

PCI Ethernet Card 100 MB

ENGLISH

PCI Ethernet Card 100 MB

User's manual

Version 1.0/Digital

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Preface

This manual describes how to install and use the PCI Ethernet Card 100 MB and is intended to be used by persons with some experience in the use and installation of computer networks.

You will require the manual supplied with your network or the help of your network administrator as well as a working knowledge of the English language.

Conventions used in this manual:

<Key>	This means pressing a key. The name is shown between the arrow symbols.
'System'	This is a specific term from a program. This contains the terms used by Windows for example.
[DIR]	Text shown in this font has to be keyed in.

Additional information shown as follows:

Note: *Switch off the computer.*



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1. Introduction

Congratulations! By purchasing the PCI Ethernet Card 100 MB you have obtained an advanced product that will enable your network to operate at the fastest possible speed.

The PCI Ethernet Card 100 MB is compatible with both classic 10 MB and fast 100 MB networks. The correct speed is automatically set, so you can upgrade your network to 100 MB step by step if you wish.

The PCI Ethernet Card 100 MB can simultaneously transmit and receive data (full duplex) via compatible networks. This function is also set automatically if the network supports this option.

The PCI Ethernet Card 100 MB is suitable only for linking a computer with a LAN of the Ethernet type using UTP or STP wiring with a length of no more than 100 metres in an office environment.

You will need the following to use the PCI Ethernet Card 100 MB:

- AT compatible computer with a free PCI slot and at least one other computer fitted with a network card to connect to;
- operating system suitable for network use. Please refer to the specifications in Appendix A for a list of compatible operating systems.

2. Safety

Do not service your computer with the power switched on; to avoid personal injury and damage to the equipment, make sure the power plug is disconnected from the mains supply.

Your computer should be connected to a suitable earthed power outlet to avoid the risk of electric shock and other hazards via the network.

3. Hardware Installation

You will need a Phillips screwdriver and a small flat-bladed screwdriver.

Take precautions against static discharge when unpacking and installing the product. Static discharge can cause damage to the product. Discharge your body and clothing by touching an earthed object, e.g. the computer case, or perform the installation at an ESD protected workbench.

In addition to this manual, the package should contain the following:

- PCI Ethernet Card 100 MB card;
- Driver disk.

Contact your dealer if any of the above are missing.

Your computer case will have to be opened before the PCI Ethernet Card 100 MB can be installed. Make a note of the position of the cables connection to the computer and disconnect the cables. You can now open the computer case.

Caution! *Do not service your computer with the power switched on; to avoid personal injury and damage to the equipment, make sure the power plug is disconnected from the mains supply.*

Locate a free PCI slot, remove the slot cover plate, insert the PCI Ethernet Card 100 MB in the slot and secure the card with the mounting screw. Most PCI slots have a white connector. ISA type slots, which mostly use black connectors, are unsuitable for the PCI Ethernet Card 100 MB.

Refer to the manual supplied with your computer if you are in any way uncertain about how to install expansion cards.

Tip *In many computers the VGA card controlling the VDU also occupies a PCI slot. If you are running Windows 95, do not move this card to a different PCI slot, as this will require reinstallation of the Windows 95 drivers, causing any custom settings you have made for your display to be lost.*

Replace the PC case and reconnect all the cables.

4. Diagnostics Program

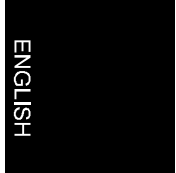
The diagnostics program enables you to make sure the PCI Ethernet Card 100 MB is in proper working order.

As defects to the PCI Ethernet Card 100 MB seldom occur, you do not necessarily have to run this test, in which case you should proceed to Section 4.2.

Follow these steps to run the diagnostics program:

1. Boot your computer under MS-DOS.
2. Insert the PCI Ethernet Card 100 MB disk into drive A.
3. Change drives to A.
4. Type 'INSTALL'. The setup screen will be displayed.
5. Select 'Hardware Diagnostic' from the menu.
6. Press **<Enter>**. The program will ask for permission to use the 'c:\diag' directory.
7. Press **<Enter>** to confirm.
8. The system will proceed to install a number of files from the disk.
9. Press **<ESC>** twice to leave the installation utility.
10. Move to 'C:\DIAG'.
11. Type DIAG followed by the **<return>** key. The opening screen will pop up.
12. Press **<Enter>** to move to the next screen. A list of available adapters (network cards) will be visible. Most systems will have only one card installed.
13. If more than one card is installed, then select the correct adapter from the list.
14. Press **<Enter>** to view the main menu.
15. Press **<Enter>** twice to start the 'Adapter Basic Diagnostic'.

16. The PCI Ethernet Card 100 MB will now be tested by the program. Unless you have connected a loop-back cable to the network card, the last test (Twister Internal Loop back test) will not execute.
17. Press **<Esc>** to interrupt the test. The test will not terminate by itself.
18. Press **<Esc>** more times to leave the program. The network card is tested and ready for use. Contact your dealer in case of failure.



5. Software Installation

The many different types of network systems on the market and the rapid developments in this field make it impossible to prepare an exhaustive manual, that will cover the installation for every type of network system.

