

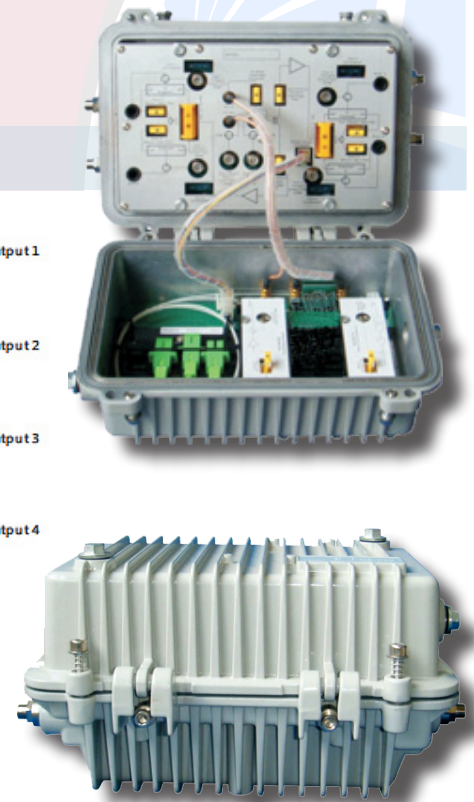
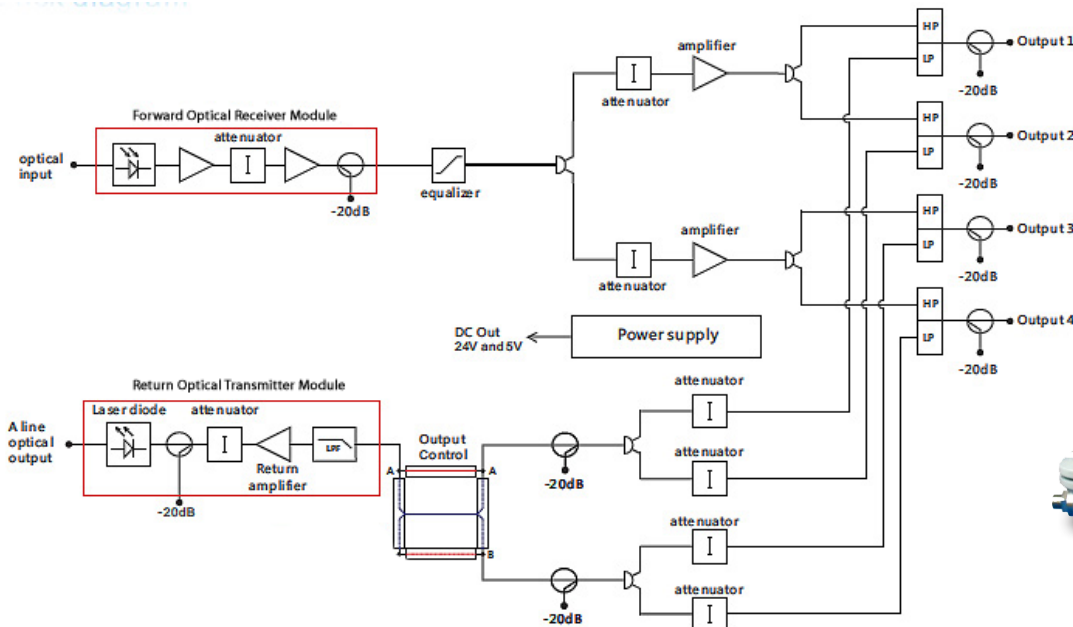


# Multicom Fiber Optic Node - 4 Port

## General Features

- Amplifier and power supply in a detachable module
- Four 48dBm output ports
- 1290nm ~ 1600nm optical wavelength
- High quality power supply, local and remote power feeding capability
- High performance outdoor housing, water resistant and electromagnetic shielded
- Input test points of optical power and LED indicators control the input
- Transistor surge arrester (resists lightning and surge voltage)
- Broadband reverse optical transmission path

## Block Diagram



Part# MUL-OFN-1000-4

[www.multicominc.com](http://www.multicominc.com)

