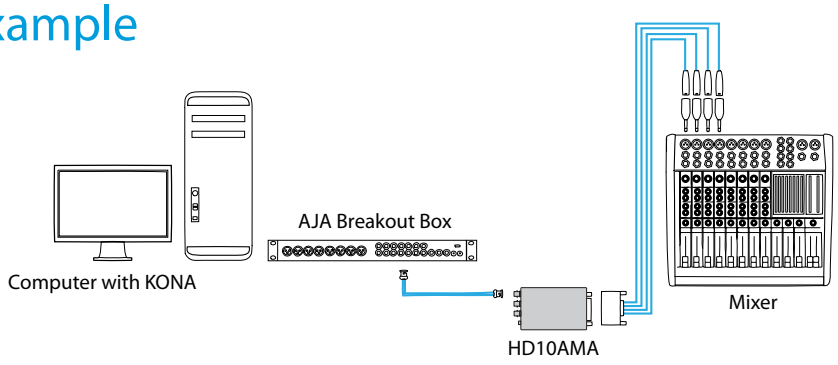


The HD10AMA is a dual rate 4 channel analog audio Embedder/Disembedder. The Disembedder is always functional providing 4 outputs. The Embedder is user selectable, on a channel pair basis, to either "pass" input audio or embed input audio from the breakout cable. Analog audio levels are selectable. The HD10AMA automatically detects and configures to the input video standard.

Features

- Dual rate HD-SDI/SDI Embedder/ Disembedder
- 4 Channel Balanced Analog Audio I/O
- Supplied XLR breakout cable
- HD-SDI/SDI input, 2 HD-SDI/SDI outputs
- Dipswitch configuration
- 5-18VDC Power
- 5 Year Warranty

Example



In some cases, a source device may only provide embedded digital audio, but analog audio monitoring is desired. The HD10AMA can be employed to disembed digital audio and provide analog audio outputs.

In this example, embedded digital audio is being sent from a capture card breakout box to the HD10AMA and then routed via the HD10AMA breakout cable to the analog mixer for monitoring. The HD10AMA could also be used to route embedded audio to an analog VTR or audio recorder.

Note: For connections from the HD10AMA breakout cable to a VTR, no adapters are required. For connection to most anlaog mixers, XLR to 1/4" adapters are required. XLR inputs on most analog mixers are designed for mic level input, not line level input.

Specifications

Formats:
- HD SMPTE 292/296M • SD SMPTE 259M • (Automatic Configuration)

Video Input:
- **HD/SD-SDI BNC**

Video Outputs:
- Follows input, 2 x BNC

Audio I/O:
- 4 x Balanced Analog Audio • XLR
  - Outputs: 4 x Balanced Analog Audio
  - XLR • Audio Levels (Full Scale Digital): +24dBu, +18dBu, +12dBu, +6dBu
  - Audio Converters: 24 bit

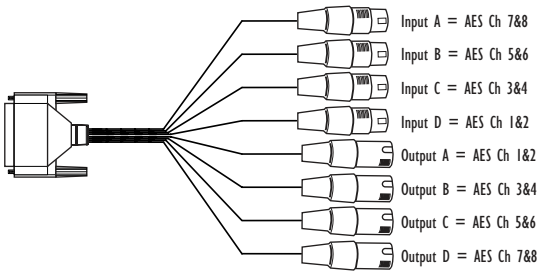
Embedded Audio:
- SMPTE 272M/299M, 24 bit, 48KHz synchronous

User Controls:
- External Dipswitch • Embedder on/off • Ch pairs 1/2 - 3/4 • Input group select 1-4 • Output Group Select 1-4 • Audio Level: Pro/Consumer