The disk contains English directions for every network operating system. This information can be found in the README file. You will find a file for each of the network systems. This file is located in the same subdirectory as the driver files.

5.1 Installing drivers

To install the drivers, use the following procedure:

1. Boot your computer under MS-DOS.
2. Insert the PCI Ethernet Card 100 MB diskette into drive A.
3. Change drives to A.
4. Type 'INSTALL'. The set-up screen will be displayed.
5. From the menu, select 'Custom Install'.
6. Press <Enter> to confirm.
7. Select the vendor of the network operating system from the list and press <Enter>.
8. Select the right version and press <Enter>. The installer may copy some files and ask for a directory name. Then more information is displayed on how to set up the network.
9. Press 'F5' to print the instructions on paper.
10. Finish the installation following the instructions.

5.2 Windows 95

The PCI Ethernet Card 100 MB is compatible with the Plug & Play standard, so it will be automatically recognised by Windows 95.

Follow the normal way to install the driver from the disk. The driver files for Windows 95 are located in the root of the disk, so the installation will be easy.

Some versions of Windows 95 might attempt to install their own driver for the network card. This driver will not work. Do not try to use it. If this driver is installed, replace it with the driver from the floppy using the following steps:

1. Open the 'System' part from 'Start | Settings | Control Panel'.
2. Choose the 'Device Manager' tab.
3. Locate the 'Network Adapters' section and double click it. A list of installed network cards will be displayed.
4. Locate the driver Windows 95 that has installed for your PCI Ethernet Card 100 MB. Double click this item. The driver parameters will be visible in a new window.
5. Select the 'Driver' tab.
6. Click the 'Update' button.
7. Change the option to: 'No, select from list'.
8. Click the 'Next' button. A list of possible drivers will be displayed.
9. Click the 'Have Disk' button. A window with the directory name will be visible.
10. Confirm the 'A:\' directory by clicking 'OK'. The driver will be read now. A new window will display one driver for the 100 MB card now.
11. Confirm the installation of this driver by clicking 'OK'. The driver will be copied. This may take some time. The computer might ask for the original Windows CD.
12. Close the driver and the control panel window.
13. The card is ready for use. Check the 'Network Properties' such as workgroup, protocol, username etc. See your Windows manual for more information. You might need to ask your system administrator for details.

6. Troubleshooting

Although the PCI Ethernet Card 100 MB is easy to install, setting up a computer for network use is not a simple task. Keep the network manuals at hand.

As the PCI Ethernet Card 100 MB can be used in combination with a large variety of network systems, the troubleshooting procedures have necessarily been limited to general guidelines.

6.1 No connection at all

If the computer cannot connect to the server or any other computer, first make sure that:

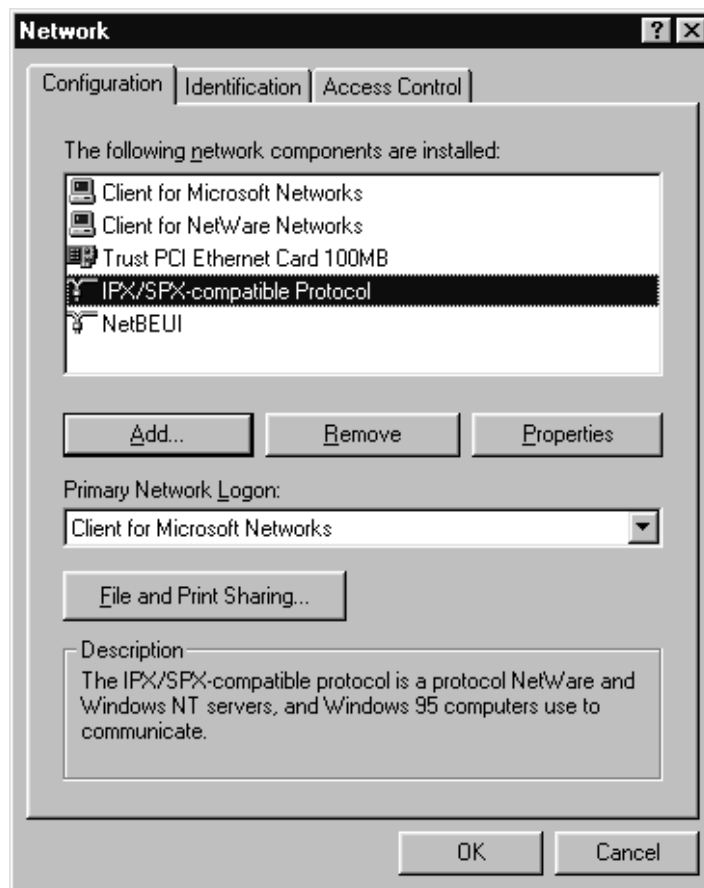
1. The drivers for the PCI Ethernet Card 100 MB have been correctly installed. If the card is out of order, or it is not correctly seated in the expansion slot, the drivers will refuse to load.
2. The correct drivers have been selected for the network you plan to use. Contact your system administrator for information about the network.
3. The correct values have been entered for the packet type and the IP address.
4. The plug of the network cable is pressed well home in the connector of the PCI Ethernet Card 100 MB.
5. The network hub is working. Try connecting using a different workstation connected to the same hub.
6. The connection is run through a Hub. UTP or STP cable cannot be linked directly between two computers.
7. Windows 95 has not been started in the 'Command prompt only' mode. In this mode, the Windows 95 drivers no longer work. If you want to use the network in this mode, install the DOS drivers.

