

Datasheet

Passive CWDM MUX/DeMUX Modules



EM316PAMULC8N

EM316PAMULC4N

EM316WP2/53S

Highlights

- Up to 16 full-duplex DWDM wavelengths multiplexed
- Protocol and topology independence
- Transparent operation
- Secure physical separation between data wavelengths
- Optical Service Channel (OSC) on some models
- Minimal dB loss on each link
- Fully passive device - requires no power
- Compact form factor

Overview

The Fiber Driver Passive MUX/DeMUX modules and cables deliver the benefits of a Coarse Wave Division Multiplexer (CWDM) in a fully passive solution. With matching units placed at each end of an optical link, up to sixteen full-duplex wavelengths can combine and transmit over a single fiber trunk.

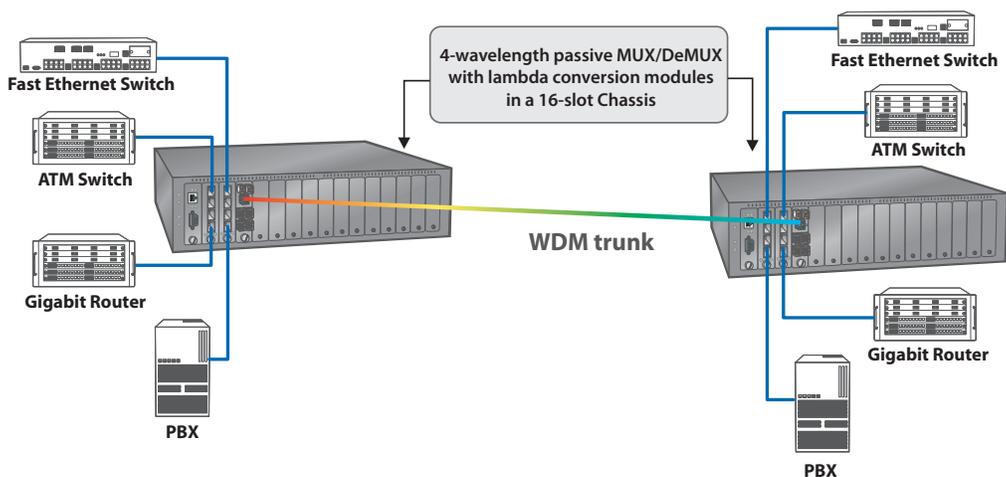
Passive MUX/DeMUX module operation is independent of protocol and topology, so it is transparent to both the network and the end user. With plug-n-play setup and a design that minimizes budget loss, it seamlessly integrates into an existing environment. The small form factor and power independence allows deployment almost anywhere.

A direct benefit of the Fiber Driver Passive MUX/DeMUX modules is in optimizing use of the existing fiber plant with far less time and expense than installing additional fiber. They increase network capacity while allowing for greater deployment flexibility because data wavelengths can be added or changed as needed.

The Fiber Driver Passive MUX/DeMUX modules are available with 2, 4, 8, or 16 independent wavelengths. Each single-slot high-density module installs in any Fiber Driver chassis. A powered chassis is required only for managed applications.

The Passive MUX/DeMUX cables pass using separate wavelengths: 1550 nm and 1590 nm. They simply connect between the transceiver of each network device and its matching single-mode fiber link.

Typical 4-wavelength passive MUX/DeMUX module application



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The 2-wavelength passive MUX/DeMUX module uses the 1310 nm and 1550 nm wavelengths. The 4-wavelength and 8-wavelength modules use wavelengths that fall within the ITU-T G.694.2 (2002) grid from 1470 nm to 1610 nm. See the wavelength chart for details. They are available with an optional 1310 nm service channel. The 16-wavelength modules follow the ITU-T G.694.2 grid from 1310 nm to 1610 nm, and require the use of low water peak fiber.

When operated in a powered chassis configured with a Fiber Driver Network Management Module (EM316LNxNM-OT), a passive MUX/DeMUX module provides essential management information including port connection wavelength diagnostics.

Contact your MRV Communications representative for additional information on these or any of the full line of MRV products, including pricing and availability.

Physical Specifications *

Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	85% maximum, non-condensing
Physical Dimensions	25 mm x 75 mm x 175 mm deep (1" x 3" x 6" deep)
Approximate Weight	249 - 425 g (8.5 - 15 oz) depending on configuration
Regulatory Compliance	RoHS Directive; China RoHS; WEEE Directive

* Consider operating specifications for all devices including chassis.

