

# 7847FSEDA-3G-F-2, 7847FSEDA-HD-F-2

## Dual Path 3G/HD/SD Frame Synchronizers and Distribution Amplifiers

Common broadcast and other professional media applications require that a number of common processing and utility functions be performed on signals entering and being generated at various points within the facility:

- Frame Synchronization
- Audio Processing
- Distribution
- Optical/Electrical Conversion

Typically, multiple products would need to be used to perform the above functions. The 7847FSEDA is a single powerful product which supports these functions on two independent processing paths. This offers exceptional value and density while reducing interwiring, rack space and power requirements. Models are available to support common SD, HD and 3G video formats.

### Frame Synchronization and Processing

The 7847FSEDA series supports frame synchronization capabilities with video proc, color correction and RGB based color legalization as standard. Audio and video delay are independently adjustable.

### Audio Processing

As standard features, the 7847FSEDA series supports 16 channels of embedded audio, 5.1 to stereo down-mixing (LoRo or LtRt), global audio delay, audio channel shuffling, gain, inversion and mono-mix capabilities. Optional audio processing features include IntelliGain audio loudness control (+IG2 option) and stereo to 5.1 upmix (+UMX2 option).

### Distribution

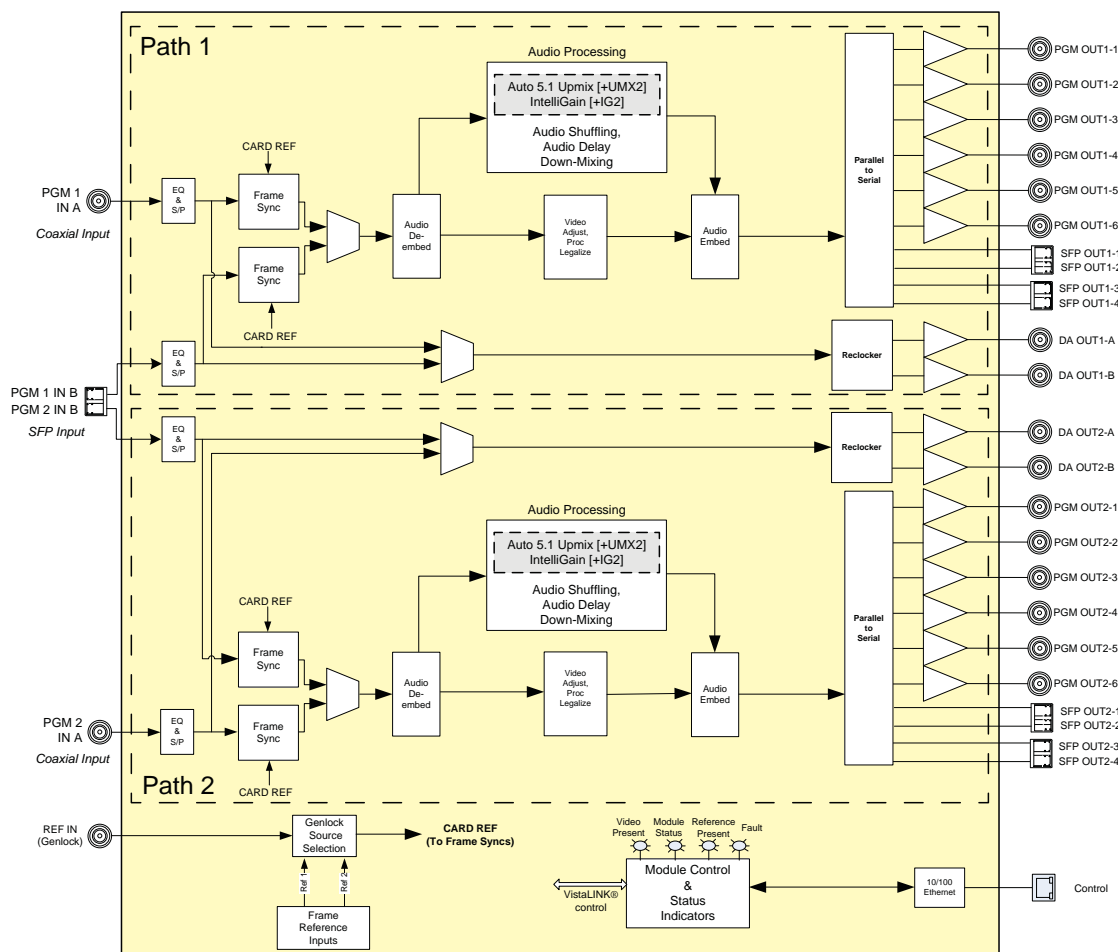
For signal distribution or connection to external elements such as patch panels, re-clocked copies of the input signals are provided on two coax outputs per path. Six coax outputs per path of the processed/synchronized input signals are also provided. Standard connectors are DIN 1.0/2.3 while HDBNC are optional.

