

4 channels multiplexers

Overview

Passive Optical module is a part of MICROSENS 10G Transport Platform, a high performance and flexible carrier-class transmission system. The 10G Transport Platform enables increasing transport capacities in CWDM, DWDM and SDH networks. The use of wide range TDM modules permits to reduce the number of necessary wavelengths and to decrease the overall cost of the application. Ethernet over SDH modules enable using existing SONET/SDH infrastructure for IP transmission.



The general features of the system:

- 19" 2U Chassis with 5 module slots and management card
- Max. 5x single size modules f.ex. 2x double size + 1x single size module
- Hot swappable modules & power supplies
- Redundant power supplies with -48 VDC input (opt. 230 VAC)
- Exchangeable air- and filter module
- Wide range of functional xWDM and TDM modules available

The functional modules of 10G Transport Platform include:

- TDM 8x GBE or 8x GFC to 10G/OC-192/STM-64
- TDM 5x GBE or 5x 2GFC to OC-192/STM-64
- TDM 4x OC-48/STM-16 to 10G/OC-192/STM-64
- TDM 2x GBE and 2x GFC to OC-48/STM-16
- 10G transponder with 3R, XFP and fixed Laser Versions
- 10G protocol converter 10G LAN to 10G WAN (OC-192/STM-64)
- DWDM MUX/DeMUX, OADMs, EDFAs

Introduction

This technical document describes the Passive optical modules for the MICROSENS 10G Transport Platform. Passive optical module is a Pluggable Module offering Multiplexer and Demultiplexer function of several wavelengths over one DWDM optical line.

Optical parameters

MS430720x family

Functional description

The block diagram of the MS430720x (B or R) is given in Figure 1, the MS430720BR in Figure 2 and the MS430720RB in Figure 3. The MS430720x is a bi-directional device which:

- Multiplexes four channels (RED or BLUE) to a transmit line.
- Demultiplexes four channels (RED or BLUE) from a transmit line.

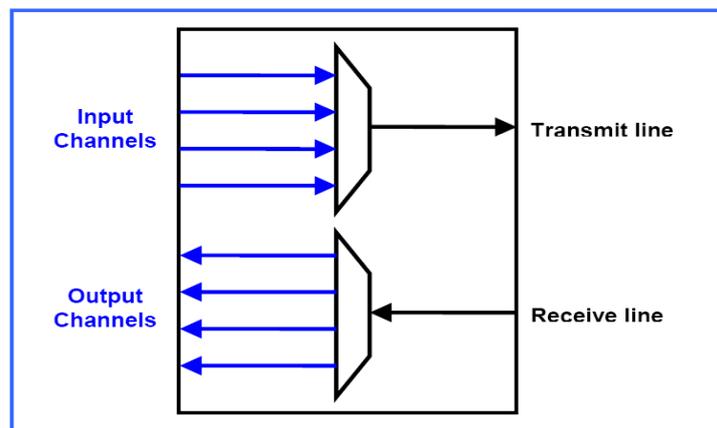


Figure 1: MS430720x (B or R) Block diagram.

The MS430720BR is a bi-directional device which:

- Multiplexes four Blue channels to a transmit line.
- Demultiplexes four Red channels from a transmit line.

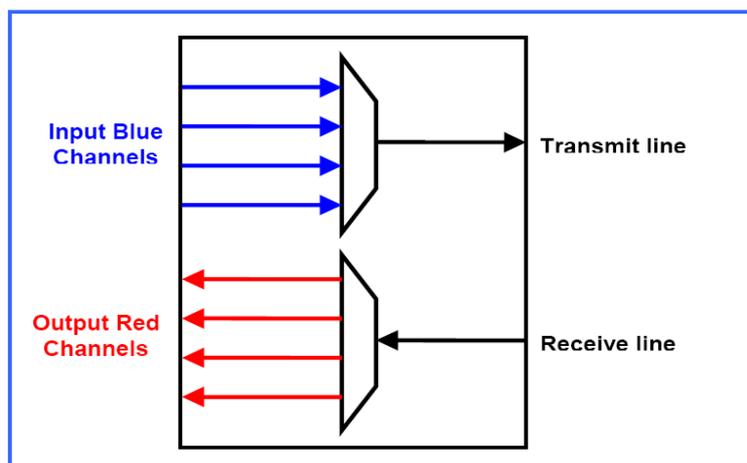


Figure 2: MS430720BR Block diagram.

The MS430720RB is a bi-directional device which:

- Multiplexes four Red channels to a transmit line.
- Demultiplexes four Blue channels from a receive line.

