

# CONVERTER

## PRODUCT LINE CATALOG

AS PASSIONATE AS YOU ARE  
**AJA**  
VIDEO SYSTEMS



SPRING07



	8-BIT	10-BIT	Component YPbPr/RGB to SDI	Composite Y/C NTSC/PAL to SDI	SDI to YPbPr/RGB to SDI	SDI to NTSC/PAL Component	SDI to SDI Reclocking Loop	Frame Sync/FSC Option	HD-SDI to HD YPbPr/RGB	HD-SDI to HD-SDI	HD-SDI to HD-SDI DA	SDI to HD-SDI	HD-SDI to SDI	Dual Rate	Audio Embed/Disembed	Audio Conversion	Audio Reference Generator	Passes Audio To Outputs	+5 to +18Vdc	
D4E	X				X															
D5CE	X			X	X	X														
D5D	X		X																	
D5PSW	X	X																		
D10AD	X	X	X	X																
D10A	X	X	X																	
D10C	X	X			X	D2	X													
D10C2	X	X			X	X	X													
D10CE	X	X			X	X	X													
D10CEA	X	X			X	X	X							X				X		
D5DA	X	X					X												X	
R44E	X					X														
R5CE	X				X	X	X													
RD5CE	X				X	X	X													
R10CE	X	X			X	X	X													
R20AD	X	X	X	X				X												
R20CE	X	X			X	X	X	X												
R20DA	X	X						X											X	
RD20DA	X	X						X						X					X	
RH10MD					X	X	X		X	X		X	X						X	
RD10MD					X	X	X		X	X		X	X						X	
RH10DA	X	X					X		X				X						X	
RH10UC	X	X					X		X		X								X <sup>1</sup>	
FS1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	
ADA4																X	X	X	X	
HD10C2	X	X			X	X	X	X		X			X						X	
HD10A	X	X							X											
HD10AVA	X	X		X	X				X				X	X					X	X
HD10AM							X						X	X					X	X
HD10AMA							X						X	X					X	X
HD10MD3	X	X			X	X	X			X	X		X	X					X	X
HD5DA	X	X							X				X						X	
HD10DA	X	X					X			X			X						X	X
HDP	X								X				X	X					X	X
Hi5		X											X	X					X	
GEN10																	X			X

<sup>1</sup> RH10UC passes audio on up-convert, but not in HD Framesync mode

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## AJA Warranty Information

All AJA Video Converters carry a 5-year warranty from the date of purchase against defects in material and workmanship. AJA Video, at its option, will repair or replace each defective product with a similar or better product. This warranty shall be limited to defects which were not caused by misuse, abuse, improper handling, tampering or attempts to repair by any unauthorized repair service. This warranty is limited solely to the above and only for the period set forth. The manufacturer will not be liable for any loss or damage incidental or consequential of any kind, whether based on warranty, contract or negligence arising in connection with the sale, use or repair of the product. The manufacturer's maximum liability shall not in any case exceed the sale price.

# FS1

## FS1 Universal SD/HD Audio/Video Frame Synchronizer and Converter

### Features

- Universal HD/SD Audio/Video Frame Synchronizer and Converter
- SD ↔ HD up/down conversion
- SD ↔ SD aspect ratio conversion
- HD ↔ HD cross conversion (720p/1080i)
- Dual HD/SD SDI Inputs and Outputs
- Component Analog HD/SD Input and Output
- Composite/S Video Input and Output with TBC
- 8 Channel AES and Balanced Analog Audio inputs and outputs
- 8 Channel Embedded Audio I/O
- Fully Redundant Power Supplies Standard
- 10/100 LAN with SNMP and Embedded Web Server for Remote Control
- Video Proc Amp
- Closed Caption Support – Including SD to HD upconversion
- Video/Audio Test Signal Generator



Featuring a flexible “everything in, everything out” architecture, the FS1 can simultaneously work with both HD and SD video—all in full 10-bit Broadcast quality video and 24-bit audio. The FS1 supports virtually any input or output, analog or digital, HD or SD. The FS-1 can up- or down-convert between SD and HD, and provide simultaneous HD and SD outputs. Cross-conversions between HD formats are also supported, with simultaneous output of both formats. For audio, the FS1 supports 8-channel AES, Balanced analog, or embedded audio with full flexibility. The FS-1 supports closed captioning and the conversion of closed captioning between SD and HD formats. The FS-1 is also network ready, supporting SNMP monitoring and web-based remote control.

### Specifications

Formats:	525i 625i 1080i 50/59.94/60 Hz 1080psf 23.98/24 Hz 1035i 50/59.94/60 Hz 720p 50/59.94/60 Hz	Audio levels:	+6dBu, +15dBu, +18dBu, +24dBu, (Full Scale Digital)
Video Inputs and Outputs:	Dual SDI/HD-SDI, SMPTE 259/292/296 HD component YPbPr/RGB, SMPTE-274 SD component/composite/YC (S Video)	LAN:	10/100 auto config, auto cable crossover Embedded Webserver, HTTP v1.1 SNMP monitoring
Video A/D, D/A:	12 bits 2x oversampled (HD) 4x oversampled (SD)	RS-422 port	
Audio Inputs and Outputs:	8 Channel Balanced, 25 pin D (Tascam pinout) 8 Channel AES (BNC) 8 Channel SDI/HD-SDI Embedded	GPI:	3x GPI input, TTL, isolated 3x GPI output, TTL, isolated
Audio A/D, D/A:	24 Bits, 48Khz	Physical:	1 RU, 12 inches deep, convection cooled
		Power:	100-240 VAC, 25 watts Fully Redundant, diode isolated

### Front



### Rear

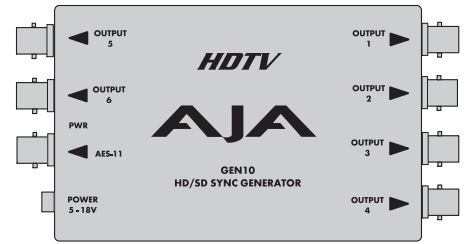


# GEN10

## GEN10 HD/SD Sync Generator

### 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



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.

### Specifications

HD Sync:	Trilevel	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
SD Sync:	Color Black, 75% Color Bars	User Controls:	(External Dipswitch)
AES:	AES-11, 48KHz, Silent or 1KHz Tone (-20db FSD for NTSC, -18db FSD for PAL)	Size:	5.8" x 3.1" x 1" (147 x 79 x 25 mm)
Accuracy:	3 ppm	Power:	+5-18VDC, 3 watts Requires Power Supply

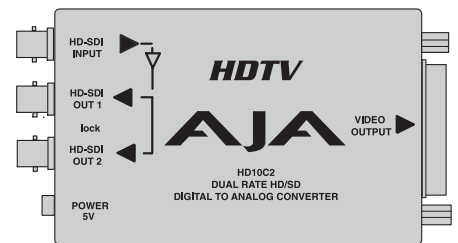
## HD10C2 HD-SDI and SDI Digital to Analog Converter

### Features

- High-Quality 10-bit Dual Rate HD/SD D/A Conversion
- Full Bandwidth HD Analog RGB or YPbPr Output (HD input)
- Component/Composite SD Output (SD input)
- 2 Equalized Loop-Thru HD-SDI/SDI Outputs
- RGBHV VGA style HD output using supplied adapter
- HD Sync Selectable Between Bi-level and Tri-Level
- 4:3 Safe Area Graticule (HD)
- 5-18VDC Power
- External Dip Switch Configuration



# HD10C2



The HD10C2, AJA's second generation HD D/A converter, brings exciting new features. In addition to being a high-quality 10-bit HD converter, the HD10C2 is "dual-rate" and works with both HD-SDI and SDI inputs. For HD-SDI inputs, the HD10C2 outputs full bandwidth HD component or "VGA" style RGBHV video. For SDI inputs, component or composite SD outputs are supported. When connected to a multi-format monitor like the Sony 20L5, the HD10C2 will automatically provide an image from almost any HD or SD input format. The HD10C2 also features 2 equalized HD-SDI outputs. A breakout cable and SVGA adapter are included.

### Specifications

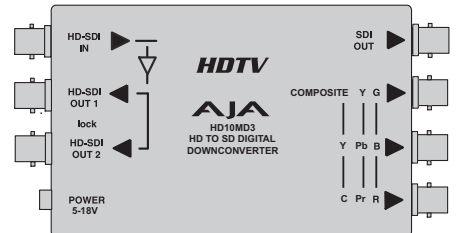
Formats:	HD: 1080i 50/59.94/60 Hz 1080p/psf 23.98/24/25/29.97/30 Hz 720p 23.98/24/25/29.97/30/60 Hz SD: 525 59.94Hz, 625 50Hz (Automatic Configuration)	Sync:	HD: Tri-level or Bi-level, H/V Drive SD: normal SD sync
Input:	HD-SDI or SDI SMPTE 259/292/296, 10-bit, BNC	Frequency Response:	HD: Y +0, -5db to 30 MHz, C +/- .25db to 13 MHz SD: Y +/- .25db to 5.5 MHz, C +/- .25db to 2.5 MHz
Input Equalization:	125 meter 1694 Cable	User Controls:	(External Dipswitch) YPbPr/RGB Component/Composite (SD) SD Pedestal SD Blanking HD 4:3 Graticule SD NTSC/NTSC-J Sync on Video on/off
Outputs:	HD: YPbPr, RGB (SMPTE-274) SD: YPbPr (SMPTE/N10, Beta® RGB, Y/C, NTSC/PAL®) 13W3 wideband analog output connector (cable supplied) HD-SDI/SDI equalized loop-thru, 2 x BNC	Size:	5.8" x 3.1" x 1" (147 x 79 x 25 mm)
		Power:	+5-18VDC, 4 watts Requires Power Supply

## HD10MD3

### HD10MD3 HD-SDI to SDI/Analog Downconverter

#### Features

- Low-Cost Broadcast-Quality 10-bit HD to SD Downconverter
- Multi-Standard HD-SDI or SDI Input
- 2 Equalized Loop-Thru HD-SDI/SDI Outputs
- SDI and Component/Composite Analog Outputs
- 3/2 Pulldown for 23.98/24 Hz p/psf inputs
- Full 10-bit Data Path, Multi-point Interpolation
- Configurable for 16:9 or 4:3 Monitors
- Letterbox and Crop Modes
- 4:3 Safe-Zone Graticule
- Passes 8 Ch embedded Audio
- 5-18VDC power
- External Dip Switch Configuration



The HD10MD3 is a miniature digital downconverter for converting HD-SDI video to broadcast-quality standard definition SDI and analog component/composite video. The HD10MD3 uses a full 10-bit data path and multi-point interpolation to produce excellent quality down-converted video. In addition, the HD10MD3 converts 23.98/24Hz 1080psi/p to 59.94Hz output video using the standard 3:2 pulldown technique. If present, the HD10MD3 will use RP-188 timecode to set the 3:2 pulldown cadence. The output can be formatted for either 4:3 or 16:9 standard definition monitors. For 4:3 monitors both Letterbox and Crop modes are supported. 8 Ch embedded audio is passed to the SDI output. The HD10MD3 is also dual-rate in that SDI inputs will also pass to the SDI and analog outputs.