Size:
- 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

Power:
- +5-18VDC • 5 watts • Requires Power Supply

HD10AM HD/SD-SDI 8 Channel AES Embedder/Disembedder

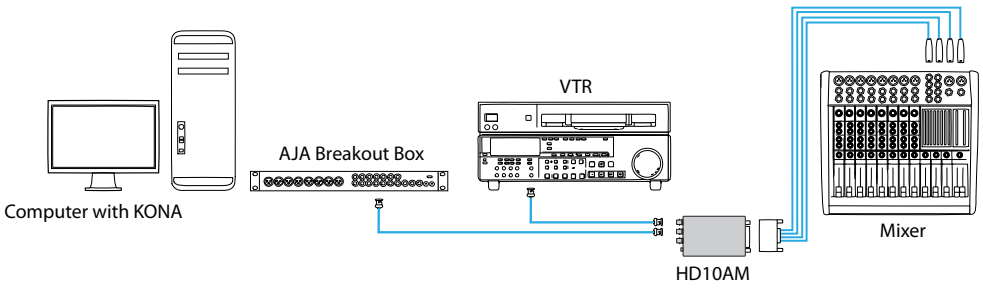


The HD10AM is a dual rate 8 channel AES audio Embedder/Disembedder. The Disembedder is always functional providing 4 AES outputs. The Embedder is user selectable, on a channel pair basis, to either "pass" SDI input audio or embed input AES audio from the breakout cable. AES inputs are sample rate converted to a 48KHz rate synchronous to the video input. The HD10AM automatically detects and configures to the input video standard.

Features

- Dual rate HD-SDI/SDI Embedder/ Disembedder
- 8 Channel AES I/O
- Supplied breakout cable for balanced AES - XLR connectors
- HD-SDI/SDI input, 2 HD-SDI/SDI outputs
- Dipswitch configuration
- 5-18VDC Power
- 5 Year Warranty

Example



A digital mixer or some other piece of digital audio equipment might only output AES/EBU digital audio via XLR while a facility might have only SDI cable runs throughout. The HD10AM can embed (or disembed) AES digital audio into an SDI signal. In this example, AES audio from a digital mixer is being routed into the HD10AM and combined with the SDI video output from a VTR. The SDI signal with the audio embedded by the HD10AM is then routed to a capture card breakout box.

Specifications

Formats:
- HD SMPTE 292/296M • SD SMPTE 259M • (Automatic Configuration)

Video Inputs:
- HD/SD-SDI BNC

Video Outputs:
- follows input, 2 x BNC

Audio Inputs:
- 4 x AES 110 ohm XLR

Audio Outputs:
- 4 x AES 110 ohm XLR

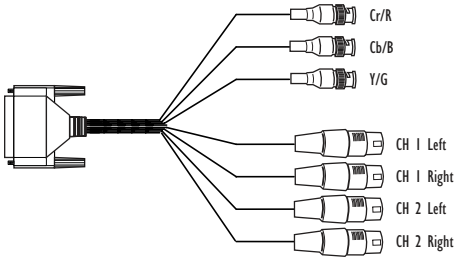
AES audio:
- SMPTE 272M/299M, 24 bit, 48KHz synchronous

User Controls: :
- External Dipswitch • Embedder on/off, Ch pairs 1/2 - 7/8 • Input group select, 1/2, 3/4 • Output Group Select, 1/2, 3/4 • SRC Bypass

Size:
- 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

Power:
- +5-18VDC, 5 watts • Requires Power Supply

HD10AVA HD/SD Analog Composite or Component Video and 4 Ch Analog Audio to HD/SD-SDI w/Embedded Audio

