Xircom

RealPort™Ethernet 10/100

User's Guide

August 1998

Xircom reserves the right to make improvements and/or changes in the products and programs described in this User's Guide at any time without notice.

The software described in this User's Guide is furnished under a license and may be used or copied only in accordance with such license.

Contents

Windows 95, 98 and NT Online Documentation

See the Help file HELPDOCS.HLP on the Xircom Windows 95, 98, and NT Installation Disk for additional information. After installation, this file can be accessed from the Xircom program group as 16-bit Ethernet 10/100 Help Docs.

Windows 3.x Installation Utility

For Windows 3.x environments, run the Installation Program SETUP.EXE from the Xircom Windows 3.x Installation Disk. For additional configuration information, see the Windows Help file HELPDOCS.HLP on the Xircom Windows 95, 98, and NT Installation Disk.

IBM OS/2 Installation Instructions

For IBM OS/2 and OS/2 Warp installation instructions, see the Windows Help file HELPDOCS.HLP on the Xircom Windows 95, 98, and NT Installation Disk.

Hardware Installation

Introduction

The Xircom RealPort™ Ethernet 10/100 Integrated PC Card supports 10Mbps and 100Mbps Ethernet networks. It plugs into a Type III or dual Type II PC Card slot. A standard RJ-45 Ethernet cable plugs directly into the RealPort Integrated PC Card.

Drivers Available
The following drivers are supplied:
- ODI and NDIS2 for MS-DOS and Windows 3.x
- NDIS3 and NDIS4 for Windows 95, 98, and NT
- IBM OS/2
- NetWare server

Driver Installation and Configuration

- For **Windows 95, 98 and NT** software installation instructions, see Chapters 2 and 3 in this User's Guide and the Help file HELPDOCS.HLP on the Windows 95, 98, and NT Installation Disk. After installation, select Xircom 16-bit Ethernet 10/100 Help Docs from the Xircom program group.

- For **Windows 3.x**, run the Xircom Installation Program SETUP.EXE from the Windows 3.x Installation Disk. Additional Windows 3.x configuration information is available in the Help file HELPDOCS.HLP on the Windows 95, 98, and NT Installation Disk.

- For **IBM OS/2**, see the Help file HELPDOCS.HLP on the Windows 95, 98, and NT Installation Disk.

Hardware Installation

Package Contents

- Xircom RealPort Ethernet 10/100 (Model RE-100)
- User's Guide and Quick Installation Card
- Software and online documentation on 3.5-inch diskettes
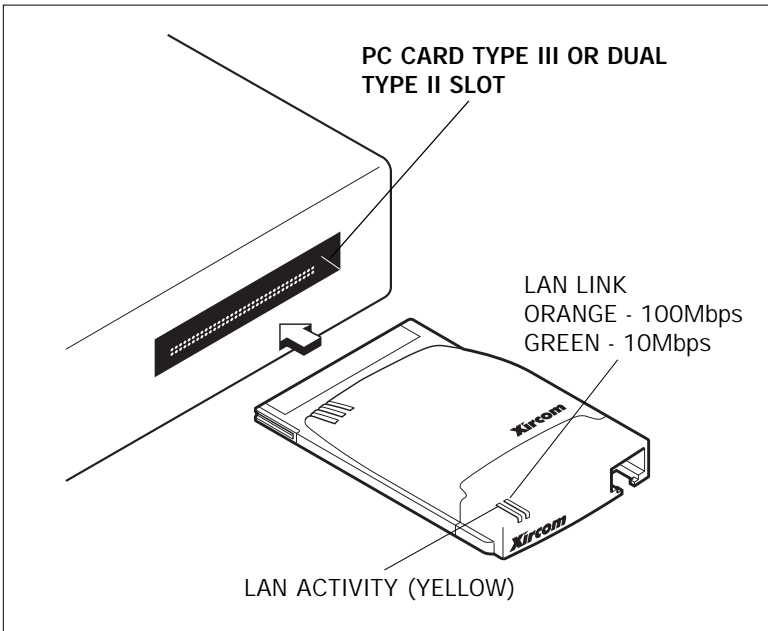
Other Requirements

- A local area network supporting 10 or 100Mbps Ethernet, as required, and a network operating system supported by the RealPort Ethernet 10/100.

Since the RealPort Ethernet 10/100 automatically detects the speed of the network to which it is connected, it may be safely connected to either a 100Base-TX or 10Base-T network.

