

# 7707ADVT-HD

Analog, SDI-SDI or HD-SDI Video with 4/Channel Analog or AES Audio Fiber Transmitter



## ►Features & Benefits

- Single card fiber optic transmitter for one composite Analog, SD-SDI or HD-SDI video and four analog or AES audio signals
- Auto-sensing (analog or digital) video and audio inputs
- Supports 525/625 line component 4:2:2 SDI @ 270Mb/s
- Supports HD (SMPTE 292M) video @ 1.485Gb/s
- Supports both NTSC and PAL analog video
- Supports Analog to Digital and Digital to Analog audio conversion
- Broadcast quality analog video and audio performance
- Meets or exceeds EIA/TIA RS250-C short haul specifications for analog video and audio transport
- Supports 32kHz, 44.1kHz, 48kHz AES audio inputs
- Dolby-E® compatible
- Comprehensive signal and card status monitoring via four digit card edge display or remotely through SNMP and VistaLINK®
- VistaLINK® capability is available when modules are used with the 3RU 7800FR or 350FR portable frame and a 7700FC VistaLINK® Frame Controller module in slot 1 of the frame
- Adjustable gain equalization for analog video for up to 250m of Belden 1694A coaxial cable
- Fully hot-swappable from front of frame with no fiber disconnect/reconnect required
- Supports single-mode and multi-mode fiber optic cable (contact factory for multi-mode applications)
- Optical output wavelengths at 1310nm, 1550nm and up to sixteen CWDM wavelengths (ITU G 694.2 compliant)
- DWDM wavelengths also available (ITU G.694.1 compliant)

## ►Specifications

### Analog Video Input:

Standards: SMPTE 170M (NTSC), ITU-R 624-2 (PAL)  
 Number of Inputs: 1  
 Connector: 1 BNC per IEC 61169-8 Annex A  
 Signal Quantization: 12 bit  
 System Bandwidth: > 5.5MHz  
 Input Level: 2V p-p (Maximum)  
 Gain Equalization: Up to 250m of Belden 1694A or equivalent (adjustable)  
 Input impedance: 75Ω  
 Return Loss: > 30dB to 5.5MHz  
 Signal/Noise Ratio: > 70dB  
 Differential Gain: < 1.0%  
 Differential Phase: < 0.7°  
 Passband Ripple:  
 NTSC: < ±0.1dB to 4.1MHz, < ±0.2dB to 5.5MHz  
 PAL: < ±0.1dB to 4.8MHz, < ±0.2dB to 5.8MHz  
 Chroma/Luma Gain: 98% to 103%  
 Chroma/Luma Delay:  
 NTSC: < 5ns  
 PAL: < 12ns  
 Line Time Distortion: 1.2%

### Serial Video Input:

Standard: SMPTE 259M-C (525 or 625 line component), SMPTE 305M (SDTi), DVB-ASI (without separate audio), SMPTE 292M (HD)  
 Connector: 1 BNC per IEC 61169-8 Annex A  
 Equalization: Automatic to 300m @ 270Mb/s and 100m @ 1.485Gb/s with Belden 1694A or equivalent cable  
 Return Loss: > 15dB up to 1.485Gb/s

### Analog Video Output:

Standard: Same as Analog Video Input  
 Number of Outputs: 1  
 Connector: 1 BNC per IEC 61169-8 Annex A  
 Output Level: 1V p-p  
 Output Impedance: 75Ω  
 Return Loss: > 30dB to 5.5MHz

### Serial Video Output:

Number of Outputs: 2, (1 loopback, 1 serial)  
 Connector: 1 BNC per IEC 61169-8 Annex A  
 Signal Level: 800mV nominal  
 DC Offset: 0V ±0.5V  
 Rise and Fall Time: 900ps nominal @ 270Mb/s  
 < 270ps @ 1.485Gb/s  
 Overshoot: < 10% of amplitude  
 Return Loss: > 15dB at 270Mb/s  
 Wide Band Jitter: < 0.2 UI

### Analog Audio Inputs:

Number of Inputs: 4  
 Type: Balanced analog audio  
 Connector: 12-pin removable terminal block  
 Input impedance: High Impedance (> 20kΩ)  
 Freq. Response: ±0.1dB, 20Hz to 20kHz  
 THD 20Hz-20kHz: < 0.005%  
 Channel Phase Diff.: ±1°  
 SNR (weighted): > 85dB  
 Max. Audio Input Level: +24dBu  
 Signal Quantization: 24 bits

### AES Audio Inputs:

Number of Inputs: 4 (auto-sensing for balanced or unbalanced input)  
 Standard:  
 Unbalanced AES: SMPTE 276M  
 Balanced AES: AES3-1992  
 Other: Dolby-E® compatible  
 Connector: 12-pin removable terminal block  
 Input Return Loss: > 15dB (1MHz to 6MHz)  
 Signal Level:  
 Unbalanced: 1.2V p-p ±0.1V  
 Balanced: 1 to 7V p-p  
 Equalization:  
 Unbalanced: 1500m of Belden 1694A cable  
 Balanced: 450m of Belden 1800D cable  
 Resolution: Up to 24 bits  
 Sampling Rate: 32kHz, 44.1kHz, 48kHz  
 Impedance:  
 Unbalanced: 75Ω  
 Balanced: 110Ω

