Compact USB 2.0 10/100 Network Adapter

Use this guide to install:

USB200M

User Guide

LINKSYS®

EC Declaration of Conformity (Europe)

In compliance with the EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC, and Amendment Directive 93/68/EEC, this product meets the requirements of the following standards:

• EN55022 Emission
• EN55024 Immunity

Industry Canada (Canada)

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe (B) est conforme à la norme NMB-003 du Canada.

LIMITED WARRANTY
Linksys guarantees that every Compact USB 2.0 10/100 Network Adapter will be free from physical defects in material and workmanship for one year from the date of purchase, when used within the limits set forth in the Specifications section of this User Guide. If the product proves defective during this warranty period, call Linksys Technical Support in order to obtain a Return Authorization Number. BE SURE TO HAVE YOUR PROOF OF PURCHASE AND A BARCODE FROM THE PRODUCT'S PACKAGING ON HAND WHEN CALLING. When returning a product, mark the Return Authorization Number clearly on the outside of the package and include a copy of your original proof of purchase. RETURN REQUESTS CANNOT BE PROCESSED WITHOUT PROOF OF PURCHASE. All customers located outside the United States of America and Canada shall be held responsible for shipping and handling charges.

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Linksys P.O. Box 18558, Irvine, CA 92623.

FCC STATEMENT
This Compact USB 2.0 10/100 Network Adapter has been tested and complies with the specifications 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 according to 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 is found 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 or devices
• Connect the equipment to an outlet other than the receiver's
• Consult a dealer or an experienced radio/TV technician for assistance

UG-USB200M-092602NC JL

Table of Contents

Chapter 1: Introduction

The Compact USB 2.0 10/100 Network Adapter

Now you can connect to any 10/100 Ethernet network without having to open your PC. And with the power of USB 2.0, you'll connect at the full speed your network supports. The Compact USB 2.0 10/100 Network Adapter from Linksys works with any USB 1.1 or 2.0 equipped desktop or notebook PC, running any version of Windows that supports USB.

This tiny, Plug-and-Play compatible device attaches directly to a USB port on your PC or hub via a standard USB Type A connector. Simply connect a Category 5 Ethernet network cable into the Compact USB 2.0 10/100 Network Adapter's RJ-45 port, install the included device driver, and you're networked.

The Compact USB 2.0 10/100 Network Adapter is bus-powered, drawing power from the host PC, so it requires no external power cord. It features easy-to-read LEDs, a compact design, a 1-year limited warranty, and free world-class technical support.

Features

- Connects at a Full 100Mbps via USB 2.0, up to 8 Times Faster than a USB 1.1 Adapter
- Compact Size for Greater Flexibility
- Also Compatible with USB 1.1 Desktop and Notebook Computers
- Plug-and-Play Compatible with Windows 98, 2000, Millennium, and XP
- One Male, Type A, USB Connector
- One RJ-45, 10/100 Port for Network Connectivity
- Powered by Host PC so No External Power Supply is Needed
- Compact Design—Perfect for Use with Notebook PCs
- RJ-45 Network Port Connects to Any 10/100Mbps Hub or Switch
- Backward Compatible with USB 1.0/1.1 USB Ports
- Plug-and-Play Compatible with Windows 98, Millennium, 2000, and XP for Easy Installation

Package Contents

Figure 1-1

- One Compact USB 2.0 10/100 Network Adapter
- One Driver Installation CD with User Guide included
- One USB Coupler
- One Quick Installation guide
- One Registration Card

Minimum Requirements

One PC with the following:
- 200MHz or Faster Processor
- 64MB RAM Recommended
- Available USB Port (USB 2.0 for maximum throughput)
- CD-ROM Drive
- Windows 98, Millennium, 2000, or XP

Chapter 2: About USB

Overview

USB, which is short for **Universal Serial Bus**, is a technology designed to make connecting devices to computers easier. First developed in 1996 by a group of computer industry leaders that included Compaq, Digital, IBM, Intel, Microsoft, NEC, and Northern Telecom, USB is one of the most widely used technologies for users who want to add peripherals to their computers.

USB is unique because it is Plug-and-Play, which allows a computer to instantly recognize when a device like a keyboard, mouse, or scanner has been connected to it. Once the device has been recognized, it's ready to go—no special setup is required. Similarly, USB supports hot-swapping, the insertion or removal of devices while the computer is turned on.

