

The FIBT-1310 (Fiber Optic Transmitter) is an ideal solution to seamlessly transport extremely high speed digital data over single mode optical fiber. The product is specifically designed to transport data streams which maintain conformance with the DOCSIS 3.1 standards and/or were generated utilizing high order quantization techniques, such as QAM 1024, 8PSK, and COFDM.

The FIBT-1310 is built with a directly modulated DFB laser, providing low noise and high linearity performance. The RF AGC and pre-distortion circuit insures the optimum laser drive level for the best overall CNR, CSO, and CTB operation. The transmitter is available in power output levels ranging from +6 dBm (4 mW) to +15 dBm (31 mW) to satisfy various system topologies and supports an increased band-edge to 1218 MHz for DOCSIS 3.1 applications.

Laser output power, unit temperature, and RF input level are accurately monitored by a built-in microprocessor and shown on the front panel LCD display, in addition to the unit function messages. Remote status monitoring is provided through SNMP network management.



## Features

- 47 to 1218 MHz RF bandwidth for DOCSIS 3.1 compatibility
- High performance and low power consumption GaAs technology
- 1310 nm DFB laser in 4 output power levels (6, 10, 13.5, and 15 dBm)
- RF AGC for optimum laser performance
- LCD front panel status display with built-in microprocessor
- SNMP network management for remote monitoring
- ETL certified

## Ordering Information

Model	Stock #	Description
FIBT-1310-06	7603 06	Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +6 dBm Output
FIBT-1310-10	7603 10	Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +10 dBm Output
FIBT-1310-13.5	7603 135	Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +13.5 dBm Output
FIBT-1310-15	7603 15	Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +15 dBm Output

## Accessories

Model	Stock #	Description
FC/APC Adapter	7607	SC/APC Male to FC/APC Female Connector Adapter

# Specifications

## Optical

Operating Wavelength:	1310 nm ± 20 nm
Optical Power Output:	6 dBm (4 mW), 10 dBm (10 mW), 13.5 dBm (22 mW) & 15 dBm (31 mW)
Laser Type:	Class 1 DFB (directly modulated; Hazard Level 1).
Beam Divergence Angle:	8° max.
Connector:	SC/APC; For applications requiring an FC/APC connector, an adapter, sold separately, is available.  Model: FC Adapter; Stk.#: 7607 Description: SC/APC-Male to FC/APC-Female

## RF

Connector:	F Female
Frequency Range:	47-1218 MHz
Input Level:	15-25 dBmV
Flatness:	±1.0 dB
Impedance:	75 Ω
Return Loss:	≥ 16 dB
AGC Range:	0-15 dB
MGC Range:	0-15 dB

## Link Performance\*

CNR:	≥ 51 dB (see table below)
CSO:	<-62 dBc
CTB:	<-65 dBc

\* 77 CW carriers (50~550 MHz) and digital channels (550 MHz~1218 MHz, RF level 10 dB lower) at -1 dBm optical input into a Blonder Tongue FTTB receiver.

## General

Dimensions (W x H x D):	19" x 1.75" x 15.31" (483 mm x 44 mm x 389 mm)
Shipping Weight:	7.0 lbs (3.18 kg)
Power	Power Supply: 100-240 VAC 50/60 Hz Power Consumption: 15 W
Operating Temperature Range:	32 to 113 °F (0 to 45 °C)
Relative Humidity:	95% non-condensing
Indicators/Controls	Status: Tri-color LED Red/Green/Orange Front Panel Display: LCD Navigation: Buttons: Up, Down, Enter for LCD SNMP: RJ45 Connector @ 10 Mbps

## Optical Link C/N Table

Optical Loss (dB)	6	7	8	9	10	11	12	13	14	15	16	17
FIBT-1310-06	52.0	51.0	50.1	49.1	48.1							
FIBT-1310-10					51.9	51.0	50.1	49.1	48.2			
FIBT-1310-13.5								52.3	51.3	50.4	49.5	
FIBT-1310-15										51.9	50.9	49.9

## Block Diagram