### Optical Outputs:

Number of Outputs: 1  
 Connector: Female SC/PC, ST/PC or FC/PC  
 Return Loss: > 14dB  
 Rise and Fall Time: 200ps nominal  
 Fiber Size: 9mm core/125mm overall  
 Wavelengths:  
 Standard: 1310nm, 1550nm (nominal)  
 CWDM: See Ordering Information  
 DWDM: See Ordering Information  
 Output Power:  
 1310nm FP (Standard): -7dBm ±1dBm  
 1550 & CWDM DFB: 1dBm -1dBm  
 DWDM DFB: +7dBm ±1dBm

### Electrical:

Voltage: +12V DC  
 Power: 16W (Non DWDM)  
 19W (DWDM)

### Physical (number of slots):

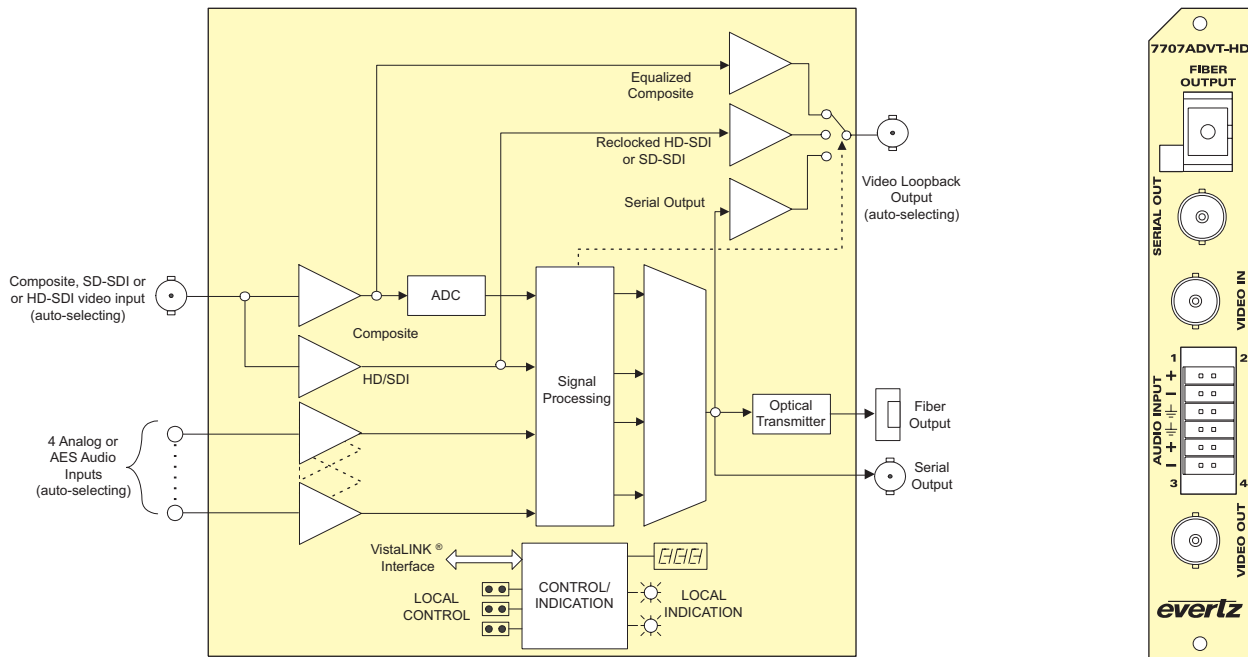
350FR: 1  
 7700FR-C: 1  
 7800FR: 1

### Compliance:

Laser Safety: Class 1 laser product  
 Complies with 24 CFR 1040.10 and 1040.11  
 IEC 60825-1  
 EMI/RFI: Complies with FCC Part 15, Class A  
 EU EMC directive

### Receiver Compatibility Chart:

MODEL #	SD-SDI	HD-SDI
2405/7705/7707OE	x	
2405/7705/7707OE-HD	x	x
7705/7707OE-3	x	
7705/7707OE-3-HD	x	x
7707ADVR	x	
7707ADVR-HD	x	x
7707VAR-HD	x	x



### Ordering Information

**7707ADVT13-HD:** Analog, or SDI or HD Video with 4/Channel Analog or AES Audio Fiber Transmitter

**7707ADVT15-HD:** Analog, or SDI or HD Video with 4/Channel Analog or AES Audio Fiber Transmitter

*For CWDM applications please refer to the end of the fiber section for details*

**7707ADVTxx-HD** Analog, HD-SDI or SDI Video & 4 Analog or 4 AES audio Fiber Transmitter, CWDM Laser, VistaLINK®

*For DWDM applications please refer to the end of the fiber section for details*

**7707ADVTDxxx-HD** Analog, HD-SDI or SDI Video & 4 Analog or 4 AES audio Fiber Transmitter, DWDM Laser, VistaLINK®

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

**Rear Plate Suffix +3RU** 3RU Rear Plate for use with 7800FR Multiframe

**Connector Suffix**  
**+SC** SC/PC  
**+ST** ST/PC  
**+FC** FC/PC

**Enclosures**  
**350FR** 3RU Portable Multiframe which holds up to 7 single slot modules  
**7700FR-C** 3RU Multiframe which holds up to 15 single slot modules  
**7800FR** 3RU Multiframe which holds up to 15 single slot modules  
**7701FR** 1RU Multiframe which holds up to 3 single or dual slot modules  
**7801FR** 1RU Multiframe which holds up to 4 single or 2 dual slot modules  
**S7701FR** Standalone Enclosure