USB 2.0

The USB 1.1 standard supports two speed modes, 1.5 and up to 12Mbps. The newest USB standard, USB 2.0, supports three speed modes: 1.5, 12, and up to 480Mbps. The new USB 2.0 devices are fully backward compatible with earlier USB devices. USB 2.0 offers you increased functionality and additional bandwidth, allowing you to add more peripherals to your computers.

USB Icon

The USB icon marks a USB port on a PC or device.

Figure 2-1

USB Cabling

There are two kinds of USB connectors, Type A and Type B. Type A is a rectangular connector, and Type B is a square connector.
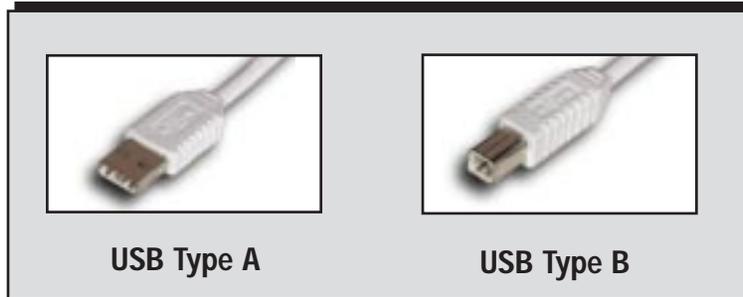
Figure 2-2

The USB extension cable that comes with the Adapter has Type A connectors on both ends. One is a male Type A connector that plugs into the PC's USB port, and the other is a female Type A connector that plugs into the Adapter.
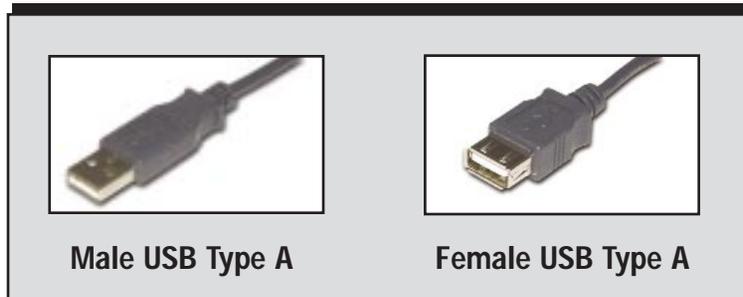
Figure 2-3

Figure 2-4 shows two USB ports as they might appear on your computer. Note the two USB icons marking the ports.
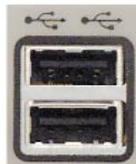
Figure 2-4

Chapter 3: Getting to Know the Compact USB 2.0 10/100 Network Adapter

The Adapter's Ports and LEDs
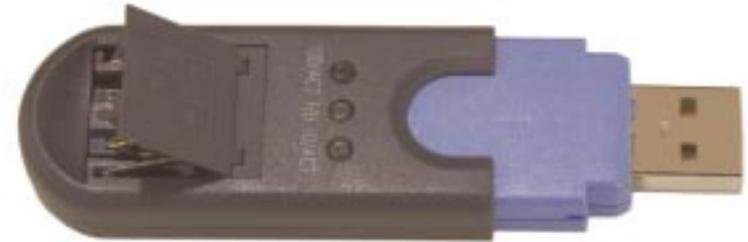
Figure 3-1

The Ports

USB Port   The USB port is a Type A connector. Connect the USB extension cable from your PC or hub to this port.

RJ-45 Port   The RJ-45 port connects the Adapter to a Category 5 Ethernet network cable.

The LED Indicators

100/ACT   *Green*. The LED lights up when there is a connection to a 100Mbps network. It flashes when the computer is transmitting or receiving data at 100Mbps.

F/H   *Green*. The LED lights up when the Adapter is operating in full-duplex mode. The LED is off when the Adapter is operating in half-duplex mode.

10/ACT   *Green*. The LED lights up when there is a connection to a 10Mbps network. It flashes when the computer is transmitting or receiving data at 10Mbps.

Chapter 4: Connecting the Compact USB 2.0 10/100 Network Adapter

1. With your PC turned off, insert the Adapter's USB end (or the end of the USB extension cable connected to the Adapter) into your PC's USB port or USB hub.

> **Note:** For maximum speed, connect the Adapter to a USB 2.0 port on your PC. If you are using a hub, make sure it is a USB 2.0 hub.

2. Insert one end of an Ethernet network cable into the Adapter's RJ-45 port.

Figure 4-1

3. Insert the other end of the Ethernet network cable into an Ethernet networking device.

The hardware installation is complete.
To install the Adapter's driver, proceed to the chapter for the Windows operating system your PC is running.

