

- FIBER OPTICS
- LINE PASSIVES
- DROP PASSIVES
- DROP AMPLIFIERS
- CONNECTORS



Description

PCT's Mini Fiber Node offers flexibility in operation and unchallenged price vs. performance in a unique miniature housing. The low distortion and flexible input levels allow for deployment where conventional nodes are impractical. The low power consumption and surge withstand design ensures longer standby operation and reliability. Originally designed as a network segmentation tool allowing node splitting in one- and two-way applications, the Mini Fiber Node product line now offers a complete feature set, including 1310 nm and CWDM transmission, FP and DFB return lasers, mid-split frequency versions, and a return path only model.

Mini FIBER NODE

APPLICATIONS

Node Splitting, FTTx, MDUs, PEG Applications & Schools/Universities/Business Parks

features & benefits

Critical Requirements

- Expanding bandwidth in the return path
- Excellent distortions performance
- Small size
- Simple installation
- Low power consumption

- ▶ **NEW- Video insertion port**
 - Excellent for PEG video return requirements
 - HE/Hub/Remote TVRO site interconnects
 - Independent of standard 5-42MHz return path
- ▶ 1GHz design
- ▶ 5-42, 5-55, and 5-65 MHz return path capabilities
- ▶ Standard output of +21 dBmV with -1 dBm optical input
- ▶ Excellent distortion specs: CNR > 51 dB
CSO/CTB < -65 dBc
- ▶ Operates from -6 dBm to +2 dBm and from 1200 nm – 1600 nm wavelengths
- ▶ -20 dB Test Points for forward output and return input
- ▶ Small housing: 6" x 3.6" x 1.3"
- ▶ Powered through dedicated F-port or RF output port
- ▶ Effective for use in high-density applications such as MDUs, schools/universities, hospitals, business parks, & PEG requirements
- ▶ Ideal for FTTx applications
- ▶ Temporary node applications
- ▶ Low power consumption RX only 3W, bi-directional 5W
- ▶ Bi-directional, return transmit only, and forward receive only versions available
- ▶ FP & DFB 1310 nm & CWDM return path transmitters available
- ▶ CWDM wavelengths available from 1490 nm to 1610 nm
- ▶ Different frequency splits available



specifications

OPTICAL RECEIVER MODULE

RF	
Frequency Range	54-1000 MHz; 70-1000 MHz; 85-1000 MHz
Output Level	21 dBmV @ -1 dBm optical input, 80 NTSC channels loading
TYPICAL PERFORMANCE	
CNR	Better than 51 dB typical @ -1 dBm optical input
CSO	Better than -65 dBc typical @ -1 dBm optical input
CTB	Better than -65 dBc typical @ -1 dBm optical input
Impedance	75 Ω
Output Return Loss	> 16 dB
Flatness	± 1 dB

OPTICAL

Bandwidth	1200 nm to 1600 nm
Input Power	-6 to +2 dBm
Connector	SC/APC - Standard
Return Loss	> 60 dB with APC type connector

RETURN TRANSMITTER MODULE

RF	
Frequency Range	5-42 MHz; 5-55 MHz; 5-65 MHz
Input Level	20 dBmV/Ch
Input Return Loss	> 16 dB
RF Gain Flatness	± 1.5 dB

UPSTREAM VIDEO INSERTION

Frequency Range	54-500 MHz; 70-500 MHz; 85-500 MHz
Input Level	30 dBmV/Ch
Input Return Loss	> 16 dB
RF Gain Flatness	± 1.5 dB

OPTICAL

Center Wavelength	1310 nm ± 20 nm	CWDM Ch. ITU ± 3 nm
Wavelength Drift Over Temperature		1 nm / 10°C
Output Power	FP: 0 dBm; DFB: +3 dBm	
Connector	SC/APC - Standard	
Return Loss	> 60 dB with APC connector	

LINK PERFORMANCE

	FP LASER (4 Ch. Loading)	DFB LASER (16 Ch. Loading)
CNR	> 48 dB	> 51 dB
CSO	< -55 dBc	< -60 dBc
CTB	< -55 dBc	< -60 dBc

ELECTRICAL / ENVIRONMENTAL / MECHANICAL

Test Points	-20 dB Forward Output & -20 dB Return Input
Power	15 VDC F-type connector AC/DC power adapter supplied or RF output port with power inserter supplied
Operating Temperature	-40°F to +149°F (-40°C to +65°C) ambient
Humidity	up to 95% non-condensing
Dimensions	6" L x 3.6" W x 1.3" H (152 x 91 x 33 mm)
Weight	14 oz. (435 grams)

Ordering Information:

- PCT-MFN-AS Mini Fiber Node, Receiver Only, 54-1000 MHz, SC/APC
 - PCT-MFN-TXF-AS Mini Fiber Node, Transmitter Only w/ FP Return Laser, 5-500 MHz, SC/APC
 - PCT-MFN-TXD-AS Mini Fiber Node, Transmitter Only w/ DFB Return Laser, 5-500 MHz, SC/APC
 - PCT-MFN-FAS Mini Fiber Node, Two-Way w/ FP Return Laser, 5-42, 54-1000 MHz, SC/APC
 - PCT-MFN-DAS Mini Fiber Node, Two-Way w/ DFB Return Laser, 5-42, 54-1000 MHz, SC/APC
 - PCT-MFN-TXC##-AS* Mini Fiber Node, Transmitter Only w/CWDM, 5-500 MHz, SC/APC
 - PCT-MFN-C##-AS* Mini Fiber Node, Two-Way w/ CWDM, 5-42, 54-1000 MHz, SC/APC
- * ## = 11 - 18 (Ch. 11=1470 nm, Ch. 12=1490 nm, Ch. 13=1510 nm, Ch. 14=1530 nm, Ch. 15=1550 nm, Ch. 16=1570 nm, Ch. 17=1590 nm, Ch. 18=1610 nm)

Please contact PCT for special configurations.

Other connector options:

US = SC/UPC; FS = FC/APC; FU = FC/UPC

Specifications are subject to change without notice.



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Mini FIBER NODE

