FNC-0103/0104FX
Fast Ethernet 100Base-FX
User's Manual
(9802-Rev. D1)

1. Checklist

Before you start installing the FNC-0103/0104FX, verify that the package contains the following items:
— FNC-0103/0104FX Board
— LAN Driver Diskette
— This User's Manual

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.

2. Overview

FNC-0103/0104FX is a PCI Fast Ethernet Board that fully complies with all IEEE 802.3u, 100Base-FX standards. Four LED indicators(LINK, ACT, COL and FDX) on the bracket will help to oversee the network/board link, activities, collision and full-duplex status.

3. FNC-0103/0104FX PCI Configuration

For motherboards with automatic PCI configuration:
— No specific setup is needed
— You can enter the system BIOS setup menu to view or specify the interrupt line of the PCI slots

For motherboards with bus master & interrupt jumpers:
— Enable bus master operation in a selected PCI slot and select an interrupt (IRQ) level using the appropriate motherboard jumper
— Enable I/O on the FNC-0103/0104FX PCI slot

4. PCI Bus System & Configuration

- Ensure that the PCI machine does support master slots, INT multiple sharing and timing compatibility. Do not install FNC-0103/0104FX in PCI slave slots. Please refer to your PCI system manual and select the appropriate configuration settings.

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- When installing multiple FNC-0103/0104FX boards at the server station, you should correctly configure the IRQ settings of the PCI slot. Up to four FNC-0103/0104FX boards can be installed in a PCI file server running NetWare system. The FNC-0103/0104FX server boards share the same interrupt line with the driver supporting multiple INT services at a time. Each FNC-0103/0104FX's IRQ should not conflict with that of other board.
- Operation in full or half-duplex(**Default**) mode is
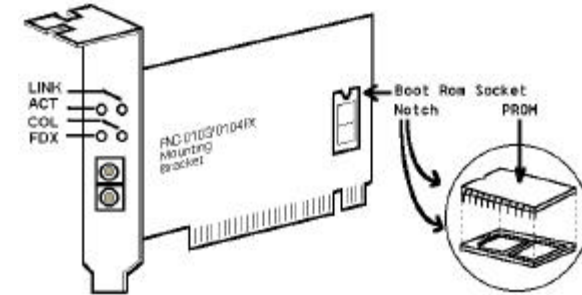
configured by LAN driver options. The operating mode should match the remote link device working status.
- You must use **EMM386** version **4.49** or **higher**, and install both **DOS & EMM386** that came from the same DOS package to avoid software problems.

5. Network Connection

100Base-FX/TX network allows 512-bit time delay between any two node stations in a collision domain. The Fiber/TP cable with devices' bit-time delay(round trip) are as below:

100Base-FX		100Base-TX	
DTE↔DTE :	100	DTE↔DTE :	100
Class II Hub:	92	Class II Hub :	92
Fiber Cable :	1.0 /m	Cat. 5 TP Wire:	1.112/m

DTE FX to DTE TX: 100

100Base-FX to 100Base-TX Converter: 56

The overall bit-time of Fiber/TP wires and devices must be within 512 bit in a segment. You may use Switching Hub to break up collision domain and extend the cabling distance.

- **Fiber Cable**(multi-mode) **Limitations:**

Half-duplex Class II Hub	Node to Node	: 205m
	Node to Hub	: 100m
	Hub to Hub	: 5m
Half-duplex Switching Hub	Node to Node	: 412m
	Node to Hub	: 412m
	Hub to Hub	: 412m
Full-duplex Switching Hub	Node to Node	: 2km
	Node to Hub	: 2km
	Hub to Hub	: 2km

Connecting to Router, Bridge, or Switching Hub, please refer to the device Technical Manual.

6. Diagnostic LEDs & Boot ROM

The Link LED lights when fiber cable connection is good and the Act LED blinks to indicate the activity. Collision and full-duplex LED report the board operating status.

To add the Remote Boot feature to a workstation, insert the Boot ROM into socket as shown below. Align the notch and pins on the Boot ROM with the notch and pin receptacles on the ROM socket. Gently push the Boot ROM into the socket, being careful not to bend the pins.

Fig. 1 Diagnostic LEDs and Boot ROM Socket

7. Technical Specifications

- **Standard :** IEEE 802.3u Fast Ethernet 100Base-FX
- **Connector:**
  - FNC-0103FX: ST(multi-mode) connector
  - FNC-0104FX: SC(multi-mode) connector
- **Cable:**
  Fiber 50/125, 62.5/125, 100/140mm multi-mode
- **Data Transfer Mode / Speed:**
  - PCI bus master
  - Full or half-duplex(**Default**) mode
  - 100Mbps speed
- **LINK, ACT, COL, and FDX** LEDs on the bracket
- **Power Requirement   :** 2.0A @+5V
- **Ambient Temperature :** 0 to 50°C
- **Humidity   :** 5% to 90%
- **PCB Dimensions   :** 4.84"(L) $\times$ 3.15"(H)
- **Complies with FCC Part 15 Class A and CE Mark**