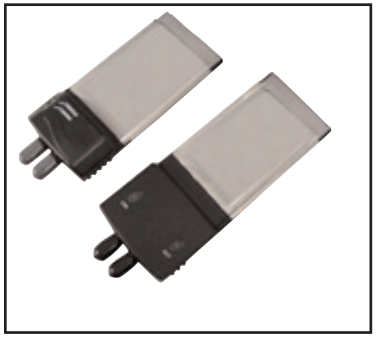
TRANSITION NETWORKS



USER'S GUIDE

PCM16 ***(16-bit PC Card)***
PCM32 ***(32-Bit CardBus)***

Fast Ethernet PCMCIAcards provide a 100Base-FX fiber port to deliver fiber optic connectivity to laptops in high-security, fiber-rich LAN environments. They are offered in either 16-bit PC card or high-performance 32-bit Cardbus versions to match virtually any laptop PC. This eliminates the need for a docking station and a fixed, fiber NIC.

PCM16-FX-xx-01 PC Card

Part Number	Duplex Fiber-Optic Port
PCM16-FX-ST-01	100Base-FX, 1300 nm multimode ST, 2km *(1.2 miles)*
PCM16-FX-SC-01	100Base-FX, 1300 nm multimode SC, 2km *(1.2 miles)*
PCM16-FX-LC-01	100Base-FX, 1300 nm multimode LC, 2km *(1.2 miles)*
PCM16-FX-SC5-01	100Base-FX, 1310 nm single mode SC, 5km *(3.1 miles)*
PCM16-FX-SC20-01	100Base-FX, 1310 nm single mode SC, 20km *(12.4 miles)*

PCM32FX-xx-01 PC CardBus

Part Number	Duplex Fiber-Optic Port
PCM32-FX-ST-01	100Base-FX, 1300 nm multimode ST, 2km *(1.2 miles)*
PCM32-FX-SC-01	100Base-FX, 1300 nm multimode SC, 2km *(1.2 miles)*
PCM32-FX-MT-01	100Base-FX, 1300 nm multimode MT, 2km *(1.2 miles)*
PCM32-FX-LC-01	100Base-FX, 1300 nm multimode LC, 2km *(1.2 miles)*
PCM32-FX-SC5-01	100Base-FX, 1310 nm single mode SC, 5km *(3.1 miles)*
PCM32-FX-SC20-01	100Base-FX, 1310 nm single mode SC, 20km *(12.4 miles)*

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

Installation

Checklist

Before installing the PCMCIA card, verify that the box contains the following items:

- Fast Ethernet card *(PCM16 or PCM32)*
- LAN Driver Diskette *(if no floppy drive, go to "www.transition.com/technical support/download/NIC drivers" to get the required driver)*.
- This User's Manual

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

Description

The PCM16- and PCM32-bit fast Ethernet cards can be used in Type II PC card slots. The LED indicators *(LINK, ACT, or FDX/Col)* oversee the network/board link and activities.

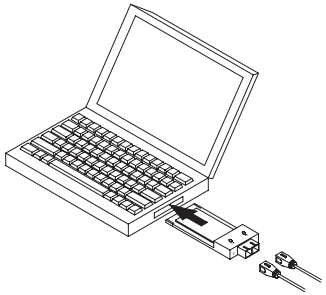
Installing the PCM card

CAUTION: Circuit boards are sensitive to static electricity, which can damage their delicate electronics. You can easily pick up static electricity in dry weather or by walking on a carpeted floor. Flow the rules below to protect your card.

- Ground yourself by touching the metal chassis of your computer before picking up the card.
- Handle the card by the edges only.

To install the PCMCIA cards, do the following:

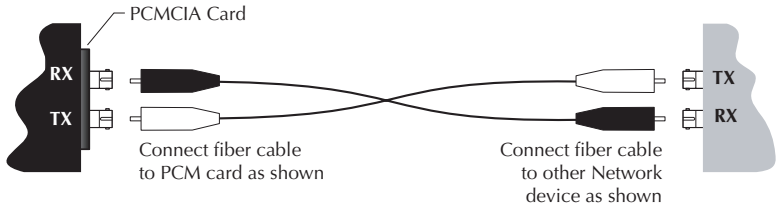
1. Power OFF the Laptop computer.
2. Gently slide the PCMCIA card all the way into the slot as shown below.



Installation -- continued

Installing the fiber cables

1. Connect the PCMCIA card to the network by using a fiber cable. Ensure that the TX/RX of the cable are paired at both ends as shown below.



2. Power on the computer.
3. Insert the provided LAN drive diskette into the laptop floppy drive, or go to "www.transition.com/technical support/download/NIC drivers" to get the required driver. Refer to the read me file for operating system specific details.

Diagnostic LEDs

Tables 1 and 2 show LED functionality for the 16- and 32-bit PCMxx-FX-xx-01 cards.

