

BrightEye 71 & 71-F

HD/SD 8 Channel Analog Audio Embedder/Disembedder

The BrightEye 71 is a dual rate eight channel analog audio embedder or disembedder for 1.5 Gb/s high definition video signals or for 270 Mb/s standard definition signals. The analog audio ports automatically configure as inputs or outputs depending if the module is configured as mux or demux.

When configured as a multiplexer, the BrightEye 71 has one serial digital video input and eight analog audio inputs. The audio streams are embedded into the video stream. The output of the module is a digital stream that contains the original video and audio signals.

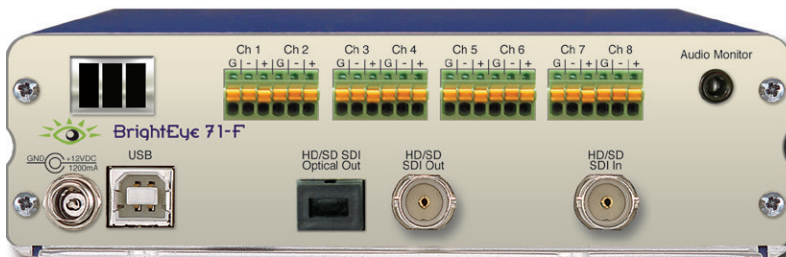
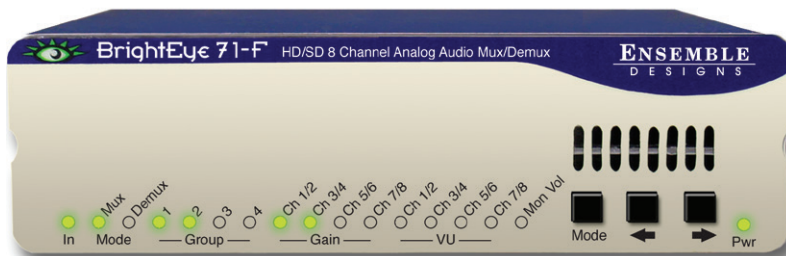
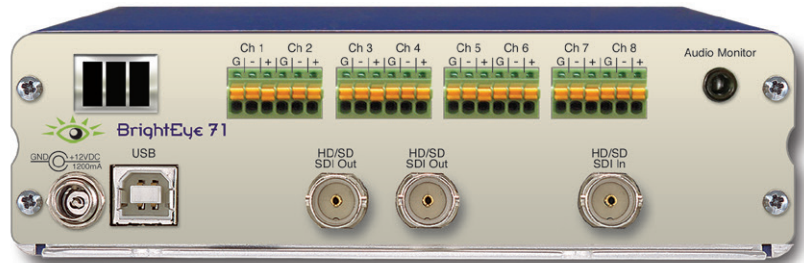
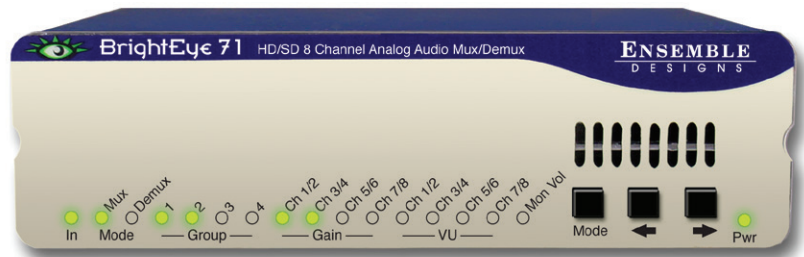
When configured as a demultiplexer, audio signals present in the incoming video signal are extracted and delivered as analog audio.

The BrightEye 71 includes an eight channel audio mixer with channel swap and shuffle capability that allows you to completely re-arrange and re-mix audio channels. It provides precise control over audio level, with up to 12 dB of gain to compensate for low level sources. All audio processing is performed at full 24 bit resolution by a digital signal processor (DSP). Delay is adjustable up to one second.

Order the BrightEye 71-F if you need an optical output.

