

BrightEye 75

HD/SD Analog to Digital Video Converter

BrightEye 75 is an analog video to digital converter and audio embedder. Standard definition component or composite, or high definition analog component video is accepted on the input BNCs. Two channels of analog audio are input on a plugable Phoenix connector.

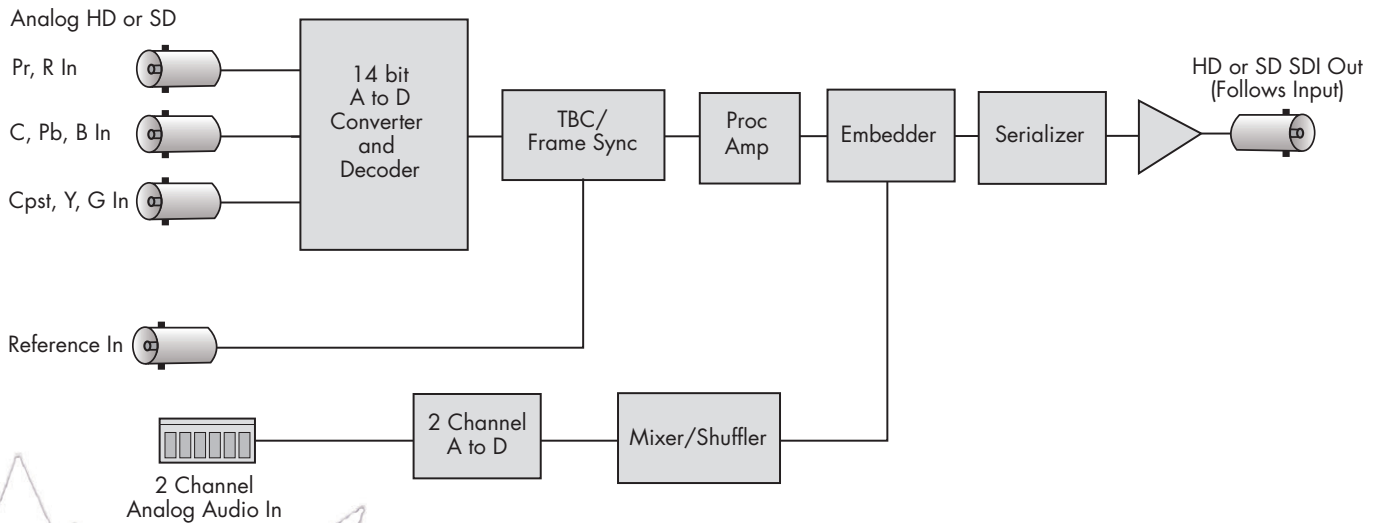
This unit is perfect for use with HD cameras or other devices with analog I/O. The digital output will carry the full, un-compressed input, synchronous to a genlock reference. You can turn a hand-held HD camera into a digital source. A three camera, live studio suddenly becomes affordable.

The built-in TBC/frame synchronizer allows you to feed asynchronous or noisy signals to the BrightEye 75. The input is digitized to 12 bits of resolution and time base corrected by a noise tolerant tracking circuit. An external reference input allows genlock to a house reference. Input selection, gain control, and TBC enable is provided through the front panel interface. Video levels can be adjusted through BrightEye Mac or PC software.

The video and audio signals are embedded and presented on a BNC. The output follows the SD or HD input standard.

Features

- Use with analog HD cameras and set top boxes
- Turn analog camera into digital HD source
- HD/SD analog inputs
- Analog audio inputs
- Serial digital HD or SD embedded output
- TBC and frame sync



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HD/SD Analog to Digital Video Converter

Analog Video Input

Number	One
Type	HD or SD: Y, Pr, Pb (SMPTE or Beta levels) HD or SD: Analog Component RGB (sync on green) Analog Composite PAL or NTSC Analog S-Video PAL or NTSC
Resolution	Digitized at 12 bits
Impedance	75 Ω
Return Loss	>40 dB
Input DC	+/-1 volt DC
Input Hum	<100 mV

Analog Audio Inputs

Number	Two
Type	Balanced
Impedance	>15K Ω
Max Input Level	24 dBu
CMRR	>60 dB, 20 Hz to 10 KHz
Quantization	24 bits, 128 x oversampled
Sample Rate	48 KHz
Reference Level	-10 dBu or +4 dBu
Frequency Response	\pm 0.1 dB, 20 Hz to 20 KHz
Crosstalk	<106 dB
Dynamic Range	>106 dB

Serial Digital Output

Number	One
Type	Follows input standard HD Serial Digital 1.485 Gb/s SMPTE 274M, 292M or 296M or SD Serial Digital 270 Mb/s SMPTE 259M
Impedance	75 Ω
Return Loss	>15 dB
Max Cable Length	100 meters for HD 300 meters for SD (Belden 1694A)

Analog Video to SDI Performance

Bit Resolution	14-bit input quantization 4 x oversampling
Decoding	Fully adaptive comb filter
K Factors	> 1%
Signal to Noise	> 64 dB weighted
Freq Response	\pm 0.1 dB, 0 to 5.5 MHz in SD \pm 0.1 dB, 0 to 12 MHz; \pm 0.5 dB, 12 to 30 MHz in HD

HD Standards Supported

1080i (SMPTE 274M -4,5,6)	50, 59.94 or 60 Hz
720p (SMPTE 296M -1,2,3)	50, 59.94 or 60 Hz
1080p (SMPTE 274M -9,10,11)	23.98, 24, 25 Hz
1080sF (RP211 -14,15,16)	23.98, 24, 25 Hz

Embedded Output (In Serial Output)

Group Assign	One of four groups
Channels	Two
Bit Depth	24 Bit

Reference Input

Number	One
Type	1 V P-P Composite Video, PAL or NTSC or Tri-Level Sync
Impedance	75 Ω
Return Loss	>40 dB

General Specifications

Size	5.63" W x 0.8" H x 5.98" D (143 mm x 21 mm x 152 mm) including connectors and flange
Weight	15 oz
Power	12 volts, 6 watts (100-230 VAC modular power supply)
Temperature Range	0 to 40° C ambient (all specs met)
Relative Humidity	0 to 95%, non-condensing
Altitude	0 to 10,000 ft.