BrightEy€ 20

Analog Audio/AES Embedder or Disembedder

BrightEye 20 is a versatile audio mux/demux. With SD 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 digital 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 Mac or PC software. Audio group selection is also made through BrightEye Mac or PC software. A variety of audio connectors and adapters are available for integrating BrightEye 20 to any type of system.

Features

- Audio embedder or disembedder
- · Analog and digital inputs
- Analog and digital outputs
- Use in desktop and broadcast applications







Analog Audio/AES Embedder or Disembedder

Video Input

Number One

Signal Type 270 Mb/s SD Serial Digital

(SMPTE 259M)

 $\begin{array}{ll} \text{Impedance} & 75 \, \Omega \\ \text{Return Loss} & >15 \, \text{dB} \\ \text{Max Cable Length} & 300 \, \text{meters} \end{array}$

Automatic Input Cable Equalization

Video Output

Number One

Signal Type 270 Mb/s SD Serial Digital

(SMPTE 259M)

Delay < 1 μSec to SDI path

 $\begin{array}{ll} \text{Impedance} & 75 \, \Omega \\ \text{Return Loss} & >15 \, \text{dB} \end{array}$

Output DC None (AC coupled)

Analog Audio Inputs

Number Four

(selectable as inputs or outputs)

Type Balanced Impedance >15 K 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 ±0.1 dB, 20 Hz to 20 KHz

Crosstalk <106 dB Dynamic Range >106 dB

AES/EBU Digital Inputs

Number Two (total of four channels)

(selectable as inputs or outputs)

Type AES3id Connector Coaxial, 75 Ω Bit Depth 20 and 24 Bit

Sample Rate 30 KHz to 96 KHz (Sample Rate Converted

internally to 48 KHz)

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
Delay < 250 µSec to audio I/0

 $\begin{array}{ll} \text{Impedance} & 30 \ \Omega \\ \text{Maximum Output Level} & 24 \ \text{dBu} \end{array}$

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

AES/EBU Digital Outputs

Number Two (total of four channels)

(selectable as inputs or outputs)

Type AES3id
Connector Coaxial, 75 Ω
Bit Depth 24 Bit
Sample Rate 48 KHz

Synchronous to video output

Reference Level -18 or -20 dBFS (selectable)

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

including conne

Weight 1 lb

Power 12 volts, 7 watts

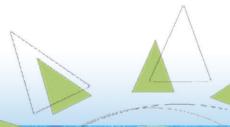
(100-230 VAC modular power supply)

Temperature Range 0 to 40° C ambient (all specs met)

Relative Humidity 0 to 95%, non-condensing

Altitude 0 to 10,000 ft.

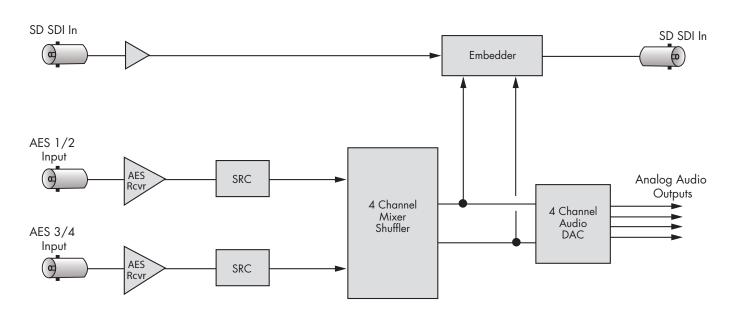
BrightEye 20 Block Diagrams on following pages



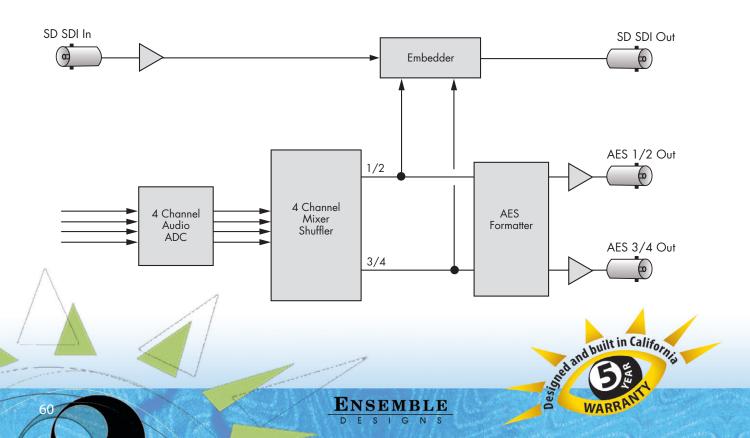
BrightEy€ 20

Analog Audio/AES Embedder or Disembedder

AES Mux (Cascade or Replace) Mode



Analog Mux (Cascade or Replace) Mode



Analog Audio/AES Embedder or Disembedder

Demux Mode