Chapter 5: Windows 98 Installation and Setup

Overview

After physically connecting the Adapter to your computer's USB port or hub, follow these instructions to install the hardware device driver. The installation procedure for the hardware device driver may vary slightly depending on which version of Windows 98 you are using, and on your current system configuration. If at any time during the installation you encounter problems, consult "Appendix A: Troubleshooting."

Windows 98 Driver Installation

1. If you haven't already, start your computer.

2. Windows 98 will automatically detect the Adapter connected to your PC. When the first *Add New Hardware Wizard* screen appears, insert the Driver CD into your CD-ROM drive, and click the **Next** button.

3. Select **Search for the best driver for your device (Recommended)**, and click the **Next** button.

Figure 5-1

> **Note:** Throughout this guide, it is assumed that "D" is the letter of your CD-ROM drive.

4. Select **Specify a location:** to find the correct driver, and enter **D:\win98** in the field provided. Click the **Next** button to continue.

Figure 5-2

5. When Windows notifies you that it is ready to install the driver files, click the **Next** button to continue.

Figure 5-3

> **Note:** Do not click **Cancel** at any time during the installation process. Doing so will prevent your driver from being properly installed on your PC.

6. Windows will begin copying the driver files to your computer. If Windows asks you for the original Windows CD-ROM, insert the CD-ROM, and direct Windows to the proper location for the CD-ROM (e.g., **D:**). If you have the Windows 98 setup files already installed in a directory, click **OK**, and enter **C:\windows\options\cabs** (if "C" is the letter of your hard drive) in the windows that appears. When Windows has completed copying the files, click the **Finish** button.

Figure 5-4

7. When asked if you want to restart your computer, remove the Driver CD from the CD-ROM drive, and click the **Yes** button. If Windows does not ask you to restart your PC, click **Start**. Choose **Shut Down**, and select **Restart**. Then click the **OK** button.

Congratulations! The installation of the Compact USB 2.0 10/100 Network Adapter is complete.

To enable file and printer sharing, go to the next section, "Windows 98 Network Configuration."

Windows 98 Network Configuration

If you are installing the Adapter in a Windows 98 PC that is used in an NT domain, go to "Appendix B: Client for Microsoft Setup for Windows 98."

1. From the Windows 98 desktop, right-click the **Network Neighborhood** icon. Then click **Properties**.

2. The *Network* screen will appear. Click the **Configuration** tab. A screen similar to Figure 5-5 will appear.
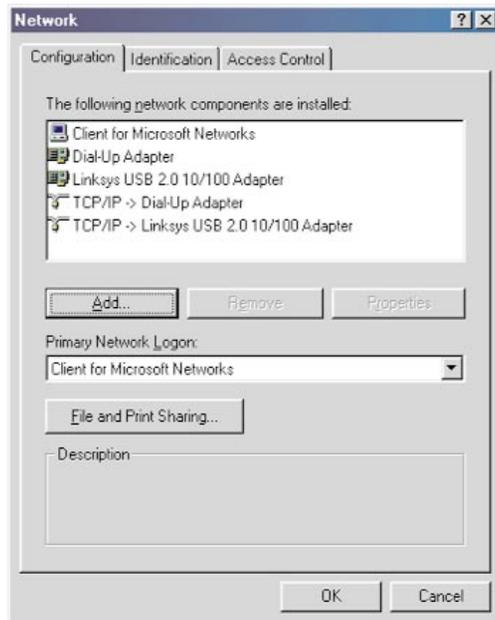
Figure 5-5

3. Click the **File and Print Sharing** button. The *File and Print Sharing* screen will appear.

> ✔ **Note:** Linksys does not provide technical support or troubleshooting for network configuration.

4. If you'd like others to be able to access the files on your PC's hard drive, select **I want to be able to give others access to my files.**

   If you'd like to share your printer with other users on the network, select **I want to be able to allow others to print to my printer(s).**
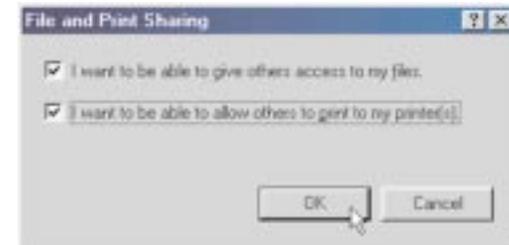
Figure 5-6

> ✔ **Note:** If you do not enable file and print sharing, your PC will be invisible on the network and inaccessible to other users.

