Regulatory Approval

- FCC Class A
- UL 1950
- CSA C22.2 Number 950
- EN60950
- CE
  - EN55022 Class B
  - EN55024

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
- EN61000-X - Electromagnetic Immunity
- EN60950 (IEC950) - Product Safety

Five-Year Limited Warranty

MiLAN Technology warrants to the original consumer or purchaser that each of itís 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

To Contact MiLAN Technology

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

- Product serial number and revision
- Date of purchase
- Vendor or place of purchase

You can reach MiLAN Technology technical support at:

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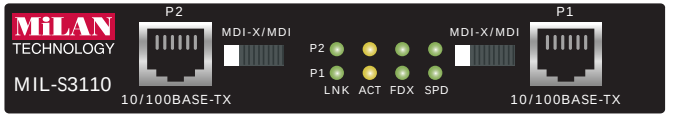
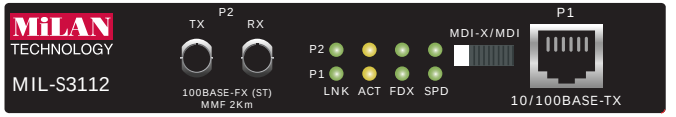
 P/N: 90000221 Rev. B

MiLAN™ TECHNOLOGY
A Division of Digi International

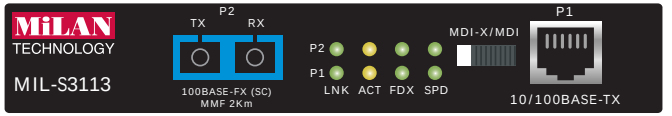
Installation Guide: MIL-S311X Series



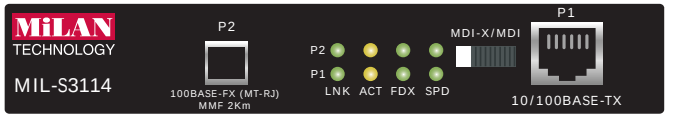
MIL-S3110 provides 10/100BASE-TX to 10/100BASE-TX



MIL-S3112 provides 10/100BASE-TX to 100BASE-FX, MMF with ST connector.



MIL-S3113 provides 10/100BASE-TX to 100BASE-FX, MMF with SC connector.
MIL-S3113-15 provides 10/100BASE-TX to 100BASE-FX, SMF with SC connector.
MIL-S3113-40 provides 10/100BASE-TX to 100BASE-FX, SMF with SC connector.
MIL-S3113-60 provides 10/100BASE-TX to 100BASE-FX, SMF with SC connector.
MIL-S3113-100 provides 10/100BASE-TX to 100BASE-FX, SMF with SC connector.



MIL-S3114 provides 10/100BASE-TX to 100BASE-FX, MMF with MT-RJ connector.
MIL-S3114-15 provides 10/100BASE-TX to 100BASE-FX, SMF with MT-RJ connector.

The MIL-S311X series are stand-alone Ethernet media and rate converters. The series provides packet switch functions between 10Mbps and 100Mbps using store and forward architecture at full wire speed. They also support auto-negotiation on a per-port basis; more than 8k MAC addresses; Packet buffer memory of 2Mbytes, backpressure in half-duplex mode and VLAN Tag packet size feature.

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 16dBm and collision domain restrictions). In full-duplex environments, use up to 100m of CAT 5 UTP and:

- 2Km of multi-mode optical fiber for MIL-S3412, S3413, S3414
- 15Km of single-mode optical fiber for MIL-S3413-15, S3414-15
- 40Km of single-mode optical fiber for MIL-S3413-40
- 70Km of single-mode optical fiber for MIL-S3413-70
- 100Km of single-mode optical fiber for MIL-S3413-100

Multi-mode fiber (2Km)
- 1300nm wavelength
- 62.5/125 micron diameter
- Launch power: -19dBm minimum
- -31dBm receive sensitivity

Single-mode fiber (15Km)
- 1300nm wavelength
- 9/125 micron diameter
- Launch power: -15dBm
- -31dBm receive sensitivity

Single-mode fiber (40Km)
- 1300nm wavelength
- 9/125 micron diameter
- Launch power: -4dBm minimum
- -34dBm receive sensitivity

Single-mode fiber (60Km)
- 1550nm wavelength
- 9/125 micron diameter
- Launch power: 0dBm minimum
- -37dBm receive sensitivity

Single-mode fiber (100Km)
- 1550nm wavelength
- 9/125 micron diameter
- Launch power: 1.8dBm minimum
- -37dBm receive sensitivity

MDI-X/MDI Switch (Figure 1)

The MDI-X/MDI 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).

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, use a swap cable (pins are connected 1 to 3, 2 to 6, 3 to 1, and 6 to 2).

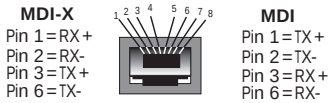


Figure 1. RJ-45 Pinouts

Installation

1. Make any configuration changes to the module DIP switch settings.
2. Remove cover plate from MCS chassis.
3. Slide module into a slot through the card guides.
4. Firmly seat module into card-edge connector.
5. Secure module with thumbscrews located on module faceplate.
6. Plug in network connections.

Note: There is no need to power off the Media Conversion System.

Diagnostic LEDs and Conditions Indicated

There are four LEDs for both UTP and fiber ports:

- D = Duplex; On indicates Full Duplex.
- A = Activity; On indicates receiving packets at port.
- S = Speed; On indicates rate is 100 Mbs.
- L = LINK; On indicates an active connection at port.

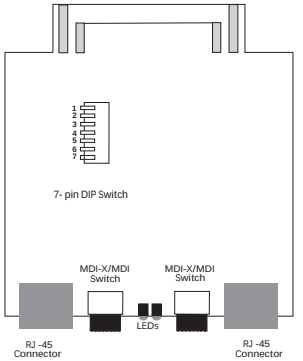


Figure 2. Inside of the MIL-S3410

Dip Switch Features (Figure 2)

Speed and Half/Full Duplex or Auto Negotiation may be manually selected using the seven-position DIP switch.
All switches must be in the up position to utilize SNMP feature selection.
Fiber ports operate at 100Mbs only.
Port 1 is on the left. Port 2 is on the right.

	Switch 1	Switch 2	Switch 3
	Auto-Negotiation	Auto-Negotiation	Speed
Up Position	Enable Port 1	Enable Port 2	100Mbs Port 1
Down Position	Disable Port 1	Disable Port 2	10Mbs Port 1

	Switch 4	Switch 5	Switch 6	Switch 7
	Speed	Duplex	Duplex	Packet size
Up Position	100Mbs Port 2	FDX Port 1	FDX Port 2	1518 Bytes
Down Position	10Mbs Port 2	HDX Port 1	HDX Port 2	1522 Bytes