

**Regulatory Approvals**

- FCC Class A
- UL 1950
- CSA C22.2 No. 950
- EN60950
- CE
  - EN55022 Class B
  - EN50082-1

**Canadian EMI Notice**

This Class A digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

**European Notice**

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the commission of the European Community. Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22) - Radio Frequency Interference
- EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity
- EN60950 (IEC950) - Product Safety

**Five-Year Limited Warranty**

MiLAN Technology warrants to the original consumer or purchaser that each of its products, and all components thereof, will be free from defects in material and/or workmanship for a period of five years from the original factory shipment date. Any warranty hereunder is extended to the original consumer or purchaser and is not assignable.

MiLAN Technology makes no express or implied warranties including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose, except as expressly set forth in this warranty. In no event shall MiLAN Technology be liable for incidental or consequential damages, costs, or expenses arising out of or in connection with the performance of the product delivered hereunder. MiLAN Technology will in no case cover damages arising out of the product being used in a negligent fashion or manner.

**Trademarks**

© 2000 MiLAN, the MiLAN logo, and MiLAN Technology are either trademarks or registered trademarks of Digi International, Inc. in the United States and/or other countries. All other trademarks are the property of their respective holders.

**To Contact MiLAN Technology**

For prompt response when calling for service information, have the following information ready:

- Product serial number and rev.
- Date of purchase
- Vendor or place of purchase

You can reach MiLAN Technology technical support at:

E-mail: support@milan.com  
Telephone: +1.408.744.2751  
Fax: +1.408.744.2771

MiLAN Technology  
1299 Orleans Drive  
Sunnyvale, CA 94089-1138  
United States of America

Telephone: +1.408.744.2775  
Fax: +1.408.744.2793

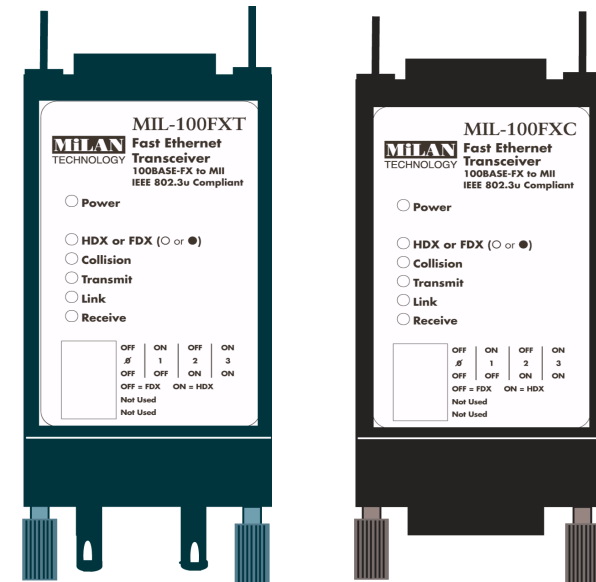
<http://www.milan.com>  
[info@milan.com](mailto:info@milan.com)



# MIL-100FXT and MIL-100FXC

## Fast Ethernet Transceivers

### Installation Guide



**MIL-100FXT and MIL-100FXC**

This guide includes the following information:

- “Introduction” on page 2
- “Installation” on page 3
- “Configuration” on page 3
- “Slide Switches” on page 4
- “Indicators” on page 5

---

## About the Manual

This document covers both the MIL-100FXC and the MIL-100FXT. “C” denotes an SC-type connector and “T” denotes an ST-type connector. The terms “MIL-100FX” or “transceiver” are used throughout the document to describe either the MIL-100FXC or the MIL-100FXT.

## Introduction

The MIL-100FX series of transceivers are compact, 100BASE-FX transceivers that allow users to connect a 100BASE-FX multi-mode fiber port to a 100BASE Fast Ethernet MII connector. When used with a Fast Ethernet switch, the device provides fiber cable connections without the cost of a full-fiber connector module. This allows a switch or server, running in full-duplex, to transmit up to 2km.

## Features

- 100BASE-FX port with SC- or ST-type connectors
- Standard Fast Ethernet MII connector
- IEEE 802.3u compliant
- Diagnostic LEDs

## Default Settings

The MIL-100FX ships with all slide switches in the off (default) position.

- **Collision:** When illuminated, collision is occurring.
- **Transmit Data:** When illuminated, data is transmitting.
- **Link:** When illuminated, LINK is sensed.
- **Receive Data:** When illuminated, data is being received.

### Calculating the Cabling Distance

The cable distance is limited to the attenuation loss over the cable, at splices, and connections. Power budget is determined by the launch power number, -15dBm, minus the receiver sensitivity number, -31dBm, which is 16dBm. Use the following equation to determine the correct cabling distance.

$$CL \leq 2 \times (\text{power budget} - 3 \times \text{the number of splices})$$

### Installation

1. Turn off the host device (optional).
2. Attach a duplex, 62.5/125  $\mu\text{m}$  multi-mode fiber cable to the SC- (or the ST-) connector on the transceiver.
3. Insert the MII connector into the female, 40-pin connector on the device you wish to connect.

### Configuration

#### Connectors

Figure 1 shows examples of the SC- and the ST-type of connectors.



Figure 1. SC- and ST-type Connectors

Figure 2 shows an example of a 40-pin MII connector.

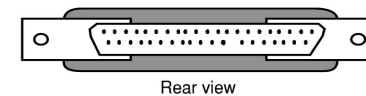


Figure 2. 40-Pin MII Connector

## Slide Switches

The MIL-100FX has slide-type switches, with five positions as shown in Figure 3. Slide to the right side for “on” or slide to the left side for “off.” The figure below shows switches in the “on” position.

Figure 3

## Switch Bank

Use switches 1 and 2 to select a transceiver address from 0 through 3. Almost all devices will expect to see address 0 selected. Use Table 1, “Configuration Option,” on page 5 for a device which needs to see an address different from 0.

Table 1: Configuration Option

SW1	SW2	Function Address
Off	Off	0 (Default)
On	Off	1
Off	On	2
On	On	3

**Note:** For a single transceiver on the MII, the transceiver should be set to ‘0’ address (default). This causes the transceiver to power up in an isolate mode until the connecting device enables communication on the network. If this function address does not enable device, turn switch 1 to “on”.

Table 2: Switch Bank 3

SW 3	Function Address
On	Half-Duplex
Off	Full-Duplex (default)

**Note:** Switches 4 and 5 are not used. Setting either switch in the OFF position will render the unit inoperative(Inop).

## Indicators

- **POWER:** When illuminated, power is being received from the MII port.
- **HDX or FDX:** When illuminated, the MIL-100FXC/FXT is running at full-duplex operation (FDX). When the LED is off, the device is running at half-duplex operation (HDX).