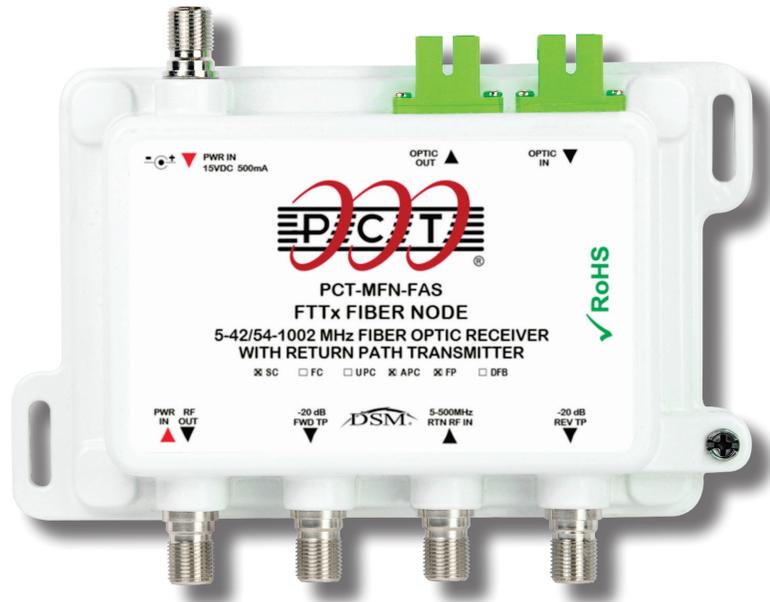


FTTx MINI FIBER NODE

Flexible Operation, Unchallenged Price vs. Performance



INNOVATIVE SOLUTIONS

PCT's Mini Fiber Node offers flexibility in operation and unchallenged price vs. performance in a unique miniature housing. The low distortion and low input levels allow for deployment where conventional nodes are impractical. Low power consumption and excellent surge withstand design provide for low energy consumption and long-term trouble free operation. Designed for FTTx applications, the mini fiber node includes various options for return path lasers. Configurations include 1310 nm FP, 1310 DFB and CWDM return path lasers.

Standard Features

- 1 GHz design
- Frequency splits available
 - 42 / 54 MHz
 - 55 / 70 MHz
 - 65 / 85 MHz
- Simple installation
- Standard output of + 21 dBmV with -1 dBm optical input
- Excellent distortion specifications
- Forward receiver operates from -6 to +2 dBm optical input power and from 1200 to 1620 nm wavelengths
- -20 dB test ports for forward output and return input
- Small housing with mounting flanges
- Low power consumption RX only 3 W, bi-directional 5 W
- Designed specifically to meet the performance, requirements of demanding FTTH installations
- Effective for use in high-density applications (MDUs, schools / universities, hospitals, business parks and PEGs)



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Specifications

Parameters	Unit	PCT-MFN-xAS		
Downstream				
Optical Receiver				
Wavelength Range	nm	1200 to 1620		
Input Power	dBm	-6 to +2		
Connector	--	SC / APC - standard ¹		
Return Loss	dB	≥ 55 with UPC type connector, ≥ 60 with APC type connector		
RF Performance				
Passband	MHz	54 to 1002, 70 to 1002, 85 to 1002		
Output Level	--	21 dBmV @ -1 dBm optical input, 80 NTSC channels and 450 MHz digital loading, -6 dB relative to analog loading		
CNR ²	dBc	≥ 51 @ -1 dBm optical input		
CSO	dBc	≤ -65 @ -1 dBm optical input		
CTB	dBc	≤ -67 @ -1 dBm optical input		
Impedance	Ohm	75		
Output Return Loss	dB	≥ 16		
Flatness	dB	± 1		
Upstream				
Return Transmitter				
Center Wavelength	nm	1310		
Output Power	dBm	FP: 0, DFB: +3, CWDM: +3		
Connector	--	SC / APC - standard ¹		
Return Loss	dB	≥ 55 with UPC type connector, ≥ 60 with APC type connector		
RF Performance				
Passband	MHz	5 to 42, 5 to 55, 5 to 65		
Input Level	dBmV / channel	20		
Input Return Loss	dB	≥ 16		
RF Gain Flatness	dB	± 1.5		
Return Path Frequency Range	MHz	5 to 42, 5 to 55, 5 to 65		
RF Gain Flatness	dB	± 1.5		
Link Performance				
		FP Laser ²	DFB Laser ³	CWDM
CNR ²	dBc	≥ 48	≥ 51	≥ 51
CSO	dBc	≤ -55	≤ -60	≤ -60
DTO	dBc	≤ -55	≤ -60	≤ -60
General				
Test Points (All)	dB	-20 dB Forward Output, -20 dB Return Input		
Power	VDC / mA	15 / 600, F-type connector AC / DC power adapter to dedicated PWR input or RF output port with power inserter ¹		
Surge Withstand	--	IEEE C62.41-1991 Cat. A3 (6 KV) for all ports		
F Ports	--	Conform to SCTE 01 2006, sealed to hold 15 psi		
Operating Temperature	°C (°F)	-40 to +65 (-40 to +149) ambient		
Humidity	%	up to 95, non-condensing		
Dimensions (W x H x D)	mm (in)	152 x 91 x 33 (6 x 3.6 x 1.3)		
Weight	g (oz)	396 (14)		

Notes: 1. Other connector types available upon special request. 2. Test conditions - Standard Return Path Receiver, -3 dBm optical input, 4CW NTSC carrier. 3. Test conditions - Standard Return Path Receiver, -6 dBm optical input, 4CW NTSC carrier.

Ordering Information

Bi-Directional with FP Return Laser

PCT-MFN-FAS	Mini Fiber Node, Two-Way, 5 to 42 / 54 to 1002 MHz, SC / APC
PCT-MFN55-FAS	Mini Fiber Node, Two-Way, 5 to 55 / 70 to 1002 MHz, SC / APC
PCT-MFN65-FAS	Mini Fiber Node, Two-Way, 5 to 65 / 85 to 1002 MHz, SC / APC

Bi-Directional with DFB Return Laser

PCT-MFN-DAS	Mini Fiber Node, 5 to 42 / 54 to 1002 MHz, SC / APC
PCT-MFN55-DAS	Mini Fiber Node, 5 to 55 / 70 to 1002 MHz, SC / APC
PCT-MFN65-DAS	Mini Fiber Node, 5 to 65 / 85 to 1002 MHz, SC / APC

Bi-Directional with CWDM Return Laser

PCT-MFN-CxxAS	Mini Fiber Node, 5 to 42 / 54 to 1002 MHz, SC / APC
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xx = CWDM Channels: 9 (1430 nm), 10 (1450 nm), 11 (1470 nm), 12 (1490 nm), 13 (1510 nm), 14 (1530 nm), 15 (1550 nm), 16 (1570 nm), 17 (1590 nm), 18 (1610 nm)

Other connector options: **US** = SC / UPC, **FS** = FC / APC, **FU** = FC / UPC
Power adapter included, specify type when ordering.

Option

PCT-MPI -1G	Power Inserter
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