



# BrightEye 20

## Analog and Digital Audio Embedder or Disembedder

BrightEye 20 is a versatile audio Mux/Demux. With SDI video I/O, and both analog and AES I/O, it is field configurable for embedding or disembedding.

When configured as a multiplexer, BrightEye 20 has one serial digital video input and two AES digital audio inputs. Alternately, the 4 channel analog audio input can be used. The audio is embedded into the 601 video stream. The output is a serial digital video stream that contains the original video plus the two AES streams or four analog audio channels.

When configured as a demultiplexer, audio signals present in the incoming serial digital video signal are extracted and delivered simultaneously as two AES digital audio streams and as four analog audio channels.

Audio mixing, level adjustments, and channel shuffling can be applied to both the multiplexer and demultiplexer modes, and are accessed through BrightEye PC. Audio group selection is also made through BrightEye PC. A variety of audio connectors and adapters are available for integrating BrightEye 20 to any type of system.

For applications that require analog video, BrightEye 20 can be used in conjunction with one of the other BrightEye units such as the BrightEye 2 Analog to SDI Converter. Use in desktop and broadcast applications.

### AES/EBU Digital Outputs

Number	Two (total of four channels) (selectable as inputs or outputs)
Type	AES3id
Connectorization	Coaxial, 75 Ω BNC
Bit Depth	24 Bit
Sample Rate	48 KHz
Reference Level	Synchronous to Video output -18 or -20 dBFS (selectable)

### General Specifications

Size	5.625" W x 0.8" H x 5.5" D (143 mm x 20 mm x 140 mm) including connectors
Power	12 volts, 7 watts (100-230 VAC modular power supply provided)
Temperature Range	0 to 40° C ambient
Relative Humidity	0 to 95% noncondensing

- ▶ Audio Embedder or Disembedder
- ▶ Analog and Digital Inputs
- ▶ Analog and Digital Outputs

## Specifications

### Video Input

Number	One
Signal Type	Serial Digital (SMPTE 259M)
Impedance	75 Ω BNC
Return Loss	>15 dB
Maximum Cable Length	300 meters

### Video Output

Number	One
Signal Type	Serial Digital (SMPTE 259M)
Impedance	75 Ω BNC
Return Loss	>15 dB
Output DC	None (AC coupled)

### Analog Audio Inputs

Number	Four (selectable as inputs or outputs)
Type	Balanced
Impedance	>15K Ω
Maximum Input Level	24 dBu
CMRR	>60dB, 20Hz to 10KHz
Quantization	24 bits, 128x Oversampled
Sample Rate	48 KHz
Reference Level	-10 dBu or +4 dBu
Frequency Response	± 0.1dB, 20Hz to 20KHz
Crosstalk	<106 dB
Dynamic Range	>106 dB

### AES/EBU Digital Inputs

Number	Two (total of four channels) (selectable as inputs or outputs)
Type	AES3id
Connectorization	Coaxial, 75 Ω BNC
Bit Depth	20 and 24 Bit
Sample Rate	30KHz to 96KHz (Sample Rate Converted internally to 48KHz)
Reference Level	-18 or -20 dBFS (Selectable)
AC-3, Dolby-E	Supported when inputs are synchronous

### Analog Audio Outputs

Number	Four (selectable as inputs or outputs)
Type	Balanced, transformerless
Impedance	30 Ω
Maximum Output Level	24 dBu
Resolution	24 bits, 128x Oversampled
Reference Level	-10 dBu or +4 dBu
Frequency Response	± 0.1dB, 20Hz to 20KHz
Crosstalk	< 106 dB
Dynamic Range	> 106 dB