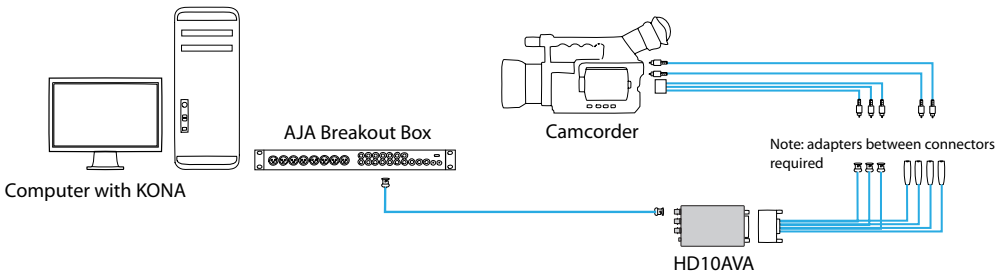


The HD10AVA is a miniature, high-quality, audio/video, HD/SD A/D converter. The HD10AVA automatically detects the video input format and embeds the audio inputs in the SDI/HD-SDI outputs. The HD10AVA is useful for adding an HD/SD-SDI audio/video output to tape decks or any professional video equipment with analog outputs. The HD10AVA is especially useful for adding HD-SDI outputs to most HDV cameras or decks by using the component outputs of such devices. The HD10AVA uses a breakout cable for audio/video inputs and provides 3 HD/SD-SDI on BNCs. NOTE: The HD10AVA does not up or down convert between HD and SD.

Features

- High-Quality SD/HD Audio/Video A/D Converter
- SD Component, Composite or Y/C Video Input
- HD Analog Component Video Input
- 4 Channel Balanced Analog Audio Input
- 3 HD/SD-SDI w/embedded Audio Outputs
- 12 Bit Video, 24 Bit Audio A/Ds
- Supplied BNC/XLR breakout cable
- Automatic Multi-Standard
- External Dip Switch Configuration
- 5-18V Power
- 5 Year Warranty

Example



Some SD and HD sources may only provide analog audio and video outputs. However, a SDI signal may be needed for connection to a VTR or capture card with digital input. The HD10AVA acts as an analog to digital converter for both audio and video sources and produces a SDI output.

In this example, analog audio and video is output from a prosumer HD camcorder and input to the HD10AVA. The HD10AVA produces an SDI output with embedded audio that is then output to a capture card breakout box.

Note: For connections to prosumer devices, the HD10AVA provides a dipswitch selection between consumer audio levels and professional audio levels. If the HD10AVA were connected to an analog VTR, professional audio level would be selected via a dipswitch setting on the converter.

Specifications

Formats:
- 525i/625i, 1080i 50/59.94/60 Hz
  1080psf 23.98/24/25 Hz
  1035i 50/59.94/60 Hz
  720p 50/59.94/60 Hz

Video Inputs:
- HD component YPbPr, (SMPTE-274), BNC • SD component/composite/YC (S Video), BNC

Audio Inputs:
- 4 Channel Balanced, XLR

Outputs:
- HD/SD-SDI, SMPTE-259/292/296
  • 3 x BNC

Video A/D:
- 12 bits

Audio A/D's:
- 24 Bits, 48Khz

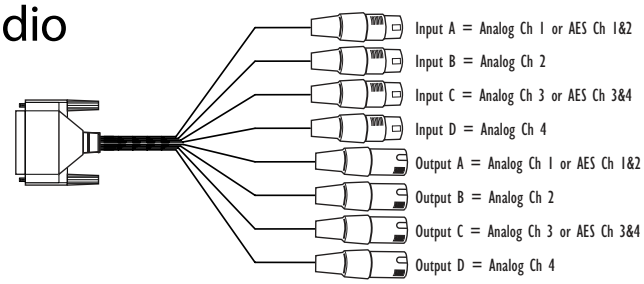
Audio levels:
- +24, +18, +15, +12 dBu • Full Scale Digital

User Controls:
- External Dipswitch • Component/ Composite (SD) • Composite/YC (SD)
  • Pedestal Present (on/off) (SD)
  • Audio Input Level • Embed Audio on/off

