



Optical Fiber/Wavelength Converter

Installation Instructions

Part Number:

CX-1x1-x/xy (ST/FC)

(1-Channel Bi-Di Fiber/Wavelength Converter)

Meridian Technologies, Inc.

700 Elmont Road, Elmont NY 11003

Telephone : 516. 285. 1000 Fax: 516. 285. 6300

E-mail : sales@meridian-tech.com Web: www.meridian-tech.com

Document Version 1.1

05/19/2014

Table of Contents

1.0 Product Description	3
2.0 Installation	3
3.0 Optical Specifications	4
4.0 Product Part Number Variations.....	4
5.0 Front Panel Indicator Lights	5
6.0 Front Panel Layout Diagram.....	6
7.0 Troubleshooting.....	8

CX-1x1-x/xy
Fiber Optic Optical Wavelength Converter
Installation Instructions

1.0 Product Description

Meridian's CX-1x1 product is an optical converter with the ability to convert one way or bi-directional transmission over various fiber types, fiber quantities and wavelength. This includes conversion from single-mode to multimode, multimode to single-mode, wavelength conversion as well as converting from one fiber to two or two fibers to one. This product is extremely versatile with its various configuration options. This product series uses Meridian's standard 1-slot wide chassis mount card assembly and plugs into the following Meridian chassis: SR-500/S, SR-1002/S, SR-1600/S and SR-2001 & SR-2000 series equipment chassis.

Both ST and FC optical connectors are supported, depending on the part number. An ST optical interface is available for both multimode and singlemode fiber application while an FC optical interface is available only for singlemode products. Optional conformal coating provides an additional level of protection from environments with high humidity.

2.0 Installation

Series CX-1x1 products are one-slot wide cards and, as such, occupy one slot in Meridian's standard chassis. To install in these chassis, orient the card with the Meridian logo at the top of the module and slide onto the top and bottom card guides in the chassis. Press securely on the top and bottom of the module to ensure that it is fully seated in the chassis so that the electrical connector mates with the chassis-mounted motherboard. Once installed, manually tighten the two thumbscrews located at the top and bottom of the card. Do not use tools to secure these and do not over tighten.

Note: A fully loaded 19" subrack should have forced-air cooling to avoid excessive heat generation inside the chassis. A fan assembly tray (P/N FA-2000) with three (3) fans is available and should be installed under the 19" SR-2000/1 whenever possible.

3.0 Optical Specifications

Optical Specifications	
Date Rate	155/1250/4250 Mb/s
Optical input range (SM)	1270nm - 1610nm

Note: User can select Wavelength and Data Rate at time of ordering.