5. Click the **OK** button. *File and printer sharing for Microsoft Networks* should now appear in the list of installed components.
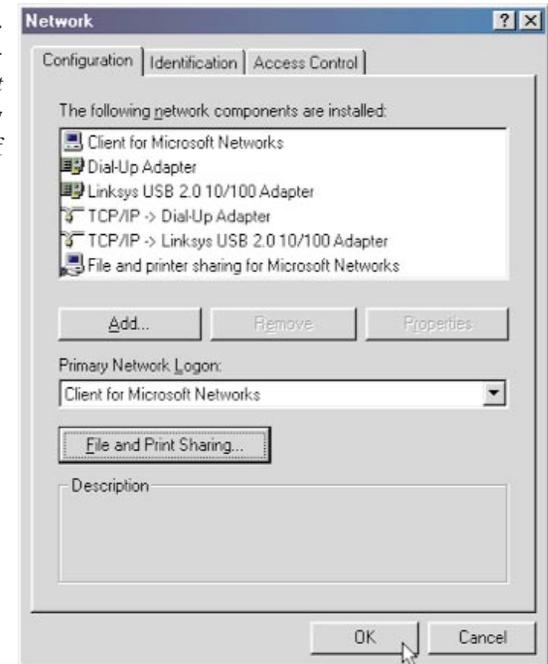
Figure 5-7

6. From the *Primary Network Logon* drop-down box, select **Client for Microsoft Networks**.

7. Click the **Identification** tab. Enter the name of your computer in the *Computer name* field. Choose a name that is different from the other computer names on the network.

> **Note:** Your Computer and Workgroup Names must each have fewer than 15 alphanumeric characters.

8. Enter the name of your workgroup in the *Workgroup* field. The workgroup name should be the same workgroup name used by all of the other PCs on the network.

9. If you wish, enter a description of your computer in the *Computer Description* field.

Figure 5-8

10. From the *Access Control* tab, you can set the level of access that network users will have to this computer.
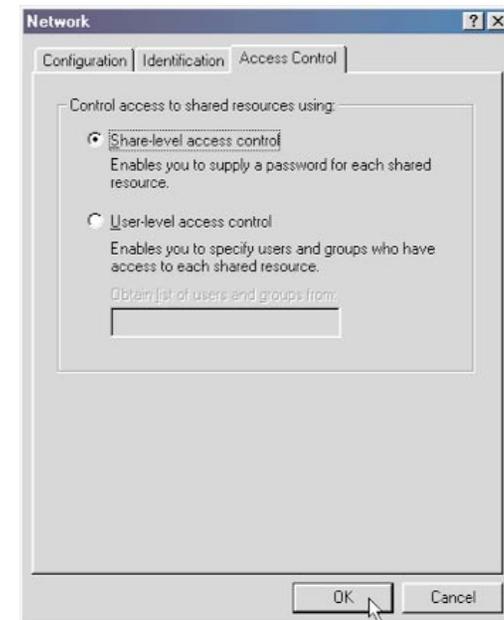
Figure 5-9

11. Click the **OK** button. Your system may ask you for your Windows 98 CD-ROM or the location of the Windows 98 installation files. If it does, direct Windows to the appropriate location (e.g., **C:\windows\options\cabs** or **D:\win98** if you have the Windows 98 CD-ROM and "D" represents your CD-ROM drive).

12. After Windows has copied the necessary files, the *System Settings Change* screen will appear. Remove all disks and CDs from your PC, and click the **Yes** button to restart your PC. If you don't see this screen, simply shut down Windows 98, and restart your PC.

13. A *Logon* screen will appear and require you to enter a **User Name** and **Password**. Make up a user name and password (if you haven't already), and click the **OK** button. Do not click the **Cancel** button or press the **Escape [ESC]** key as this will prevent you from logging into the network. If the logon does not appear or if it does not allow you to log on, refer to "Appendix A: Troubleshooting."

14. When you are at the Windows 98 desktop, double-click the **Network Neighborhood** icon. You should see one icon for the entire network and the names of the other PCs on the network.

   • If you can see your computer along with all the other computers on the network in Network Neighborhood, then the Windows 98 network configuration is complete.

Refer to "Appendix A: Troubleshooting" if you run into any problems, such as:

   • If you don't see anything at all in Network Neighborhood after pressing the **F5** key on your keyboard a few times to refresh the screen;

   • If you only see your own computer in Network Neighborhood;

   • If you see all computers on the network except yours after pressing the **F5** key a few times; or

   • If you only see computers that are running the same operating system as you and you don't see any other computers.