Size:
- 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

Power:
- +5-18VDC, 5 watts • Requires Power Supply

ADA4 4-Channel Bi-directional Audio A/D and D/A Converter

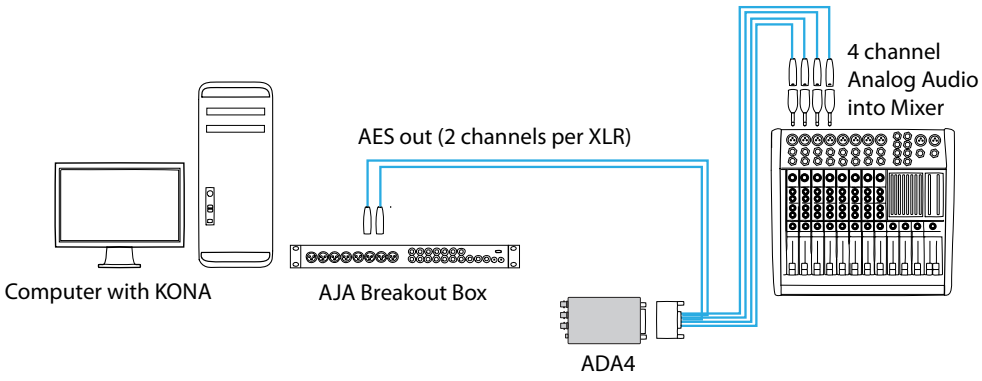


The ADA4 is a 4 channel bi-directional converter which can be configured as a 4 channel A/D, a 4 channel D/A, 2 channel A/D and 2 channel D/A, or an AES sychronizer. The ADA4 can accept a AES11, wordclock, or video sync/ color black reference input for synchronization. Reference input and synchronization is automatic. Audio levels are configurable via dipswitch control.

Features

- 4 Simultaneous A/D and D/A, or AES Synchronizer
- Full-time AES11 low jitter reference output
- Up to 4 channels of balanced analog to AES/EBU audio
- Up to 4 channels of AES/EBU to balanced analog audio
- Supplied XLR breakout cable
- AES11/Wordclock/Tri-level Sync/ Color Black Reference Loop
- Adjustable Audio Levels
- Sample Rate Conversion Between 96KHz and 48KHz
- Dipswitch configuration
- 5-18VDC Power
- 5 Year Warranty

Example



The ADA4 is a useful bi-directional audio converter. As an example, the ADA4 can be used to convert the digital AES/EBU audio output from an AJA KONA or XENA to balanced analog audio that can then be routed to an analog mixer or VTR. Conversely, the ADA4 can be employed to convert analog audio from a VTR or mixer to digital AES/EBU.

Specifications

Analog Audio I/O:
- Balanced, XLR • one channel per XLR connector

AES Audio I/O:
- Balanced 110 ohm, XLR , two channels per XLR connector

Analog Audio Levels:
- +24dBu (SMPTE RP155) • +18dBu (EBU R68) • +15dBu • +12dBu (consumer +10dBv)

Audio Converters:
- 24 bit, 48/96 KHz

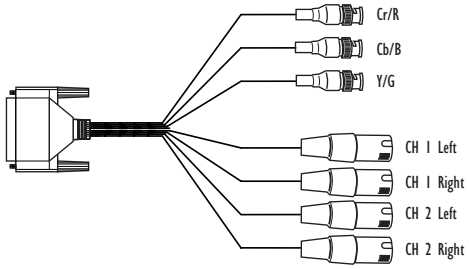
User Controls:
- External Dipswitch • Channel 1/2: A/D, D/A • Channel 3/4: A/D, D/A • Audio Level: Pro/Consumer • Audio Level: High/Low

Reference Loop:
- 75 Ohm (unterminated) • HD/SD Sync • AES-11, or Wordclock (48/96 KHz)

