

Model 7700DA-HD / 7700DA8-HD

The 7700 HD series Distribution Amplifiers provide reliable distribution of your 1.5 Gb/s HDTV serial digital signal. The DA's feature one auto-equalized input with either four or eight reclocked outputs. The 7700 HD DA's are housed in the Evertz Multiframe, which is available in either a 3RU or 1RU version. The DA has been designed to reclock at 1.5Gb/s. However, in non-reclocking mode it can also be used as a SMPTE 310M, DVB-ASI, M2S or SMPTE 259M distribution product.

Features

- Reclocking mode for SMPTE 292M (1.5 Gb/s) signals
- Non-reclocking mode for SMPTE 310M DA (nominal 19.4 Mb/s), SMPTE 259M, DVB-ASI or M2S
- Tally output upon loss of signal for quality monitoring

Status LEDs:

- Signal presence
- Max. Equalization Warning
- Module Health Status

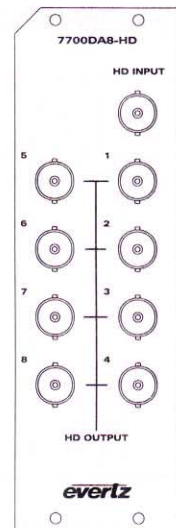
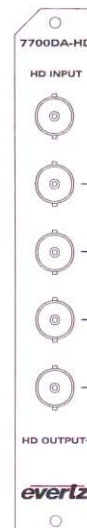
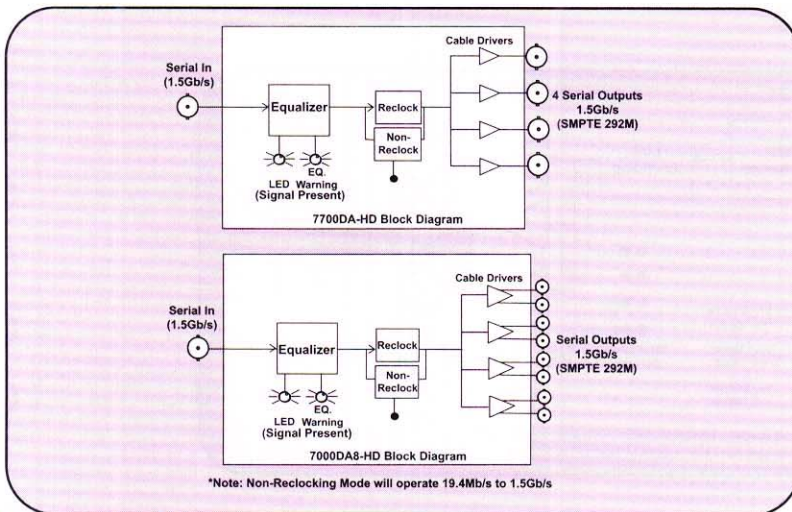
Input:

- SMPTE 292M (1.5 Gb/s) - Reclocking mode
- SMPTE 310M/259M, M2S or DVB-ASI - Non-reclocking mode
- Auto equalization to 130m (Belden 1694)

Output:

- 4 or 8 reclocked outputs
- Wideband jitter <0.2UI

7700DA-HD / 7700DA8-HD Block Diagram



Specifications

Serial Video Input:

- Standard:** SMPTE 292M
- In Non-Reclock Mode:** SMPTE 310M, SMPTE 259M-A, B, C, D, DVB-ASI or M2S
- Connector:** 1 BNC input per IEC 169-8
- Equalization:** Automatic to 130m @ 1.5Gb/s with Belden 1694 (or equivalent)
- Return Loss:** >15dB to 1.0 Gb/s, >12db up to 1.5 Gb/s

Serial Video Outputs:

- Number of Outputs:** 4 or 8 Per Card
- Standard:** SMPTE 292M
- In Non-Reclock Mode:** SMPTE 310M, SMPTE 259M-A, B, C, D, M2S, DVB-ASI
- Signal Level:** 800mV nominal
- DC Offset:** 0V ±0.5V
- Rise and Fall Time:** 200ps nominal
- Overshoot:** <10% of amplitude
- Return Loss:** >15dB to 1.0 Gb/s, >12db up to 1.5 Gb/s, Wideband jitter <0.2UI

Physical:

- Number of Slots:** 1 (7700DA-HD), 2 (7700DA8-HD)

Electrical:

- Voltage:** + 12V DC
- Power:** 5 Watts
- EMI/RFI:** Complies with FCC Part 15 Class A, EU EMC Directive