- For connection to a 100Base-TX 100Mbps Ethernet network, a **Category 5** (data grade) unshielded twisted pair (UTP) network cable terminating in a male RJ-45 connector and connected to a 100Mbps hub or switch.
- For connection to a 10Base-T twisted pair Ethernet network, a network cable terminating in a male RJ-45 connector and connected to a 10Mbps hub or switch.

PC CARD TYPE III OR DUAL TYPE II SLOT

LAN LINK
ORANGE - 100Mbps
GREEN - 10Mbps

LAN ACTIVITY (YELLOW)

Inserting the RealPort Integrated PC Card
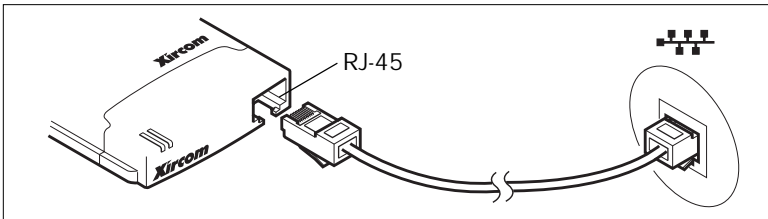
RJ-45

Connecting to the LAN (RJ-45)

CHAPTER 2

Windows 95 and 98 Installation

Use these instructions for a first-time installation under Windows
95 or 98. The NDIS3 driver CE3.SYS is installed by default using
the instructions in this chapter. For NDIS4, see the README file
on the Xircom Windows 95, 98, and NT Installation Disk.

Card Detection and Prompt for Manufacturer's Disk
1 With the computer ON and Windows 95 or 98 running, insert
the RealPort™ Ethernet 10/100 into the PC Card slot and
connect the network cable.
2 The RealPort Integrated PC Card will be detected as new
hardware (if not detected, see troubleshooting in this chapter).

- **Windows 98 and Windows 95 Version 950b (OSR2)
and later:** Computer detects RealPort Integrated PC Card
and displays Update Device Driver Wizard.
- **Windows 95 Version 950/950a:** Computer detects
RealPort Integrated PC Card and displays Xircom 16-bit
Ethernet 10/100. Select Disk provided by hardware
manufacturer, click OK.

3 Insert the Xircom Windows 95, 98, and NT Installation Disk
and follow the prompts to complete the installation.

4 After files are copied from the Xircom disk, Windows will
recognize the functionality of the RealPort Integrated PC Card.

Windows 95 and 98 Network Installation
5 If prompted for Windows networking files, click OK at the
Insert Disk screen.

6 At the Copying Files screen, specify the path to Windows files
(usually c:\windows\options\cabs), click OK. If prompted
again for the Network Drivers, enter A:\ and click OK.
7 At System Settings Change, remove the Xircom disk, click Yes.
If Windows networking was installed, computer will restart.

Troubleshooting

Network Installation

Review this section if any of the following problems occur:

- The Xircom RealPort Ethernet 10/100 is not detected during installation.

- The RealPort Ethernet 10/100 appears to have installed correctly but you cannot access network resources.

Use the following steps to verify that the PCMCIA Card Socket controllers are enabled.

1 In the Control Panel, double-click the System icon.

2 Click the Device Manager tab.

3 Under PCMCIA Socket, make sure that the PCMCIA Card Socket device is installed and that it is enabled. Disabled devices are indicated with a red "X." To enable the PCMCIA Socket controller, go to Control Panel and double-click the PC Card (PCMCIA) icon. Follow the PC Card Socket Wizard instructions. When prompted to do so, shut down the computer (using the Windows Start/Shut Down procedure), turn it OFF, then turn it back ON after a few seconds. DO NOT use Ctrl+Alt+Del or the reset button to restart the computer.

An exclamation mark (!) on a device usually indicates a resource conflict.

1 In Control Panel, double-click the System icon.

2 Click the Device Manager tab.

3 Highlight and double-click the RealPort Ethernet 10/100 entry (listed as Xircom 16-bit Ethernet 10/100).

4 Select Properties, Resources. Remove the check mark from the Use Automatic Settings box. Highlight and double-click on the first memory range listed. Use the up or down arrow to adjust the memory range to 000D2000-000D3FFF. Click OK.

5 Double-click the second memory range listed. Use the up or down arrow to adjust the memory range to 000D4000-000D4FFF. Click OK.

