Passive 8 Channel CWDM MUX/DeMUX Module

MICROSENS

General

MICROSENS is expanding its product portfolio of optical Metro solutions by introducing new passive multiplexers for multiplying transmission capacities of fiber optical connections.

By using passive multiplexers, several optical channels of different wavelengths can be combined, which will allow multiple services to the transmitted together via fiber without interference. What makes this possible is the fact that different light colours (wavelengths) do not affect each other. These components will make realizing CWDM and DWDM applications easy.

For transmission, light colours are multiplexed onto an fiber using a wavelength-specific filter (multiplexing). At the other (receiving) end of the line, the wavelengths are divided again, or rather, demultiplexed. Hence, any transmission line consists of a multiplexer and a demultiplexer.

For bi-directional transmission, both start and end points will then require the appropriate multiplexers and demultiplexers. Since we are dealing with true passive multiplexing, the individual optical signals must already be available in their respective wavelengths. The multiplexers are then selected according to the different wavelengths (window, number of channels, and wavelength difference).

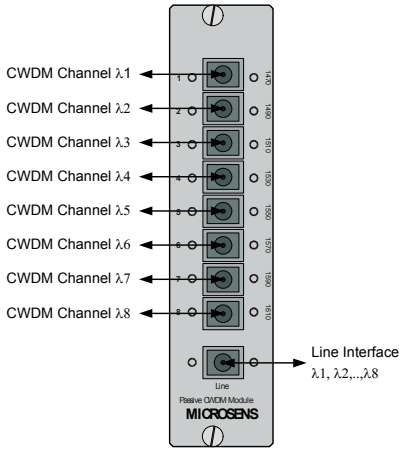
The design of these components emphasizes ease of installation and start-up of operations, as well as consistent modularity for optimal adaptability to given communication requirements.

The multiplexer/demultiplexer rack modules are part of a wide product range of functional modules for installation in modular rack systems from MICROSENS. In addition to desktop housings, users can select a 19" chassis with up to 12 slots. When using multi-slot chassis, the converter may be combined with any other modules from the Enterprise Access family. In addition, the MICROSENS product portfolio offers active converters for optical or electrical/optical adaptation of data channels to the appropriate wavelengths and required ranges. These converters are also based on the modular system of the Enterprise Access family, allowing band-widths of up to 2.5 Gbit/s per channel. Depending on combination and wavelengths, ranges of up to 80 km can be realized.

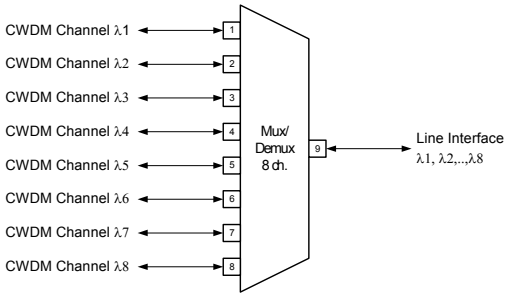
Using WDM as transmission technology, network operators can build an infrastructure that may be expanded depending on need. In addition, the capacities in all sub-areas of the network are expandable. This represents an advantage no other technology can provide.

Using passive multiplexers is of interest for cable network operators, too. This technology will allow providing additional services such as combining bi-directional data services with uni-directional TV transmission without any problem, while using the existing infrastructure.

Device

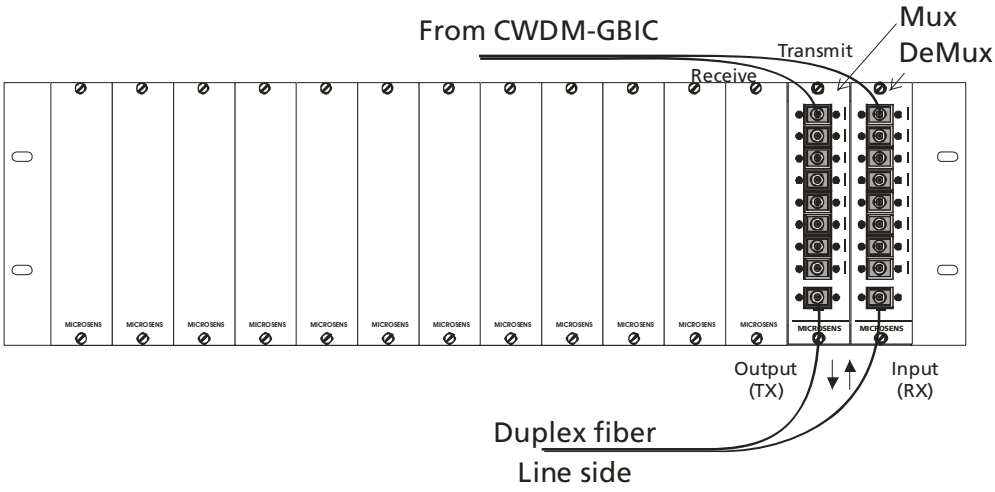


Function



Connection

The use of the multiplexer and demultiplexer is always done in a pair.



Technical Specifications

Type	Passive Multiplexer/Demultiplexer Module for multiplexing or demultiplexing of 8 CWDM channels. To be mounted in the MICROSENS modular converter chassis.
Fiber type	Single Mode 9/125 µm SC/APC-connector (Line Interface) SC/PC-connector (Channel Interface)
CWDM Channels	According to ITU G.694.2, spacing 20 nm: 1470 nm, 1490 nm, 1510 nm, 1530 nm, 1550 nm, 1570 nm, 1590 nm, 1610 nm
Channel width	min. +/- 6,5 nm
Channel Isolation	min. 30 dB (adjacent) min. 45 dB (non adjacent)
Insertion Loss	max. 2,5 dB per channel
Return Loss	min. 40 dB
Flatness	max. 0,5 dB
Power supply	12 V DC / max. 100 mA via system backplane (for management only)
Operating temperature	0°C to 55°C
Storage temperature	-20°C to 80°C
rel. Humidity	5% to 80% non condensing
Dimensions	31 x 128 x 170 mm (w x h x d)

Notes

The passive Mux/DeMUX modules are belonging to a big range of converter modules and can be combined with other modules of the same family. A power supply of the passive modules is not necessary.

Ordering information

Art.-No.	Description	Connectors
MS416410M	8 channel CWDM MUX and DeMUX module (for an 8 channel MUX/DeMUX system there are two modules necessary)	Local: 8x SC/PC simplex Line:1x SC/APC simplex