- Downconversion: Multi-point interpolation, 10-bit processing  
3:2 conversion for 23.98/24p/psf inputs
- Frequency Response: Y +0, -.5db to 30 MHz  
C +/- .25db to 15 MHz
- User Controls: (External Dipswitch)  
Output Video Format  
4:3/16:9 Monitor Select  
Letterbox/Crop  
Pedestal (Output)  
4:3 Safe-Zone Graticule Overlay
- Size: 5.8" x 3.1" x 1" (147 x 79 x 25 mm)
- Power: 5-18VDC, 5 watts  
Requires Power Supply

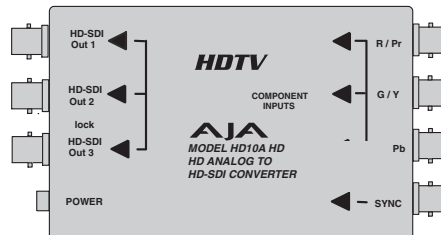
#### Specifications

- Formats: 1080i 50/59.94/60 Hz  
1080p/psf 23.98/24/25/29.97/30 Hz  
720p 23.98/24/25/29.97/30/50/60 Hz  
(Automatic Configuration)
- Inputs: HD-SDI or SDI SMPTE 259/292/296, 10-bit, BNC
- Outputs: SDI, SMPTE 259M, 10-bit, BNC  
YPbPr - SMPTE, EBU-N10, Betacam  
RGB, NTSC, PAL, YC (S-Video), 10-bit  
3 x BNC

### HD10A HD Analog to HD-SDI Converter

#### Features

- High-Quality 10-bit HDTV A/D Conversion
- Full Bandwidth Component HD RGB or YPbPr Input
- 3 HD-SDI Outputs
- Multi-Standard
- Internal or External Sync
- External Dip Switch Configuration
- Optional 12V Power



The HD10A is a miniature, high-quality, 10-bit analog to digital converter for HDTV. A companion to the popular HD10C2 D/A converter, the HD10A can add an HD-SDI output to cameras, computers with HD RGB, VTRs, or other analog-only high definition equipment. The HD10A accepts RGB or YPbPr analog HD and outputs three duplicate HD-SDI signals. Works in 1080/1035i and 720p with internal or external sync (tri-level).

#### Specifications

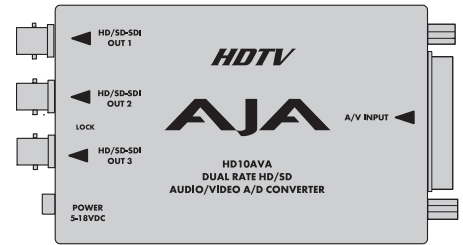
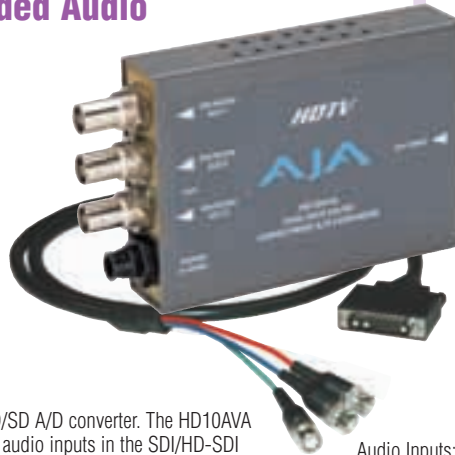
- Formats: 1080i 50/59.94/60 Hz  
1080psf 23.98/24  
1035i 50/59.94/60 Hz  
720p 23.98/24/29.97/30/59.94/60 Hz
- Inputs: YPbPr, RGB (SMPTE-274), 3 x BNC  
External Sync, 1 x BNC
- Outputs: HD-SDI, SMPTE-292/296  
3 x BNC
- Frequency Response: Y +0, -.5db to 30 MHz  
C +/- .25db to 15 MHz
- User Controls: (External Dipswitch)  
RGB/YPbPr input  
1.00/1.001 clock  
Internal/External Sync
- Size: 5.8" x 3.1" x 1" (147 x 79 x 25 mm)
- Power: +5VDC regulated, 4.5 watts  
Requires Power Supply

## HD10AVA

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

#### Features

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



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 SDI/HD-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 SDI-HD-SDI on BNCs.

#### Specifications

Formats: 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: SDI, HD-SDI, SMPTE-259/292/296, 3 x BNC

Video A/D: 12 bits

Audio A/D's: 24 Bits, 48KHz

Audio levels: +10dBu, +12dBu, +18dBu, +24dBu, 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

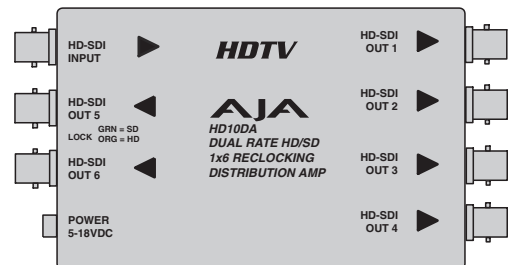
Size: 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

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

### HD10DA 1x6 HD/SD Distribution Amplifier

#### Features

- Compact SD/HD Distribution
- Six Separately Buffered Outputs
- Miniature Size
- 125m HD cable equalization (1694 coax)
- HD-SDI or SDI input, auto sensing
- Bi-color LED indication of input lock and rate
- Passes all ancillary data
- +5-18V power supply
- No dip switches or configuration required



The HD10DA is a miniature, low-cost 1x6 SD/HD (dual-rate) re-clocking distribution amplifier. Featuring six separately buffered HD-SDI outputs, the HD10DA provides automatic input cable re-clocking and equalization to 125 meters.

#### Specifications

Formats: 1.5Gb, 143, 177, 270, 360 Mb, Auto Select

Inputs: 1 HD-SDI,  
 SDI (SMPTE 259/292/296),  
 1x BNC

Outputs: HD-SDI,  
 SDI,  
 6x BNC Equalizing and re-clocking

Power: 5 to 18VDC Regulated, 2.5 Watts

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

## HD5DA 1x4 HD-SDI/SDI Distribution Amplifier

### Features

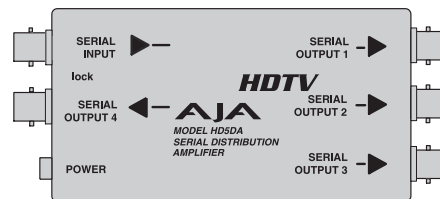
- Compact HD-SDI/SDI Distribution
- Four Separately Buffered HD-SDI/SDI Outputs
- Auto Equalization
- Acts As Low-Cost Repeater
- Automatic Multi-Standard 143/177/270 Mb, 1.5Gb
- Miniature Size



The HD5DA is a miniature, low-cost 1x4 HD-SDI/SDI distribution amplifier/repeater. Featuring four separately buffered HD-SDI/SDI outputs, the HD5DA provides automatic input cable equalization to 100 meters and automatically adapts to 143, 177, 270, 360 Mb, and 1.5Gb.

### Specifications

Formats:	1.5Gb, 143, 177, 270, 360 Mb, auto select		
Inputs:	1 HD-SDI, SDI (SMPTE 259/292/296), 1 x BNC		
Outputs:	4 HD-SDI, SDI, 4 x BNC Equalizing		
Size:	5.1" x 2.4" x 1" (131 x 61 x 25 mm)	Power:	+5VDC Regulated, 2.5 Watts Requires Power Supply



## HD10AMA HD/SD 4 Channel Analog Audio Embedder/Disembedder

### Features

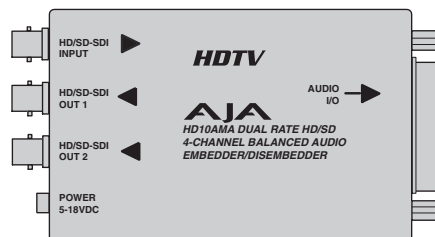
- Dual rate HD-SDI/SDI Embedder/Disembedder
- 4 Channel Balanced Analog Audio I/O
- Supplied XLR breakout cable
- HD-SDI/SDI input, 2 HD-SDI/SDI outputs
- Dipswitch configuration
- 5-18VDC Power



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.

### Specifications

Formats:	HD SMPTE 292/296M SD SMPTE 259M (Automatic Configuration)	Embedded Audio:	SMPTE 272M/299M, 24 bit, 48KHz synchronous
Video Input:	HD-SDI or SDI BNC	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
Video Outputs:	follows input, 2 x BNC	Size:	5.8" x 3.1" x 1" (147 x 79 x 25 mm)
Audio Inputs:	4 x Balanced Analog Audio, XLR Outputs: 4 x Balanced Analog Audio, XLR Audio Levels (Full Scale Digital): +24dbu, +18dbu, +14dbu Audio Converters: 24 bit	Power:	+5-18VDC, 5 watts Requires Power Supply

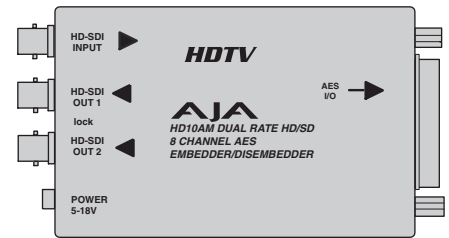




## HD10AM HD/SD 8 Channel AES Embedder/Disembedder

### 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



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.

