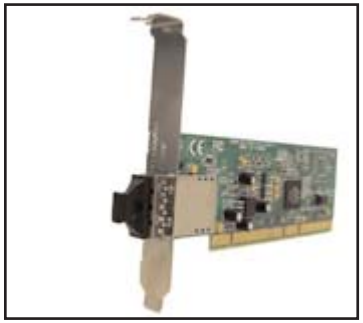
TRANSITION networks



USER'S GUIDE

N-GxX-xx-01 ***(standard)***
N-GxX-xx-01(L) ***(low profile)***

The N-GxX-xx-01(x) gigabit ethernet Network Interface Card (NIC) provides a 1000Base-SX/LX fiber port to deliver fiber optic connectivity to the desktop in fiber-rich LAN environments. With both standard and low profile form factors, driver support for most popular operating systems, and supports 32/64-bit PCI 2.2 plug-and-play capability, all help make installation a breeze in virtually any PC on the Network.

Part Number	Port One - Duplex Fiber-Optic 1000Base-SX/LX
N-GSX-SC-01 N-GSX-SC-01(L)	SC, 850 nm multimode, [62.5/125µm: 220 m *(722 ft)*] [50/125µm: 550 m *(1804 ft)**]
N-GSX-SC-01-020** N-GSX-SC-01(L)-020**	SC, 850 nm multimode, [62.5/125µm: 220 m *(722 ft)*] [50/125µm: 550 m *(1804 ft)**]
N-GSX-LC-01 N-GSX-LC-01(L)	LC, 850 nm multimode, [62.5/125µm: 220 m *(722 ft)*] [50/125µm: 550 m *(1804 ft)**]
N-GSX-LC-01-020** N-GSX-LC-01(L)-020**	LC, 850 nm multimode, [62.5/125µm: 220 m *(722 ft)*] [50/125µm: 550 m *(1804 ft)**]
N-GLX-SC-01 N-GLX-SC-01(L)	SC, 1310 nm single mode, 10 km *(6.2 miles)**
N-GLX-LC-01 N-GLX-LC-01(L)	SC, 1310 nm single mode, 10 km *(6.2 miles)**

Optional accessories sold separately

Part Number	Description
BTR-NGX-PXE	PXE, Bootable ROM Chip

*Typical maximum cable distance. Actual distance is dependent upon the physical characteristics of the network installation.

**The -020 designation at the end of the part number means sold in packs of 20 NICs only. There are no changes to NIC specifications.

Installation and Configuration

Checklist

Before installing the N-GxX-xx-01(x) NIC, verify that the package contains the following items:

- N-GxX-xx-01(x) NIC
- LAN driver CD

Please notify your sales representative if any item is missing or damaged.

Description

The N-GxX-xx-01(x)NIC has a bootable ROM socket *(bootable ROM chip sold separately)*. The two LED indicators *(LINK/ACT and FDX)* located on the bracket, show network/board link, activities, collision, and full-duplex statuses. See Figure 1.

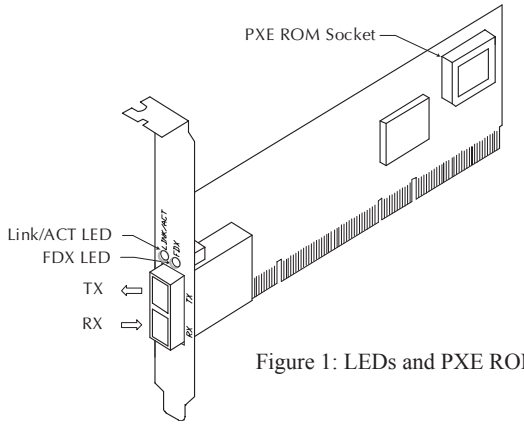


Figure 1: LEDs and PXE ROM Socket

N-GxX-xx-01(x) NIC configuration

CAUTION: Wear a grounding strap and observe electrostatic discharge precautions when installing the N-GxX-xx-01(x) NIC. Failure to observe this caution could result in damage or failure of the N-GxX-xx-01(x) NIC.

