

## 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

Digi International 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.

Digi 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 Digi be liable for incidental or consequential damages, costs, or expenses arising out of or in connection with the performance of the product delivered hereunder. Digi will in no case cover damages arising out of the product being used in a negligent fashion or manner.

## Trademarks

Digi International™ and the Digi Logo are trademarks of Digi International. All other products and brands are the trademarks of their respective holders. All rights reserved.

## To Contact Digi

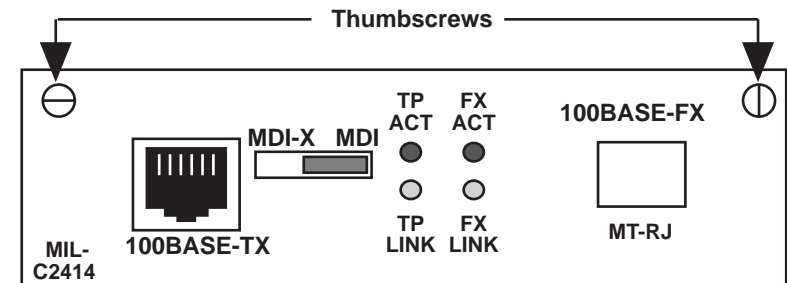
For prompt response when calling for service information, have the following information ready:

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

You can reach Digi LAN technical support at 408/744-2751  
Or E-mail at: [sun-tech@dgii.com](mailto:sun-tech@dgii.com)



# MIL-C2414 Series Fast Ethernet Media Converter for Digi's Media Conversion System



## Installation Guide

This guide includes the following:

- “Introduction” on page 2
- “Installation” on page 3
- “MDI/MDI-X” on page 3
- “Link Sentry Feature” on page 5
- “Indicators” on page 6



**Address:** 1299 Orleans Drive  
Sunnyvale, CA 94089  
**Voice:** 408/744-2775  
**Fax:** 408/744-2793  
**E-mail:** [info@dgii.com](mailto:info@dgii.com)

## About this Manual

This guide covers the MIL-C2414 Series Fast Ethernet, hot-swappable media converter. The terms “MIL-C2414,” “MIL-C2414 Series” and “converter” are used throughout this document to describe this device.

## Introduction

The MIL-C2414 is one in a series of modules designed for Digi's Media Conversion System. This Fast Ethernet converter supports half- and full-duplex modes. For network budget constraint, the MIL-C2414 uses 150 ns (approximately 30 m of cables) during conversion in each direction.

To maximize the fiber cable distance, use one meter of CAT 5 UTP cable when connecting directly to a node (subject to fiber budget of 16 dBm and collision domain restrictions). In full-duplex environments, up to 100 meters of CAT 5 UTP and for Mil-C2414 use 2 km of 62.5/125 micron multimode MT-RJ receptacle optical fiber and for MIL-C2414-15 use 15 km of 10/125 micron single-mode MT-RJ receptacle optical fiber

The MIL-C2414 Series comes equipped with one MT-RJ type (100BASE-FX) connector and one RJ-45 (100BASE-TX) connector.

## Features

- Diagnostic LEDs
- Link Sentry features

1300 nm single-mode fiber

- 10/125 micron diameter
- Launch power: -8 dBm
- Receive sensitivity: -31 dBm

## Indicators

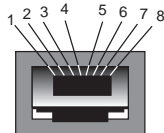
There are four LEDs, including:

- **TP/ACT:** Unit is receiving packets from the 100BASE-TX port
- **FX/ACT:** Unit is receiving packets from the 100BASE-FX port
- **TP/LINK:** There is an active connection on the 100BASE-TX port
- **FX/LINK:** There is an active connection on the 100BASE-FX port

## Specifications

### RJ-45: MDI

Pin 1=TD+  
Pin 2=TD-  
Pin 3=RD+  
Pin 6=RD-



### RJ-45: MDI-X

Pin 1=RD+  
Pin 2=RD-  
Pin 3=TD+  
Pin 6=TD-

### Fiber Specifications: SC connector

1300 nm multi-mode fiber

- 62.5/125 micron diameter
- Launch power: -14 dBm
- Receive sensitivity: -31 dBm

- Supports half- and full-duplex modes

## Installation

Do the following to install the MIL-C2414 Series into a redundant rack mount chassis:

1. Make any configuration changes to the module (i.e., DIP switch settings or jumper).
2. Remove the screws securing the faceplate and remove it from the chassis.
3. Slide the module into the slot through the guide rails.
4. Insert the module into the card-edge connector (port bay). Make sure it is seated firmly.
5. Secure the module with the two thumbscrews located on the faceplate of the unit.

The unit is now ready for network connections.

### MDI/MDI-X Switch

The MDI/MDI-X switch allows for quick configuration of the 100BASE-TX port. Cables used when the switch is in the MDI-X position (the “left” position):

- For a hub/repeater, use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2)

- For a workstation/PC, use a straight-through cable (pins are connected 1 to 1, 2 to 2, 3 to 3, and 6 to 6)

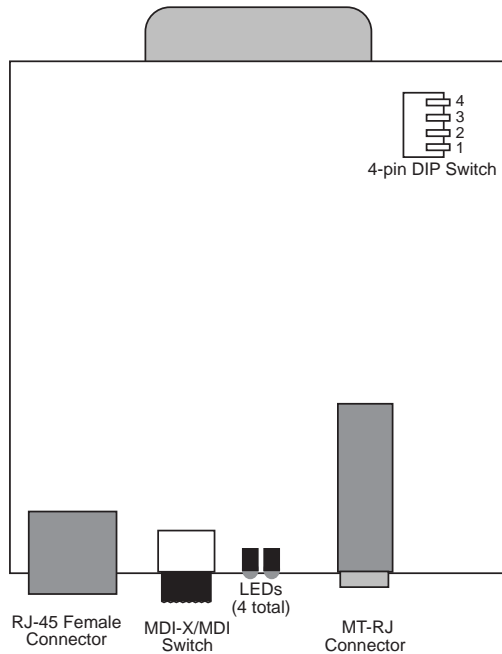


Figure 1. Inside of the MI-C2414 Series

Cables used when the switch is in the MDI position (the “right” position):

- For a hub/repeater, use a straight-through cable (pins are connected 1 to 1, 2 to 2, 3 to 3, and 6 to 6)
- For a workstation/PC port, use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2)Indicators

## Link Sentry Configuration

The Link Sentry feature on the MIL-C2414 Series is configured through a 4-position DIP switch (refer to Figure 1). Default setting for the DIP switches: All switches are in the “up” position.

Link Sentry allows users to add new management tools to the network. When enabled, it monitors the selected receiver port and, if the Link test signal is not seen, the unit will stop sending a signal through the selected transmit port.

The following table shows which Link Sentry feature is enabled:

Table 1. Link Sentry Features

Switch	Losing Link on RX of	Stop sending Link on TX of
1 (down)	Fiber port	Fiber port
2 (down)	UTP port	UTP port
3 (down)	UTP port	Fiber port
4 (down)	Fiber port	UTP port

**Note:**For two MIL-C2414s used back-to-back and UTP-to-UTP, all DIP switches must be *enabled* (in the “down” position) on the first MIL-C2414. On the second MIL-C2414, enable switches 1 and 4 (in the “down” position).

Default setting for Link Sentry: All switches set in the “up” position (disabled). When using the SNMP module to control the Link Sentry feature, leave the switches in the default mode (“up”).