### Specifications

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

Video Input: HD-SDI or 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)

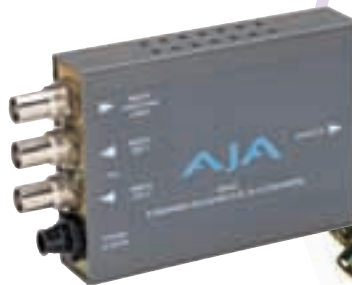
Power: +5-18VDC, 5 watts  
Requires Power Supply



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

### 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



The ADA4 is a 4 channel 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 synchronizer. 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.

### 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), +10dBV (consumer +12.2 dBu)

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

## HDP

### HDP HD-SDI/SDI To DVI-D And Audio Converter

#### Features

- Converts HD-SDI/SDI to DVI-D for LCD/Plasma monitors
- Automatically adapts to most LCD monitors up to 1920 x 1200
- High quality scaling engine for proper display of 4:3 or 16:9 content
- Scaling is 1 to 1 for appropriate monitor configurations
- 2 channel audio output
- 2 HD-SDI/SDI looping outputs
- Flexible 5-18V power supply
- 5 year warranty

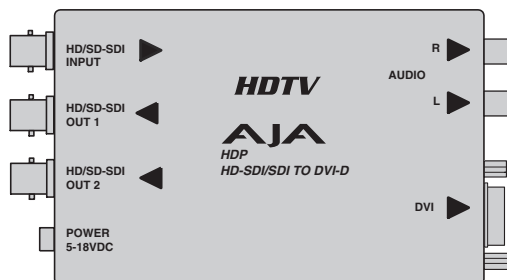
The HDP is a miniature HD-SDI/SDI to DVI-D converter for LCD or Plasma monitors. Using a very high quality scaling engine, the HDP will automatically size 4:3 or 16:9 inputs to many DVI-D monitors. For appropriate monitor configurations, scaling is automatically 1 to 1—for example, displaying 1920x1080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

The HDP 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, much more! The HDP is not intended as a critical viewing device, for applications such as color-correction, etc. We recommend professional/broadcast grade monitors for such critical applications.



#### Specifications

Inputs:	SMPTE-259/292/296 SDI/HD-SDI
Input Formats:	1080i, 1080p, 720p, 525i, 625i
Outputs:	DVI-D, Audio (2 channel RCA-style outputs), 2 Looping SDI outputs of the SDI inputs
Maximum DVI resolution:	1920x1200 @ 60Hz
Power:	+5-18VDC, 5 watts
Size:	5.8" x 2.4" x 1" (131 x 61 x 25mm)



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

## Hi5

#### Features

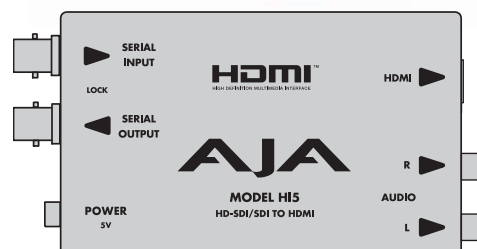
- SDI/HD-SDI to HDMI
- Full HDMI support including embedded audio
- Additional 2 Channel RCA jack audio output
- Equalized looping SDI/HD-SDI output
- No configuration necessary
- HDMI cable included
- 5 year warranty

The Hi5 converts SDI or HD-SDI to HDMI for driving HDMI monitors. Embedded SDI/HD-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 SDI/HD-SDI output useful for connecting additional equipment, or for "daisy chaining" multiple monitors to the same SDI/HD-SDI source.



#### Specifications

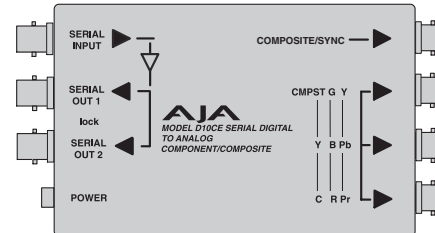
Inputs:	SMPTE-259/292/296 SDI/HD-SDI
Input Formats:	525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60
Outputs:	HDMI with embedded audio Audio (2 channel RCA-style outputs), 1 equalized looping SDI/HD-SDI output
Power:	+5VDC, 3 watts
Size:	4.6" x 2.4" x 1" (117 x 61 x 25mm)



## D10CE SDI to Component and Composite Analog Converter, 10-bit

### Features

- Excellent-Quality 10-bit Universal D/A Conversion
- Full 10-bit Data path, 4x Oversampling
- SDI Input, 2 Re-clocked, Loop-Thru SDI Outputs
- Simultaneous Component and Composite Analog Outputs
- YPbPr, Betacam, or RGB Component Formats
- NTSC or PAL Composite Formats
- Precision PLL Jitter Filter for Stable Composite Outputs
- Digital Noise Reduction
- External Dip Switch Configuration



The D10CE SDI to Analog Video Converter provides excellent-quality 10-bit conversion of SDI to both component and composite video formats simultaneously. The component outputs are user configurable to YPbPr (SMPTE, EBU-N10), Betacam, or RGB (or composite and Y/C). The composite output is configurable to composite video or sync. The component and composite outputs are completely independent including optimum chroma filtering for each and independent pedestal configuration. The D10CE also features an exclusive PLL jitter filter/memory to reduce the effects of SDI jitter on the output analog video. This feature, along with the precision 4x oversampled D/A filters, provides the highest quality analog outputs - including very low phase noise in composite outputs. The D10CE also provides two re-clocked, loop-thru SDI outputs. All functions are user configurable via dip switches.

### Specifications

Input: SDI (SMPTE 259M), 1 x BNC

Outputs: (Simultaneous Component and Composite output)  
YPbPr - SMPTE, EBU-N10, Betacam, RGB, NTSC, PAL, YC (S-Video) 3 x BNC  
NTSC/PAL or Sync, 1 x BNC  
Re-clocked loop-thru SDI, 2 x BNC

D/A Converters: 10-bits, 4x oversampling  
Clock Jitter Filtering to 2.5Hz

Frequency Response: Y +/- .15dB to 5.5MHz  
C +/- .15dB to 2.5MHz (Component)  
C +/- .15dB to 1.3MHz (Composite)  
Less than .5% K Factor (2T)

User Controls: (External Dip Switch )  
Output Video Format  
Pedestal On/Off  
Narrow/Wide Blanking  
Digital Noise Reduction

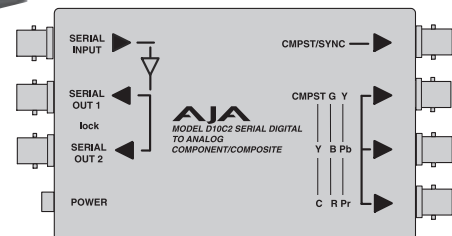
Power: +5VDC Regulated, 4 Watts  
Requires Power Supply

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

## D10C2 SDI to Component or Composite Analog Converter, 10-bit

### Features

- Excellent-Quality 10-bit Universal D/A Conversion
- Full 10-bit Data path, 4x Oversampling
- SDI Input, 2 Re-clocked, Loop-Thru SDI Outputs
- Component or Composite Analog Output
- YPbPr, Betacam, or RGB Component Formats
- NTSC or PAL Composite Formats
- Digital Noise Reduction
- External Dip Switch Configuration



The D10C2 SDI to Analog Video Converter provides excellent-quality 10-bit conversion of SDI to analog component or composite video at low cost. In the Component mode the D10C2 outputs are user configurable to YPbPr (SMPTE, EBU-N10), Betacam, or RGB. In the Composite mode, the D10C2 provides 2 composite outputs and a Y/C (S-Video) output. The D10C2 also provides two re-clocked, loop-thru SDI outputs and a composite sync output (Component mode). All functions are user configurable via dip switches.

### Specifications

Input: SDI (SMPTE 259M), 1 x BNC

Outputs: Component Mode:  
YPbPr - SMPTE, EBU-N10, Betacam, RGB, 3 x BNC  
Sync, 1 x BNC  
Composite Mode:  
NTSC/PAL 2 x BNC  
YC (S Video) 2 x BNC  
Re-clocked loop-thru SDI, 2 x BNC

D/A Converters: 10-bits, 4x oversampling

Frequency Response: Y +/- .15dB to 5.5MHz  
C +/- .15dB to 2.5MHz (Component)  
C +/- .15dB to 1.3MHz (Composite)  
Less than .5% K Factor (2T)

User Controls: (External Dip Switch )  
Output Video Format  
Pedestal On/Off  
Narrow/Wide Blanking  
Digital Noise Reduction

Power: +5VDC Regulated, 4 Watts  
Requires Power Supply

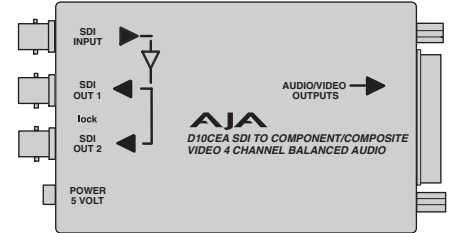
Size: 5.8" x 3.1" x 1" (147 x 79 x 25 mm)

## D10CEA SDI to Analog Audio and Video Converter, 10-bit

### Features

- SDI to Analog Audio and Video Converter
- SDI with Embedded Audio Input
- 2 Re-clocked, Loop-Thru SDI Outputs
- 10-bit Component or Composite Analog Video Outputs
- 4 ch Balanced Analog Audio Output
- Selectable Audio level
- Selectable Audio Channel Group
- External Dip Switch Configuration

The D10CEA converts SDI video with embedded audio to 10-bit component or composite analog video and 4 channel balanced analog audio. The video outputs can be configured as YPbPr (Betacam or SMPTE/EBU N10), RGB, 1 composite or 1 Y/C (S-Video). The 4 ch analog audio outputs can be wired in a balanced or unbalanced configuration. The 4 audio output channels can be selected as group 1-4 from SMPTE embedded audio. Audio level has 4 settings. Audio and video output connections are available on a 25 pin "D" subminiature connector – a break-out cable is supplied. All video/audio configuration is done by external dipswitch selection. This versatile, low-cost, miniature monitoring solution also outputs two re-clocked loop-thru SDI outputs.