6 Click OK again. Close the Resource Properties windows. When prompted to confirm that resources have been adjusted manually, select Yes. After the hour glass disappears (it may take a few seconds) verify that the exclamation mark is gone.

Any device attempting to use the same memory segments as another device will cause the card to fail initialization. Ideally there should be 12K of contiguous memory starting with the first 4K block following the video drivers, which typically load in the C0000-C7FFF range. This varies from computer to computer. The memory range identified for the Xircom card is any block in the C0000-E7FFF range. On many computers, use of the range D0000-DFFFF is optimal. Be aware that not all blocks of memory are available.

Failure to access to network resources may be due to Windows network configuration issues.

1 In Control Panel, double-click the Network icon.

2 In the configuration window verify that the correct Network Clients are installed.

- To install a Microsoft Network Client, click Add. Double-click Client. Under the Manufacturers list, select Microsoft. Double-click Client for Microsoft Networks.

- To install a Novell Network Client, click Add. Double-click Client. Under the Manufacturer list, select Microsoft. Double-click Client for NetWare Networks.

3 In the configuration window verify that the correct Network
Protocols are installed.

- To install the native Microsoft Network Protocol, double-
  click Protocols. Click Add. Under the Manufacturers list,
  select Microsoft. Double-click NetBEUI.
- To install the IPX/SPX compatible Protocol, double-click
  Protocols. Click Add. Under the Manufacturers list, select
  Microsoft. Double-click IPX/SPX compatible Protocol.

> **If necessary, consult your network administrator for
> additional information regarding client and protocol
> configuration details.**

Windows 95 and 98 Driver Parameters

CE3.SYS (NDIS3) Settings

CE3.SYS is an NDIS3 driver. It conforms to the Microsoft Network
Driver Interface Specification (NDIS). CE3.SYS is installed by
default. For NDIS4 instructions, see the README file on the
Xircom Windows 95, 98, and NT Installation Disk.

The files necessary for using CE3.SYS with Windows 95 and 98
include:

NETCE3.INF   Xircom install file for Windows 95 and 98

CE3.SYS   Xircom NDIS3 driver for Windows 95 and 98

There are user-configurable parameters for the CE3.SYS driver that
can be modified using the Network Control Panel built into
Windows. This applet queries the user for parameter selections
and then sets the corresponding parameters in the registry. The
user-configurable parameters are as follows:

Parameter	Default	Valid Values	Registry Value
DIRECT ENABLE	OFF	OFF	0
		ON	1
EARLY TRANSMIT	ON	OFF	0
		ON	1
FULL DUPLEX	OFF	OFF	0
		ON	1
LINE SPEED	AUTO	AUTO DETECT	0
		10MBPS	1
		100MBPS	2
LINK INTEGRITY	ON	OFF	0
		ON	1
MODE	I/O	I/O	0
		MEMORY MAPPED	1
NETWORKADDRESS	SEE NOTE BELOW		
TRANSMITBUFFERSIZE	7168	1024-29696	1024-29696

The network node address can be modified by specifying a value for 'NetworkAddress' such as '0080C7112233'. If the user does NOT specify a 'NetworkAddress' then the CE3.SYS driver uses the network node address contained in the RealPort Ethernet 10/100 Card Information Structure.

There are parameters in the Windows registry which specify the configuration of the RealPort Ethernet 10/100 hardware to the CE3.SYS driver. Many of these parameters correspond directly to the user-configurable parameters. These parameters are found in the registry at the following location:

HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\CLASS\NET\000X

> **Under most circumstances it will not be necessary to make modifications directly to the registry. Incorrect settings can result in undesirable changes to the configuration of Windows 95 or 98. Consult Xircom Customer Support for assistance if you find it necessary to modify the registry.**

The registry parameters are as follows:

Keyword	Default	Valid Values
DEVICEVXDS	"CE3.SYS"	
DEVLOADER	"NDIS"	
DIRECTENABLE	"0"	0-1
DRIVERDESC	"XIRCOM 16-BIT ETHERNET 10/100"	
EARLYTRANSMIT	"1"	0-1
ENUMPROPPAGES	"NETDI.DLL,ENUMPROPPAGES"	
FULLDUPLEX	"0"	0-1
INFPATH	"NETCE3.INF"	
INTERRUPTNUMBER	04 00 00 00	
IOBASEADDRESS	02 00 00 00	
LINESPEED	"0"	0-2
LINKINTEGRITY	"1"	0-1
MEMORYBASEADDRESS	01 00 00 00	
MODE	"0"	0-1
NETWORKADDRESS		
PLATFORMTYPE	"1"	1
TRANSMITBUFFERSIZE	"7168"	1024-29696

'InterruptNumber', 'IoBaseAddress', and 'MemoryBaseAddress' are NOT user-configurable and their values are assigned by the Windows Configuration Manager.