Features

- Use with servers, workstations and satellite receivers
- HD/SD audio embedder or disembedder
- 8 channel audio mixing
- Adjustable delay
- Optical output available on BrightEye 71-F
- Passes embedded audio



BrightEye 71 & 71-F

HD/SD 8 Channel Analog Audio Embedder/Disembedder

Serial Digital Input

Number	One
Type	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)
Automatic Input Cable Equalization	

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

Analog Audio Inputs

Number	Eight (selectable as inputs or outputs)
Type	Balanced
Impedance	>15K Ω
Maximum 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

Analog Audio Outputs

Number	Eight (selectable as inputs or outputs)
Type	Balanced, transformerless
Impedance	30 Ω
Maximum Output Level	24 dBu
Resolution	24 bits, 128 x oversampled
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

Embedded Output (In SDI Outputs)

Group Assign	Cascade or replace any two of four groups
Channels	Eight
Bit Depth	24 Bit

Serial Digital Output

Number	Two (BE 71) One (BE 71-F)
Type	Follows input
Delay	< 1 μ Sec Audio is adjustable to 1 second
Impedance	75 Ω
Return Loss	>15 dB
Output DC	None (AC coupled)

Optical Output (only on the BrightEye 71-F)

Number	One
Connector	SC/UPC
Type	SD (SMPTE 297M, optical equivalent of 259M) HD (SMPTE 274M or 296M)
Wavelength	1310 nm (non-CWDM) (1550 non-CWDM by special order)
Power	-7 dBm
Max Cable Length	20 km (For greater distances, or higher power and larger loss budgets, please contact the factory)
Fiber Type	Single Mode Multi-mode compatible with attenuation at transmit end

