

# 7707LTA & 7707LTA-WB

## L-Band Fiber Transmitter with VistaLINK® Monitoring

The 7707LTA and 7707LTA-WB are VistaLINK® -capable fiber optic transmitters for L-Band satellite signals. The 7707LTA-WB offers extended bandwidth from 250 to 2250MHz vs 950 to 2250MHz for the 7707LTA version. The 7707LTA and 7707LTA-WB accept one L-Band coaxial input and provide a fiber optic output signal at 1310nm, 1550nm, CWDM or DWDM wavelengths. An L-Band BNC output is also provided for monitoring or further signal distribution. Monitoring and control of card status is provided locally at the card edge and remotely via VistaLINK®.

The 7707LTA and 7707LTA-WB occupies one card slots and is housed in a 1RU frame which will hold up to 3 modules, a 3RU frame which will hold up to 15 modules, 350FR portable frame that holds up to 7 modules or a standalone frame which will hold 1 module.

### ►Features & Benefits

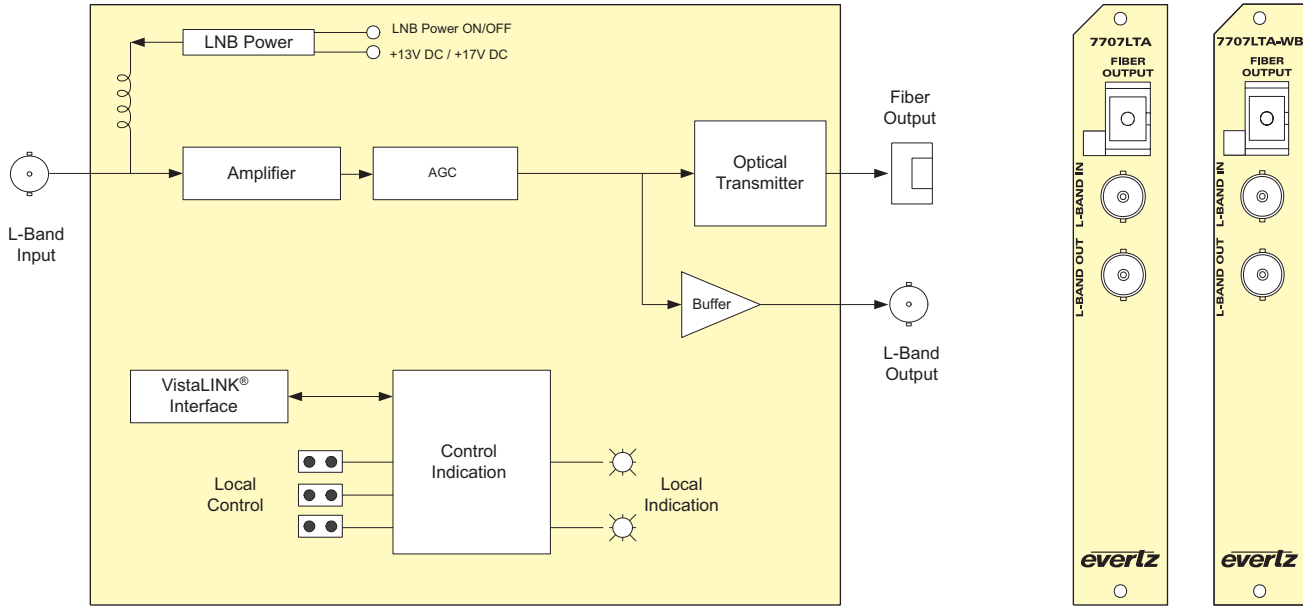
- Band operation:
  - 7707LT: 905 to 2250MHz
  - 7707LTA-WB: 250 to 2250MHz
- Wide dynamic range RF input (-20 to -65dBm)
- Protocol transparent - transmits all video, audio and data modulation formats
- Supports manual and automatic gain control (AGC)
- Wide AGC hold range (50dB) using 7707LTA/LTA-WB + 7707LR/LR-WB
- Additional buffered output for monitoring or distribution
- LNB power at +13 or +17V DC with built-in current limiting
- Available with BNC or F-Type connector options
- Available with wavelengths of 1310nm, 1550nm, CWDM (ITU-T G.694.2 compliant) and DWDM (ITU-T G.694.1 compliant)
- Supports single-mode and multi-mode fiber optic cable
- Available in SC/PC, ST/PC, FC/PC and APC connector options
- Fully hot-swappable from front of frame
- 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 frame and a 7700FC VistaLINK® Frame Controller module in slot 1 of the frame