Size:
- 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

Power:
- +5-18VDC, 3 watts • Requires Power Supply

HD10CEA HD/SD-SDI to Analog Audio/Video

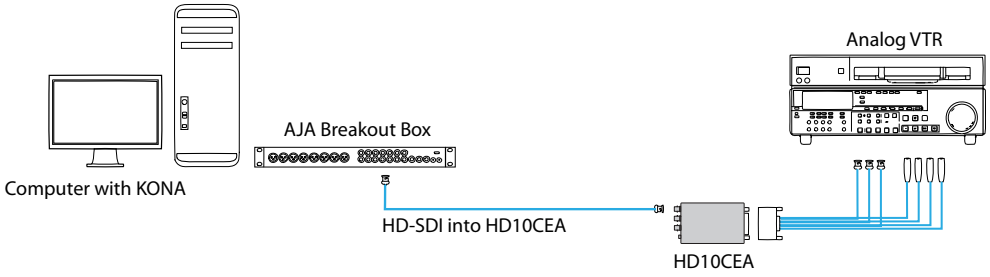


The HD10CEA converts HD/SD-SDI video with embedded audio to analog video and 4 channel balanced analog audio. SD video outputs can be configured as YPbPr (Betacam or SMPTE/EBU-N10), RGB, composite or YC (S-Video). HD video outputs can be configured as YPbPr or RGB. The analog audio outputs can be wired in a balanced or unbalanced configuration. The 4 audio channels can be selected from group 1-4. Audio and video output connections are available on a 25 pin "D" subminiature connector (breakout cable supplied). All video/audio configuration is done by external dipswitch selection. This versatile, low-cost, miniature monitoring solution also outputs two loop-thru HD/SD-SDI outputs. Note: The HD10CEA does not up or down convert between HD and SD.

Features

- Digital to Analog Audio and Video Converter
- SDI/HD-SDI with Embedded Audio Input
- SD Component or Composite Video Outputs (SD Input)
- HD Component Video Outputs (HD Input)
- 4 Channel Balanced Audio Output
- 2 Equalized, Loop-Thru SD/HD-SDI Outputs
- Selectable Audio Channel Pair/Group
- Supplied BNC/XLR Breakout Cable
- 5 Year Warranty

Example



When connecting to older VTRs or analog monitors, the HD10CEA can be used to take a high-quality HD-SDI out of a KONA or XENA and convert the embedded audio to balanced or unbalanced analog audio and component video (YPbPr or RGB) for the devices.

Note: For connections to prosumer devices, the HD10CEA provides a dipswitch selection between consumer audio levels and professional audio levels.

Specifications

Inputs:
- SDI/HD-SDI w/Embedded Audio 1x BNC

Outputs::
SD Video: YPbPr - SMPTE • EBU-N10 • Betacam • RGB • NTSC • PAL • YC (S-Video) • **HD Video:** YPbPr • **RGB**
Audio: 4 Channel Balanced/Unbalanced • Video/Audio Outputs on 25 Pin D Connector • 2 SDI/HD-SDI Equalized Loop-Thru • 2x BNC

User Controls:
- External Dipswitch • Video Format • Pedestal • H/V Blanking • Audio Group 1 - 4 • Audio Level (adjustable via switch selection): +24, +18, +15, +12 dBu • Full Scale Digital

Size:
- 5.8" x 3.1" x 1" (147 x 79 x 25mm)