Ordering Information:

- 7700DA-HD** HD SDI reclocking DA, 4 outputs
- 7700DA8-HD** HD SDI reclocking DA, 8 outputs

Ordering Options

- Rear Plate must be specified at time of order
- Eg: Model + 3RU

Rear Plate Suffix

- +3RU** 3RU Rear Plate for use with 7700FR-C Multiframe
- +1RU** 1RU Rear Plate for use with 7701FR Multiframe
- +SA** Standalone Enclosure Rear Plate

Enclosures:

- 7700FR-C** 3RU Multiframe which holds 15 modules
- 7701FR** 1RU Multiframe which holds 3 modules
- S7701FR** Standalone enclosure

DS3 Distribution Amplifier

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7700DA-DS3

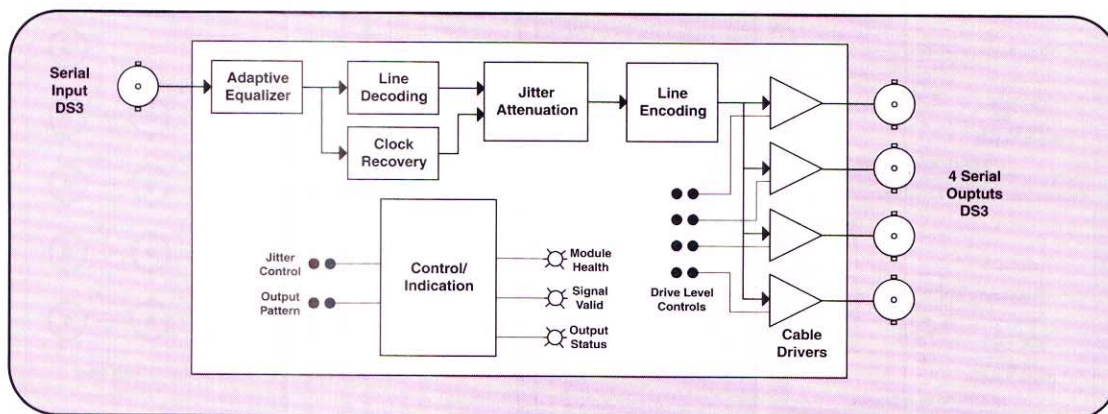
The 7700DA-DS3 Distribution Amplifier provides automatic coaxial cable equalization, reclocking and signal distribution of DS3 (44.736 Mb/s), signals. The 7700DA-DS3 accepts a B3ZS-encoded Alternate Market Inversion (AMI) input signal and provides four reclocked outputs.

The 7700DA-DS3 occupies one card slot and can be housed in either a 1RU frame that will hold up to three modules or a 3RU frame that will hold up to 15 modules

Features

- Supports DS3 (44.736 Mb/s)
- Accepts B3ZS AMI input signals
- Automatic cable equalization for up to 1000ft of high quality 75Ω cable
- Signal reclocking and optional jitter attenuator
- Output wave shaping for DS3 standards compliance
- High/Low output amplitude setting for long/short cable lengths
- Loss of signal (LOS) detection/indication
- Outputs 1's pattern generation upon loss of input signal
- Electrical output drive level control for enhanced distance
- Transformer coupled inputs/outputs
- Input/output transient protection

7700DA-DS3 Block Diagram



Specifications

Inputs:

Standard:	DS3 (44.7346 Mb/s)
Number of Inputs:	1
Connector:	Isolated BNC input per IEC 169-8r
Equalization:	Automatic to 300m with Belden 8281 or equivalent cable
Return Loss:	> 20 dB up to 44 Mb/s

Outputs:

Number of Outputs:	4 Per Card Reclocked
Connector:	BNC per IEC 169-8
Waveform:	Conforms to G.703 compliant masks
Return Loss:	> 18 dB up to 44 Mb/s

Physical:

Number of Slots:	1
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Electrical:

Voltage:	+12VDC
Power:	6 Watts
EMI/RFI:	Complies with FCC Part 15 Class A Complies with EU EMC Directive

Ordering Information:

7700DA-DS3	DS3 Distribution Amplifier
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Ordering Options

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

Rear Plate Suffix

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

Enclosures:

7700FR-C	3RU Multiframe which holds 15 modules
7701FR	1RU Multiframe which holds 3 modules
S7701FR	Standalone enclosure

143-540 Mb/s, DVB-ASI, SMPTE 310M Reclocking Distribution Amplifier

Model 7700DA

The Evertz 7700 series Distribution Amplifier provides inexpensive distribution of your serial digital video signal at rates of 19.4 Mb/s and 143 Mb/s to 540 Mb/s. The DA features an auto-equalized input with four reclocked outputs. The 7700DA has been designed for use as a SMPTE 310M (19.4 Mb/s), DVB-ASI, M2S or SMPTE 259M distribution product. SMPTE 310M support is selected by setting a rate select jumper.

