GE
Security

# SFP Transceivers User Manual

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**Regulatory information**

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# Content

# Chapter 1
# Overview


The GE Security SFP1000 and SFP100 family of Small Form Factor Pluggable (SFP, also known as mini-GBIC) Transceiver Modules is specifically designed for a high performance integrated duplex data link over single mode optical fiber. These transceiver modules are compliant with the SFP Multisource Agreement (MSA). With the hot plug ability, these modules offer an easy way to be installed into SFP MSA compliant ports at any time without the interruption of the host equipments operating online. The SFP Transceivers can be installed into any of GE Security Switch products with the 100Base-FX or 1000Base-SX/LX SFP interface.

# Model List

The GE SFP1000/SFP100 Transceiver family comes with one of the following models.

| SFP module List | | | |
|---|---|---|---|
| **Model** | **Interface** | **Speed** | **Fiber connector and distance** |
| **SFP1000SX-220** | 1000Base-SX | 1000Mbps | LC, Multi-Mode (850nm) -220m/550m |
| **SFP1000LX-10Km** | 1000Base-LX | 1000Mbps | LC, Single Mode (1310nm) – 10km |
| **SFP100FX1310-TSC-2Km** | 100Base-FX | 100Mbps | LC, Multi-Mode (1310nm) -2km |
| **SFP100FX1310-TSC-20Km** | 100Base-FX | 100Mbps | LC, Single Mode (1310nm) – 20km |

# Checklist

Your SFP Transceiver box should contain the following items:

- The SFP transceiver module
- This User's manual

If any item is missing or damaged, please consult the dealer from whom you purchased you SFP Transceiver module.

# Introduction

**1000Base-SX / LX SFP Mini-GBIC Modules - SFP1000SX-220, SFP1000LX-10Km**

**Features:**

- Complies with the IEEE 802.3z Gigabit Ethernet standard
- 1 X 1000Mbps fiber port

- Plug and Play Installation
- SFP1000SX-220 provides distance up to 220m over 62.5/125μm fiber cable and 550m over 50/125μm fiber cable
- SFP1000LX-10Km provides distance up to 10km over 9/125μm single mode fiber cable

**100Base-FX SFP Mini-GBIC Modules - SFP100FX1310-TSC-2Km / SFP100FX1310-TSC-20Km**

**Features:**

- Complies with IEEE 802.3u Fast Ethernet standard
- 1 x 100Mbps fiber port
- Plug and Play Installation
- SFP100FX1310-TSC-2Km provides distance up to 2km over 62.5/125μm multi-mode fiber cable
- SFP100FX1310-TSC-20Km provides distance up to 20km over 9/125μm single mode fiber cable

# Installing SFP modules

The section describes 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 from any SFP port without having to power down the Switch/Media Converter. As Figure 1 shows.

**Figure 1: Plug-in the SFP transceiver**

**Note:** Before connecting the other switches, workstations or Media Converters ensure the following conditions are met.

1. Make sure both sides of the SFP transceiver are the same media type, for example: 100Base-FX to 100Base-FX, 1000Base-SX to 1000Base-SX.
2. Check that the fiber-optic cable type matches the SFP transceiver model.
    - To connect to a SFP1000SX-220m or a SFP100FX1310-TSC-2Km SFP transceiver, use the multi-mode fiber cable- where one side must be a male duplex LC connector type.
    - To connect to the SFP1000LX-10km or the SFP100FX1310-TSC-20Km SFP transceiver, use the single-mode fiber cable- where one side must be a male duplex LC connector type.

### Connecting the Fiber cable

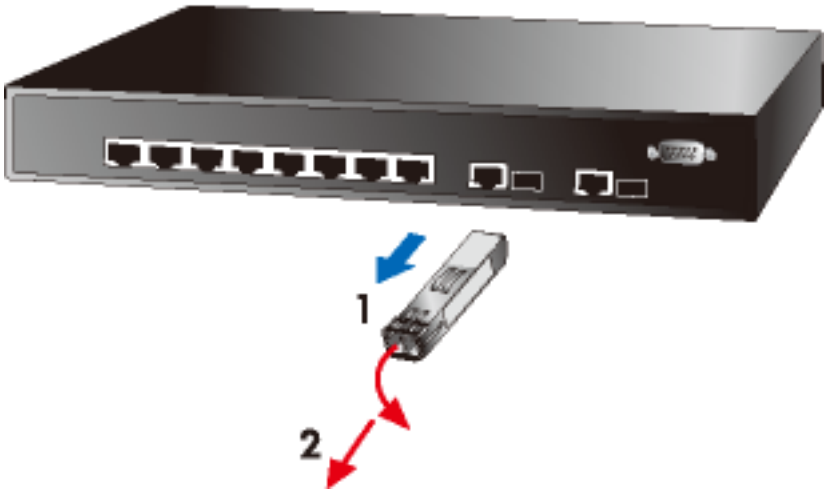
1. Attach the duplex LC connector on the network cable into the SFP transceiver.
2. Connect the other end of the cable to a device - switches with SFP installed, fiber NIC on a workstation or a Media Converter.

3. Check that the LNK/ACT LED on 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. Set the Link mode to "1000 Force" or "100 Force" if needed.

### Removing the module

1. Make sure that there is no network activity by checking 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: Pullout the transceiver**




**Note:** Never pull out the module without pull the handle or the push bolts on the module. Pulling out the module with too much force could damage the module and SFP module slot of the Managed Industrial Switch.

# Appendix A
# Fiber Optic Cable Parameters

The wiring details are shown below:

| Standard | Fiber Type | Cable Specification |
|---|---|---|
| 1000Base-SX (850nm) | Multi-mode | 50/125 μm or 62.5/125μm |
| 1000Base-LX (1310nm) | Single mode | 9/125μm |
| 100Base-FX (1310nm) | Multi-mode | 50/125μm or 62.5/125μm |
| | Single mode | 9/125μm |