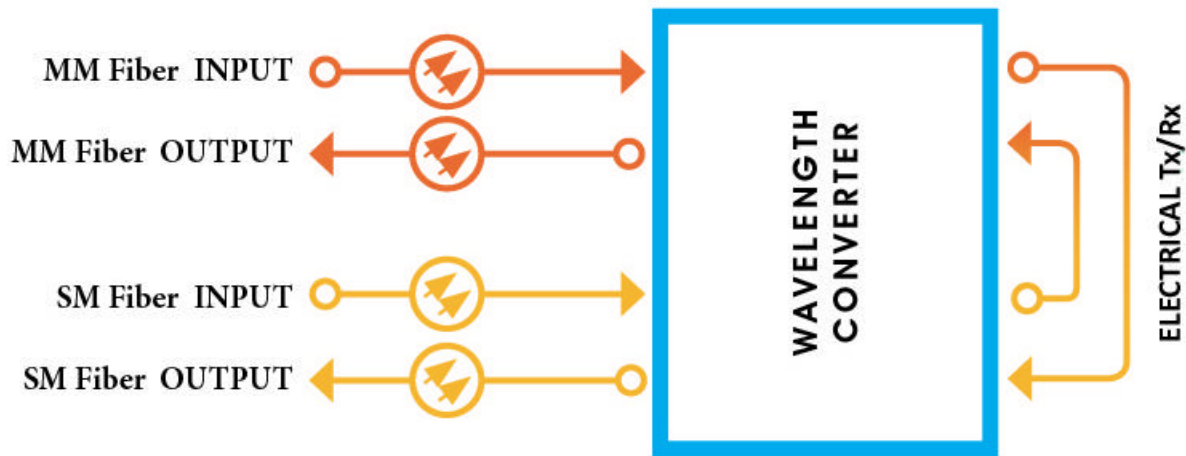


Figure 3.1
CX-1x1 Block Diagram

4.0 Product Part Number Variations

The table below lists the various part numbers and description that are available for this series of product.

Meridian Optical code	Description
0	MM, 850nm Laser, 2 Fibers
1	MM, 1300nm Laser, 2 Fibers
2	MM, 850nm/1300nm Laser, 1 Fiber
3	SM, 1310nm FP Laser, 2 Fibers
4	SM, 1550nm FP Laser, 2 Fibers
5	SM, 1310nm/1550nm FP Laser, 1 Fiber
7	SM, 1550nm DFB Laser, 2 Fibers
9	SM, 1310nm DFB Laser, 2 Fibers
11	MM, 1310nm/1550nm FP Laser, 1 Fiber
14	MM, 1550nm/1310nm FP Laser, 1 Fiber
19	SM, 1550nm/1310nm FP Laser, 1 Fiber
CWDM*	1270nm-1610nm CWDM DFB Lasers*

*See Meridians Part Number Guide for CWDM Lasers details.

