

# Compact Fiber Optic Node

## Trailblazer Series - FOCN



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 duplexing the 12 VDC supply onto the RF output

### 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

### 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, 870 MHz, SC/APC Connectors
FOCN-S4S-204	7420A 4	Fiber Optic Compact Node, 28 dBmV RF Output Forward RX 1310/1550 nm, 870 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, 870 MHz, Return TX 1550 nm, 4 dBm DFB