Features

- Mode to run SMPTE 310M DA (nominal 19.4 Mb/s with reclocking)
- Supports up to 540Mb/s operation
- DVB-ASI compatible
- Tally output upon loss of signal for quality monitoring
- Features independent isolated output drivers to ensure no cross channel loading effects (i.e. no need to terminate unused outputs)

Card Edge LEDs:

- Signal presence
- Max. Equalization Warning
- Module Health Status

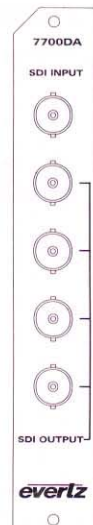
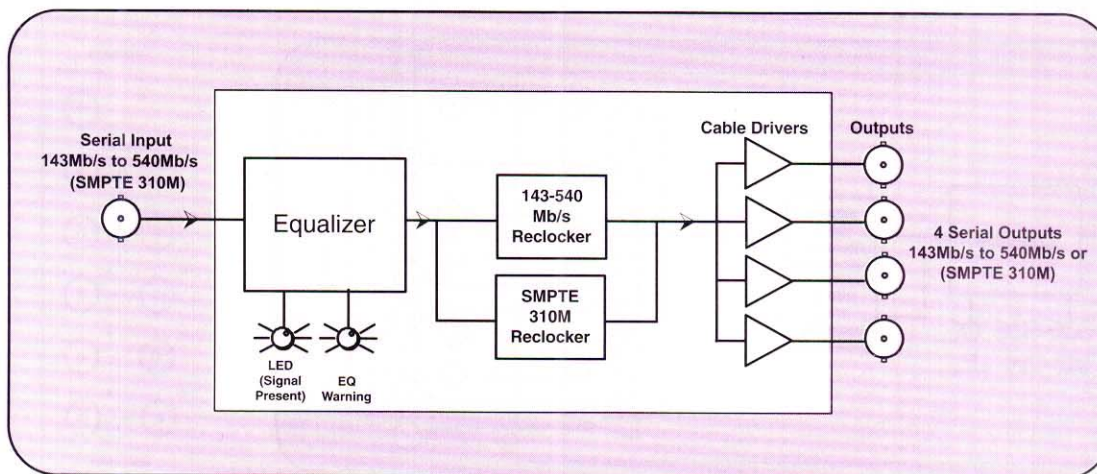
Input:

- SMPTE 259M (143 Mb/s to 540Mb/s), DVB-ASI, M2S, SMPTE 310M (19.4 Mb/s)
- Return loss > 15dB up to 540Mb/s
- 300m auto eq. at 270Mb/s (Belden 8281)
- 210m auto eq. at 540Mb/s (Belden 8281)

Outputs:

- 4 reclocked outputs
- Return loss > 15dB up to 540Mb/s
- Wideband jitter < 0.2 UI

7700DA Block Diagram



Specifications

Serial Video Input:

Standard: SMPTE 259M A, B, C, D, DVB-ASI, M2S, SMPTE 310M (19.4Mb/s-jumper selected)
Connector: BNC input per IEC 169-8
Equalization: Automatic to 300m @ 270Mb/s with Belden 8281 (or equivalent)
Return Loss: > 15dB up to 540Mb/s

Serial Video Output:

Number of Outputs: 4 Per Card Reclocked
Connector: BNC per IEC 169-8
Signal Level: 800mV nominal
DC Offset: 0V ± 0.5V
Rise and Fall Time: 470ps nominal
Overshoot: <10% of amplitude
Return Loss: >15 dB up to 540Mb/s
Wideband Jitter: <0.2 UI

Physical:

Number of Slots: 1

Electrical:

Voltage: +12VDC
Power: 6 Watts
EMI/RFI: Complies with FCC Part 15 Class A
Complies with EU EMC Directive

Ordering Information:

7700DA 143-540 Mb/s, DVB-ASI, SMPTE 310M, M2S
Reclocking Distribution Amplifier (with 4 outputs)

Ordering Options

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

Rear Plate Suffix

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

Enclosures:

7700FR-C 3RU Multiframe which holds 15 modules
7701FR 1RU Multiframe which holds 3 modules
S7701FR Standalone enclosure

143-540 Mb/s, SMPTE 310M Reclocking Distribution Amplifier

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Model 7700DA10

The Evertz 7700DA10 Distribution Amplifier provides inexpensive distribution of your serial digital signal at rates of 19.4Mb/s and 143Mb/s to 540Mb/s. The DA features an auto-equalized input with ten reclocked outputs.