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 (INT) line of the PCI slots.

PCI bus system and configuration

- Ensure that the PCI machine supports master slots, and INT multiple sharing and timing functionality.
- DO NOT install N-GxX-xx-01(x) NICs in PCI slave slots. Please refer to your PC system manual and select the appropriate configuration settings.
- When installing multiple N-GxX-xx-01(x) NICs at the server station, you should correctly configure the IRQ settings of the PCI slot.
- N-GxX-xx-01(x) NIC server modules share the same INT line with the driver supporting multiple INT services. The IRQ of each N-GxX-xx-01(x) NIC should not conflict with other boards.
- Gigabit Ethernet Fiber Partner should be set at full-duplex mode with NWay flow control. Ensure that all network nodes are configured at an identical operation mode. Improper operation and flow control mode between fiber nodes will render the LAN to work poorly. The operating mode should match at both ends' working status.

Installation

To install the N-GxX-xx-01(x)module, do the following:

Important: Install the N-GxX-xx-01(x) NIC in a “master slot” only.

1. Locate a master slot on the PC workstation or file server.
2. Remove the cover from the PC workstation or file server—keep all screws.
3. Remove and keep the screws holding the cover over the installation slot.
4. Carefully slide the N-GxX-xx-01(x) NIC into the “master slot,” aligning the module with the slot guides.
5. Ensure that the module is firmly seated in the slot.
6. Use the screws from step “3” to secure the module to the workstation or file server housing.

Cable Specifications

Fiber cable

Bit error rate:	<10-9	
Single mode fiber *(recommended)*:	9 µm	
Multimode fiber *(recommended)*:	62.5/125 µm	
Multimode fiber *(optional)*:	100/140, 85/140, 50/125 µm	
N-GSX-SC-01(x)	850 nm multimode	
Fiber optic transmitter power:	min: -9.5 dBm	max: -4.0 dBm
Fiber optic receiver sensitivity:	min: -18.0 dBm	max: -0.0 dBm
Link budget:	8.5 dB	
N-GSX-LC-01(x)	850 nm multimode	
Fiber optic transmitter power:	min: -9.5 dBm	max: -4.0 dBm
Fiber optic receiver sensitivity:	min: -18.0 dBm	max: -0.0 dBm
Link budget:	8.5 dB	
N-GLX-SC-01(x)	1310 nm single mode	
Fiber optic transmitter power:	min: -9.5 dBm	max: -3.0 dBm
Fiber optic receiver sensitivity:	min: -20.0 dBm	max: -3.0 dBm
Link budget:	10.5 dB	
N-GLX-LC-01(x)	1310 nm single mode	
Fiber optic transmitter power:	min: -9.5 dBm	max: -3.0 dBm
Fiber optic receiver sensitivity:	min: -20.0 dBm	max: -3.0 dBm
Link budget:	10.5 dB	

The fiber optic transmitters on the device meet Class I Laser safety requirements per IEC-825/CDRH standard and comply with 21CRF1040.10 and 21CRF1040.11.

Technical Specifications

For models N-GxX-xx-01 and N-GxX-xx-01(L)

