

# 7800IDA8-3G

## 3G/HD/SD-SDI Intelligent Distribution Amplifier (1x8)

The 7800IDA8-3G reclocking distribution amplifier provides high quality distribution of facility 3G/HD/SD-SDI signals. This module features an auto-sensing equalized input which generates eight reclocked outputs and is especially useful in projects where long cables runs are encountered.

Unlike other traditional DA's on the market, this module has been designed to support additional broadcast functionality such as loudness control, lipsync control, audio up and down mixing. These features can be optionally ordered providing more value to an already high performance distribution amplifier!

The 7800IDA8-3G is VistaLINK® capable, offering remote monitoring, control and configuration capabilities via Simple Network Management Protocol (SNMP) giving the flexibility to manage operations, including signal monitoring and module configuration from SNMP capable control systems (Manager or NMS)

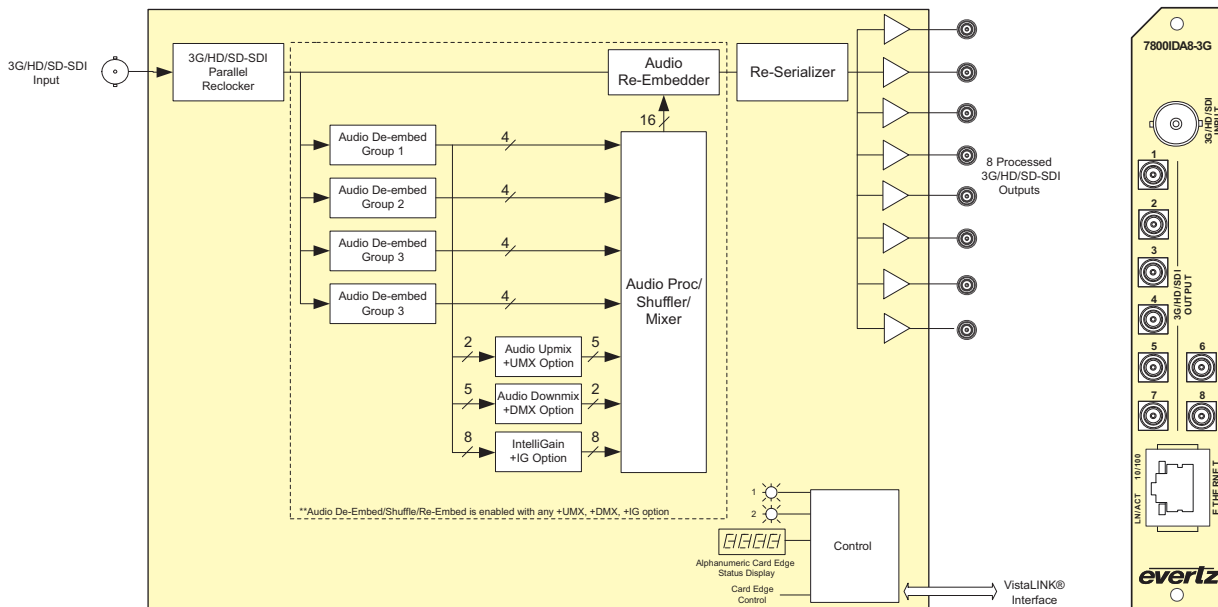
### ►Features & Benefits

- 3G/HD/SD-SDI input with eight reclocked outputs
- Long reach cable performance
- Optional embedded audio channel shuffling
- Optional upmixing, downmixing, loudness control and lipsync control

#### This device:

- Provides eight reclocked outputs from the 3G/HD/SD-SDI input
- Provides enhanced signal reclocking and conditioning
- Offers embedded mono audio channel shuffling (with any of the +UMX, +DMX, +IG options)
- Offers 2-channel stereo to 5.1 surround sound upmixing (with the +UMX option)
- Offers 5.1 2-channel stereo downmix (with the +DMX option)
- Offers award winning IntelliGain™ loudness control (with the +IG option)
- Offers award winning IntelliTrak™ Lipsync control (with the +IT option)
- SNMP configuration via 7700FC Evertz frame controller

The 7800IDA8-3G occupies 1 card slot and can be housed in the 3RU 7700FR-C, 7800FR and 7800FR-QT frames which have a 15 slot capacity. The 7700FC frame controller is required for configuration.