Power:
- +5-18VDC, 4 watts • Requires Power Supply

HDP2 HD-SDI/SDI to DVI-D and Audio Converter

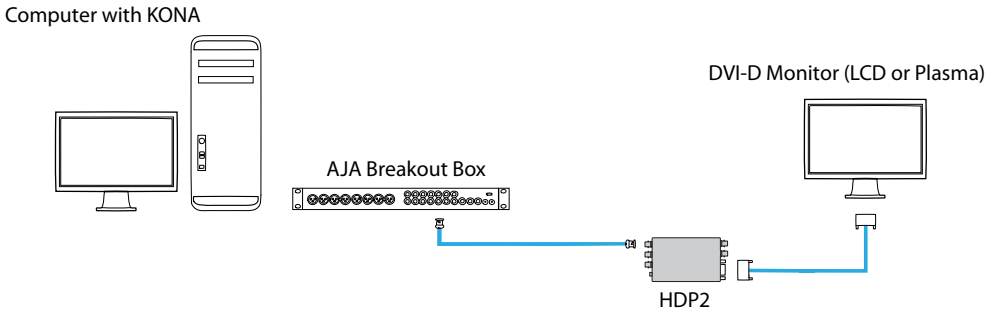
Replaces Model HDP

The HDP2 is a miniature HD-SDI/SDI to DVI-D converter for digital display devices, such as LCD, DLP, and Plasma monitors or projectors. Using a very high quality scaling engine and de-interlacer, the HDP2 will automatically size 4:3 or 16:9 inputs to many DVI-D monitors. For appropriate monitor configurations, scaling is automatically 1 to 1—for example, displaying 1920x1080 video on a WUXGA (1920x1200) monitor. The HDP2 will also automatically adapt the input frame rate for monitor compatibility. In addition, the HDP2 provides 2 channel audio monitoring and a looping output of the SDI input.

The HDP2 is designed for general monitoring, perfect for use in applications such as: General post-production reference monitoring, Client monitoring, Presentation, Projection, Corporate displays, Kiosk applications ...and much more.

The HDP2 also supports HDMI v1.3a Deep Color (with a DVI to HDMI cable). In the HDMI mode, Deep Color is supported at 30 bits per pixel with 8 channel audio. USB connectivity allows for easy PC/Mac setup and field upgrades.

Example



Many affordable monitors and projectors offer a DVI-D connector. However, most professional broadcast equipment does not come equipped with a DVI-D connector. The AJA HDP2 can convert HD/SD-SDI signals to DVI-D to provide video monitoring on a variety of DVI-D equipped displays and projectors. Note: Video displays with DVI-D are often considered acceptable for general viewing, but not necessarily suitable for color correction purposes.

In this example, an SDI signal is being sent out of a capture card breakout box to the AJA HDP2. The HDP2 is then connected to the monitor via DVI-D cable.

Features

- HD-SDI/SDI to DVI-D
- HDMI 1.3a support (via DVI-D connector), including:
  - Deep Color 30-bit video (24-bit also supported)
  - 2 or 8 channels of embedded audio
- Automatically adapts to popular LCD/DLP/Plasma monitors (and projectors) up to 1920x1200 and 1080p
- High quality scaling engine for proper display of 4:3 or 16:9 content—even better quality than original HDP
- 1 to 1 scaling for appropriate monitor configurations
- 2 channel RCA analog audio output (user-assignable channels)
- HD-SDI/SDI looping output
- Setup via PC/Mac using USB port and supplied USB cable (USB configuration software application supplied on CD)
- 5 year warranty

Specifications

Inputs:
- 525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60, 1080p 23.98/24/25/29.9/30 1080psF 23.98/24/25, YCbCr 10-bit

Video Inputs:
- HD, and SD-SDI (auto-selected), SMPTE-259/274/292/296, BNC connector

Video Outputs:
- DVI v1.0 / HDMI v1.3a, 4:2:2 YCbCr, 4:4:4 YCbCr/RGB 24/30-bit, DVI-D standard male connector

Audio Outputs:
- RCA-style analog outputs at -10dBV (nominal), 2 channels embedded audio (HDMI mode only), 24 bit, 2 or 8 channels, User assignable channels

Power:
- +5-18 VDC regulated, 5 watts

Size:
- 5.8" x 3.1" x 1 (147mm x 79mm x 25mm)