Windows NT 4.0 Installation

The NDIS3 driver CE3.SYS is installed by default using the instructions in this chapter. For NDIS4 instructions, see the README file on the Xircom Windows 95, 98, and NT Installation Disk.

PCMCIA Services Verification

Verify that PCMCIA services are enabled on your computer.

1 Select Devices from the Control Panel.

2 Scroll down the Device list to the PCMCIA device. The Status should be Started and the Startup should be Boot. If this is not how PCMCIA is configured, then click Startup, set the Startup Type to Boot and click OK.

Network Driver Installation

Use the following procedure to install the network driver:

3 Shut off power to the computer (power down).

4 Insert the RealPort Ethernet 10/100 into the PC Card slot.

5 Power up the computer.

6 Select Network from the Control Panel.

7 Select the Adapters tab and click Add.

8 On the Select Network Adapters screen, click Have Disk. Insert the Xircom Windows 95, 98, and NT Installation Disk and verify that the specified path (for example: A:\) is correct. Click OK.

9 Select Xircom 16-bit Ethernet 10/100, and click OK.

10 At the Xircom 16-bit Ethernet 10/100 Setup screen, choose appropriate settings. Click OK.

11 At the Network screen click Close.

12 At the Network Settings Change screen, remove the Xircom disk from the disk drive and click Yes. The computer will shut down and restart.

Troubleshooting

Network Installation

Windows NT 4.0 does not support plug and play resource assignment for the Xircom adapter. Default settings are specified by the installation files. If these settings do not work on your system, use the following general guidelines to assist you. Contact Xircom Customer Support if you are unable to resolve the issues.

Resource Conflict Symptoms

- After network installation the computer locks up on reboot.
- A Service Control message reports that a service or driver did not start.
- The Xircom card initializes properly, but another hardware device functions sporadically, the computer locks up randomly or exhibits very slow network performance.

The most likely cause of these symptoms is a resource conflict between the Xircom card and another hardware device. Interrupt conflicts are the most common. Open the Event Viewer to review errors encountered during the boot process (Start, Programs, Administrative Tools, Event Viewer). Double-click the bottom error message to start reviewing. Identification of the device or service that failed to start may help in pinpointing where the conflict lies.

> **Error messages reporting that the driver failed to start because a device attached to the system is not functioning may not involve the Xircom card. For example, an error is sometimes displayed if a device not currently connected to the computer is still listed as an installed component.**

Two items frequently in conflict with the Xircom card are:

Sound cards Often use IRQ 5 and I/O Port addresses 220h and 330h

PCMCIA.SYS Installs at memory segment D000-D3FF but may not appear under NT Diagnostics

Possible Solutions

Remove the card and reboot NT 4.0 normally. Click OK at message stating that a Service or Services failed to start. Use the following steps to evaluate assigned resources and settings:

1 Under the Device applet in the Control Panel verify that PCMCIA status is Started and the Startup setting is Boot. If it is not change it to start on Boot and then restart the computer.

2 Start Windows NT Diagnostics (Start, Programs, Administrative Tools).

3 Under the Version tab note the Service Pack level. The NT 4.0 version is displayed as follows:

```
MICROSOFT (R) WINDOWS NT (TM) WORKSTATION

VERSION 4.0 (BUILD 1381: SERVICE PACK X)
```

If no service packs have been applied on Version 4.0, "(Build 1381: service pack X)" is displayed. Or service pack level 1, 2, 3, or 4 will display. Service Packs integrate software upgrades to your current system and are available from Microsoft.

4 Select the Resources tab. By default the IRQ levels in use are displayed. Verify that the IRQ assigned to the Xircom card is not in use by any other device. This list is not inclusive and may not be completely indicative of resources in use.