Although the 7700DA10DA has been designed for use as a reclocking SMPTE 259M distribution product, it also supports SMPTE310M (19.4Mb/s), DVB-ASI (270Mb/s) and M2S. SMPTE 310M support is selected by setting a rate select jumper.

Features

- Mode to run SMPTE 310M (nominal 19.4Mb/s with reclocking)
- Six of ten outputs are DVB-ASI compliant
- Supports up to 540Mb/s operation
- Tally output upon loss of input signal for quality monitoring

Card Edge LEDs:

- Signal presence
- Max. equalization warning
- Module health status

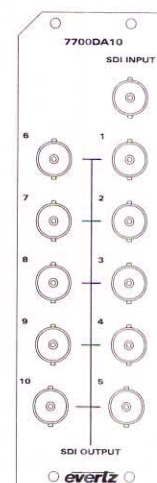
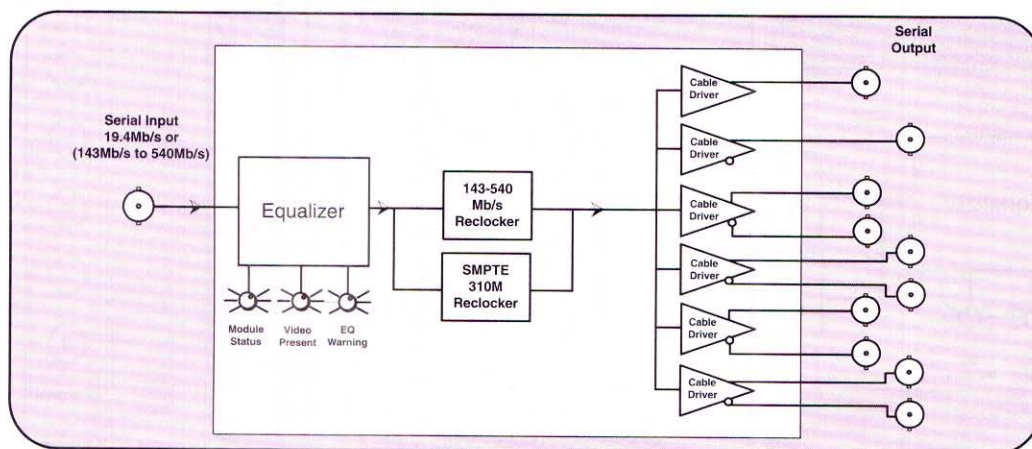
Input:

- SMPTE 259M (143Mb/s to 540Mb/s), SMPTE 310M (19.4Mb/s), DVB-ASI (270Mb/s) and M2S compliant
- Return loss >15dB up to 540Mb/s
- 300m auto eq. at 270Mb/s (Belden 8281)
- 200m auto eq. at 540Mb/s (Belden 8281)

Outputs:

- 10 reclocked outputs
- 6 DVB-ASI/M2S compliant outputs
- Return loss > 15dB up to 540Mb/s
- Widband jitter <0.2UI

7700DA10 Block Diagram



Specifications

Serial Video Input:

Standard:

- 259 Mode:** SMPTE 259M A, B, C, D (143-540Mb/s), DVB-ASI (270Mb/s) or M2S
- 310 Mode:** SMPTE 310M (19.4Mb/s)

Serial Video Output:

- Number of Outputs:** 10
- Number of DVB-ASI Compliant Outputs:** 6
- Connector:** BNC per IEC 169-8
- Signal Level:** 800mV nominal
- DC Offset:** 0V ± 0.5V
- Rise and Fall Time:** 470ps nominal
- Overshoot:** <10% of amplitude
- Return Loss:** >15 dB to 540Mb/s
- Wideband Jitter:** <0.2 UI

Physical:

- Number of Slots:** 2

Electrical:

- Voltage:** +12V DC
- Power:** 6 Watts
- EMI/RFI:** Complies with FCC Part 15 Class A
EU EMC Directive

Ordering Information:

