# BrightEy€ 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.

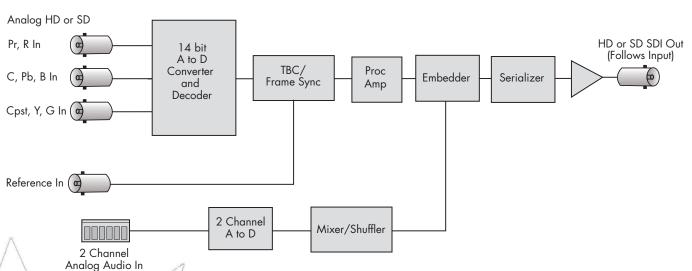
The video and audio signals are embedded and presented on a BNC. The output follows the SD or HD input standard.

#### **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

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Resolution Digitized at 12 bits

 $\begin{array}{lll} \text{Impedance} & 75 \ \Omega \\ \text{Return Loss} & > 40 \ \text{dB} \\ \text{Input DC} & +/-1 \ \text{volt DC} \\ \text{Input Hum} & < 100 \ \text{mV} \end{array}$ 

#### **Analog Audio Inputs**

 $\begin{array}{lll} \mbox{Number} & \mbox{Two} \\ \mbox{Type} & \mbox{Balanced} \\ \mbox{Impedance} & >15 \mbox{K} \, \Omega \\ \mbox{Max Input Level} & 24 \mbox{ dBu} \end{array}$ 

CMRR >60 dB, 20 Hz to 10 KHz
Quantization 24 bits, 128 x oversampled

Sample Rate 48 KHz

Reference Level -10 dBu or +4 dBuFrequency Response  $\pm 0.1 \text{ dB}$ , 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  $75 \Omega$ 

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  $\Omega$ 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.