### Optical/Electrical Conversion

In addition to coaxial inputs and outputs, the 7847FSEDA also offers added I/O via Evertz pluggable SFP modules (ordered separately). Whether the card uses the SFP or coaxial inputs for either processing or distribution path is software selectable on a per path basis. On the output side, in addition to the six fully processed coaxial outputs per path, four outputs per path are available via SFP's. Optical or coaxial type SFP's may be installed (ordered separately) to facilitate alternate coaxial or optical inputs or additional coaxial or optical outputs.

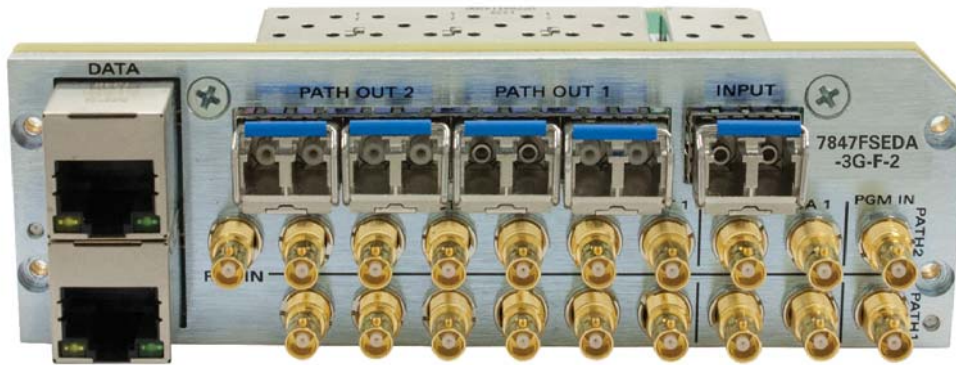
### Features & Benefits

- Dual path Frame Sync and Distribution Amplifier
- 14x paths of processing in 3RU
- Comprehensive DA functionality with 6x synchronized and processed coax outputs and 4x synchronized and processed SFP outputs per path
- Re-clocked, non-synchronized/processed outputs and synchronized/processed outputs may be independently sourced from the SFP or coaxial inputs (software selectable)
- Mini DIN 1.0/2.3 I/O coaxial inputs/outputs, HDBNC optional
- Fiber inputs and outputs are available when fiber SFP transmit and/or receive modules are installed
- Coaxial SFP's may also be installed in SFP ports to provide alternate coaxial inputs and/or additional synchronized/processed coaxial outputs
- Input may be sourced from coaxial or SFP sources, and through software selection may be manually forced to either input or may operate in an automatic mode based on loss of video
- Reference may be sourced from either frame reference connector, or the local reference input on the card (software selectable) with support for prioritizable auto-failover among the reference sources
- Economical SCTE104 message insertion over IP via the SCTE104 API with +SCTE104-2 option
- Support for 16 channels of embedded audio with full routing capability
- 5.1 to stereo down-mixing (LoRo or LtRt) as standard, stereo to 5.1 up-mixing optional (+UMX)