### Specifications

Inputs	SDI (SMPTE 259M) w/embedded audio, 1 x BNC
Outputs:	Video: YPbPr - SMPTE, Betacam, RGB, NTSC, PAL, YC (S-Video), 10-bits Audio: 4 Channel Balanced/Unbalanced
	Video/Audio outputs on 25-pin D connector
	2 SDI Re-clocked loop-thru, 2 x BNC
Frequency Response:	Video, +/- .25db to 5.5 Mhz Y Audio, +/- .5db to 20Khz

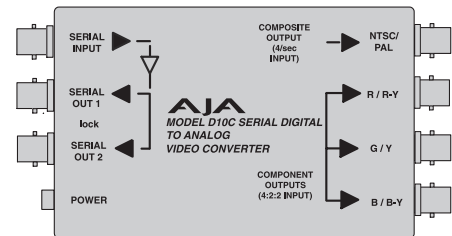
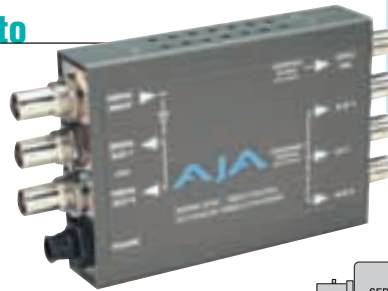
User Controls:	(External Dip Switch) Video format Pedestal H&V blanking Audio group 1,2,3,4 Audio Level, adjustable via switch selection: S/N A15212 and above: +24, +18, +15, +12 dBu S/N below A15212: -14, 0, +2, +4 dBu
Size:	5.8" x 3.1" x 1" (147 x 79 x 25 mm)
Power:	+5VDC Regulated, 4 watts Requires Power Supply

## D10C Composite Digital (D2/D3) to Composite Analog, or SDI to YPbPr or RGB Converter, 10-bit

### Features

- Excellent Quality 10-bit D/A Conversion
- SDI Input, 2 Re-clocked, Loop-Thru SDI Outputs
- Accepts Component or Composite SDI Inputs (D1, D2, D3)
- YPbPr, Betacam, or RGB Component Formats
- NTSC or PAL Composite Formats (with D2/3 input)

The D10C SDI to Analog Converter provides excellent quality 10-bit digital to analog conversion at low cost. The D10C is useful for D/A conversion, high-quality monitoring, or adding an SDI input to VTRs, workstations, or other analog video equipment. The D10C automatically works with component or composite SDI inputs in 625 or 525 line formats. Featuring one SDI input with two re-clocked, loop-thru SDI outputs, the D10C also acts as a distribution amplifier/repeater. The D10C provides a component analog output for component SDI inputs (D1), a NTSC output for 525 line composite SDI inputs (D2, D3), and a PAL output for 625 line composite inputs SDI (D2, D3).



### Specifications

Input:	SDI (SMPTE 259M), 1 x BNC
Outputs:	For Component Input Only (270Mb): YPbPr - SMPTE, EBU-N10, Betacam, RGB, 3 x BNC Sync, 1 x BNC
	For Composite Input Only (143/177Mb): NTSC/PAL 1 x BNC

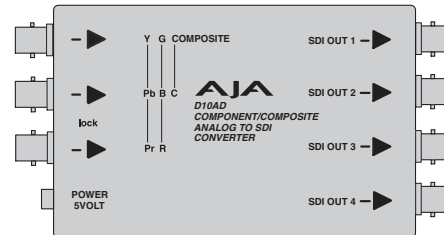
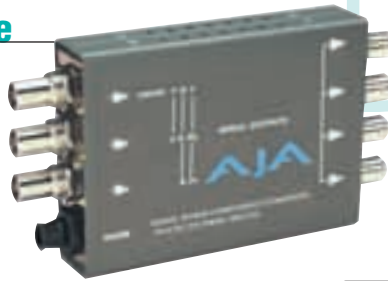
D/A Converters:	10-bits
Frequency Response:	Y +/- .25dB to 5.2MHz C +/- .25dB to 2.5MHz Less than 1% K Factor (2T)
Power:	+5VDC Regulated, 5 Watts Requires Power Supply
Size:	5.8" x 3.1" x 1" (147 x 79 x 25 mm)

## D10AD Component or Composite Analog to SDI Converter, 10-bit

### Features

- Excellent-Quality 10-bit Universal A/D Conversion
- Component, Composite or Y/C Analog Input
- 4 Line Adaptive Comb Filter
- Full 10-bit Data path, 2x Oversampling
- YPbPr, Betacam, or RGB Component Formats
- NTSC or PAL Composite Formats
- AGC Mode
- 4 SDI Outputs with EDH
- Color Bar Generator

The D10AD provides excellent-quality 10-bit conversion of component or composite analog video to SDI with EDH. The D10AD accepts YPbPr (SMPTE, EBU-N10), Betacam, or RGB component inputs or NTSC/PAL or Y/C (S-Video) composite inputs. The D10AD features a 4 Line Adaptive Comb Filter for high-quality decoding of composite sources. The comb filter can be switched to 2 line or notch modes for minimum delay requirements. NTSC/PAL configuration is automatic. Video format, AGC, and pedestal are all user configurable via dip switches.



### Specifications

Inputs:	YPbPr - SMPTE, EBU-N10, Betacam, RGB, NTSC, PAL, Y/C (S-Video) 3 x BNC
Outputs:	SDI (SMPTE 259M) w/EDH 4 x BNC
A/D Converters:	10-bits, 2x oversampling
Frequency Response:	Y +/- .15dB to 5.5MHz C +/- .15dB to 2.5MHz Less than .5% K Factor (2T)

### User Controls:

- (External Dip Switch )  
 Input Video Format  
 Pedestal Present/Not Present  
 AGC On/Off  
 EDH On/Off  
 Test Pattern

### Power:

+5VDC Regulated, 4 Watts  
 Requires Power Supply

### Size:

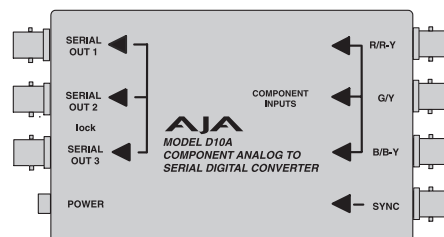
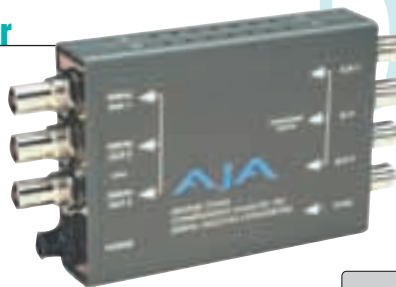
5.8" x 3.1" x 1" (147 x 79 x 25 mm)

## D10A Component to SDI Converter (with Separate Sync Input)

### Features

- Excellent-Quality 10-bit A/D Conversion
- Component Analog to SDI
- Full 10-bit signal path
- 3 serial outputs
- Multi-Format
- Normal/Wide V-blanking
- 2 loop-through serial outputs

The D10A provides exceptional quality component-only analog to 10-bit SDI. The superior quality of this 10-bit A/D converter has made it a favorite of the professional video engineer. The D10A is pre-set at the factory to accept either YPbPr (SMPTE, EBU/N10), Betacam, or RGB in 525 or 625 line formats, converting the analog component signal to 10-bit SDI. The D10A has three BNC's for one component input, one external sync input, and three SDI outputs. Input formats can be reset by internal jumpers and level/gain controls.



### Specifications

Inputs:	YPbPr (SMPTE, EBU/N10), Betacam, or RGB, 3 x BNC External Sync, 1 x BNC
Outputs:	3 SDI, 3 x BNC
A/D Converters:	10-bits
Frequency Response:	Y +/- .25dB to 5.5MHz C +/- .25dB to 2.5 MHz

### Power:

+5VDC Regulated, 3 watts  
 Requires Power Supply

### Size:

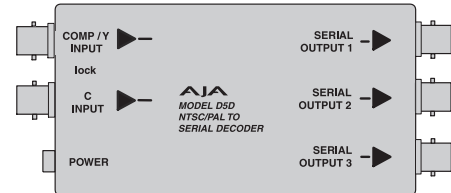
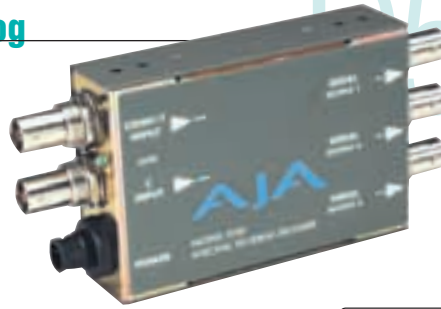
5.8" x 3.1" x 1" (147 x 79 x 25 mm)

## D5D Composite and S-Video Analog to SDI Converter

### Features

- Analog Composite-Y/C to SDI Conversion
- Selectable 2 or 3 Line Adaptive Comb Filter
- Three SDI Outputs
- Crystal PLL Jitter Filter
- Automatically Configures to NTSC/PAL
- Selectable Pedestal
- External Dip Switch Configuration

The D5D Decoder provides low-cost, all digital decoding of analog NTSC/PAL or Y/C (S-Video) to SDI. The D5D is useful for bringing video from time-base corrected analog composite equipment into a serial digital environment. The D5D features a crystal PLL jitter filter/memory to reduce jitter in the SDI outputs. The D5D decodes the full dynamic range of input video - values below black and above white are not clipped. In the NTSC mode, the removal of the 7.5 IRE pedestal can be enabled by external dip switch selection.