5 Click the I/O Port button. Verify that the I/O Port Address assigned to the Xircom card is not shared by any other device. I/O Port 0x280 is usually available. This is displayed as:

```
0280 - 028E CEM56  BUS 0  TYPE ISA
```

For an I/O Port Address to be usable the entire I/O range must be available. For example, the above listed I/O range would be unusable if another device was using any I/O port within that range.

Windows NT Driver Parameters

CE3.SYS (NDIS3) Settings for Microsoft Windows NT

CE3.SYS is an NDIS3 NIC driver. It conforms to the Microsoft
Network Driver Interface Specification (NDIS). The CE3.SYS driver
supports the networking environment in Microsoft Windows NT
versions 3.5 and greater.

Windows NT Parameters

**Under most circumstances it will not be necessary to make
modifications directly to the registry. Incorrect settings can
result in undesirable changes to the configuration of
Windows NT. Consult Xircom Customer Support for assis-
tance if you find it necessary to modify the registry.**

The files necessary for using CE3.SYS include:

CE3.DLL	Xircom CE3 installation DLL
OEMSETNT.INF	Xircom installation file for Microsoft Windows NT
CE3.SYS	Xircom NDIS3 driver for Microsoft Windows NT

There are user-configurable parameters to the CE3.SYS driver
which can be modified using the Network Control Panel built into
Windows NT. This applet uses the OEMSETNT.INF file to set the
corresponding parameters in the registry. The user-configurable
parameters are as follows:

Parameter	Default	Valid Values	Registry
EARLY TRANSMIT	ENABLED	DISABLED	0
		ENABLED	1
FULL DUPLEX	DISABLED	DISABLED	0
		ENABLED	1
INTERRUPT	5	3, 4, 5, 7, 10, 11, 15	SAME
I/O PORT	0X320	0X200-0X3D0	SAME
LINE SPEED	AUTODETECT	AUTODETECT	0
		10MBPS	1
		100MBPS	2
LINK INTEGRITY	ENABLED	DISABLED	0
		ENABLED	1
MEMORY ADDRESS	0XD4000	0XA0000 - 0XFE000	SAME
MODE	I/O	I/O	0
		MEMORY MAPPED	1

The network node address can be modified by manually editing the registry and adding the parameter 'NetworkAddress' with a hexadecimal string value, such as '0080C7112233'. If the user does NOT specify a 'NetworkAddress' then the CE3.SYS driver uses the network node address contained in the RealPort Ethernet 10/100 Card Information Structure.

There are parameters in the Windows NT registry which specify the configuration of the RealPort Ethernet 10/100 hardware to the CE3.SYS driver. Many of these parameters correspond directly to the user-configurable parameters. These parameters are found in the registry at the following location:

HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\CE31\PARAMETERS\

The registry parameters are as follows:

Keyword	Default	Valid Values
ADAPTERTYPE	0	
BUSNUMBER	0	
BUSTYPE	0X5	
DIRECTENABLE	0	0-1
EARLYTRANSMIT	0X1	0-1
FULLDUPLEX	0	0-1
INTERRUPTNUMBER	0X5	3, 4, 5, 7, A, B, F
IOBASEADDRESS	0X320	0X200 - 0X3D0
IOLENGTH	0XF	
LINESPEED	0	0-2
LINKINTEGRITY	0X1	0-1
MEMORYMAPPEDBASEADDRESS	0XD5000	A1000-FF000
MEMORYMAPPEDSIZE	0X1000	
MODE	0	0-1
NETWORKADDRESS		
PCCARDATTRIBUTEMEMORYADDRESS	0XD4000	A0000 - FE000
PCCARDATTRIBUTEMEMORYOFFSET	0	
PCCARDATTRIBUTEMEMORYSIZE	0X1000	
PCCARDMEMORYWINDOWOFFSET	0	
PCMCIA	1	0-1
TRANSMITBUFFERSIZE	0X1C00	0X0400-0X1E800

APPENDIXES

Appendix A. Support Services

Service and Support

Xircom offers an extensive family of service and support programs, including world-class phone support, software updates, plus 24-hour access to our BBS, World Wide Web, and other electronic facilities.

Warranty Service Procedures

For details on warranty coverage and service, see the Appendix entitled **Lifetime Limited Warranty**. If you think there is a problem or defect with your Xircom product, your point of contact will be

In the U.S.A.

Xircom's Customer Support department at **(805) 376-9200**.

Outside the U.S.A.

Contact your local Xircom supplier or Xircom regional office.