Ph: 800-423-2594



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## Product Specifications

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### Optical Specifications

Optical Performance - Forward	Performance Parameters	Notes
Wavelength (nm)	1290 ~ 1600	
Output Power (dB)	48	
Optical Input Range (dBm)	-6 - +2	
Optical Return Loss (dB)	>40	
Frequency Response	>0.85	
Passband (MHz)	54-1000	
Optical Performance - Reverse	Performance Parameters	Notes
Wavelength (nm)	1310 ±20, 1550±50	
Return Loss (dB)	45	

### General Specifications

Item	Performance Parameters	Notes
Operating Temperature (°C)	-40 - +70	-40 - 158°F
Humidity (%)	95	Non-condensing
Water and Dust Resistance (R)	IP68	
Housing Dimensions (mm - LxHxD)	285 x 205 x 150	11.25 x 8 x 6 inches
Weight (Kg)	<4	
Surge (R)	IEEE C62.41	1.2/50us Combination
Supply Voltage (VAC)	35-95	
Maximum Input Current (A)	15	
Power Consumption (W)	<40	

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# Multicom Fiber Optic Node - 4 Port Product Specifications

## RF Specifications

General Performance	Forward	Reverse	Notes
Passband (MHz)	54-1000	5-42	
Amplifier Type	PHD	Push-Pull	
Return Loss (dB)	16	16	
Hum Modulation (dB)	65 (54-750 MHz)	65	
Internal RF Test Points ( $\pm 1$ dB)	-20	-20	
Launch Amplifier Performance - Forward	Performance Parameters		Notes
Operational Gain (minimum) (dB)	26		4
Frequency Response (dB)	$\pm 0.75$		
Internal Tilt ( $\pm 1$ dB) (dB)	9.5		1,3
Noise Figure - 54-1000 MHz (dB)	<11		2
Reference Output Level - 1000 MHz (dBmV)	48		
Reference Output Tilt - 55 - 1000 MHz	12.5		1, 5
110 NTSC Channels (CW) with Digital			12
Composite Triple Beat (dB)	60		6
Cross Modulation (dB)	61		6
Composite Second Order (high side) (dB)	64		6
Launch Amplifier Performance - Reverse	Performance Parameters		Notes
Operational Gain (minimum) (dB)	18		8, 10
Frequency Response (dB)	$\pm 0.75$		10
Noise Figure (dB)	14		9, 10
Reference Output Levels @ 5 and 42 MHz	35		7, 10
6 NTSC Channels (CW)			
Composite Triple Beat (dB)	78		10
Cross Modulation (dB)	71		10
Composite Second Order (dB)	73		10
Station Performance - Reverse	Performance Parameters		Station port input to optical transmitter input - Notes
Amplifier Type	Push-Pull		
Operational Gain (minimum) (dB)	14		11

### Notes for RF Specifications:

- Reference output tilt and internal tilt are both "Linear" tilt.
- Launch amplifier forward noise figure with 1 dB input pad and 0 dB interstage equalizer (ISEQ).
- Forward internal tilt specified with factory installed 0 dB ISEQ.
- Launch amplifier forward gain from RF input to station output port, with 1 dB input pad and 0 dB ISEQ. The 1 dB input pad simulates the loss of an ISEQ with value greater than 0 dB, which is typically field installed to achieve desired output tilt.
- The forward reference output tilt specified is achieved via the field installation of appropriate ISEQ, in conjunction with the internal tilt of the launch amplifier and the tilt associated with the optical link (transmitter/receiver combination).
- Station performance can be determined by combining optic performance and launch amplifier performance. Stated distortion performance is for launch amplifier section operated at reference output levels and tilt.
- Reverse output reference level at reverse output of RF launch amplifier.
- Launch amplifier reverse gain from station reverse input(s) to launch amplifier RF output, with 0 dB reverse input pad, 0 dB reverse output pad, and 0 dB reverse EQ.
- Reverse noise figure at station input with 0 dB reverse input pad, 0 dB reverse output pad and 0 dB reverse EQ.
- All reverse specifications are with reverse switch installed.
- Station reverse gain from station input(s) to reverse transmitter input. With 0 dB reverse input pad, 0 dB reverse output pad, and 0 dB reverse EQ in launch amplifier. Includes optical interface board losses.
- "Digital" refers to 750-1000 MHz loading with 19 QAM carriers at -6 dB relative to analog video carrier levels.

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