PART NUMBER DIAGRAM

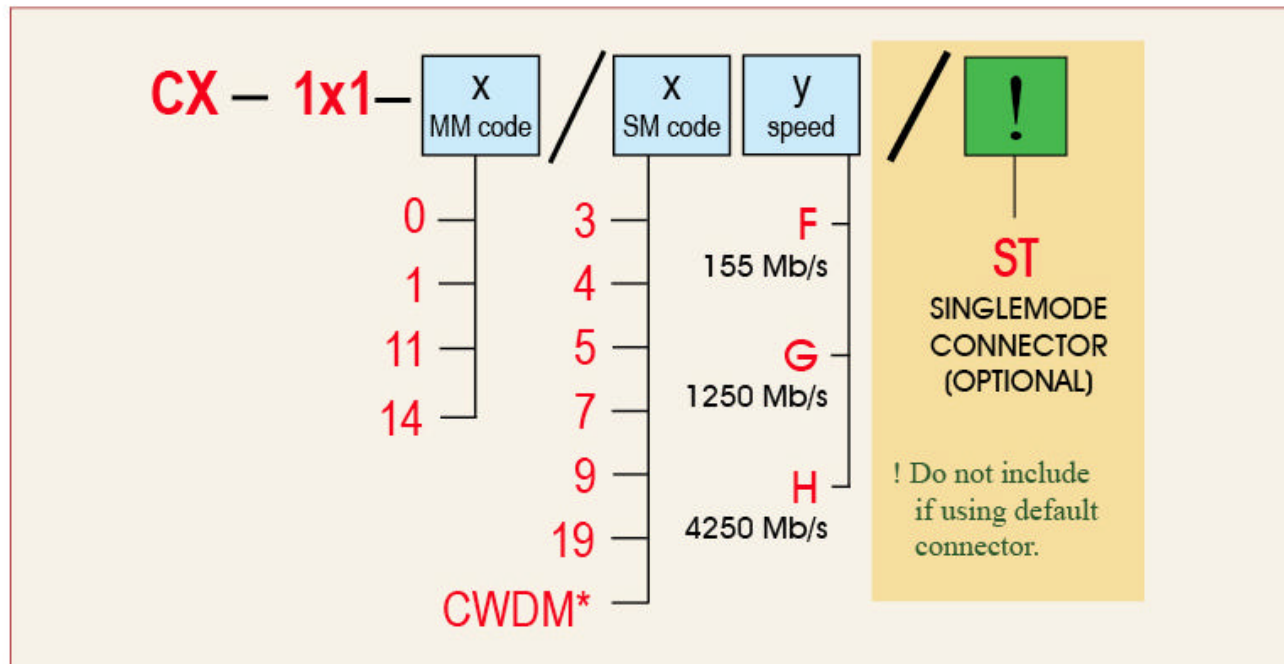


Figure 4.1
CX-1x1 Part Number Diagram

5.0 Front Panel Indicator Lights

There are 5 LED indicator lights mounted on the left side of the module's front panel (see Figure 6.1 below). These indicators show the operation status of the module's power and optical carriers. These indicators can be used for troubleshooting the module, electrical and optical connections.

Not all of the LEDs apply to all versions of these modules. Please refer to the module's part number for the appropriate signals, description.

Indicator	Function
Power	Green – ON
Tx MM Carrier	Optical output Green – OK
Rx MM Carrier	Optical Carrier input Green – OK
Tx MM Carrier	Optical output Green – OK
Rx SM Carrier	Optical Carrier input Green – OK

6.0 Front Panel Layout Diagram

Figures 6.1 below show the front panel layout, LED lights location and FC or ST optical connectors assignment for all CX-1x1 cards.