### Specifications

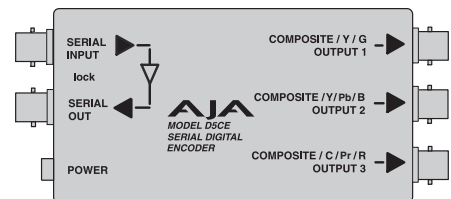
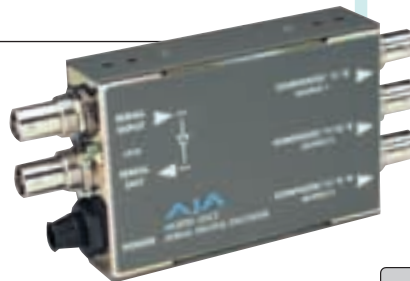
Inputs:	NTSC/PAL, Y/C (S-Video), 2 x BNC	User Controls:	(External Dip switch) Composite/YC Pedestal in NTSC Mode Narrow/Wide Blanking 2 or 3 Line Comb
Outputs:	SDI (SMPTE 259M), 3 x BNC	Power:	+5VDC regulated, 3.5 Watts Requires Power Supply
Frequency Response	+/- 0.25dB to 5MHz <1% 2t K Factor (Y) < 1.5% Differential Gain < 1.5 Degree Differential Phase	Size:	5.1" x 2.4" x 1" (131 x 61 x 25 mm)

## D5CE SDI to Component or Composite Analog Converter

### Features

- Low Cost SDI to Component or Composite Analog
- User Selectable Component or Composite/YC Outputs
- YPbPr, Betacam, or RGB Component Formats
- Re-clocked Loop-Thru SDI Output
- Automatic NTSC/PAL Selection
- User Selectable Vertical/Horizontal Blanking
- External Dip Switch Configuration

The D5CE provides low cost, all digital conversion of SDI to either composite or component analog video. Three analog BNC outputs are user configurable to cover a wide range of format combinations including 3 composite, 1 composite and Y/C, YPbPr (SMPTE, EBU-N10), Betacam, or RGB. The D5CE also features a re-clocked, loop-thru SDI output. The D5CE automatically adapts to NTSC or PAL video standards. Pedestal and narrow/wide H/V blanking are user configurable via dipswitches.



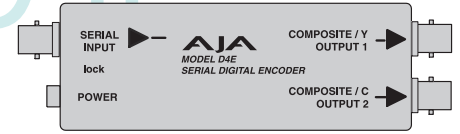
### Specifications

Inputs:	SDI (SMPTE 259M), 1 x BNC	Size:	5.1" x 2.4" x 1" (131 x 61 x 25 mm)
Outputs:	YPbPr - SMPTE, EBU-N10, Betacam, RGB, 3 x BNC Or NTSC, PAL, 3 x BNC Or NTSC/PAL and Y/C, 3 x BNC Loop-thru SDI, re-clocking, 1x BNC	Power:	+5V DC regulated power, 2 Watts Requires Power Supply
User Controls:	(External Dip switch) Video Format Vertical/Horizontal Blanking Pedestal		

## D4E SDI to Composite Analog Converter

### Features

- Lowest-Cost SDI to NTSC/PAL Available
- 1 SDI Input, 2 Composite-Y/C Analog Outputs
- Automatic NTSC/PAL Selection
- Built-In Test Pattern
- Ultra-Miniature Size Mounts Anywhere
- External Dip Switch Configuration



The D4E SDI Encoder provides the lowest cost all-digital conversion of SDI to analog NTSC or PAL. The D4E is useful for monitoring, level and phase checking, dubbing, etc. The D4E automatically adapts to NTSC or PAL video standards and outputs analog NTSC (525 line input) or PAL (625 line input). Pedestal and narrow/wide H/V blanking are user configurable via dipswitches. The D4E encodes the full dynamic range of input video: levels below black and above white are not clipped.

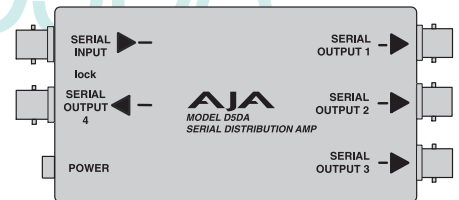
### Specifications

Inputs:	SDI (SMPTE 259M), 1 x BNC	Size:	5.1" x 1.8" x 1" (131 x 44 x 25 mm)
Outputs:	NTSC, PAL, 2 x BNC Or NTSC/PAL Y/C, 2 x BNC	Power:	+5V DC regulated power, 2 Watts Requires Power Supply
User Controls:	(External Dip switch) Video Format Vertical/Horizontal Blanking Pedestal Test Pattern (requires valid SDI input)		

## D5DA 1x4 SDI Distribution Amplifier, Multi-format

### Features

- Compact 1x4 Re-Clocking SDI Distribution Amplifier
- Low Cost
- Automatic Multi-Standard, 143/177/270 Mb
- Cable EQ to 300 Meters
- Useful as a repeater



The D5DA is a multi-format, 1x4, re-clocking SDI Distribution Amplifier. The D5DA can be used as a low-cost SDI DA or repeater. The SDI input is re-clocked and equalized to 300 meters of cable. In addition, the multi-standard feature allows the D5DA to automatically adapt to 143, 177, 270, or 360 Mb SDI inputs automatically.

### Specifications

Formats:	143, 177, 270, 360 Mb, auto select	Return Loss:	>15 dB-270 MHz (Input and Output)
Input:	1 SDI (SMPTE 259M), 1xBNC	Size:	5.1" x 2.4" x 1" (131 x 61 x 25 mm)
Outputs:	4 SDI (SMPTE 259M), 4x BNC Equalizing, Re-Clocking	Power:	+5V DC regulated power, 2 Watts Requires Power Supply

## D5PSW SDI Protection Switch

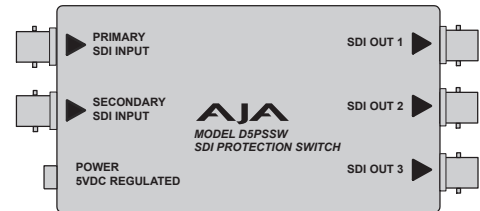
### Features

- Dual SDI input protection switch
- 3 SDI outputs
- Low Cost
- Cable EQ to 300 Meters
- Useful as a repeater and/or DA
- Multi color LED status



### D5PSW

The D5PSW accepts 2 SDI inputs, Primary and Secondary, and automatically switches to the Secondary input if the Primary input is not present or is not a valid SDI signal. An SDI input is considered valid if a proper SMPTE 259 stream is present. A LED indicator is Green if both Primary and Secondary are present, flashing green if the Primary is present but the Secondary is not present, and Orange if the Secondary is present but the Primary is not. The D5PSW has 3 SDI outputs.



### Specifications

- Formats: 143, 177, 270, 360 Mb SMPTE 259, auto select  
 Inputs: 2 SDI (SMPTE 259M), 2x BNC  
 Outputs: 3 SDI (SMPTE 259M), 3x BNC  
 Equalizing, Re-Clocking  
 Size: 5.1" x 2.4" x 1" (131 x 61 x 25 mm)  
 Power: +5V DC regulated power, 4 Watts  
 Requires Power Supply

## Power Supplies for D- and H-Series Converters

### DWP

A new more robust design for 2005, 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, latching, circular connector with gold pins, the DWP meets the high reliability requirements of the professional video industry.

### Specifications

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



### DWP-U

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

### Specifications

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





The FR1 and FR2 mounting frames provide high density rack-mount solutions for AJA's R series modules. The FR1 is a 1 RU frame with 4 slots; the FR2 is a 2 RU frame with 10 slots. Both frames feature high capacity power supplies with no power restrictions for any module combination. Also, both frames feature multiple fan forced air cooling which provides ample cooling capacity without the need for empty rack space above or below the units. Both frames feature optional redundant power supplies - the FR2's power supplies are easily changed from the front of the unit. The FR2 features a reference Distribution amplifier which distributes a color black reference to all slots from one input BNC. The FR1 also features a frame reference input with a passive distribution to all 4 slots.

## FR1 One RU Rack Mount Frame & Power Supply, 4 Slot

### Features

- 1 Rack Unit Mounting Frame
- 4 Module Capacity
- Multiple Fan Forced Air Cooling
- Optional Redundant Power Supplies
- Power Supply Monitoring
- Frame Reference Input BNC
- UL, CSE, CE Certification
- Universal Input 90-240 VAC 50 Watt Power Supply

### Specifications

Capacity:	4 Slots, 1 Rack Unit
Inputs:	Power Supply Monitoring Reference Input, BNC
Power:	50 Watt Capacity Universal Input 90-240 VAC Power Supply Optional Redundant Power Supply, Diode Isolated
Cooling:	Multiple Fan Forced Air
Size:	19" x 1.75" x 14.75", (1RU)

Leitch™ 6800 Series Compatible



- FR1** FR1 Frame with One FR1-PS Power Supply
- FR1-D** FR1 Frame with Dual FR1-PS (Redundant) Power Supplies Installed
- FR1-PS** Power Supply Module for FR1 Frame

## FR2 Two RU Rack Mount Frame & Power Supply, 10 Slot

### Features

- 2 Rack Unit Mounting Frame
- 10 Module Capacity
- Multiple Fan Forced Air Cooling
- Optional Redundant Power Supplies
- Reference DA sends color black to all slots
- Power Supply Monitoring
- UL, CSE, CE Certification
- Universal Input 90-240 VAC 100 Watt Power Supply

### Specifications

Capacity:	10 Slots, 2 Rack Unit
Inputs:	Power Supply Monitoring Reference Input, BNC – Active DA to all slots
Power:	100 Watt Capacity Universal Input 90-240 VAC Power Supply Optional Redundant Power Supply, Diode Isolated
Cooling:	Multiple Fan Forced Air
Size:	19" x 3.5" x 13", (2RU)