### ►Specifications

#### Serial Video Input:

Standard: Auto-detects standard 3 Gb/s SMPTE ST 424-1, 1.5Gb/sec SMPTE ST 292-1, 270Mb/s S SMPTE ST 259-1, (525i/59.94 or 625i/50)

Connector: BNC per IEC 61169-8 Annex A

Input Equalization: Automatic to 100m @ 3 Gb/s, 140m @ 1.5Gb/s & 350m @ 270Mb/s

Return Loss: > 20dB up to 270Mb/s > 15dB up to 1.5Gb/s > 10dB up to 3 Gb/s

Signal Level: 800mV nominal

DC Offset: 0V ±0.5V

Rise and Fall Time: 200ps nominal for 3G/HD-SDI 900ps nominal for SD-SDI

Overshoot: < 10% of amplitude

Return Loss: > 20dB up to 270MHz > 15dB at 1.5Gb/s

Jitter: < 0.20 UI

#### Ethernet Interface:

Standard: Ethernet 10/100 base-T, IEEE 802.3U standard for 100Mb/s

Connector: RJ-45

Function: Unused. Designed for future use.

#### Electrical:

Voltage: +12V DC

Power: 9W

EMI/RFI: Complies with FCC regulations for class A devices Complies with EU EMC directive

#### Physical (number of slots):

7700FR-C: 1

7800FR: 1

7800FR-QT: 1

#### Serial Video Outputs:

Standard: Same as input

Number of Outputs: 8

Connector: Mini Din 1.0/2.3 connector

### ►Ordering Information

**7800IDA8-3G** 3G/HD/SD-SDI Intelligent 1x8 Distribution Amplifier (7700FC required for configuration)

**Ordering Options** Rear Plate must be specified at time of order  
Eg: Model + 3RU

**+DMX** 5.1 to 2-Channel Stereo Downmix

**+UMX** 2-Channel Stereo to 5.1 surround sound upmix

**+IG** IntelliGain™ Loudness Control

**+IT** IntelliTrak Lipsync Control

**+TL** ThumbLINK

#### Accessories:

**7700FC** VistaLINK® Frame Controller

**CP-2116E-H** Remote Control Panel

**CP-2232E** Remote Control Panel

#### Rear Plate Suffix

**+3RU** 3RU Rear Plate for use with 7700FR-C, 7800FR or 7800FR-QT Multiframe

#### Enclosures

**7700FR-C** 3RU Multiframe which holds up to 15 single slot modules

**7800FR** 3RU Multiframe which holds up to 15 single slot modules

**7800FR-QT** 3RU Quiet Multiframe which holds up to 15 single slot modules

**7801FR** 1RU Multiframe which holds up to 3 single or dual slot modules

# 7800IDA8-3G+IG

## 3G/HD/SD-SDI Intelligent Distribution Amplifier (1x8) with IntelliGain™



Audio loudness problems are nothing new. For years broadcasters have had the challenge of providing audio and video content to their target audience while minimizing complaints about the drastic variations in audio loudness between program and commercial.

The 7800IDA8-3G+IG IntelliGain™ processor is designed to normalize perceived differences in audio loudness in real time for any 3G/HD/SD-SDI signal with embedded audio. This module will internally de-embed the audio signals, regulate the signal level based on a user defined target loudness level, then re-embed the corrected audio signals back into the video output.

The 7800IDA8-3G modules are VistaLINK® PRO capable, offering remote monitoring, control and configuration via Simple Network Management Protocol (SNMP).

The 7800IDA8-3G occupies one module slot within the 7000 series 3RU frames, which will hold up to 15 modules or the 7701FR 1RU frame, which will hold up to three modules.