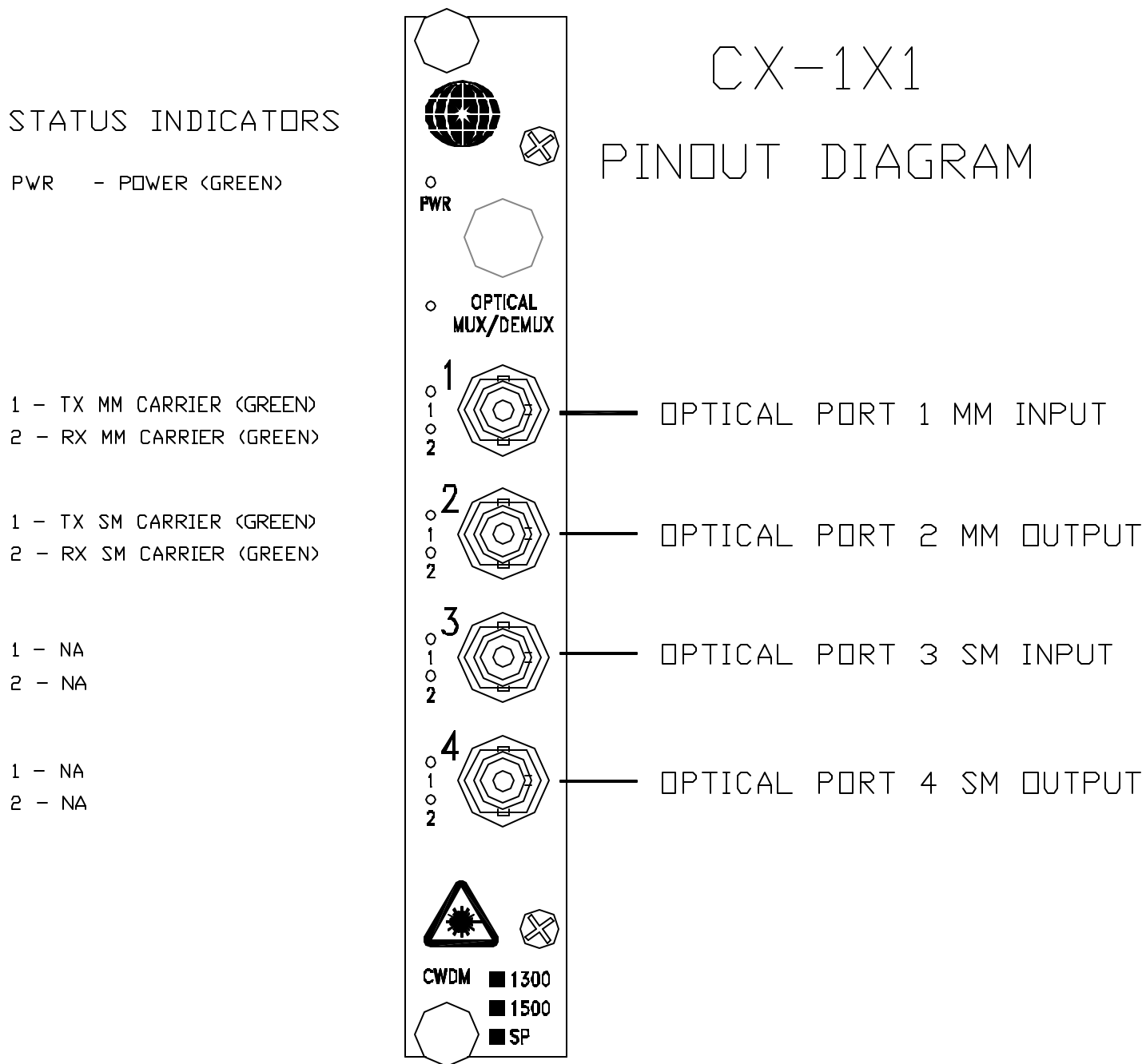


Figure 6.1
CX-1x1-x/xy Front Panel Layout Diagram for 4-fiber system

STATUS INDICATORS

PWR - POWER (GREEN)

1 - TX MM CARRIER (GREEN)

2 - RX MM CARRIER (GREEN)

1 - TX SM CARRIER (GREEN)

2 - RX SM CARRIER (GREEN)

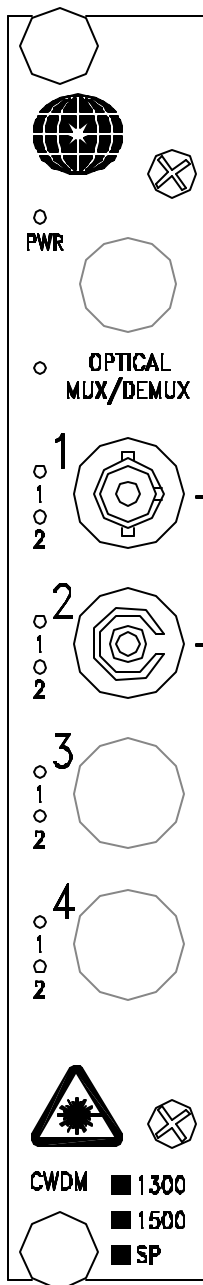
1 - NA

2 - NA

1 - NA

2 - NA

CX-1X1-X/Y (2 FIBER) PINOUT DIAGRAM



OPTICAL PORT 1 MM IN/OUT

OPTICAL PORT 2 SM IN/OUT

PORT 3 NA

PORT 4 NA

Figure 6.2
CX-1x1-x/xy Front Panel Layout Diagram for 2-fiber system

7.0 Troubleshooting

Below is a listing of several problems that may arise during the installation & operation of the modules. If you are having difficulty installing or operating the modules please refer to this list below.

Problem: *Module does not fit in chassis slots*

Action: Check module orientation. Meridian “Globe” must be oriented on the top left hand side of the module. Make sure the card guides in the chassis are aligned with the extrusion on the module.

Problem: *Card power LED does not light when power to the module/subrack is applied or power indicator turns on and off*

Action: Check power supply to ensure that it is plugged in and turned on. If flashing continues, move module to another chassis or location in the same chassis, if available.

Problem: *No Tx Carrier light*

Action: Optical module is defective, return to factory for repair.

Problem: *No Rx Carrier light*

Action: Received optical signal absent or low. Check fiber connection and optical power at receiver.

If the problem still persists after reviewing the above items, please contact Meridian technical support (516-285-1000).

Notes:



Meridian Technologies, Inc.
700 Elmont Road, Elmont NY 11003
Telephone: 516-285-1000 Fax: 516-285-6300
E-mail: support@meridian-tech.com
Web: www.meridian-tech.com
Document Version 1.1
05/19/2014