Leitch 6800 Series Compatible



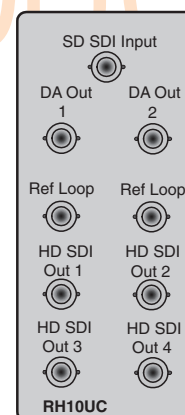
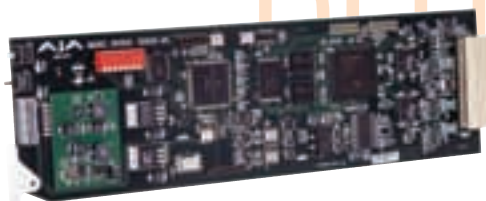
- FR2** FR2 Frame with One FR2-PS Power Supply Installed
- FR2-D** FR2 Frame with Dual FR2-PS (Redundant) Power Supplies Installed
- FR2-PS** Power Supply Module for FR2 Frame

## RH10UC SDI to HD-SDI Upconverter and HD Frame Synchronizer

### Features

- Broadcast-Quality 10-bit SD to HD Upconverter
- Motion-adaptive de-interlacing
- Frame Synchronizer function with Genlock input
- Selectable aspect ratio conversion
- Selectable HD output format
- HD-SDI stand-alone Frame synchronizer mode

The RH10UC is a 10-bit SD to HD up-converter and HD Frame Synchronizer. Using motion-adaptive de-interlacing and high quality digital scalers, the RH10UC provides excellent Broadcast quality HD video from SD sources. Output HD video is selectable between 720p and 1080i formats. 4:3 to 16:9 aspect ratio conversion is selectable between 4:3 pillarbox, 14:9 crop, 16:9 anamorphic, and 16:9 zoom. Input SD ITU Rec. 601 color space is converted to ITU Rec. 709. . Additionally, the RH10UC can operate as a standalone HD-SDI Frame Synchronizer. The RH10UC is compatible with AJA's FR1 or FR2 frames.



### Specifications

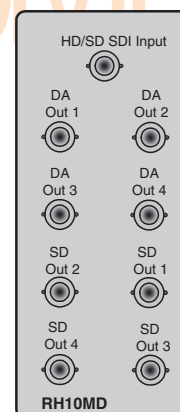
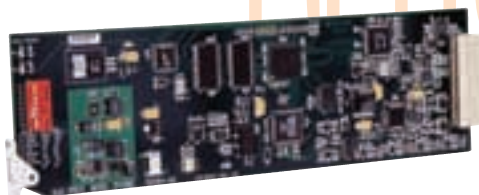
Input Formats:	525/59.94, 625/50, SMPTE 259M, 292M	User Controls:	Mode: Upconvert, HD Frame Synchronizer Output Format Aspect Ratio Convert Select Output Timing
Output Formats:	1080i 50/59.94, 720p 59.94 Hz (50Hz input requires 50 Hz output)	Size:	Fits AJA R-Series Frames
Upconversion:	Motion adaptive, Multi-point interpolation, 10-bit processing	Power:	6 watts
Inputs:	HD/SD SDI, BNC		
Reference:	2 x BNC, looping		
Outputs:	Input Loop, 2 x BNC, Equalized HD-SDI, 4 x BNC		

## RH10MD High Definition Downconverter and DA

### Features

- Broadcast-Quality 10-bit HD Downconverter
- Re-clocking 1x4 HD-SDI/SDI DA
- Multi-Standard HD-SDI or SDI Input
- SDI and Component/Composite Analog Outputs
- 3/2 Pulldown for 23.98/24 Hz p/psf inputs
- Full 10-bit Data Path, Multi-point Interpolation
- Configurable for 16:9 or 4:3 Monitors
- Letterbox and Crop Modes
- 4:3 Safe-Zone Graticule

The RH10MD is a 10-bit broadcast-quality HD downconverter and HD-SDI/SDI distribution amplifier. There are 4 re-clocked HD-SDI/SDI outputs and four down-converted SD outputs. The SD outputs can be individually configured as analog or SDI - analog can be component or composite. All HD formats are supported including 24p/psf with 3:2 pull-down. The SD output can be formatted for either 4:3 or 16:9 monitors. For 4:3 monitors both Letterbox and Crop modes are supported. The RH10MD is also dual-rate (HD/SD) and will support SDI inputs. 4 Ch AES embedded audio is passed through to the SDI outputs. The RH10MD is compatible with AJA's FR1 or FR2 frames.



### Specifications

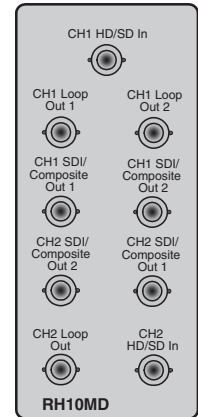
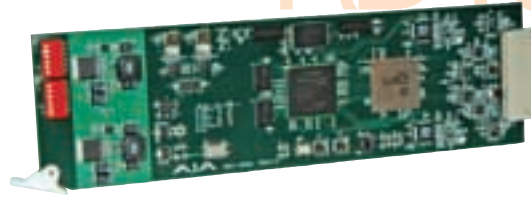
Formats:	HD: 1080i 50/59.94/60 Hz 1080p/psf 23.98/24/25/29.97/30 Hz 720p 23.98/24/25/29.97/30/50/60 Hz	Downconversion:	Multi-point interpolation, 10-bit processing 3:2 conversion for 23.98/24p/psf inputs
Inputs	HD-SDI or SDI SMPTE 259/292/296, 10-bit, BNC	User Controls:	(External Dipswitch) Output Video Format 4:3/16:9 Monitor Select Letterbox/Crop Pedestal (Output) 4:3 Safe-Zone Graticule Overlay
Outputs:	SDI, SMPTE 259M, 10-bit, BNC YPbPr - SMPTE, EBU-N10, Betacam RGB, NTSC, PAL, Y/C (S-Video), 10-bit 3 x BNC	Size:	Fits AJA R-Series Frames
		Power:	5 watts

## RD10MD

### RD10MD Dual HD To SD Downconverter

#### Features

- Dual Independent channel HD to SD down conversion
- Re-clocking HD-SDI/SDI input loop outputs
- Multi-Standard HD-SDI or SDI Input
- SDI and Composite Analog Outputs
- 3/2 Pulldown for 23.98/24 Hz p/psf inputs
- Full 10-bit Data Path, Multi-point Interpolation
- Configurable for 16:9 or 4:3 Monitors
- Letterbox and Crop Modes
- 4:3 Safe-Zone Graticule



The RD10MD is a 10-bit broadcast-quality Dual HD down converter. Channels 1 and 2 are fully independent. Channel 1 has 2 re-clocked HD/SD SDI outputs and channel 2 has 1. Both Channel 1 and 2 have 2 down converted outputs, which can be independently configured as SDI or composite analog. All HD formats are supported including 24p/psf with 3:2 pulldown. The SD output can be formatted for either 4:3 or 16:9 monitors. For 4:3 monitors both Letterbox and Crop modes are supported. The RD10MD is also dual-rate (HD/SD) and will support SDI inputs. The RD10MD is compatible with AJA's FR1 or FR2 frames.

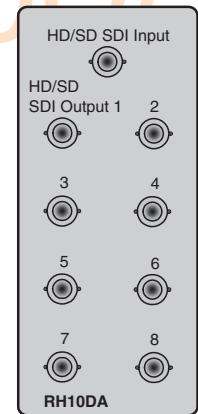
#### Specifications

Formats:	HD: 1080i 50/59.94/60 Hz 1080p/psf 23.98/24/25/29.97/30 Hz 720p 23.98/24/25/29.97/30/50/60 Hz	Downconversion:	Multi-point interpolation, 10-bit processing 3:2 conversion for 23.98/24p/psf inputs
Inputs	HD-SDI or SDI SMPTE 259/292/296, 10-bit, BNC	User Controls:	External Dipswitch Output Video Format 4:3/16:9 Monitor Select Letterbox/Crop Pedestal (Output) 4:3 Safe-Zone Graticule Overlay
Outputs:	Each Channel has two outputs configurable for either SDI (SMPTE 259M, 10-bit) or analog composite NTSC/PAL, 2x BNC Channel 1 has two relocked loop-through outputs, 2x BNC Channel 2 has one relocked loop-through output, 1 BNC	Size:	Fits AJA R-Series Frames
		Power:	7 watts

### RH10DA Dual Rate SD/HD 1x8 Re-clocking Distribution Amplifier

#### Features

- Dual Rate HD-SDI/SDI
- Equalizing and Re-clocking, 8 outputs
- Automatic Input configuration



The RH10DA is a multi-standard Dual Rate 1x8 SDI/HD-SDI Distribution Amplifier. The input is re-clocked and equalized to 100/300 meters (HD/SD) of coax cable. The RH10DA automatically configures to 143, 177, 270, 360mb, or 1.485gb SDI inputs. The re-clock function can be by-passed with an on-board jumper.

#### Specifications

Input:	SMPTE 259M/292M/296M, BNC
Output:	SMPTE 259M/292M/296M, 8 x BNC
Size:	Fits AJA R-Series Frames
Power:	3 watts

## R20DA 1x8 SDI Distribution Amplifier, Multi-format

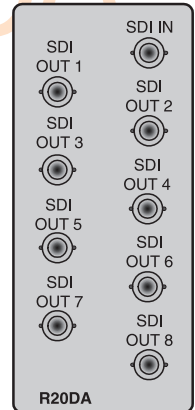
### Features

- Re-clocking, Equalizing SDI Distribution Amplifier
- SDI Input
- 8 SDI Outputs
- Multi-Standard: 143/177/270/360 Mb

The R20DA is a multi-standard, 1x8 SDI Distribution Amplifier. The SDI input is re-clocked and equalized to 300 meters of cable. In addition, the multi-standard feature allows the R20DA to automatically adapt to 143, 177, 270, or 360 Mb SDI inputs.