# 7847FSEDA-3G-F-2, 7847FSEDA-HD-F-2

## Dual Path 3G/HD/SD Frame Synchronizers and Distribution Amplifiers



### Specifications

<p><b>Serial Digital Video Input</b> Standard: -3G Model SMPTE ST 424 2.970 Gb/sec (1080p/59.94Hz level A&amp;B, 1080p/50Hz level A&amp;B) All models SMPTE ST 292-1 1.485 Gb/s (1080i/59.94Hz, 1080i/50Hz, 720p/59.94Hz, 720p/50Hz) SMPTE ST 259-1 270 Mb/s (525i/59.94Hz, 625i/50Hz)</p> <p>Number of Inputs: 2 (one per video path) Connector: DIN 1.0/2.3 (HDBNC Optional) Input Equalization: Automatic to 80m @ 2.970 Gb/s with Belden 1694 or equivalent Automatic to 100m @ 1.485 Gb/s with Belden 1694 or equivalent Automatic to 300m @ 270 Mb/s with Belden 1694 or equivalent</p> <p>Return Loss: &gt;15 dB to 1.5 GHz &gt;10 dB to 3.0 GHz</p> <p><b>Serial Digital Video Output</b> Standard: -3G Model SMPTE ST 424 2.970 Gb/sec (1080p/59.94Hz level A&amp;B, 1080p/50Hz level A&amp;B) All models SMPTE ST 292-1 1.485 Gb/s (1080i/59.94Hz, 1080i/50Hz, 720p/59.94Hz, 720p/50Hz) SMPTE ST 259-1 270 Mb/s (525i/59.94Hz, 625i/50Hz)</p>	<p>Number of Outputs: Fully processed: 12 (6 per video path) Reclocked only: 4 (2 per video path) Connector: DIN 1.0/2.3 (HDBNC optional) Signal Level: 800mV Nominal SD Rise/Fall Times: 740ps nominal HD Rise/Fall Times: 200ps nominal Return Loss: &gt;15 dB to 1.5 GHz &gt;10 dB to 3.0 GHz</p> <p><b>Optical (SFP) Digital Video Input</b> Module: Evertz SFP3R-2 (Note: SFP3R-DIN2-3G coaxial SFP may also be fitted to provide additional DIN1.0/2.3 inputs) Number of Inputs: 2 per SFP, 1 SFP may be installed Connector: LC/UPC Fiber: Compatible with Singlemode or 50/62.5µm Multimode Operating Wavelength: 1270nm to 1610nm Maximum Input Power: -1dBm Optical Sensitivity: -21dBm at 2.97GB/s pathological Level A <i>Note: SFP3R-DIN2-3G coaxial SFP may also be fitted to provide additional DIN1.0/2.3 inputs</i></p> <p><b>Optical (SFP) Digital Video Output</b> Module: Evertz SFP3T series (see ordering information) Number of Outputs: 2 per SFP, up to 4 SFP's may be installed SFP Connector: LC/UPC</p>	<p>Fiber: Compatible with Singlemode or 50/62.5µm Multimode</p> <p>Optical Power: Standard 1310nm: -2dBm +/-1dBm -S (Short haul 1310nm): -7dBm +/-1dBm CWDM: +4dBm +/-1.5dBm</p> <p>Wavelength: Standard &amp; -S: 1310nm CWDM: 1270nm-1610nm, ITU-T G.694.2 compliant <i>Note: SFP3T-DIN2-3G coaxial SFPs may also be fitted to provide additional DIN1.0/2.3 outputs</i></p> <p><b>Reference Video Input</b> Type: HD Tri-Level sync, NTSC or PAL Colour Black 1 V p-p</p> <p>Connector: BNC per IEC 61169-8 Annex A Frame Reference: DIN 1.0/2.3 (HDBNC Optional) Card Reference: 75Ω (Termination is user configurable – enable / disable)</p> <p><b>Electrical</b> Voltage: +12VDC Power: 32 Watts EMI/RFI: Complies with FCC regulations for class A devices. Complies with EU EMC directive</p> <p><b>Physical</b> Number of slots 7800/7801FR Frame: 2</p>
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### Ordering Information

<b>7847FSEDA-3G-F-2</b>	Dual Path 3G/HD/SD Frame Synchronizer and Distribution Amplifier
<b>7847FSEDA-HD-F-2</b>	Dual Path HD/SD Frame Synchronizer and Distribution Amplifier

**Ordering Options**

<b>+IG2</b>	Dual Path (16 Channels each) IntelliGain® Loudness Processing
<b>+UMX2</b>	Dual Path Stereo to 5.1 Upmix Capability
<b>+HDBNC</b>	Rear Plate with HDBNC Connectors
<b>+SCTE104</b>	Dual path SCTE104 message insertion over IP

**Evertz SFP Modules (Sold separately, please specify at the time of ordering)**

<b>SFP3R-2</b>	Dual fiber optic receiver SFP module
<b>SFP3T13-2</b>	Dual fiber optic transmitter SFP module, 1310nm FP lasers
<b>SFP3T13-2-S</b>	Dual short-haul fiber optic transmitter SFP module, intra-facility and multimode applications, 1310nm FP lasers

<b>SFP3Txx/yy-2</b>	Dual fiber optic transmitter SFP module, CWDM DFB lasers (1270-1610nm available)
<b>SFP3T-DIN2-3G</b>	Dual coaxial transmitter SFP module, Mini DIN 1.0/2.3 Connectors
<b>SFP3R-DIN2-3G</b>	Dual coaxial receiver SFP module, Mini DIN 1.0/2.3 Connectors

**Consult factory for CWDM multiplexers and other optical accessories.**

**Rear Plate Suffix**

<b>+3RU</b>	+3RU Rear Plate
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**Enclosure**

<b>7800FR</b>	3RU Multiframe which holds up to 15 single slot modules
<b>7800FR-QT</b>	3RU Multiframe which holds up to 15 single slot modules, low noise
<b>7801FR</b>	1RU Multiframe which holds up to 4 single slot modules