

SD Aspect Ratio Converter

The 7940 is an aspect ratio converter for standard definition signals. Resizing and Repositioning includes choices for: Letterbox, Anamorphic, Crop and Zoom. Proc amp controls are provided in the form of Video, Chroma and Pedestal.

The 7940 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 lock out, and customizable menus are just some of the tools included in the Avenue control system.

Automatic Aspect Ratio Conversion

The 7940 supports WSS (Wide Screen Signaling), and AFD (Active Format Description) to mark or identify the aspect ratio of the video content. These flags are generated at the output of the module, and they are read at the input. This allows the up and downconversion process to adapt automatically to material that is already in letterbox or pillarbox form in order to produce the most appropriate conversion.

Audio Options

When an audio sub module is installed, audio is automatically delayed as needed to compensate for the video processing in the 7940. For complete audio processing, choose from three different audio sub modules. Sub modules plug onto the 7940 board and do not take up a slot in the frame.

The 8415 is an eight-channel audio sub module with AES I/O that provides management of embedded audio in the

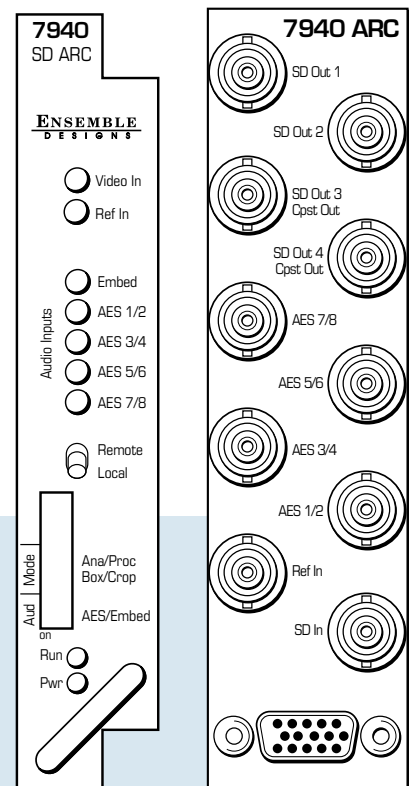
processing path, or supports audio embedding/disembedding alongside the video processing elements. Embedded audio is safely bypassed around the video frame store with the lip sync preserved. Level adjustments and channel shuffling are accessed through the built-in audio mixer. The 9670 Automatic Gain Control option can be added to the 8415. All audio processing is performed at full 24 bit resolution.

The 7610 provides carriage of up to eight channels of embedded audio through the format conversion process. Embedded audio in the input signal is delayed to match the video delay and preserve lip sync. The delayed content is reinserted in the video output. No level adjustment or channel swapping is provided.

The 7615 provides processing for signals with eight channels of embedded audio. It offers the same processing and AES I/O as the 8415 plus the ability to decode Dolby E signals.

Features

- » SD Aspect Ratio Converter
- » 16 bit processing
- » Accepts asynchronous signals
- » Reference input – output is timeable
- » Auto-detects input standard and frame rate
- » Passes closed captioning
- » Proc Amp
- » Built-in test pattern and tone
- » Audio Mux/Demux optional
- » Audio Automatic Gain Control optional
- » Add audio sub module for delay and processing
- » Occupies one slot in frame, even with audio option



Serial Digital Input

Number One
Signal Type SD Serial Digital 270 Mb/s SMPTE 259 (both 525 and 625 SD standards)
Impedance 75 Ω
Return Loss >15 dB
Max Cable Length 300 meters Belden 1694A
Automatic Cable Input Equalization

Serial Digital Output

Number Four max
Signal Type SD Serial Digital 270 Mb/s SMPTE 259
Impedance 75 Ω
Return Loss >15 dB
Output DC None (AC coupled)

Reference Input Number

One external (module's BNC)
 One internal (frame master ref BNC)
 (frame master ref BNC)
Signal Type PAL or NTSC composite video
Return Loss >40 dB
 (applies to external ref input)