### Specifications

Input:	SDI (SMPTE 259M), BNC 143, 177, 270, 360 Mb, auto select	Size:	Fits AJA R-Series Frames Compatible with Leitch 6800 Series Frames
Outputs:	SDI (SMPTE 259M), 8 x BNC Re-Clocked, Equalized	Power:	3 watts



## R20AD Component or Composite Analog to SDI Converter, 10-bit

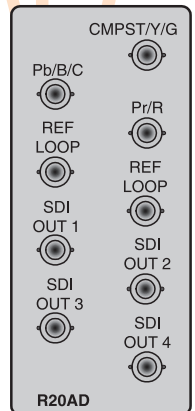
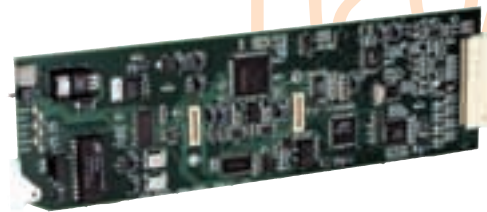
### Features

- Excellent-Quality 10-bit Universal A/D Conversion
- Component, Composite or Y/C Analog Input
- 4 Line Adaptive Comb Filter
- Full 10-bit Data path, 2x Oversampling
- YPbPr, Betacam, or RGB Component Formats
- NTSC or PAL Composite Formats
- AGC Mode
- 4 SDI Outputs with EDH
- Color Bar Generator
- Optional Frame Synchronizer

The R20AD provides excellent-quality 10-bit conversion of component or composite analog video to SDI with EDH. The R20AD accepts YPbPr (SMPTE, EBU-N10), Betacam, or RGB component inputs and NTSC/PAL or Y/C (S-Video) composite inputs. The R20AD features a 4 Line Adaptive Comb Filter for high quality decoding of composite sources. The comb filter can be switched to 2 line, or notch modes for minimum delay requirements. The R20AD also accommodates the optional FSG card (Frame Sync) for synchronizing the output video relative to an external reference. NTSC/PAL configuration is automatic. Video format, AGC, H/V blanking, and pedestal are all user configurable.

### Specifications

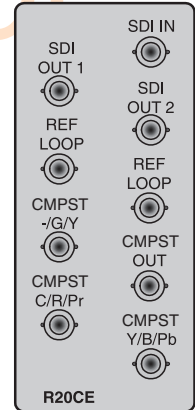
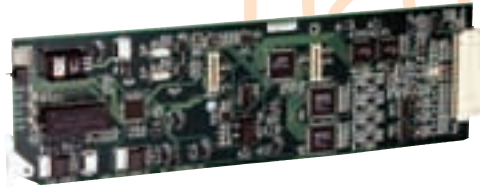
Inputs:	YPbPr - SMPTE, EBU-N10, Betacam, RGB, NTSC, PAL, Y/C (S-Video), 3 x BNC Reference: Passive Loop, 2 x BNC	User Controls:	Input Video Format Pedestal Present/Not Present Narrow/Wide Blanking AGC On/Off EDH On/Off Test Pattern Output Timing adj. (w/Frame Sync option)
Outputs:	SDI (SMPTE 259M) w/EDH 4 x BNC	Size:	Fits AJA R-Series Frames Compatible with Leitch 6800 Series Frames
A/D Converters:	10-bits, 2x oversampling	Power:	7 Watts (8 watts w/Frame Sync option)
Frequency Response:	Y +/- .15dB to 5.5MHz C +/- .15dB to 2.5MHz Less than .5% K Factor (2T)		



## R20CE SDI to Component and Composite Analog Converter, 10-bit

### Features

- Excellent-Quality 10-bit Universal D/A Conversion
- Full 10-bit Data path, 4x Oversampling
- SDI Input, 2 Re-clocked, Loop-Thru SDI Outputs
- Simultaneous Component and Composite Analog Outputs
- YPbPr, Betacam, or RGB Component Formats
- NTSC or PAL Composite Formats
- Digital Noise Reduction
- Optional Frame Synchronizer Allows Genlock to Reference, Full Timing Adjustment



The R20CE SDI to Analog Video Converter provides excellent-quality 10-bit conversion of SDI to both component and composite video formats simultaneously. The 4 analog outputs are user configurable to NTSC/PAL, Y/C (S-Video), YPbPr (SMPTE, EBU-N10), Betacam, or RGB. The component and composite outputs are completely independent including optimum chroma filtering for each and independent pedestal configuration. The R20CE also features an exclusive PLL jitter filter/memory to reduce the effects of SDI jitter on the output analog video. This feature, along with the precision 4x oversampled D/A filters, provides the highest-quality analog outputs - including very low phase noise in composite outputs. The optional FSG (Frame Sync/Genlock) Module allows genlock to an external reference with full timing adjustment. Without the FSG Module, the reference input provides color frame timing.

### Specifications

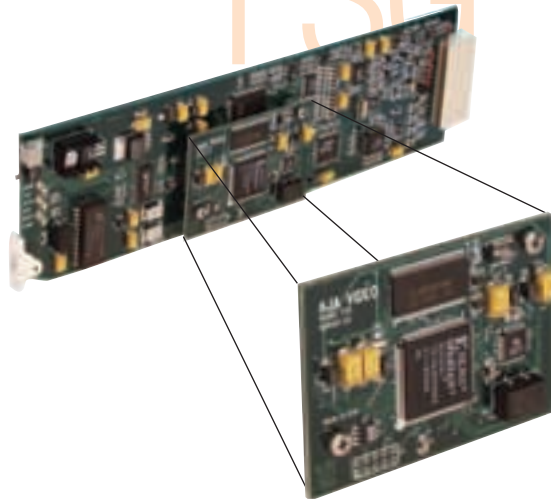
<p><b>Input:</b> SDI (SMPTE 259M), 1 x BNC Reference: Passive loop, 2 x BNC</p> <p><b>Outputs:</b> (Simultaneous Component and Composite output) YPbPr - SMPTE, EBU-N10, Betacam, RGB, NTSC, PAL, Y/C (S-Video) 3 x BNC NTSC/PAL or Sync, 1 x BNC Re-clocked loop-thru SDI, 2 x BNC</p> <p><b>D/A Converters:</b> 10-bits, 4x oversampling Clock Jitter Filtering to 2.5Hz</p>	<p><b>Frequency Response:</b> Y +/- .15dB to 5.5MHz C +/- .15dB to 2.5MHz (Component) C +/- .15dB to 1.3MHz (Composite) Less than .5% K Factor (2T)</p> <p><b>User Controls:</b> Output Video Format Pedestal On/Off Narrow/Wide Blanking Digital Noise Reduction Output Timing Adj. (w/Frame Sync option)</p> <p><b>Size:</b> Fits AJA R-Series Frames Compatible with Leitch 6800 Series Frames</p> <p><b>Power:</b> 7 Watts (8 watts w/Frame Sync option)</p>
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## FSG Frame Sync/Genlock Module

### Features

- Optional Frame Sync R20CE, R20D, and R20AD
- External or Input Timing Reference
- Full Output Timing Adjustment
- Passes Vertical Interval Data
- 10-bit Data Path

The FSG Frame Sync/Genlock Module is an optional upgrade to AJA's R20 series encoders and decoders. The FSG Module provides user adjustable output timing relative to an external sync reference. Also, a delay mode provides adjustable delay with respect to the video input. In addition to the frame sync and delay functions, when installed on AJA R20 series encoders, the FSG Module allows the encoder to genlock to an external reference.



### Specifications

<b>Formats:</b>	525/625 Line Component Digital
<b>Data Path:</b>	10 bits
<b>Power:</b>	2 watts

## R10CE

### R10CE 1x4 SDI DA and 10-bit Component/Composite Analog Converter

#### Features

- Universal Monitoring SDI DA
- SDI Input
- 4 Re-Clocked SDI Outputs
- 4 10-bit Component/Composite Analog Outputs
- YPbPr, Betacam, or RGB Component Formats
- PLL Jitter Filter
- Built-In Test Pattern

The R10CE is a SDI distribution amplifier and universal monitoring D/A converter. The R10CE provides four equalized and re-clocked SDI outputs along with four analog monitoring outputs. The four analog outputs can be configured to a wide variety of formats including NTSC/PAL, YC (S-Video), YPbPr (SMPTE, EBU-N10), Betacam or RGB. A PLL jitter filter/memory reduces the effects of SD jitter on the analog outputs. The R10CE fits the AJA R-Series Rack Mount Frames, and is compatible with other standard racks.

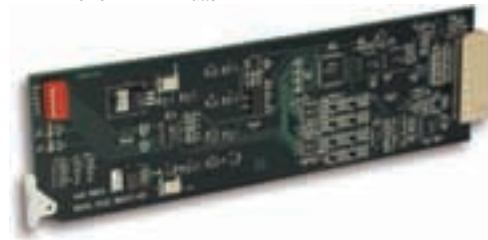
#### Specifications

Inputs: SDI (SMPTE 259M), 1x BNC

Outputs: YPbPr - SMPTE, EBU-N10, Betacam, RGB, 3x BNC  
 Or NTSC, PAL, 3x BNC  
 Or NTSC/PAL and YC, 3x BNC  
 SDI, Re-Clocking, 4x BNC

User Controls:  
 External Dipswitch  
 Video Format  
 Pedestal  
 Vertical/Horizontal Blanking

Power: 4 Watts

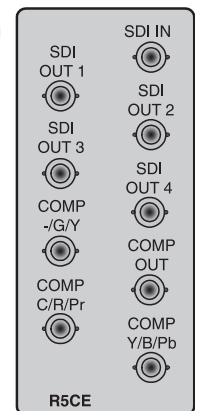
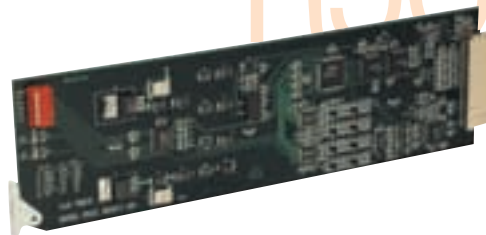


### R5CE 1x4 SDI DA and Component/Composite Analog Converter

#### Features

- Universal Monitoring SDI DA
- SDI Input
- 4 Re-clocked SDI Outputs
- 4 Component/Composite Analog Outputs
- YPbPr, Betacam, or RGB Component Formats
- 10-bit to 8-bit Dithering
- PLL Jitter Filter
- Built-in Test Pattern

The R5CE is a SDI distribution amplifier and universal monitoring D/A converter. The R5CE provides four equalized and re-clocked SDI outputs along with four analog monitoring outputs. The four analog outputs can be configured to a wide variety of formats including NTSC/PAL, Y/C (S-Video), YPbPr (SMPTE, EBU-N10), Betacam or RGB. A PLL jitter filter/memory reduces the effects of SDI jitter on the analog outputs. An exclusive feature of the R5CE is a 10- to 8-bit dithering circuit which removes contouring in the analog outputs. Additionally, the R5CE features user selectable pedestal and H&V blanking.



