

## Overview

Thank you for purchasing PLANET MFB family SFP 100Base-FX Fast Ethernet module. The MFB family SFP Fast Ethernet module can install into PLANET Switch products with 100Base-FX SFP interface. The distance can be extended from 2km (MM) up to 60 kilometers (Single-mode, LC).



Class 1 Laser Product  
Complies with FDA Regulation 21 CFR 1040.10 and 1040.11.



Class 1 radiation is present when the device or system is powered up.



Only trained and qualified personnel should be allowed to install or replace these modules.

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## 2. Check List

Your MFB carton should contain the following items:

- The MFB family SFP Fast Ethernet Module
- This User's Manual

If any item is missing or damaged, please consult the dealer from whom you purchased you MFB family SFP Fast Ethernet module.

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## 3-2 1-Port 100Base-BX WDM SFP Modules – MFB-FA20 / MFB-FB20

### Features:

- Comply with IEEE 802.3u Fast Ethernet standard
- 1 x 100Mbps LC fiber port (Single LC fiber connectors)
- Plug and Play Installation
- 0 to 50 Degree C operation temperature

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The MFB series single mode SFP transceivers provide the optical power budget from 15 dB to 30dB. When shorter distance of single-mode fiber cables is used, you might need to insert an in-line optical attenuator in the link to avoid overloading the transceiver:

SFP Model	MFB-F20 MFB-TF20	MFB-F40	MFB-F60	MFB-FA20	MFB-FB20
In-line Optical Attenuator					
Optical power budget	15 dB	24 dB	30 dB	18 dB	18 dB
Fiber Cable Length = 10Km	---	---	10 dB	---	---
Fiber Cable Length = 30Km	X	---	---	X	X
15Km ≤ Fiber Cable Length < 40Km	---	---	---	---	---

1. "----" means no need to use in-line optical attenuator.
2. "X" means fiber connection not established.

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## 1. Model List

Your MFB family SFP Fast Ethernet module comes with one of the following models.

Fast Ethernet SFP Module List		
Model	Interface	Fiber connector and distance
MFB-FX	SFP-Port 100Base-FX Module	LC, Multi-Mode (1310nm) -2km
MFB-F20	SFP-Port 100Base-FX Module	LC, Single Mode (1310nm) -20km
MFB-F40	SFP-Port 100Base-FX Module	LC, Single Mode (1310nm) -40km
MFB-F60	SFP-Port 100Base-FX Module	LC, Single Mode (1310nm) -60km
MFB-FA20	SFP-Port 100Base-BX Module	LC WDM, Single Mode (TX: 1310nm, RX: 1550nm) -20km
MFB-FB20	SFP-Port 100Base-BX Module	LC WDM, Single Mode (TX: 1550nm, RX: 1310nm) -20km
MFB-TFX	SFP-Port 100Base-FX Module	LC, Multi-Mode (1310nm) -2km (-40~75°C)
MFB-TF20	SFP-Port 100Base-FX Module	LC, Single Mode (1310nm) -20km (-40~75°C)

\* Models with last two numbered characters indicate the maximum distance in km.

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## 3. Introduction

### 3-1 1-Port 100Base-FX SFP Modules – MFB-FX / MFB-F20 / MFB-F40 / MFB-F60

#### Features:

- Comply with IEEE 802.3u Fast Ethernet standard
- 1 x 100Mbps LC fiber port
- Plug and Play Installation
- 0 to 50 Degree C operation temperature

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### 3-3 1-Port 100Base-FX SFP Modules – MFB-TFX / MFB-TF20

#### Features:

- Comply with IEEE 802.3u Fast Ethernet standard
- 1 x 100Mbps LC fiber port
- Plug and Play Installation
- -40 to 75 Degree C operation temperature

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## 4. Installing SFP Modules

### 4.1 Installing the SFP transceiver

The sections describe how to insert an SFP transceiver into an SFP slot.

The SFP transceivers are hot-pluggable and hot-swappable. You can plug-in and out the transceiver to/from any SFP port without having to power down the Switch/Media Converter. As the Figure -1 appears.

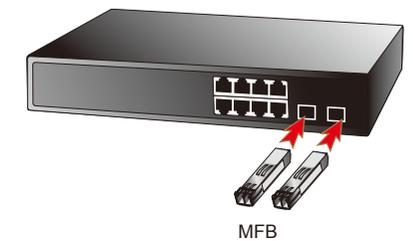


Figure 1 Plug-in the SFP transceiver

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**Before connect the other switches, workstation or Media Converter.**

1. Make sure both side of the SFP transceiver are with the same media type or WDM pair, for example: 100Base-FX to 100Base-FX, 100Base-BX20-U to 100Base-BX20-D.
2. Check the fiber-optic cable type match the SFP transceiver model.
  - To connect to **MFB-FX / MFB-TFX** SFP transceiver, use the **multi-mode** fiber cable- with one side must be male duplex LC connector type.
  - To connect to **MFB-F20/TF20/F40/F60/FA20/FB20** SFP transceiver, use the **single-mode** fiber cable-with one side must be male duplex LC connector type.

**Connect the fiber cable**

1. Attach the duplex LC connector on the network cable into the SFP transceiver.
2. Connect the other end of the cable to a device – switches with SFP installed, fiber NIC on a workstation or a Media Converter.
3. Check the LNK/ACT LED of the SFP slot of the switch / converter. Ensure that the SFP transceiver is operating correctly.
4. Check the Link mode of the SFP port if the link failed. Co works with some fiber-NICs or Media Converters, set the Link mode to “100 Force” is needed.

**APPENDIX A**

**A.1 Fiber Optical Cable Connection Parameters**

The wiring details are as below:

■ **Fiber Optical patch Cables:**

Standard	Fiber Type	Cable Specification
100Base-FX (1310nm)	Multi-mode	50/125µm or 62.5/125µm
100Base-FX (1310nm)	Multi-mode	50/125µm or 62.5/125µm
	Single-mode	9/125µm
100Base-BX-U (TX: 1310/RX: 1550) 100Base-BX-D (TX: 1550/RX: 1310)	Single-mode	9/125µm

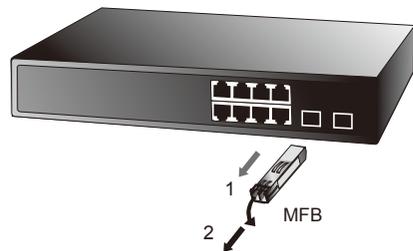
Plug & Play **100Base-FX SFP**  
MFB-Series **Fast Ethernet Transceiver**



**User's Manual**

**4.2 Remove the module**

1. Make sure there is no network activity by consult or check with the network administrator. Or through the management interface of the switch/converter (if available) to disable the port in advance.
2. Remove the Fiber Optic Cable gently.
3. Turn the handle of the MFB module to horizontal.
4. Pull out the module gently through the handle.



**Figure-2** Pull Out the SFP transceiver

**Note**  
Never pull out the module without pull the handle or the push bolts on the module. Direct pull out the module with violent could damage the module and SFP module slot of the device.