Software and Driver Updates

World Wide Web

To download drivers (subject to the terms of the Xircom Software License Agreement) from the Xircom website, go to:

www.xircom.com

Bulletin Board System (BBS)

Set your modem to its maximum speed, no parity, 8 data bits, 1 stop bit to connect at up to 56,000 bps in the U.S. and Europe, 33,600 bps elsewhere.

To download drivers, go to the Main Menu, select **F**ile Menu and **S**earch by filename or keyword (e.g., Windows 95) or **L**ist files by area. Follow the instructions to select and download current versions of Xircom *released* drivers (subject to the terms of the Xircom Software License Agreement).

Xircom Worldwide Access

Americas Customer Support

Xircom, Inc.

2300 Corporate Center Drive

Thousand Oaks, California 91320-1420

Direct Line to Customer Support

(805) 376-9200	Customer Support

(6 a.m. to 5 p.m. Monday through Friday U.S. Pacific time)

(805) 376-9100	Fax to Customer Support

Online or Automated Access (24 hours, 7 days a week)

(805) 375-5280	BBS (up to 56Kbps)
(805) 376-9130	BBS (up to 33.6Kbps)
cs@xircom.com	E-mail
www.xircom.com	World Wide Web

Europe, Middle East, and Africa Customer Support

Xircom Europe N.V.

King Square, Veldkant 39

2550 Kontich, Belgium

Direct Line to Customer Support

+32/(0)70 233 307	Telephone English language
+32/(0)70 233 852	Telephone Dutch language
+32/(0)70 233 851	Telephone French language
+32/(0)70 233 850	Telephone German language

(9:00 to 18:00 Monday through Friday)

+32/(0)70 233 306	Fax to Technical Support

Online or Automated Access (24 hours, 7 days a week)

+32/(0)70 233 163	BBS (up to 56Kbps)
eurots@xircom.com	E-mail

Asia Pacific Customer Support

Xircom Asia Pacific (Pte) Ltd.

76 Shenton Way

Unit #06-01

Singapore 079119

+65 323 1511

+65 323 3404   Customer Support

+65 224 3313   Fax

+65 323 0455   BBS (up to 33.6Kbps)

asiats@xircom.com   E-mail

Xircom Australia

Level 15, 99 Walker Street

North Sydney, NSW

Australia 2060

+61 (02) 9911 7794   Customer Support

+61 (02) 9911 7796   Fax

+61 (02) 9911 7758   BBS (up to 33.6Kbps)

aunzts@xircom.com   E-mail

Xircom Japan Customer Support

KDD Otemachi Bldg. /21F

1-8-1, Otemachi, Chiyoda-ku

Tokyo 100-0004

+81 (03) 3243 1129   Customer Support

+81 (03) 3243 1019   Fax

japan_ts@xircom.com   E-mail

Additional International Access

Contact your local reseller or distributor

www.xircom.com   World Wide Web

Please fill out and return the Product Registration Card supplied with the product.

Appendix B. Specifications

General Specifications

Model RE-100BTX

Cable: 100Base-TX unshielded twisted pair for use on Category 5 (data grade) cabling; 10Base-T unshielded twisted pair (UTP)

Connector: RJ-45

Operating Distance: 328 ft (100 m)

Ethernet specifications

Ethernet IEEE 802.3 for 10Mbps, 802.3u for 100Mbps

Type III PC Card

10Mbps full- and half-duplex

100Mbps half-duplex

Size: 86.0 mm x 54.0 mm x 10.5 mm (3.37 in x 2.13 in x 0.413 in)

Weight: 36 g (1.3 oz)

Power Requirements:

10Base-T   5V DC, 270 mA idle, 280 mA active

100Base-TX   5V DC, 315 mA idle, 320 mA active

Temperature Range:

  Operating: 32°F to 149°F (0°C to 65°C)

  Storage: -4°F to 185°F (-20°C to 85°C)

Humidity: 95% max. noncondensing

LEDs: LAN link, LAN activity

Certification: FCC Part 15, Class B

            CE Mark (EN 55022, Class B, EN50082)

Appendix C. Lifetime Limited Warranty

Warranties

As the original purchaser, you receive these warranties from Xircom:

Hardware

Your RealPort Ethernet 10/100 (collectively, "Products"), will be free from defects in material and workmanship and will perform in substantial compliance with your user documentation accompanying the Products for as long as you own and properly use the Products.

