Compact Fiber Optic Node

Trailblazer Series - FOCN

❍ Features & Benefits

- Compact Size
- 1000 MHz Forward Bandwidth, 5-42 MHz Return Bandwidth(on 2-way models)
- Tri-color LED for Optical Input Status
- LED Indicator for Return Laser Status
- 12 VDC Powering Versatility

The FOCN-20x Series is a low-cost, compact 2-way node designed to deliver the full array of CATV services presently available and those planned for the future. These services include video (analog and digital), high speed data and telephony. The FOCN has applications for the direct fiber transmission of CATV RF signals in MDU, industrial, government and educational facilities, or wherever a high performance compact indoor node is required. The unit is constructed with high quality components enabling it to meet or exceed its performance specifications in an uncontrolled indoor environment with wide temperature variations. The FOCN-20x is available in 3 models. All models have at their core a 1310/1550 nm optical receiver with exceptional optical sensitivity and 28 dBmv RF output at an optical input of -1dBm. The differences between the models pertain to return path operation. Models are available in both 1-way or 2-way configurations. The 2-way models are available with either a 1310 nm or 1550 nm DFB laser. All 2-way models have a return RF bandwidth of 5-42 MHz. Other standard features include LEDs for optical input and laser status. Powering is via a 12 VDC supply and can be accomplished in either of two ways. To power locally, a separate power connector marked "+12 VDC power in", is provided. Alternately, the unit can accept 12 VDC from its RF output connector, thus permitting remote powering by diplexing the 12 VDC supply onto the RF output

❍ Specifications

Forward Optical Receivers

RF Output

Frequency Range (+/- 1.0 dB): 54-1000 MHz (NTSC)

Output Level (@ -1 dBm optical input):*
+28 dBmV (@ 550 MHz)

Return Loss: 14 dB min., 16 dB typical

Impedance: 75 Ohm

CNR (@ 0 dBm optical input):* > 53 dB

CSO (@ -1 dBm optical input):* > 63 dBc

CTB (@ -1 dBm optical input):* > 65 dBc

Slope: 0dB

RF Test Point (forward) -20 dB; Type F

Optical

Wavelength: 1280 - 1610 nm

Optical Input Power Range: +2 dBm to -8 dBm

Return Loss: > 50 dB with APC connector

Optical Input Power Test Point:
1 V/mW +/- 0.1 V

Optical Connector: SC/APC, 8° APC

Electrical & Mechanical

Dimensions: 3" H x 6" D x 2.1" H

Weight: 12 oz.

Operating Temperature Range:
-10 to +55˚C (temperature at the mounting plate)

Enclosure IP Rating: IP20

Powering: +12 VDC
(via external Power Supply (included))

DC Ripple: < 50 mV

Power Dissipation (with return TX): < 7 W

Return Optical Transmitters

RF Input

Frequency Range: (+/- 1.0 dB) 5-42 MHz (NTSC)

RF Test Point (return): -20 dB (external); Type F

Return Loss (with Return TX Installed):
> 16 dB within the Return Band

Return Path NPR: 15 dB min. of NPR Range
FP: 37 dB NPR Threshold
DFB: 41 dB NPR Threshold

Optical

Optical Output:
DFB = 4.8dBm (3mW) @1310nm
DFB = 4.0dBm (2.5mW) @1550nm

Return Loss: > 50 dB with APC connector

Optical Connector SC/APC, 8° APC

❍ Ordering Information

Model	Stock No.	Description
FOCN-S4S-201	7420A 1	Fiber Optic Compact Node, 28 dBmv RF Output 1310/1550 nm, 1000 MHz, SC/APC Connectors
FOCN-S4S-204	7420A 4	Fiber Optic Compact Node, 28 dBmv RF Output Forward RX 1310/1550 nm, 1000 MHz, Return TX 1310 nm, 4.8 dBm DFB
FOCN-S4S-205	7420A 5	Fiber Optic Compact Node, 28 dBmv RF Output Forward RX 1310/1550 nm, 1000 MHz, Return TX 1550 nm, 4 dBm DFB