

# 7600

## HD/SD Embedder and Disembedder

The 7600 module is a dual rate eight-channel audio embedder or disembedder for 1.5 Gb/s high definition video signals or for 270 Mb/s standard definition signals. Four AES ports automatically configure as inputs or outputs depending on if the module is configured as mux or demux.

### Configurable Mux or Demux

When configured as a multiplexer, the 7600 has one serial digital video input and four AES audio inputs. These four AES streams are embedded into the video stream. AES inputs are sample rate-converted, allowing the use of asynchronous audio. The output of the module is a digital stream that contains the original video signal and four AES pairs.

When configured as a demultiplexer, audio signals present in the incoming video signal are extracted and delivered as standard AES digital audio streams.

The 7600 includes a full-featured, eight-channel audio mixer. The channel swap and shuffle capability allows you to completely rearrange and remix 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.

### In-Line Shuffler

Because the 7600 has simultaneous disembedding and embedding, it is an in-line processor for embedded audio. It can take embedded content, adjust levels and remap channels, and deliver it to the output as an embedded signal.

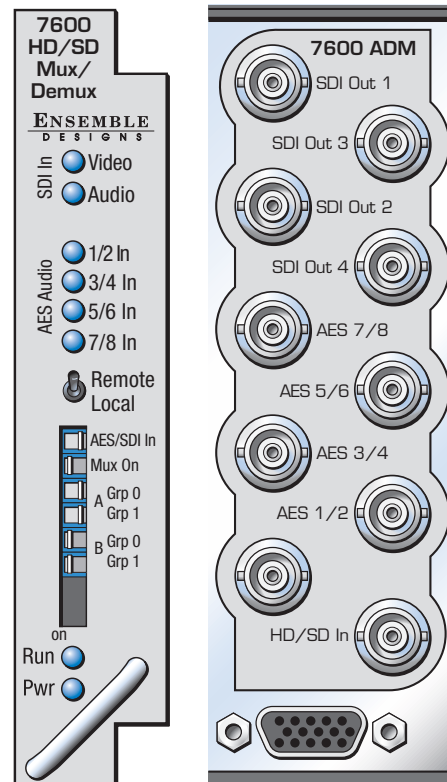
The 7600 can be configured locally or controlled and configured remotely with Avenue Touch Screens, Express Panels, or Avenue PC Software. Alarm generation, configurable user levels, module lockout, and customizable menus are just some of the tools included in the Avenue Control System.

### Automatic Gain Control Option

The 9670 Audio Automatic Gain Control software key can be added as an option. This option provides control for keeping audio levels consistent in program material.

## Features

- **Audio embedder or disembedder for HD or SD signals**
- **Handles 4 AES streams/8 channels**
- **Up to one second of delay**
- **In-line processor for embedded audio**
- **Supports Dolby E and AC-3 data**
- **Audio Automatic Gain Control option**
- **Built-in audio mixer**
- **Phase inversion selectable on a channel basis**
- **Built-in sample rate converter accepts asynchronous inputs**
- **26 bit processing resolution**
- **Memory registers**
- **Local and remote control**



## HD/SD Embedder and Disembedder

### Serial Digital Input

Number	One
Signal Type	HD Serial Digital 1.485 Gb/s, SMPTE 274M, 292M or 296M SD Serial Digital 270 Mb/s, SMPTE 259M
Impedance	75 $\Omega$
Return Loss	>15 dB
Max Cable Length	100 meters Belden 1694A
Automatic Cable Input Equalization	

### Standards Supported

1080i 50, 59.94 or 60 Hz, SMPTE 274M -4,5,6  
720p 50, 59.94 or 60 Hz, SMPTE 296M -1,2,3  
1080p 23.98, 24 or 25 Hz, SMPTE 274M -9,10,11  
1080sF 23.98, 24 or 25 Hz, RP211 -14,15,16  
525i 59.94, 625i 50

### Serial Digital Output

Number	Four
Signal Type	Follows input
Impedance	75 $\Omega$
Return Loss	>15 dB
Output DC	None (AC coupled)
Delay	<2 $\mu$ Sec

### AES/EBU Digital Inputs

Number	Four (total of eight channels)
Type	AES3id
Connector	Coaxial, 75 $\Omega$
Bit Depth	20 and 24 bit
Sample Rate	30 kHz to 100 kHz (sample rate converted internally to 48 kHz)

Crosstalk	<144 dB
Dynamic Range	>144 dB
Reference Level	-18 or -20 dBFS (selectable)
AC-3, Dolby E	Supported when inputs are synchronous

### Embedded Inputs

Number	Four AES Streams (from video input) Eight channels from any two of four groups
Channels	Eight
Bit Depth	20 and 24 bit

### AES/EBU Digital Outputs

Number	Four (total of 8 channels)
Signal Type	AES3id
Connector	Coaxial, 75 $\Omega$
Bit Depth	20 and 24 bit
Sample Rate	48 kHz
	Synchronous to video output
Reference Level	-18 or -20 dBFS (selectable)

### Embedded Output (In SDI Outputs)

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

### General Specifications

Power Consumption	10 watts
Temperature Range	0 to 40°C ambient (all specs met)
Relative Humidity	0 to 95%, noncondensing
Altitude	0 to 10,000 ft