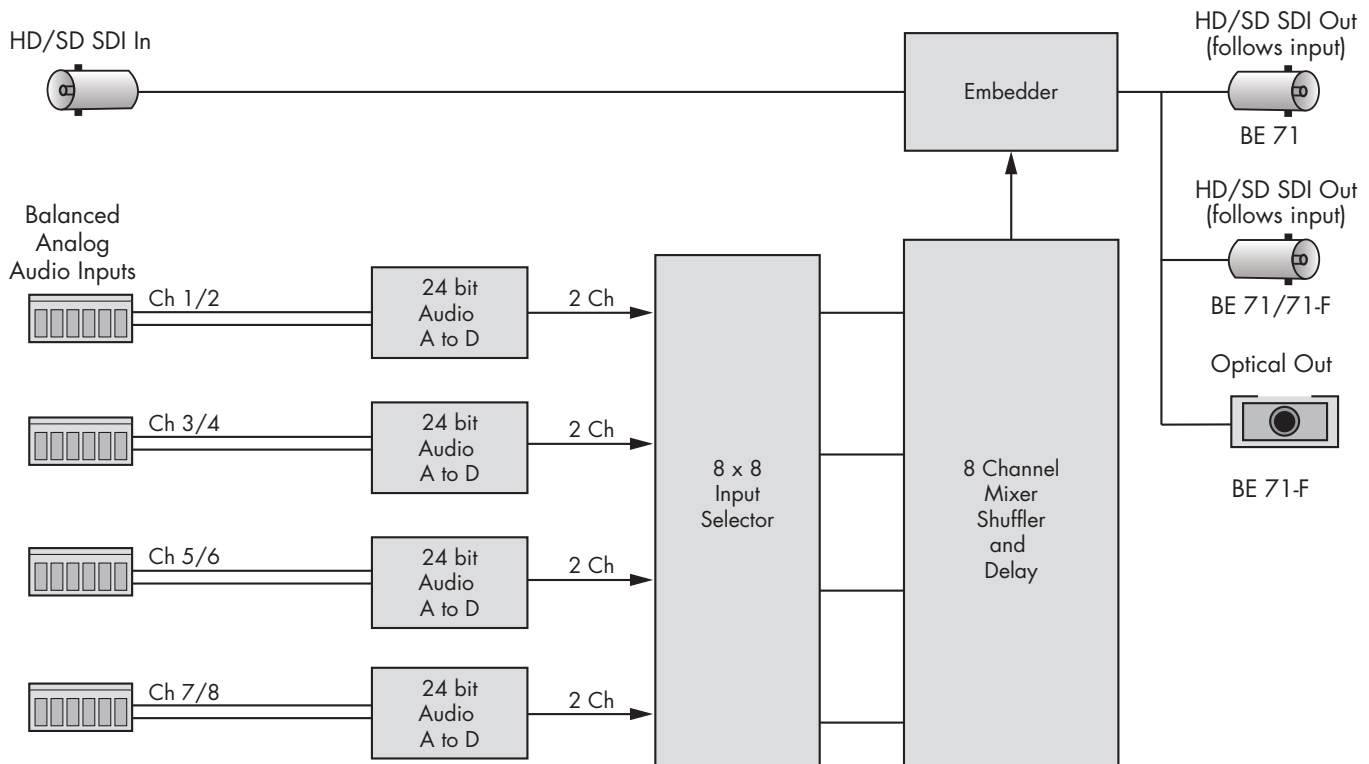
General Specifications

Size	5.63" W x 1.65" H x 5.98" D (143 mm x 42 mm x 152 mm) including connectors and flange
Weight	1 lb 5 oz
Power	12 volts, 8 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.

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Mux Mode



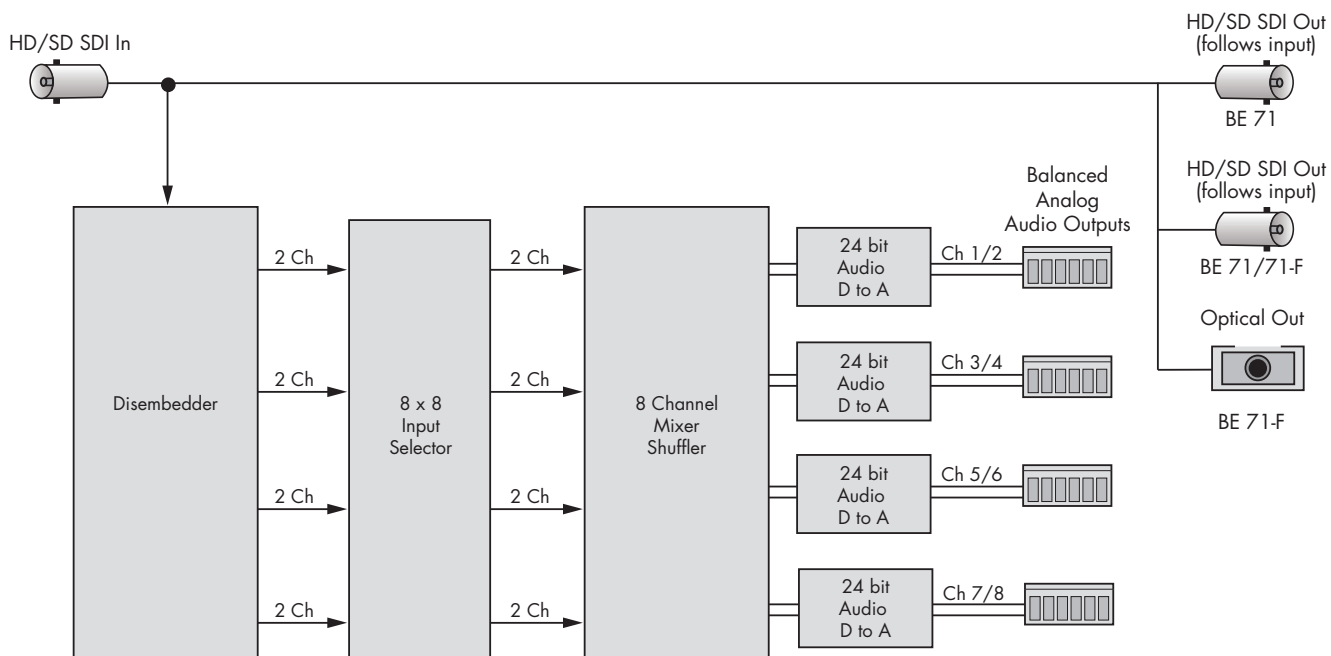
BrightEye 71 has two electrical SDI outputs

BrightEye 71-F has one electrical SDI output and one optical output

BrightEye 71 & 71-F

HD/SD 8 Channel Analog Audio Embedder/Disembedder

Demux Mode



BrightEye 71 has two electrical SDI outputs

BrightEye 71-F has one electrical SDI output and one optical output