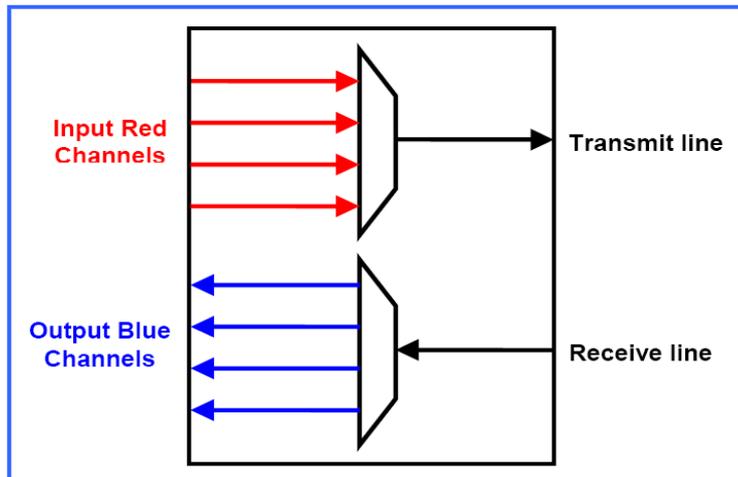


Figure 3: MS430720RB Block diagram.

Optical Characteristics

The MS430720x module has the following optical characteristics

General	Value			Unit
	Min	Typ	Max	
Insertion loss		2.1	2.4	dB
0.5dB Pass Band		0.75		nm
Return Loss	30			dB
Adjacent Channel Isolation	25			dB
Non_adjacent Channel Isolation	40			dB
Channel Spacing	200			GHz
Blue Band				
Wavelength 1	1541.35 (Ch45)			nm
Wavelength 2	1539.77 (Ch47)			nm
Wavelength 3	1538.19 (Ch49)			nm
Wavelength 4	1536.61 (Ch51)			nm
Red Band				
Wavelength 1	1548.51 (Ch36)			nm
Wavelength 2	1550.12 (Ch34)			nm
Wavelength 3	1551.72 (Ch32)			nm
Wavelength 4	1553.33 (Ch30)			nm

Table 1: MS430720x optical characteristics.

Front Panel

The MS430720x occupies one slot in the MS430500M/MS430502M chassis

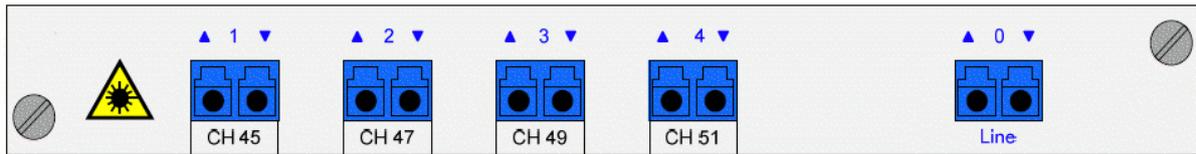


Figure 4: MS430720B front panel layout.

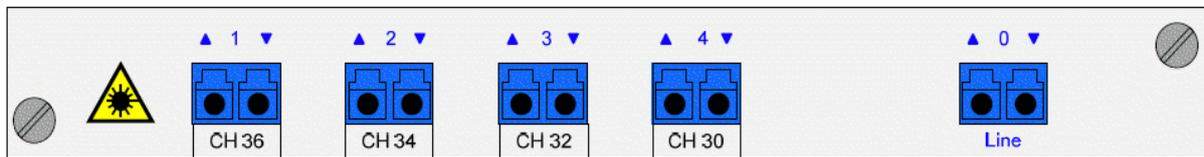


Figure 5: MS430720R front panel layout.

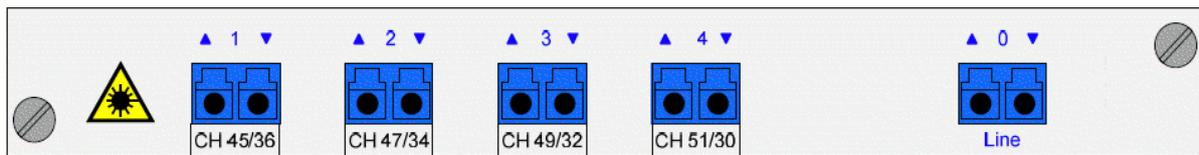


Figure 6: MS430720BR front panel layout.

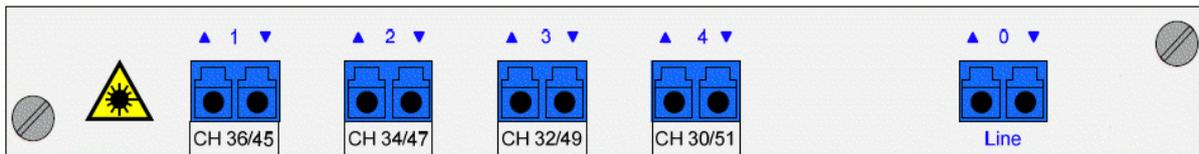


Figure 7: MS430720RB front panel layout.

Order Information

Art. No.	Description
MS430720B	4 Channel optical MUX/DMUX Unit (ch 45-47-49-51)
MS430720R	4 Channel optical MUX/DMUX Unit (ch 30-32-34-36)
MS430720BR	4 Channel Blue Band MUX Unit (ch 45-47-49-51) / Red Band DMUX (ch 30-32-34-36)
MS430720RB	4 Channel Red Band MUX Unit (ch 30-32-34-36) / Blue Band DMUX (ch 45-47-49-51)

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