Chapter 6: Windows Millennium Installation and Setup

Overview

After physically connecting the Adapter to your computer's USB port or hub, follow these instructions to install the hardware device driver. The installation procedure for the hardware device driver may vary slightly depending on your current system configuration. If at any time during the installation you encounter problems, consult "Appendix A: Troubleshooting."

Windows Millennium Driver Installation

1. If you haven't already, start your computer.

2. Windows Millennium will automatically detect the Adapter connected to your PC. When the *Add New Hardware Wizard* screen appears, insert the Driver CD into your CD-ROM drive, and select **Specify the location of the driver (Advanced)**. Click the **Next** button.

Figure 6-1

Note: Throughout this guide, it is assumed that "D" is the letter of your CD-ROM drive.

3. Select **Search for the best driver for your device (Recommended)**. You MUST remove the checkmark from the box next to *Removable Media*. Select **Specify a location:**, and enter **D:\winME** in the field provided. Then click the **Next** button.

Figure 6-2

4. When Windows notifies you that it is ready to install the driver files, click the **Next** button to continue.

Figure 6-3

⚠️ **Note:** Do not click **Cancel** at any time during the installation process. Doing so will prevent your driver from being properly installed on your PC.

5. When Windows has completed copying the driver files, click the **Finish** button.
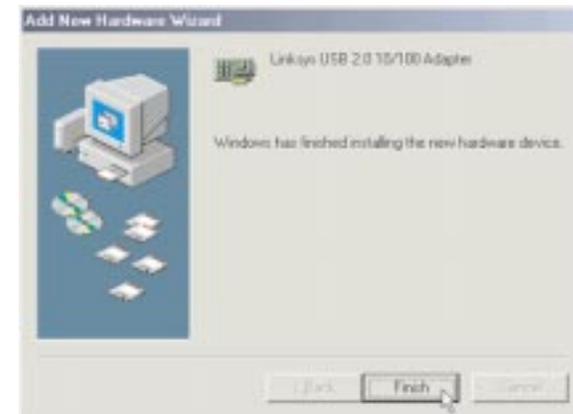
Figure 6-4

6. When asked if you want to restart your computer, remove the Driver CD from the CD-ROM drive, and click the **Yes** button. If Windows does not ask you to restart your PC, click **Start**. Click **Shut Down**, and select **Restart**. Then click the **OK** button.

Congratulations! The installation of the Compact USB 2.0 10/100 Network Adapter is complete.

To enable file and printer sharing, go to the next section, "Windows Millennium Network Configuration."

Windows Millennium Network Configuration

✓ **Note:** Linksys does not provide technical support or troubleshooting for network configuration.

1. From the Windows Millennium desktop, right-click the **My Network Places** icon. Then click **Properties**.

2. The *Network* window will appear. Click the **Configuration** tab. A screen similar to Figure 6-5 will appear.
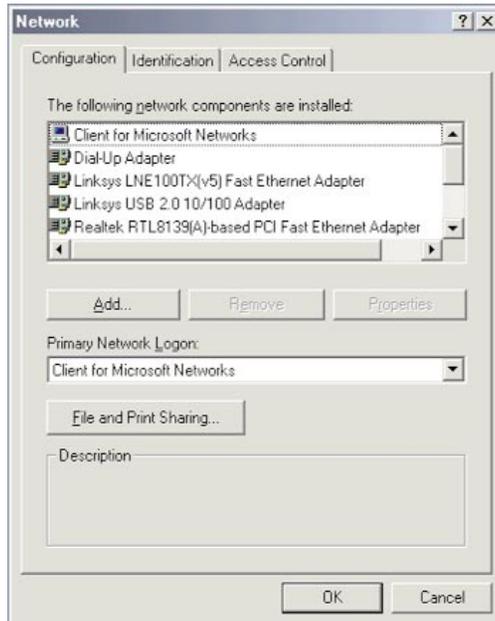
Figure 6-5

3. Click the **File and Print Sharing** button. The *File and Print Sharing* window will appear.

4. If you'd like others to be able to access the files on your PC's hard drive, select **I want to be able to give others access to my files.**

   If you'd like to share your printer with other users on the network, select **I want to be able to allow others to print to my printer(s).**

Figure 6-6

✓ **Note:** If you do not enable file and printer sharing, your PC will be invisible on the network and inaccessible to other users.