Software

Software accompanying these Products (including driver, utility software, etc.) and the magnetic media containing the software are warranted to perform in substantial compliance with the specifications contained in your user documentation for two years from your purchase date. Our warranty does not cover or provide you with rights to upgrades or updates.

You are responsible for your choice of applications programs or related reference materials. Given the wide range of third party hardware and applications software products you might use our software with, you understand that Xircom does not warrant the compatibility or the uninterrupted or error free operation of our software.

Upon our confirmation of a covered defect or failure, at our option we will repair or replace the affected item or will refund your purchase price if repair or replacement is not possible or practical. At our option, replacement products or repaired items may be a new, refurbished, or functionally equivalent item. Our warranty on items serviced under warranty will be lifetime for **hardware** and, for **software**, 90 days from return to you of software/magnetic media or the remainder of the original warranty, whichever is longer. Repair, replacement, or refund are the exclusive remedies available to you from Xircom for products and software.

Your Obligations

Your warranty rights will be honored provided you

1 Read and follow your user documentation for installation, setup, software setup, and operating guidelines,

2 Use the Products and software only in suitable physical or operating environments as described in your user documentation and for purposes for which the Products and software are intended.

Warranty Service

If you think there is a problem or defect with your purchased item, your point of contact will be

In the U.S.A.

Xircom's Technical Support department at **(805) 376-9200**.

Outside the U.S.A.

Contact your local Xircom supplier or Xircom regional office.

Your Xircom contact will discuss your problem to confirm the defect. If warranty or return service is needed, you'll receive a *Return Material Authorization* (RMA) number. Replacement Product will be shipped when the original Product has been received by Xircom. (**U.S. only:** advance shipment of replacement Product is available with a credit card deposit.)

Ship your return Product prepaid, **with the RMA number clearly visible on the outside of the shipping package**, to:

From the U.S.A.

Xircom Service Department

2101 Corporate Center Drive

Thousand Oaks, CA 91320-1422

From outside the U.S.A.

Contact your local Xircom supplier or Xircom regional center for shipping instructions.

Returned Products may need to include, if requested by Xircom, all other components from your original package, including the Product and any cables, connectors, software diskettes, and user documentation. Be sure to enclose a copy of your purchase receipt or other proof of purchase confirming that you are the original purchaser.

Limitations

Our warranty is subject to the following limitations:

a We do not cover or accept liability for any injury, damage or failure caused by misuse, abuse, acts of Nature, accidents (e.g., dropping the Products or software diskettes), electrical mishaps, causes beyond our control, or claims by other than the original purchaser.

b We will not honor, and will consider our warranty voided, if there has been any (1) tampering with the Product's external label or serial number, (2) attempt to open the Product's case, or (3) attempted or actual repair by anyone other than an authorized Xircom technician.

Disclaimer

THIS LIMITED WARRANTY IS THE ONLY WARRANTY WE MAKE FOR THE PRODUCT AND SOFTWARE. TO THE EXTENT ALLOWED BY LAW, NO OTHER WARRANTY APPLIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE, OR OF NON-INFRINGEMENT. XIRCOM WILL NOT BE LIABLE OR RESPONSIBLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES (e.g., LOST PROFITS, LOSS OF OR DAMAGE TO ANY COMPUTER EQUIPMENT OR RELATED DATA).

Additional Rights

Some states or countries do not allow exclusion or limitation of incidental or consequential damages, or limitations on the length of an implied warranty, so the above limitations or exclusions may not apply to you. Our warranty gives you specific legal rights, and you may also have other rights which vary from state to state or country to country.

International Notice

Due to differing national regulations and approval requirements, certain Xircom products are designed for use only in specific countries, and may not function properly in a country other than the country of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended.

For information on specific products, contact Xircom's nearest regional center:

Xircom Corporate (U.S.A.)	(800) 438-4526
Xircom Europe	+32/(0)3 450.08.11
Xircom Asia Pacific	+65 323 1511

Unauthorized Applications

Xircom's products are not designed or authorized for use as a component in any life support, life safety, or other comparable application. Our products should not be used in any application where the failure or faulty performance of the product might create a risk of personal injury or death. Buyer assumes all risk of loss, damage or injury alleged to arise from the failure or faulty performance of a Xircom product in any unauthorized application. Buyer agrees to indemnify and hold harmless Xircom, and its officers, directors, employees, agents, representatives, and sales partners, from and against any and all claims, costs, damages, losses and expenses (including reasonable attorney fees) which arise from or are alleged to have been caused by any claim for personal injury or death connected with Buyer's use of a Xircom product in any unauthorized application, including claims which allege that Xircom has been negligent in connection with the design or manufacture of the product.