6.2 No connection under Windows 95

Refer also to the Microsoft Windows manual for further information.

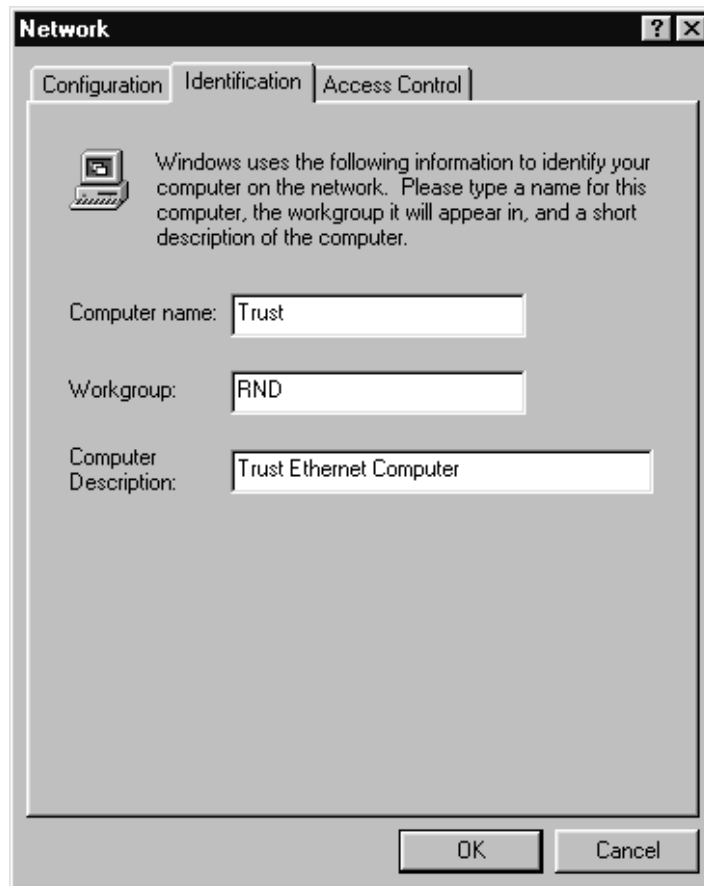
Make sure:

1. The NETBEUI protocol and the 'Client for Microsoft networks' have been loaded. Check the network properties. These components are required to obtain a connection. If necessary, add these components by clicking on the 'Add' with the mouse.



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2. The NETBEUI protocol has been bound to the PCI Ethernet Card 100 MB driver. Select 'Bindings' in the network properties. This is required only if the link has been manually broken. During the installation of a new network card, Windows 95 will automatically set up this link.
3. The name for the workgroup is the same for both systems. The workgroup name you enter must be known to the server. If necessary, change the name. Consult your network administrator if you do not know the name of your workgroup. The workgroup name cannot be the same as any other computer name in the same network.



6.3 Novell Netware server not found

Make sure:

1. The correct 'packet' type has been selected. Most Novell Networks use Ethernet_802.3. Contact your system administrator for information about the correct 'packet'-type.
2. The 'IPX/SPX protocol' and the 'Client for Novell Networks' have been loaded under Windows 95.

Appendix A: Technical Specifications

Settings	<ul style="list-style-type: none"> • Plug & Play for Windows 95 • EEPROM configuration for non-PnP-systems
Network Type	<ul style="list-style-type: none"> • Normal Ethernet 10MB • Fast Ethernet 100 MB (following the 100TX standard)
Slot	PCI (32 bit)
Performance Improvements	<ul style="list-style-type: none"> • Full Duplex • PCI Bus Master • Automatic selection of fastest connection
Media Connection	<ul style="list-style-type: none"> • RJ45 using class 5 cable (STP/UTP) for 100 MB • RJ45 using class 3, 4 or 5 cable (STP/UTP) for 10MB
Marks of approval	<ul style="list-style-type: none"> • CE Mark • EN-55022 class B • EN-50082-1
Indicator lights	<ul style="list-style-type: none"> • 100/10MB per second • Full/Half Duplex • Link • Active (data) • Collision

Appendix B: Drivers

Operating system	Driver
D-Link LANsmart	NDIS driver
D-Link TCP/IP for DOS	MS LAN Manager
Novell Netware 3.x and 4.x ODI driver	WIN/TCP Pathway Access for DOS
Packet driver	IBM PC LAN Support Program
FTP PC/TCP	IBM LAN Server
SUN PC-NFS	DEC Path Works
3COM 3+Share	Banyan VINES
NetBIOS Driver	3COM 3+Open
WINDOWS NT	Unixware
Windows NT Advanced Server	SCO UNIX
Windows 95	AT&T UNIX
SCO Open Server	Solaris UNIX
Winsock	NCSA

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