Standards:	IEEE 802.3™, 802.1P, 802.1Q
Expansion bus standard:	PCI 2.2 64/32 bit, 33/66Mhz standard
Data rate	1000Mbps fiber media
LED:	LINK/ACT *(on the bracket)*: • ON = communication link; • FLASHING = activity on link FDX *(on the bracket)*: ON = full duplex link
Drivers:	• NetWare Server 4.x, 5.x; 6.x • Netware DOS Client ODI • Windows 98, 2000, 2003, NT4.0, XP • Linux • SCO UnixWare 7.1x • OpenUnix 8.0
Boot server support:	PXE Boot ROM
PCB dimensions:	2.2” x 6.5” x .09” *(56 mm x 165 mm x 23 mm)*
Shipping weight:	1 lb. *(0.45 kg.)*
Power consumption:	2.0A @ +5VDC
MTBF	127,234 hours *(Bellcore7 V5.0)*
Opearting temp:	0°C to 50°C *(32°F to 122°F)*
Storage temp:	-25°C to 85°C *(-13°C to 185°F)*
Humidity:	5% to 95%, non-condensing
Altitude:	0 to 10,000 feet
Warranty:	Lifetime

WARNING: Visible and invisible laser radiation when open: DO NOT stare into the beam or view directly with optical instruments. Failure to observe this warning could result in damage to your vision or blindness.

WARNING: Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

The information in this manual is subject to change without further notice. Go to www.transition.com/TransitionNetworks/Products2/Static/MediaConversion.aspx to check for updates to this manual by checking the revision level.

Troubleshooting

Diagnostics LEDs and Boot ROM

LEDS

- The Link/ACT LED *(green)* turns ON when cable connection is good and speed is at 1000Mpbs.
- The FDX LED *(green)* truns ON when full-duplex mode is active.

Boot ROM

To add the remote boot feature to a workstation, insert the Boot ROM into the ROM socket. See Figure 1 on page 2.

After power UP, the LINK/ACT LED should light; if not, check the following:

1 Confirm that the N-GxX-xx-01(x) NIC is properly inserted into the master slot.

2 Confirm that the PC is properly connected to a power source and with the power source turned ON.

3 Check the fiber cable for proper connection.

4 Contact Tech Support: 1-800-260-1312, Int'l: 00-1-952-941-7600 if those steps fail to produce the desired result.

Note: To connect this device to a router, bridge, or switch, please refer to the corresponding technical manual for the device.

TRANSITION networks

Declaration of Conformity

Name of Mfg:	Transition Networks, 6475 City West Parkway, Minneapolis, MN 55344 U.S.A.
Model:	N-GxX-xx-01 and N-GxX-xx-01(L) Network Interface Cards
Part Number:	N-GSX-SC-01(x), N-GSX-LC-01(x), N-GLX-SC-01(x) N-GLX-LC-01(x)
Regulation:	EMC Directive 89/336/EEC
Purpose:	To declare that theN-GxX-xx-01 and N-GxX-xx-01(L) to which this declaration refers is in conformity with the following standards:

CISPR 22:1997+A1:2000; EN 55022:1998+A1:2000 Class A; FCC Part 15 Subpart B; 21CFR subpart J

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Stephen Anderson

Stephen Anderson, Vice-President of Engineering

September 9, 2005

Date

Contact Us

Technical support

Technical support is available at techsupport@transition.com

- US and Canada: 1-800-260-1312 *(24 hours)*
- International: 00-1-952-941-7600 *(24 hours)*

Transition now

Chat live via the Web with Transition Networks Technical Support. Log onto www.transition.com and click the Transition Now link.

Web-based seminar

Transition networks provides seminars via live, web-based training. Log onto www.transition.com and click the Learning Center link.

Email

Ask a question anytime by sending an email to our technical support staff: techsupport@transition.com

Address

Transition Networks

6475 City West Parkway

Minneapolis, MN 55344, U.S.A.

Telephone: 952-941-7600,

Toll free: 800-526-9267

Fax: 952-941-2322

Compliance Information

CISPR22/EN55022 Class A, CE Mark, CISPR22/EN55022 Class A + EN55024, CE Mark

FCC regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

Canadian regulations

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.
Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European regulations

Caution: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Achtung! Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fäll ist der Benutzer für Gegenmaßnahmen verantwortlich.

Attention! Ceci est un produit de Classe A. Dans un environment domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilsateur de prende les measures spécifiques appropriées.

CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentlickes Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

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