Appendix D. Regulatory Agency Notices

FCC Regulations Part 15 Declaration of Conformity (DoC)

Xircom, Inc. declares that the equipment described in this document is within the requirements of the Code of Federal Regulations listed below:

Title 47 Part 15, Subpart B, Class B for a digital device.

This declaration is based upon the compliance of the Xircom RealPort Ethernet 10/100 model RE-100 to the above standards. Xircom has determined that model RE-100 has been shown to comply with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated.

These units are identical to the units tested and found acceptable with the applicable standards. Records maintained by Xircom continue to reflect that units being produced under this Declaration of Conformity, within the variation that can be expected due to quantity production and tested on a statistical basis, continue to comply with the applicable technical standards.

Authorized Signature:

R.W. Bass

Vice President, Operations

Xircom, Inc.

2300 Corporate Center Drive

Thousand Oaks, California 91320 U.S.A.

FCC Rules and Regulations - Part 15

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1 This device may not cause harmful interference and,

2 This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

·   Reorient or relocate the receiving antenna.

·   Increase the separation between the equipment and the receiver.

·   Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

·   Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.

In order to maintain compliance with FCC regulations, standard network (as specified) cables must be used with this equipment. Operation with non-approved equipment or non-standard cables is likely to result in interference to radio and TV reception.

Canadian Department Of Communications

Industry Canada Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in 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 Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

European Community - CE Mark

Declaration of Conformity

Xircom, Inc. declares that the equipment described in this document is in conformance with the requirements of the European Council Directive listed below:

73/23/EEC	Low Voltage Directive with Amendment 93/68/EEC
89/336/EEC	EMC Directive with Amendments 92/31/EEC and 93/68/EEC

This declaration is based upon compliance of the product to the following standards:

EN 55022 (CISPR 22B)	RF Emissions Control
EN 50082-1 (IEC 801-2, 3, 4)	Immunity to Electromagnetic Disturbance
Product Description:	Xircom RealPort Ethernet 10/100, Model RE-100

Authorized Signature:

R.W. Bass,

Vice President, Operations

Xircom, Inc.

2300 Corporate Center Drive

Thousand Oaks, California 91320

U.S.A.

Safety Notices

This card is intended for use with UL 1950/EN60950/IEC950 (or other NRTL) listed ITE computer that contains operator-accessible PC Card slots.

Appendix E. Software License Agreement

Xircom grants you a non-exclusive license to use the copies of software programs supplied with this product on the following terms:

You may:

a Use the software program on any computer or network but only in conjunction with any Xircom hardware product;

b Permit any other individuals to use the software program either directly or on a computer network, but only if there is no more than one user for each Xircom hardware product in use in conjunction with such use;

c Make only those number of backup and archival copies of the software program in machine readable form as are essential to backup use of the software program, provided that you reproduce all proprietary notices on each copy.

You may not:

a Modify, translate, reverse engineer, decompile, disassemble, create derivative works based on, or copy (except for archival purposes) the program or the accompanying documentation;

b Rent, transfer, sublicense or grant any rights in the program or accompanying documentation (including any time-sharing arrangement) in any form to any other person without the prior written consent of Xircom;

c Remove any proprietary notices, labels, or marks on the program and accompanying documentation.

Failure to comply with any of the above restrictions will terminate this license. This is not a sale. Title and copyrights to the program and accompanying documentation and any copies remain with Xircom, except that title to software programs shipped by Xircom through an agreement with another manufacturer is owned and retained by the original manufacturer, and no title to the intellectual property contained in such programs is transferred hereunder. The human readable code of the software program (source code), including the source code of programs shipped by Xircom through an agreement with another manufacturer, is not sublicensed hereunder.

U.S. Government Restricted Rights

The SOFTWARE and documentation are provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013, or subparagraphs (c)(1) and (c)(2) of the Commercial Computer Software-Restricted Rights at 48 CFR52.227-19, as applicable. Contractor/manufacturer is Xircom, Inc., 2300 Corporate Center Drive, Thousand Oaks, CA 91320-1420.

This Agreement is governed by the laws of the State of California.