mNode | Modular Optical Node Platform

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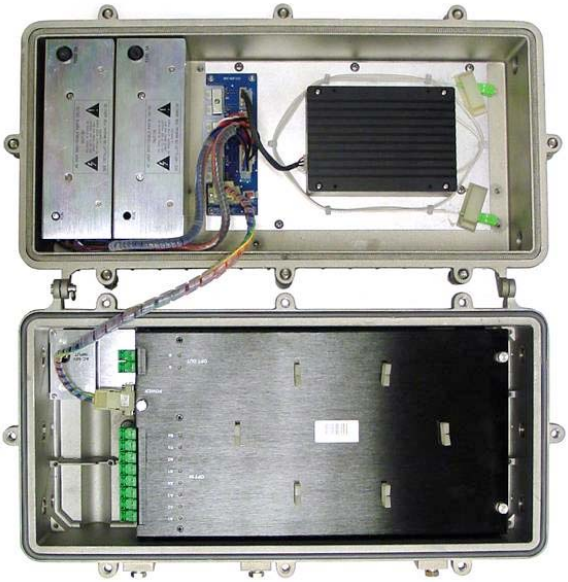

The QAMnet mNODE series is a modular platform for fully-customized optical node. Designed to meet the requirements for next generation deep fiber HFC, RF over Glass (RFoG) and Cable Passive Optical Networks (Cable PON) applications, mNODE provide a flexible and cost-effective transport solution. With our patented multiple wavelength technology, mNODE is provide a bandwidth upgrade solution that is also fully compatible with existing HFC/CATV infrastructure and installation.

Depending on system architecture and bandwidth requirements, mNODE can be configured with all functional blocks to enable deep fiber HFC, RFoG or Cable PON installation. These building blocks include: EDFA, fiber splitters, wavelength Add/drop, WDM/CWDM multiplexer, CWDM return path laser, return receivers and protective optical switch.

Based on our patented technologies, mNODE provides a higher density of functions and greater bandwidth capabilities than the tradition node design . The QAMnet design team will assist our customers to select the necessary functions from standard modules. There are two versions of mNODE optical node. mNODE is available with a weather-resistant outdoors units.

Features

- Designed for deep fiber, RFoG and Cable PON applications
- Compatible with existing HFC/CATV infrastructure and installation
- Patented multiple wavelength technology that is capable of:
    - DWDM channels for forward path broadcasting or narrowcasting
    - CWDM for high bandwidth return path data grooming
    - Incorporates GPON /EPON into HFC
    - Internal EDFA up to +24dBm
- Robust construction for outdoor operation

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Configuration / Order Information

Modules	Specifications A	Specifications B
Forward Path		
EDFA	**Input Level:** ☐ Standard : -5 to +7dBm ☐ Low Input: -15 to +3dBm	**Output power level:** ☐ +17dBm ☐ +20dBm ☐ +23dBm
Fiber Splitter	**Operating wavelength:** ☐ 1310nm ☐ 1470nm ☐ 1490nm ☐ 1510nm ☐ 1530nm ☐ 15500nm ☐ 1570nm ☐ 1590nm ☐ 1610n	**Number of output ports:** ☐ 16 ☐ 8 ☐ 4 ☐ 2 ☐ 1
WDM Combiner	**Operating wavelength:** ☐ 1310nm ☐ 1470nm ☐ 1490nm ☐ 1510nm ☐ 1530nm ☐ 15500nm ☐ 1570nm ☐ 1590nm ☐ 1610nm	**Number of WDM:** ☐ 16 ☐ 8 ☐ 4 ☐ 2 ☐ 1
Optical Switch	☐ 2 to 1	
Return Path		
Return Receiver	**Frequency range:** ☐ 5 to 45 MHz ☐ 5 to 200 MHz	**Number of receivers:** ☐ 16 ☐ 8 ☐ 4 ☐ 2 ☐ 1
WDM Combiner	**Operating wavelength:** ☐ 1310nm ☐ 1470nm ☐ 1490nm ☐ 1510nm ☐ 1530nm ☐ 15500nm ☐ 1570nm ☐ 1590nm ☐ 1610nm	**Number of WDM:** ☐ 16 ☐ 8 ☐ 4 ☐ 2 ☐ 1
Return Transmitter	**Output power level and type:** ☐ 3dBm DFB ☐ 10dBm DFB	**Number of transmitter:** ☐ 8 ☐ 4 ☐ 2 ☐ 1
	Operating wavelength: ☐ 1310nm ☐ 1470nm ☐ 1490nm ☐ 1510nm ☐ 1530nm ☐ 15500nm ☐ 1570nm ☐ 1590nm ☐ 1610nm	

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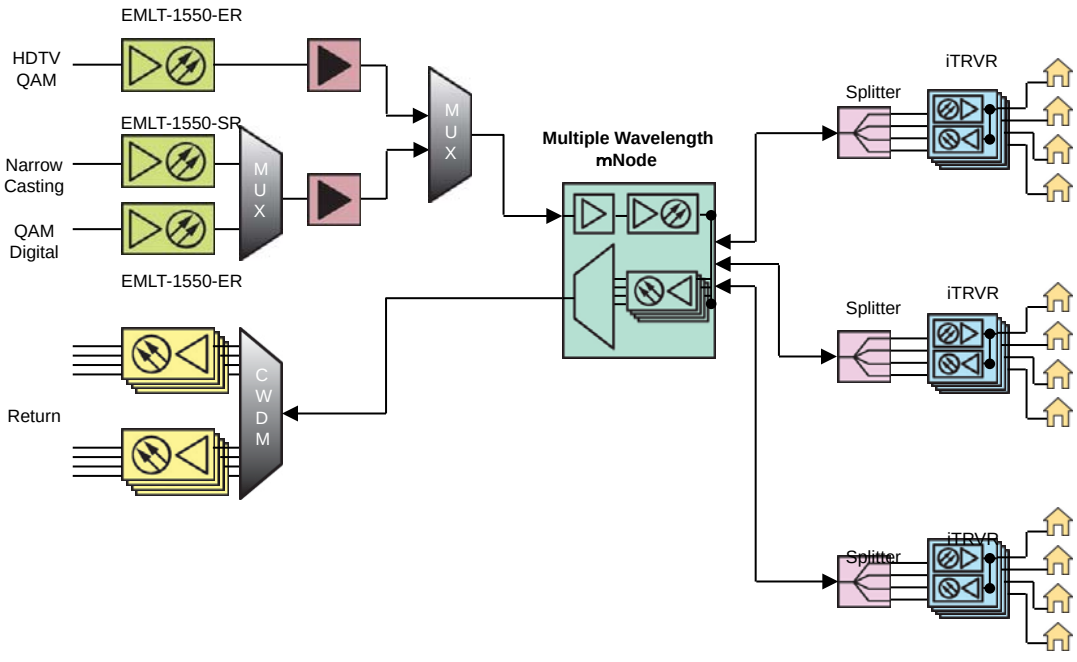
Environment / Mechanical Specifications

Dimensions	10.25” x 20.25” x 8.5” (Outdoors Model)
Shipping Weight	65 lbs
Temperature Range	-40°C to +50°C (operation) -50°C to +70°C (storage)
Power Supply	Dual 60 VAC for outdoor units
Power Consumption	150 W Maximum
Control / Monitoring	Optical Input and Output LEDs
Optical Connectors	SC/APC
Cast Material	Aluminum

FTTH Example with mNODE



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