

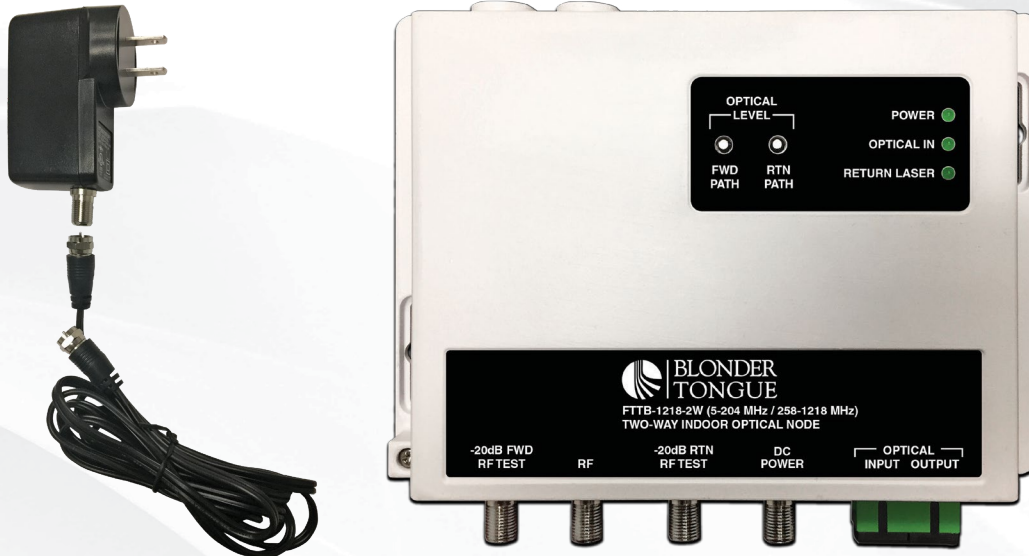


FTTB-1218-2W Series

Two-Way Indoor Optical Node with DOCSIS 3.1 Support

The FTTB-1218-2W Series (Two-Way Indoor Optical Node) converts the optical signal received from the headend into a +36 dBmV RF output. The compact housing includes an optical receiver, RF AGC, RF amplifier, and return path optical transmitter. Three (3) frequency splits are available to satisfy standard 5-42 MHz, 5-85 MHz, or 5-204 MHz returns for increased return bandwidths required in DOCSIS 3.1 applications.

The FTTB-1218-2W Series has one tri-color LED indicating the optical input status, one bi-color LED indicating return transmitter status as well as calibrated DC test points for receive and transmit optical power.



Features

- 1218 MHz Forward RF Bandwidth for DOCSIS 3.1 Compatibility
- Three (3) Frequency Splits Available for All DOCSIS 3.1 Applications
- RF AGC Maintaining +36 dBmV Output with Optical Input Range from -4 to +3 dBm
- High Performance and Low Power Consumption GaAs Technology
- 1310 nm 3.0 dBm DFB Return Path Transmitter
- Die-cast Aluminum Housing for Indoor Installation
- Tri-color LED Indicating Optical Input Status
- Bi-color LED Indicating Return Laser Transmitter Output Status
- Forward and Return -20 dB RF Test Ports (One Each)
- Local/Remote 18 VDC Powering from F Connector

Ordering Information

Model	Stock #	Description
FTTB-1218-2W-42	7630 42	Two-Way Indoor Optical Node; 1218 MHz; 36 dBmV Output w/AGC; 42/54 MHz Split
FTTB-1218-2W-85	7630 85	Two-Way Indoor Optical Node; 1218 MHz; 36 dBmV Output w/AGC; 85/105 MHz Split
FTTB-1218-2W-204	7630 204	Two-Way Indoor Optical Node; 1218 MHz; 36 dBmV Output w/AGC; 204/258 MHz Split

Accessories

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

Specifications



Optical and RF Performance

Optical	Input Optical Wavelength: 1210 ~ 1650 nm Optical Input Connector: SC/APC; Single Mode Optical Return Loss: 50 dB Optical Input Power: -6 ~ +3 dBm AGC Effective Optical Input Range: -4 ~ +3 dBm Forward Optical Power Test Point: 1V/mW
RF	RF Bandwidth: 54 ~ 1218 MHz (42/54 MHz Diplexer) 105 ~ 1218 MHz (85/105 MHz Diplexer) 258 ~ 1218 MHz (204/258 MHz Diplexer) AGC RF Output Level: +36 dBmV AGC RF Output Stability Range: ± 1.5 dB RF Slope (54~1218 MHz): 6 dB RF Slope (105~1218 MHz): 6 dB RF Slope (258~1218 MHz): 6 dB RF Flatness: ± 0.75 dB (Relative to Slope) RF Return Loss: >16 dB RF Output Impedance: 75 Ω RF Test Port: -20 dB CNR: ≥ 51 dB at -1.0 dBm CSO: <-62 dBc at 77 CW carriers CTB: <-65 dBc at 77 CW carriers

Optical and RF Performance

Optical	Optical Wavelength: 1310 nm DFB Laser (Uncooled) Optical Output Connector: SC/APC Optical Output Power: 3 dBm ± 1 dB Optical Return Loss: 50 dB
RF	RF Bandwidth: 5 ~ 42 MHz / 85 MHz / 204 MHz RF Input Level: 17 dBmV RF Flatness: ± 1 dB RF Return Loss: > 16 dB RF Test Port: -20 dB NPR: > 25 dB

Optical vs RF Levels

Optical Input Power (dBm)	Received Power DC Test Point (V)
-4	0.40
-2	0.63
-1	0.79
0	1.00
+1	1.26
+2	1.58
+3	2.00

Note: DC voltage Test point vs Optical input power (calibrated at 1310 nm optical input)

Alarms and Monitoring

Optical Input Tri-Color LED	Green: Normal: > -4 dBm to < +3 dBm Orange: Low: < -4 dBm Red: High: > +3 dBm
Return Path Laser Bi-Color LED (Laser Output Power)	Green: < +3 dBm Red: > +3 dBm

Test Conditions

FORWARD PATH: 77 CW carriers (54~550 MHz) and digital channels (550~1218 MHz, RF level 10 dB lower) at -1 dBm optical input (10 km fiber + optical attenuator).

RETURN PATH: return path specs are measured in transmitter and receiver composed link.

General

Connectors	Fiber Ports: 2x SC/APC Female (Optical Input/Output) RF Port: 1x F-Female -20 dB RF Test Ports: 1x F-Female Forward; 1x F-Female Return 18 VDC Port: 1x F-Female for DC power input
Chassis Dimensions: (L x W x H)	6.85" x 4.9" x 1.22" (174 mm x 124 mm x 31 mm)
Weight:	1.0 lbs (0.50 kg)
Power	Power Supply: 18V 1.3A DC Adaptor, UL Certified Power Consumption: ≤ 7 W
Working Temperature:	-4 to 140 °F (-20 to +60 °C)
Storage Temperature:	-40 to 185 °F (-40 to +85 °C)
Humidity:	5%~95% Non-condensing