APPLICATION	OPTICAL/LINK BUDGET	TRANSMITTER SIDE		RECEIVER SIDE		DESCRIPTION
		ORDERING PRODUCT INFO	TX POWER	ORDERING PRODUCT INFO	RX SENSITIVITY	
ONE SIGNAL PER FIBER						
Short to Medium Haul	14dB/40km	7707LTA13	0dBm	7707LR	-14dBm	1310nm FP laser on Tx
Medium Haul	16dB/45km	7707LTA13L	+2dBm	7707LR	-14dBm	1310nm DFB laser on Tx
Long Haul	16dB/64km	7707LTA15	+2dBm	7707LR	-14dBm	1550nm DFB laser on Tx
Long Haul	25dB/71km	7707LTA13L	+2dBm	7707LR-H	-23dBm	1310nm DFB laser on Tx, High Sensitivity RX
Long Haul	25dB/100km	7707LTA15	+2dBm	7707LR-H	-23dBm	1550nm DFB laser on Tx, High Sensitivity RX
MULTI-SIGNAL PER FIBER (WAVELENGTH MUX/DEMUX)						
Medium Haul	12.5dB/50km	7707LTAxx	+2dBm	7707LR	-14dBm	1470nm-1610nm CWDM DFB laser on Tx, with 8 Ch CWDM Mux/Demux*
Long Haul	21.5dB/86km*	7707LTAxx	+2dBm	7707LR-H	-23dBm	1470nm-1610nm CWDM DFB laser on Tx, High Sensitivity RX, 8 Ch CWDM Mux/Demux*
Long Haul	16dB/64km**	7707LTADxxx	+7dBm	7707LR	-14dBm	DWDM DFB laser on Tx, with 8 Ch DWDM Mux/Demux**
Long Haul	25dB/100km**	7707LTADxxx	+7dBm	7707LR-H	-23dBm	DWDM DFB laser on Tx, High Sensitivity RX, 8 Ch DWDM Mux/Demux**
Fiber loss = 0.35/0.25dB per km @ 1310nm/1550nm *Assumes 8 Channel upper band CWDM Mux/Demux loss of 3.5dB **Assumes 8 Channel DWDM Mux/Demux loss of 5dB						



# 7707LTA & 7707LTA-WB

## L-Band Fiber Transmitter with VistaLINK® Monitoring



### ► Specifications

#### RF Input:

Number of Inputs: 1  
 Connector: 1 BNC per IEC 61169-8 Annex A (F-type optional)  
 I/O Impedance: 75Ω (50Ω optional) (See Ordering Information)  
 Return Loss: > 10dB  
 Frequency Range: 950MHz-2250MHz (7707LTA)  
 250MHz-2250MHz (7707LTA-WB)  
 Input Power Range: -20 to -65dBm  
 AGC Hold Range: -20 to -50dBm

#### RF Monitoring Output:

Number of Outputs: 1  
 Connector: 1 BNC per IEC 61169-8 Annex A (F-type optional)  
 I/O Impedance: 75Ω (50Ω optional) (See Ordering Information)  
 Return Loss: >10dB  
 Frequency Range: 950MHz-2250MHz (7707LTA)  
 250MHz-2250MHz (7707LTA-WB)  
 Flatness: ±1.5dB @ 950MHz-2250MHz (7707LTA)  
 ±2.0dB @ 250MHz-2250MHz (7707LTA-WB)  
 ±0.25dB @ any 36MHz BW

#### Output Signal Level:

AGC mode: -25dBm constant (within AGC range)  
 Manual mode: (Input signal) + (manual Gain setting) -5dB  
 OIP3: +10dBm (-40dBm input level)  
 Intermodulation Products: -55dBc (-20dBm RF in, AGC mode)

#### Optical Output:

Number of outputs: 1  
 Connector: Female SC/PC, ST/PC, FC/PC, SC/APC, FC/APC  
 Operating Wavelengths:  
 Standard: 1310nm, 1550nm (nominal)  
 CWDM: 1270nm to 1610nm  
 DWDM: C-Band (ITU G.694.1 compliant)

#### Output Power:

1310nm FP: 0dBm ±1dBm  
 1310nm, 1550nm  
 CWDM DFB: +2dBm ±1dBm  
 DWDM DFB: +7dBm ±1dBm

#### Electrical:

Voltage: +12V DC  
 Power: 9W (Non DWDM not including LNB load)  
 10W (DWDM not including LNB load)

#### Physical (number of slots):

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

#### Compliance:

Laser Safety: Class 1 laser product  
 Class 1M laser product (DWDM versions only)  
 Complies with 24 CFR 1040.10 and 1040.11, IEC 60825-1  
 Complies with FCC Part 15, Class A  
 EU EMC directive

### ► Ordering Information

Note: 75Ω I/O impedance ships standard

<b>7707LTA13</b>	L-Band Satellite Fiber Transmitter with VistaLINK® 1310nm, FP Laser, Short to Medium Haul
<b>7707LTA13L</b>	L-Band Satellite Fiber Transmitter with VistaLINK® 1310nm, DFB Laser, Medium Haul
<b>7707LTA15</b>	L-Band Satellite Fiber Transmitter with VistaLINK® 1550nm, DFB Laser, Long Haul
<b>7707LTA13-WB</b>	L-Band Satellite Fiber Transmitter with VistaLINK® 1310nm, FP Laser, Short to Medium Haul, Wideband
<b>7707LTA13L-WB</b>	L-Band Satellite Fiber Transmitter with VistaLINK® 1310nm, DFB Laser, Medium Haul, Wideband
<b>7707LTA15-WB</b>	L-Band Satellite Fiber Transmitter with VistaLINK® 1550nm, DFB Laser, Long Haul, Wideband

For CWDM, please refer to the end of the fiber section for ordering information

**7707LTAxx** L-Band Satellite Fiber Transmitter, CWDM wavelength  
**7707LTAxx-WB** L-Band Satellite Fiber Transmitter, CWDM wavelength, Wideband

For DWDM, please refer to the end of the fiber section for ordering information

**7707LTA Dxxx** L-Band Satellite Fiber Transmitter, DWDM wavelength

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

**Impedance Suffix**  
**+50** 50Ω I/O impedance

**Connector Suffix**  
**+SC** SC/PC  
**+AP+SC** SC/APC (Angle polished available with 7707LTA13 only)  
**+ST** ST/PC  
**+FC** FC/PC  
**+AP+FC** FC/APC (Angle polished available with 7707LTA13 only)  
**+F75** 75Ω, F-Type rear connector

**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** 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  
**S7701FR** Standalone Enclosure

7700 Series Modular - Fiber - L/Band & 70/140MHz IF Transport