There are two main complaints:

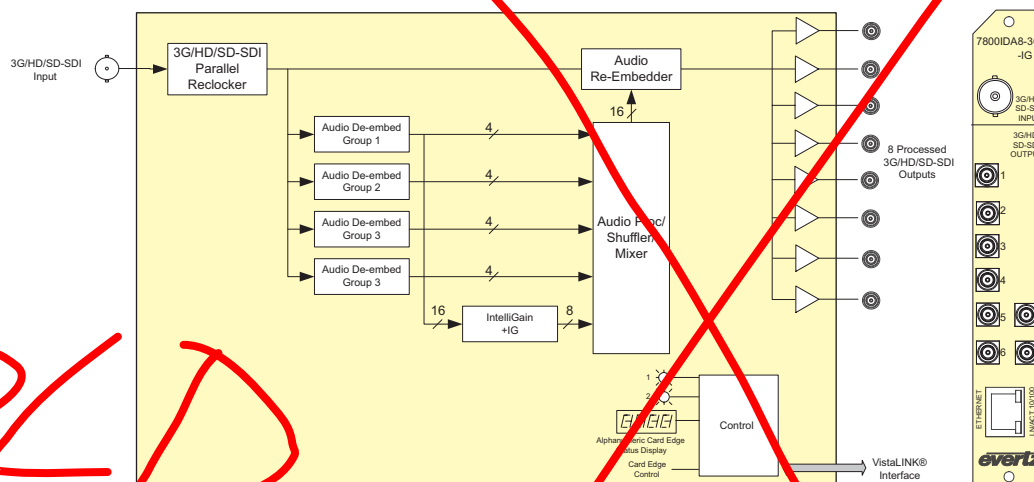
1. Commercial Loudness
2. Channel to Channel loudness variation.

As more and more channels with inconsistent audio levels are distributed to the home, public annoyance has increased. Some recent studies have shown up to a 17dB deviation in perceived loudness of programming between channels. Home listeners have had to tolerate this problem by either muting the commercials or adjusting the volume as they watch their programs.

Evertz has recognized this dilemma and presents IntelliGain™ (patent pending) as the solution.

### IntelliGain™ Offers:

- Consistent audio loudness levels applying the ITU-R BS.1770 algorithm
- Gain control within a program interval to preserve audio dynamic range
- Artifact-free transitions between program and commercials
- Elimination of drastic volume changes during commercials and interstitials
- Fully Integrated Dynamic Range Processor, also referred to as a compander
- Ideal for aggregator applications and multi-channel playback facilities (DTH, Cable, IPTV...)
- VistaLINK® controlled and monitored!



### Specifications

#### Serial Video Input:

Standard: Auto-detects standard 3Gb/s SMPTE 424M, 1.5Gb/sec SMPTE 292M, 270Mb/s SMPTE 259M-C (525i/59.94 or 625i/50)

Connector: BNC per IEC 61169-8 Annex A

Input Equalization: Automatic to 100m @ 3Gb/s, 140m @ 1.5Gb/s & 350m @ 270Mb/s

Return Loss: > 20dB up to 270Mb/s  
> 15dB up to 1.5Gb/s  
> 10dB up to 3Gb/s

#### Serial Video Outputs:

Standard: Same as input

Number of Outputs: 8

Connector: Mini Din 1.0/2.3 connector

Signal Level: 800mV nominal

DC Offset: 0V ±0.5V

Rise and Fall Time: 200ps nominal for 3G/HD-SDI

900ps nominal for SD-SDI

Overshoot: < 10% of amplitude

Return Loss: > 20dB up to 270MHz

> 15dB at 1.5Gb/s

Jitter: < 0.20 UI

#### Electrical:

Voltage: +12V DC

Power: 9W

EMI/RFI: Complies with FCC regulations for class A devices  
Complies with EU EMC directive

#### Physical (number of slots):

350FR: 1

7700FR-C: 1

7800FR: 1

### Ordering Information

**7800IDA8-3G+IG** 3G/HD/SD-SDI Intelligent Distribution Amplifier (1x8) with IntelliGain™

**Ordering Options** Rear plate must be specified at time of order  
Eg: model +3RU

#### Rear Plate Suffix

+3RU 3RU Rear Plate for use with 350FR, 7700FR-C or 7800FR Multiframe  
+1RU 1RU Rear Plate for use with 7701FR Multiframe  
+SA Standalone Enclosure Rear Plate

#### Enclosures

350FR

7700FR-C

7800FR

7701FR

S7701FR

3RU Portable Multiframe which holds up to 7 single slot modules  
3RU Multiframe which holds up to 15 single slot modules  
3RU Multiframe which holds 15 modules  
1RU Multiframe which holds up to 3 single or dual slot modules  
Standalone enclosure