PASSIVE CWDM MODULES

Ordering Information

Model	Description	Connectors Port / Link	Wavelength Port / Link (nm)	Approx. Budget Loss per Pair (dB)
EM316WP/53S	CWDM dual wavelength passive, single-mode, single fiber	SC / SC	1310 (x1), 1550 (x1) / 1310 & 1550 (x1)	2.0
EM316WP/515S	CWDM dual wavelength passive, single-mode, single fiber	SC / SC	1510 (x1), 1550 (x1) / 1510 & 1550 (x1)	2.0
EM316PLC/5559	CWDM dual wavelength passive, single-mode, single fiber	LC / SC	1550 (x1), 1590 (x1) / 1550 (x1) & 1590 (x1)	2.0
EM316PSC/5559	CWDM dual wavelength passive, single-mode, single fiber	SC / SC	1550 (x1), 1590 (x1) / 1550 (x1) & 1590 (x1)	2.0
EM316WP2/53S	CWDM dual wavelength passive, single-mode, dual fiber	SC / SC	1310 (x2), 1550 (x2) / 1310 & 1550 (x2)	2.0
EM316WP2/515S	CWDM dual wavelength passive, single-mode, dual fiber	SC / SC	1510 (x2), 1550 (x2) / 1510 & 1550 (x2)	2.0
EM316WP2/5961	CWDM dual wavelength passive, single-mode, dual fiber	SC / SC	1590 (x2), 1610 (x2) / 1590 & 1610 (x2)	2.0

JUMPER CABLES

Ordering Information

Model	Description	Connectors Port / Link	Fiber Length (cm)
10600120-0002	Patch cable, passive	MU / LC	30

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PASSIVE CWDM MUX/DMUX MODULES
Ordering Information

Model	Description	Connectors			Wavelength (nm)*		Budget Loss per Pair (dB)
		Port	Trunk	OSC	Port / Link	OSC	
EM316PAMULC41	CWDM 4-wavelength passive MUX/DeMUX, single-mode	DMU (x4)	DLC	N/A	1470 to 1530	N/A	2.9
EM316PAMULC41N	CWDM 4-wavelength passive MUX/DeMUX with service channel, single-mode	DMU (x4)	DLC	DMU	1470 to 1530	1310	3.9
EM316PAMULC42	CWDM 4-wavelength passive MUX/DeMUX, single-mode	DMU (x4)	DLC	N/A	1550 to 1610	N/A	2.9
EM316PAMULC42N	CWDM 4-wavelength passive MUX/DeMUX with service channel, single-mode	DMU (x4)	DLC	DMU	1550 to 1610	1310	3.9
EM316PAMULC43	CWDM 4-wavelength passive MUX/DeMUX, single-mode	DMU (x4)	DLC	N/A	1530 to 1590	N/A	2.9
EM316PAMUSCM41	CWDM 4-wavelength passive MUX, single-mode	DMU (x2)	SC	N/A	1470 to 1530	N/A	2.9
EM316PAMUSCD41	CWDM 4-wavelength passive DeMUX, single-mode	DMU (x2)	SC	N/A	1470 to 1530	N/A	2.9
EM316PAMUSCM42	CWDM 4-wavelength passive MUX, single-mode	DMU (x2)	SC	N/A	1550 to 1610	N/A	2.9
EM316PAMUSCD42	CWDM 4-wavelength passive DeMUX, single-mode	DMU (x2)	SC	N/A	1550 to 1610	N/A	2.9
EM316MUX41N315B	CWDM 4-wavelength passive MUX/DeMUX with service channel, single-mode, single fiber	DMU (x2)	MU	DMU	1470 to 1530	1310 / 1350	3.3
EM316DMX41N315B	CWDM 4-wavelength passive MUX/DeMUX with service channel, single-mode, single fiber	DMU (x2)	MU	DMU	1470 to 1530	1310 / 1350	3.3
EM316MUX42N315B	CWDM 4-wavelength passive MUX/DeMUX with service channel, single-mode, single fiber	DMU (x2)	MU	DMU	1550 to 1610	1310 / 1350	3.3
EM316DMX42N315B	CWDM 4-wavelength passive MUX/DeMUX with service channel, single-mode, single fiber	DMU (x2)	MU	DMU	1550 to 1610	1310 / 1350	3.3
EM316PAMULC8	CWDM 8-wavelength passive MUX/DeMUX, single-mode	MU (x16)	DLC	N/A	1470 to 1610	N/A	4.3
EM316PAMULC8N	CWDM 8-wavelength passive MUX/DeMUX with service channel, single-mode	MU (x16)	DLC	DMU	1470 to 1610	1310	4.6
EM316PAMUSCM8	CWDM 8-wavelength passive MUX, single-mode	MU (x8)	SC	N/A	1470 to 1610	N/A	4.3
EM316PAMUSCD8	CWDM 8-wavelength passive MUX, single-mode	MU (x8)	SC	N/A	1470 to 1610	N/A	4.3
EM316MUX8N315BD	CWDM 8-wavelength passive MUX with service channel, single-mode, single fiber	MU (x8)	MU	DMU	1470 to 1530	1310 / 1350	3.6
EM316DMX8N315BD	CWDM 8-wavelength passive MUX with service channel, single-mode, single fiber	MU (x8)	MU	DMU	1470 to 1530	1310 / 1350	3.6
EM316MUXMUSC16	CWDM 16-wavelength passive MUX, single fiber low water peak, single fiber	MU (x16)	SC	N/A	1310 to 1610	N/A	5.4
EM316DMUXMUSC16	CWDM 16-wavelength passive MUX, single fiber low water peak, single fiber	MU (x16)	SC	N/A	1310 to 1610	N/A	5.4

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