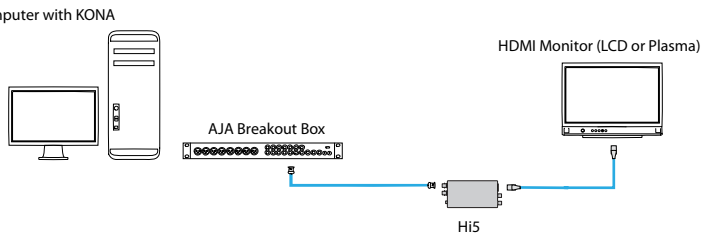
Hi5 HD/SD-SDI to HDMI Video and Audio Converter

The Hi5 converts HD/SD-SDI to HDMI for driving HDMI monitors. Embedded HD/SD-SDI audio is supported in the HDMI output allowing a convenient single cable audio/video connection. The Hi5 provides 2 Channel RCA style audio outputs for separate audio monitoring if needed. The Hi5 also provides a looping HD/SD-SDI output useful for connecting additional equipment, or for "daisy chaining" multiple monitors to the same HD/SD-SDI source.

Features

- HD/SD-SDI to HDMI
- Full HDMI support including embedded audio
- Additional 2 Channel RCA jack audio output
- Equalized looping HD/SD-SDI output
- No configuration necessary
- 1m HDMI cable included
- 5 year warranty

Example



Many HD monitors on the market now offer HDMI connectors to go along with their large sizes and affordable prices. Though some HDV devices on the market have HDMI outputs, most broadcast devices do not. The AJA Hi5 converts SDI video signals to HDMI so that a wide range of monitors equipped with HDMI connectors can be used for general viewing.

In this example, a SDI signal is being sent out of a capture card breakout box to the AJA Hi5 which is then connected to the monitor via an HDMI cable.

Specifications

Inputs:
- SMPTE-259/292/296 SDI/HD-SDI

Input Formats:
- 525i • 625i • 720p 50/59.94/60 • 1080i 50/59.94/60 • 1080p23.98 • 1080p24 • 1080p25 • 1080p29.97 • 1080p30

Outputs:
- HDMI with embedded audio • Audio (2 channel RCA-style outputs) • 1 equalized looping HD/SD-SDI output

Power:
- +5VDC, 3 watts, Requires Power Supply

Size:
- 4.6" x 2.4" x 1" (117 x 61 x 25mm)

Hi5-3G 3G/Dual-link/HD/SD-SDI To HDMI 1.3a Video and Audio Converter

The Hi5-3G converts 3G-SDI, dual or single link HD-SDI, or SD-SDI to HDMI v1.3a for driving HDMI monitors. HDMI v1.3a capability at 30 bits per pixel allows full support of the latest 10 bit monitors. Audio is supported in the HDMI output allowing a convenient single cable audio/video connection. The Hi5-3G provides 2 Channel RCA style audio outputs for separate audio monitoring if needed. USB connectivity allows for easy PC/Mac setup and field upgrades.

Features

- 3G/HD/SD-SDI to HDMI
- SMPTE425M-AB input
- Full HDMI 1.3a support including:
  - Deep Color 30- and 36-bit video per pixel (24-bit also supported)
  - 2 or 8 channels of embedded audio
- Additional 2 channel RCA analog audio output (User assignable channels)
- Setup via PC/Mac using USB port and supplied USB cable (USB configuration software application supplied on CD)
- HDMI cable supplied
- Uses 5V power (supply sold separately)
- 5 year warranty

Specifications

Input Formats:
- 525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60, 1080p 23.98/24/25/29.9/30/50/59.94/60 1080psF 23.98/24/25/29.97/30 YCbCr/RGB/XYZ 10/12-bit

Video Inputs:
- 3G, HD, and SD-SDI (auto-selected), SMPTE-259/274/292/296/372/424/425, 2x BNC

Video output:
- HDMI v1.3a, 30/36 bits per pixel, RGB or YUV, 2.25Gbs, SD, HD, 1080p50/60, HDMI Standard Type A connector

Audio Outputs:
- HDMI embedded audio, 24 bit, 2 or 8 channels RCA-style analog outputs at -10dBV (nominal), User assignable channels

Size:
- 5.8" x 3.1" x 1 (147mm x 79mm x 25mm)

Power:
- +5 VDC regulated, 5 watts (AJA power supply model DWP or DWP-U recommended)

NOTE:
The Hi5-3G does not encode the HDMI output with HDCP encryption. By definition, SDI/HD-SDI inputs to the Hi5-3G are unencrypted.