AES/EBU Digital Inputs (with 8415 sub module option)

Number Four (total of eight channels)
Signal Type AES3id
Connectorization Coaxial, 75 Ω
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
 Selectable to any of four groups
Channels Eight
Bit Depth 20 and 24 bit

AES/EBU Digital Outputs

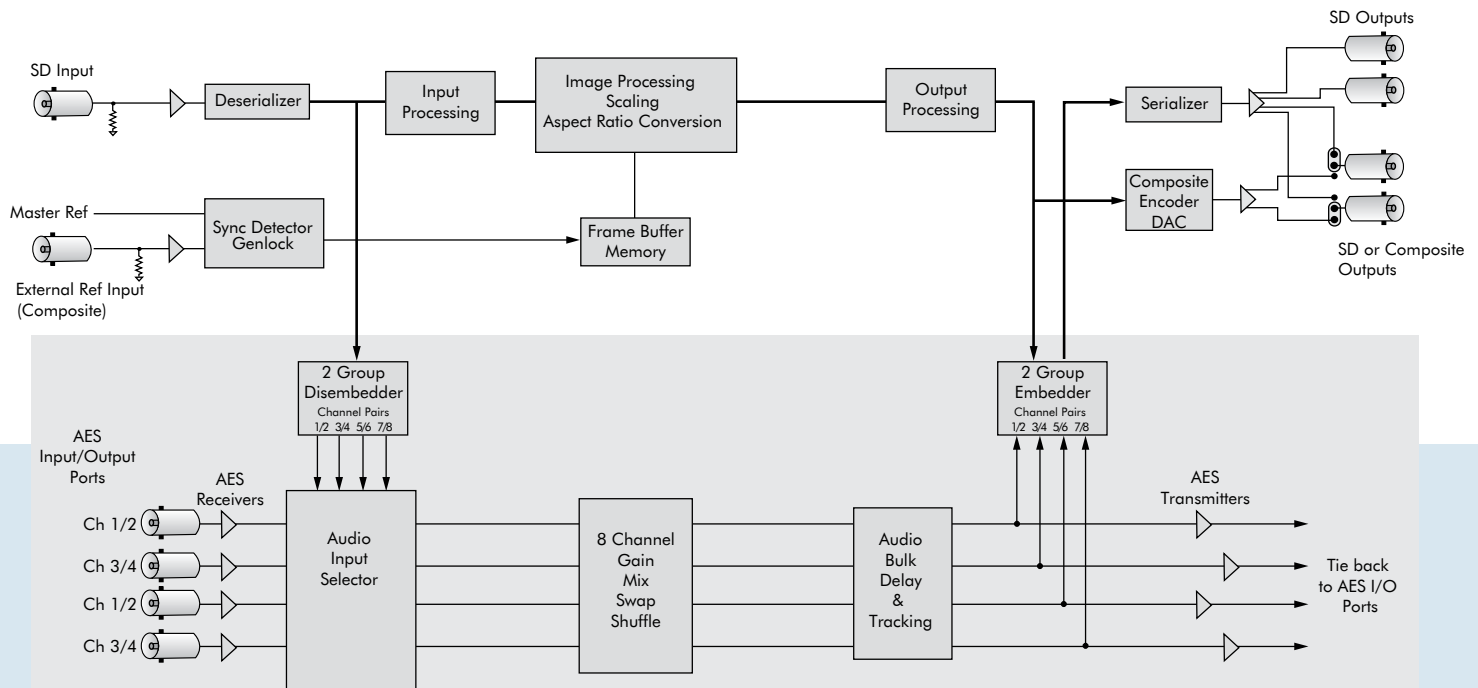
Number Four (total of eight channels)
Signal Type AES3id
Connectorization Coaxial, 75 Ω
Bit Depth 20 and 24 bit
Sample Rate 48 KHz
 Synchronous to Video output
Reference Level -18 or -20 dBFS (selectable)

Embedded Output

Number Four or two depending on configuration
 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



8415 8 Channel Audio Processing Option