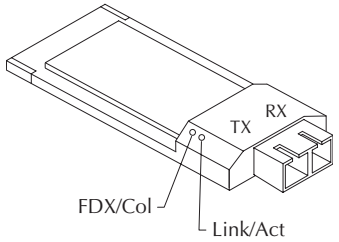


Table 1: 16-Bit PCMCIA LED Functionality

LED	Color	Function
Link/Act	Green	• ON when cable connection to a remote device is good • Blinks when any traffic is present • OFF when cable connection to a remote device is not good
FDX/Col	Green	• Lit when full-duplex mode is active • Blinks when any collision is present • OFF when half-duplex mode is active

Diagnostic LEDs -- continued

Table 2 shows LED functionality for 32-bit PCMxx-FX-xx-01 cards.

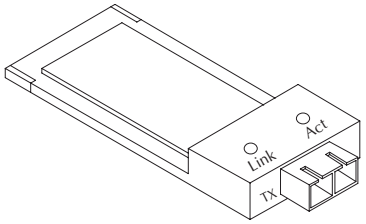


Table 2: 32-Bit PCMCIA LED Functionality

LED	Color	Function
Link	Green	ON = communication link
Act	Green	Flashing = Traffic present

Cable Specifications

Fiber cable

Single mode fiber: 8.3/125. 8.7/125, 9/125, or 10/125µm
Multimode fiber: 50/125, 62.5/125, or 100/140µm

PCMxx-FX-ST-01, PCMxx-FX-SC-01, PCMxx-FX-MT-01, PCMxx-FX-LC-01

1300 nm multimode
Fiber optic transmitter power: min: -19.0 dBm max: -14.0 dBm
Fiber optic receiver sensitivity: min: -31.0 dBm max: -17.0 dBm
Link budget: 12.0 dB

PCMxx-FX-SC5-01 1310 nm single mode
Fiber optic transmitter power: min: -19.0 dBm max: -14.0 dBm
Fiber optic receiver sensitivity: min: -31.0 dBm max: -7.5 dBm
Link budget: 12.0 dB

PCMxx-FX-SC20-01 1310 nm single mode
Fiber optic transmitter power: min: -15.0 dBm max: -8.0 dBm
Fiber optic receiver sensitivity: min: -31.0 dBm max: 0.0 dBm
Link budget: 16.0 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 laser safety standards.

Technical Specifications

For models PCMxx-FX-xx-01, 16-bit and 32-bit Fast Ethernet cards

Standards: IEEE 802.3u, PCMCIA release 2.x Type II Cardbus, JEIDA 4.x
Data rate: 100Mbps fiber media
Card slot: PC Card 68-pin connector to PC
LED: LINK/ACT 32-bit models
LINK/ACT/FDX 16-bit models

LAN Drivers:

PCM16-FX-xx-01:
- Netware 3.x, 4.0
- Netware DOS Client ODI
- Windows 95,98, ME, 2000, NT4.0, XP

PCM32-FX-xx-01:
- Netware 3.x, 4.0
- Netware DOS Client ODI
- Windows 95,98, ME, 2000, NT3.51, NT4.0, XP, Vista, Windows for workgroups 3.1/3.11
- Linux 2.4x, 2.6x

PCM dimensions: 2.1" W x 4.7" D x 0.6" H *(54 mm x 120 mm x 16 mm)*
Shipping weight: 1.0 lb. *(0.45kg)* approximately
Power: 0.7A @ +5V
MTBF: PCM16 series = 156,494 hours *(Bellcore7 V5.0)*
PCM32 series = 160,323 hours *(Bellcore7 V5.0)*

Operating 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 90%, non-condensing
Altitude: 0 to 10,000 feet
Warranty: Lifetime

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

`Troubleshooting

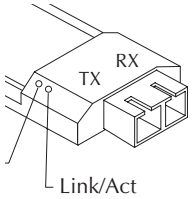
The laptop and system can not find the PCMCIA card:

1. Is the Laptop powered up?
   NO
   - Power up the laptop.

   YES
   - Move to Step 2.
2. Is the PCMCIA card fully installed into the Type II PC card slot?
   NO
   - Remove the PCMCIA card and reinsert it fully in to the slot.
   - Contact Tech Support: US/Canada: 1-800-260-1312
     International: 00-1-952-941-7600

   YES
   - Move to Step 3.
3. Is the correct driver installed on the laptop?
   NO
   - Insert the provided LAN drive diskette into the laptop floppy drive, or go to "www.transition.com/technical support/download/NIC drivers" to get the required driver.

   YES
   - Move to Step 4.
4. Is the Link or Link/Act LED lit?
   NO
   - Ensure that the fiber cables are installed as shown below.



   YES
   - Contact Tech Support: US/Canada: 1-800-260-1312,
     International: 00-1-952-941-76004.

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

Declaration of Conformity

Name of Mfg:	Transition Networks, 6475 City West Parkway, Minneapolis, MN 55344 U.S.A.
Model:	PCMxx-FX-xx-01 Fiber Adapter Cards
Part Number:	PCMxx-FX-ST-01, PCMxx-FX-SC-01, PCMxx-FX-MT-01, PCMxx-FX-LC-01, PCMxx-FX-SC5-01, PCMxx-FX-SC20-01
Regulation:	EMC Directive 89/336/EEC
Purpose:	To declare that the PCMxx-FX-xx-01, 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, Vice-President of Engineering

January, 2008
Date

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.

In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Transition Networks will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.

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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