- 7700DA10** 143-540 Mb/s, SMPTE 310M, DVB-ASI, M2S
Reclocking Distribution Amplifier (with 10 outputs)

Ordering Options

- Rear Plate must be specified at time of order
Eg: Model + 3RU

Rear Plate Suffix

- +3RU** 3RU Rear Plate for use with 7700FR-C Multiframe
- +1RU** 1RU Rear Plate for use with 7701FR Multiframe
- +SA** Standalone Enclosure Rear Plate

Enclosures:

- 7700FR-C** 3RU Multiframe which holds 15 modules
- 7701FR** 1RU Multiframe which holds 3 modules
- S7701FR** Standalone enclosure

Auto Equalizing Unbalanced AES/EBU Distribution Amplifier

Model 7700DA-AESU

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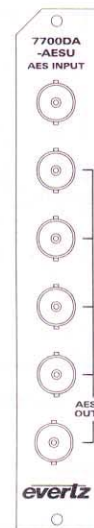
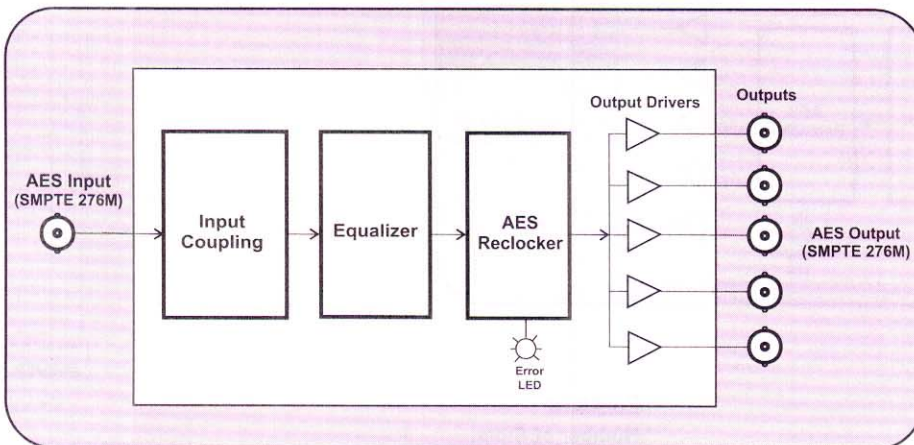
The 7700DA-AESU is a five output reclocking and auto equalizing DA for 75Ω unbalanced AES signals. The DA will automatically equalize AES signals on Belden 1694A coax to 1500m. The DA will reclock data with sampling frequencies of 32kHz, 44.1kHz, 48kHz and 96kHz.

The 7700DA-AESU card edge LED indicators provide quick and accurate assessment of the incoming signal integrity. The 7700DA-AESU also provides a contact closure output that can be configured using on-board jumpers to assert when an input error condition exists.

Features

- SMPTE 276M standard for AES audio on 75Ω coax
- Transformer coupled 75Ω unbalanced input (selectable Hi-Z)
- Data reclocking provides jitter reduction
- Automatic equalization
- EQ and reclock provide extended cable length compensation (>1500m)
- Five 75Ω coax outputs
- Error LED indication for input PLL out of lock, parity error or biphas coding error
- External indication of input error condition using contact closure output

7700DA-AESU Block Diagram



Specifications

AES Input:

Standard: SMPTE 276M (jumper selectable)
Number of Inputs: 1
Connector: BNC input per IEC 169-8
Input Level: 1V p-p
Coupling: Transformer
Input Impedance: 75Ω (Selectable Hi-Z)
Return Loss: 25dB at 100kHz to 6MHz
Equalization: Automatic to 1500m with Belden 1694A (or equivalent) @ 48kHz AES signal
Sampling Frequency: 32kHz, 44.1kHz, 48kHz and 96kHz

AES Output:

Number of Outputs: 5 Per Card Reclocked
Connector: BNC per IEC 169-8
Output Level: 1V p-p
Output Impedance: 75Ω
Return Loss: 30 dB

Physical:

Number of Slots: 1

Electrical:

Voltage: +12VDC
Power: 1.2 Watts
EMI/RFI: Complies with FCC Part 15 Class A
Complies with EU EMC Directive

Ordering Information:

7700DA-AESU Auto Equalizing Unbalanced AES/EBU Distribution Amplifier

Ordering Options

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

Rear Plate Suffix

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

Enclosures:

7700FR-C 3RU Multiframe which holds 15 modules
7701FR 1RU Multiframe which holds 3 modules
S7701FR Standalone enclosure