#### Specifications

Input: SDI (SMPTE 259M), BNC

Outputs: SDI (SMPTE 259M), 4 x BNC  
 Re-Clocked, Equalized  
 NTSC/PAL Analog, 1 x BNC  
 YPbPr - SMPTE, EBU-N10, Betacam  
 RGB, or 3 x NTSC/PAL,  
 or 1 NTSC/PAL and Y/C (S Video) 3 x BNC  
 Jitter Filtering to 2.5 Hz

User Controls: (External Dipswitch)  
 Video Format  
 Pedestal  
 H/V Blanking

Frequency Response: +/- .25 dB to 5 MHz

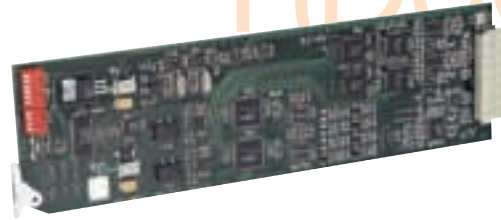
Size: Fits AJA R-Series Frames  
 Compatible with Leitch 6800 Series Frames

Power: 6 watts

## RD5CE Two Channel Digital to Component/Composite Analog Converter

### Features

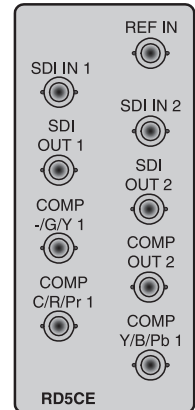
- Low-Cost Universal D/A Conversion
- Two Separate Channels
- SDI Inputs, Re-clocked Loop-thru SDI outputs
- CH 1 outputs Component or Composite
- CH 2 outputs Composite or Y
- Useful as Video/Key Pair
- Reference Input for Color Framing



The RD5CE is a low-cost, dual-channel, universal video D/A converter. The RD5CE supports 2 completely separate channels of SDI to analog conversion and is useful for video/key or video/video applications. Channel 1 can output component or composite analog video including YPbPr (SMPTE, EBU-N10), Betacam, RGB, composite or YC (S-Video). Channel 2 can output composite or Y. Both SDI inputs have a re-clocked SDI loop-thru output.

### Specifications

<p><b>Inputs:</b> 2 Channels SDI (SMPTE 259M), 2 x BNC 1 Reference Input, 1 x BNC</p> <p><b>Outputs:</b> CH 1 Output: YPbPr-SMPTE, EBU-N10, Betacam, RGB, NTSC/PAL, Y/C (S-Video), 3 x BNC CH 2 Output: NTSC/PAL, Y, 1xBNC SDI Looping Output, 2 x BNC</p> <p><b>User Controls:</b> Dipswitch (Separate control for each channel) Video Format Pedestal H/V Blanking</p>	<p><b>Frequency Response:</b> +/- .25dB to 5 Mhz Y +/- .25dB to 2.5 MHz C (component) +/- .25dB to 1.3 MHz C (composite) &lt;1.5% Differential Gain &lt;1.5 Degree Differential Phase</p> <p><b>Size:</b> Fits AJA R-Series Frames Compatible with Leitch 6800 Series Frames</p> <p><b>Power:</b> 7.5 watts</p>
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## RD20DA Dual Channel SDI Distribution Amplifier

### Features

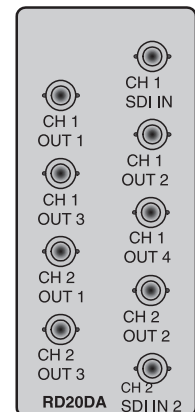
- 2 Channel Re-Clocking, Equalizing SDI Distribution Amplifier
- 2 Separate SDI Inputs,
- 1x3, 1x4 SDI Outputs
- Multi-Standard: 143/177/270/360 Mb



The RD20DA is a multi-standard, 2-channel, 1x4 and 1x3 SDI Distribution Amplifier. The SDI input is re-clocked and equalized to 300 meters of cable. In addition, the multi-standard feature allows the RD20DA to automatically adapt to 143, 177, 270, or 360 Mb SDI inputs.

### Specifications

<p><b>Input:</b> 2 Separate SDI (SMPTE 259M), BNC 143, 177, 270, 360 Mb, auto select</p> <p><b>Outputs:</b> Ch 1: 4 SDI (SMPTE 259M) Ch 2: 3 SDI (SMPTE 259M) Re-Clocked, Equalized</p> <p><b>Size:</b> Fits AJA R-Series Frames Compatible with Leitch 6800 Series Frames</p> <p><b>Power:</b> 3 Watts</p>
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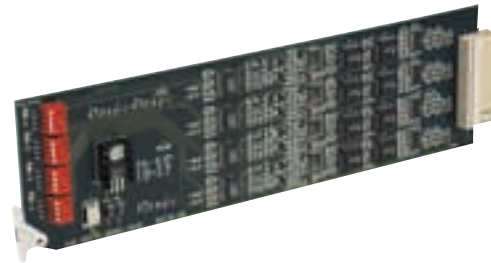
# R44E

## R44E Four Channel SDI to Composite Analog Converter

### Features

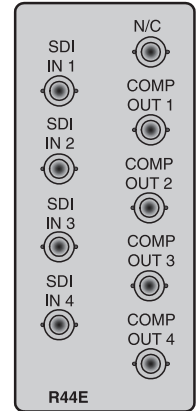
- 4 Channel SDI to NTSC/PAL Converter
- 4 Separate SDI Inputs
- 4 Separate Composite Analog Outputs
- Built In Test Pattern
- Configurable Pedestal
- R44E allows 40 Channels of Conversion in 2 RU

The AJA Video R44E provides four composite analog monitoring outputs from four separate SDI inputs. Each channel has a separate D/A converter with a 10-bit DAC and 8-bit broadcast encoding. Values below black and above white are not clipped. Each channel has a test pattern generator with separate user selectable blanking controls. The R44E also features automatic NTSC or PAL configuration.



### Specifications

Inputs	4 CH SDI (SMPTE 259M) Inputs, 4 x BNC
Outputs:	4 NTSC/PAL, 4 x BNC
User Controls:	Dipswitch (Separate control for each channel) Composite/Y Pedestal H/V Blanking
Frequency Response:	+/- .25 dB to 5 MHz
Size:	Fits AJA R-Series Frames Compatible with Leitch 6800 Series Frames
Power:	8 watts





# C-Series Converters

## C-Series Converters

### Features

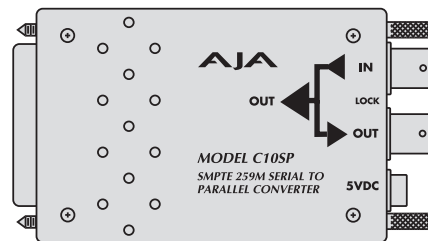
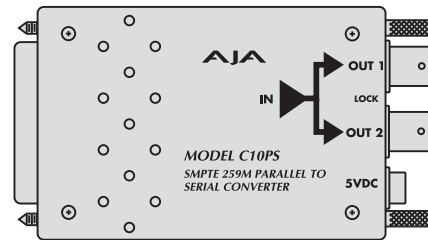
- Parallel to Serial, Serial to Parallel Video Conversion
- Multi-Format, Multi-Standard
- Auto Configuration To Component/Composite, 525- or 526-line
- Dither Mode For Proper 10-bit To 8-Bit Conversion
- Ancillary Data Filter Blocks Audio/Unwanted Data
- Crystal PLL Jitter Filter Available
- Wide Range of Models Available



The C-Series converter products are designed to efficiently adapt 8-bit or 10-bit parallel digital video equipment to serial digital interfaces. The C-Series converters attach directly to the "D" connectors of parallel equipment-eliminating the need for expensive and unreliable parallel cables. At only .65 inches (16.5mm) wide, the C10 converters can fit on even the highest density parallel equipment. A wide range of C-Series products are available for any budget, from single-format only to multi-format with auto configuration and crystal PLL jitter filter. Requires power supply (C10WP or C10WP-U, below).

### Specifications

Serial Interface:	SMPTE 259M-A, B, C Serial I/O BNC
Parallel Interface:	SMPTE 125M (4:2:2) SMPTE 244(4fsc NTSC) EBU Tech 3246/3276 (4:2:2) OEC 60B 170/6 (4fsc PAL) Parallel I/O D-Connectors
Return Loss:	>15dB, 5-270Mhz
Cable EQ:	0-300 meters, Belden 8281 typical
Power:	5 Volts, DC Regulated Power, 3 Watts
Size:	4"x 2.25"x.65" (102mm x 57 mm x 16.5mm)



## C-Series Power Supplies

### C10WP

The C10WP is a miniature high quality switching power supply for AJA's C-Series products. Custom manufactured for AJA, the C10WP is so small it does not cover the adjacent socket in power strips. With a 2x power over-rating and a latching connector, the C10WP meets the high reliability requirements of the professional video industry.

### Specifications

- 100-240v, 50/60Hz Universal input
- 5 volt regulated output
- 7.5 watt capacity
- Latching output connector



### C10WP-U

The C10P-U is an in-line universal input version which can accept a power cord anywhere in the world.

### Specifications

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



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