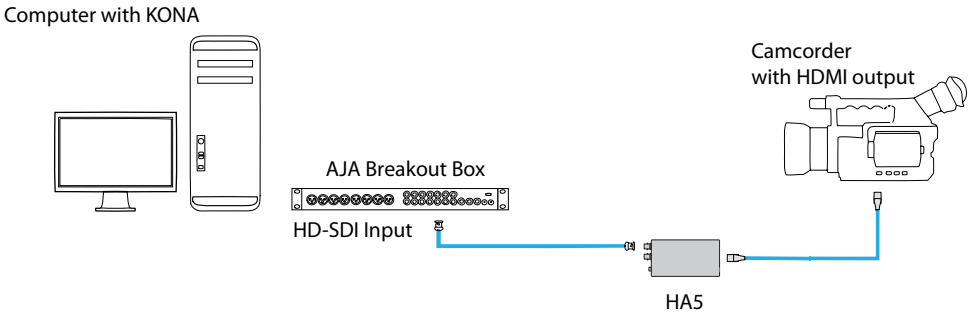
HA5 HDMI to HD/SD-SDI Video and Audio Converter

The HA5 converts HDMI to HD-SDI or SD-SDI in accordance with the input signal. Two channels of HDMI audio are embedded into the HD/SD-SDI output allowing a convenient single cable audio/video connection. The HA5 provides two HD/SD-SDI outputs and supports long HDMI cables on the input. The HA5 is useful for connecting HDMI cameras to HD/SD-SDI equipment.

Features

- HDMI to HD/SD-SDI
- Full HDMI support including embedded audio
- Equalized HDMI input supports long HDMI cables up to 30m, 24 gauge
- PLL clock filtering for low jitter HD/SD-SDI outputs
- Lock LED shows type of input source, SD (green) or HD (red)
- 1m HDMI cable included
- 5 year warranty

Example



The HA5 is ideal for taking the HDMI output from camcorders or decks having an HDMI output and ingesting into a KONA or XENA-equipped editing system via HD-SDI.

Specifications

Input:
- HDMI with embedded audio

Input Formats:
- 525i • 625i • 720p 50/59.94/60 • 1080i 50/59.94/60 • 1080p23.98 • 1080p24, 1080p25 • 1080p29.97 • 1080p30

Outputs:
- SMPTE-259/292/296 HD/SD-SDI
  - 2 x BNC

Power:
- +5VDC Regulated • 4 watts
  - Requires Power Supply

Size:
- 4.6" x 2.4" x 1" (117 x 61 x 25mm)

Note: HDCP content not supported

Incredible 5 Year Warranty

AJA Video warrants that all Converter products will be free from defects in materials and workmanship for a period of five years from the date of purchase.

About AJA Video Systems, Inc.

Since 1993, AJA Video has been a leading manufacturer of video interface and conversion solutions, bringing high-quality, cost-effective digital video products to the professional broadcast and post-production markets. AJA offers the Io and KONA desktop video products, Ki Pro family of recorders, miniature stand-alone converters, and a complete line of rack mount interface and conversion cards and frames. With a headquarters and design center located in Grass Valley, California, AJA Video offers its products through an extensive sales channel of dealers and systems integrators around the world. For further information, please see our website at **www.aja.com**

AJA® VIDEO SYSTEMS

Because it matters.

AJA Video Systems Inc.
Grass Valley, California
www.aja.com • sales@aja.com • support@aja.com