5. Click the **OK** button. *File and printer sharing for Microsoft Networks* should now appear in the list of installed components.
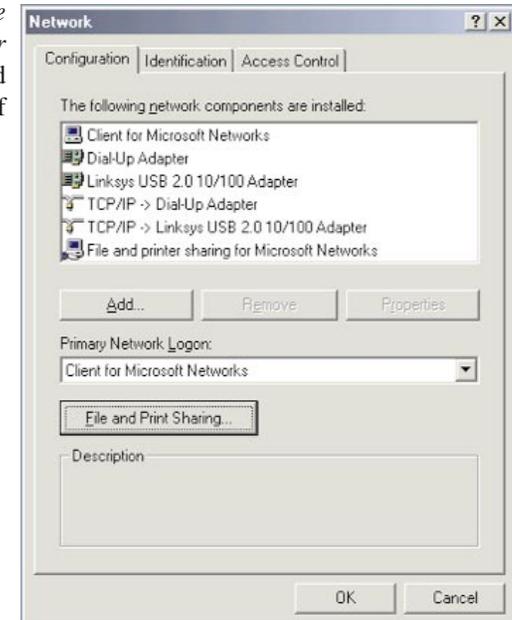
Figure 6-7

6. From the the *Primary Network Logon* drop-down box, select **Client for Microsoft Networks**.

7. Click the **Identification** tab. Type the name of your computer in the *Computer name* field. Choose a name that is different from the other computer names on the network.

> **Note:** Your Computer and Workgroup Names must each have fewer than 15 alphanumeric characters.

8. Type the name of your workgroup in the *Workgroup* field. The workgroup name should be the same workgroup name used by all of the other PCs on the network.

9. If you wish, enter a description of your computer in the *Computer Description* field.
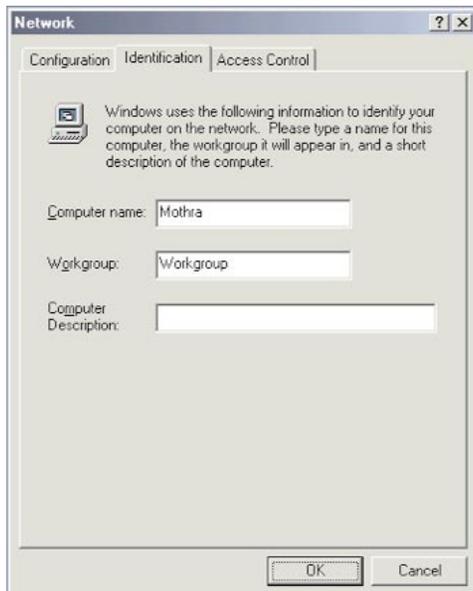
Figure 6-8

10. From the *Access Control* tab, you can set the level of access that network users will have to this computer.
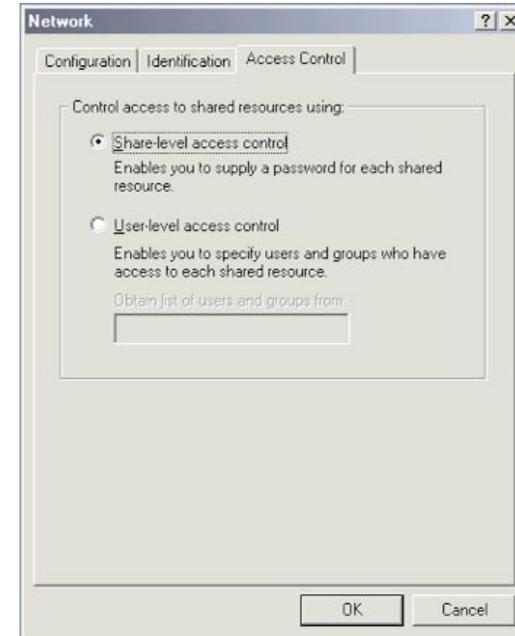
Figure 6-9

11. Click the **OK** button. Your system may ask for your Windows Millennium CD-ROM or the location of the Windows Millennium installation files. If it does, direct Windows to the appropriate location (e.g., **C:\windows\options\cabs** or **D:\win9x** if you have the Windows Millennium CD-ROM and "D" represents your CD-ROM drive).

12. After Windows has copied the necessary files, the *System Settings Change* window will appear. Remove all disks and CDs from your PC, and click the **Yes** button to restart your PC. If you don't see this window, simply shut down Windows Millennium and restart your PC.

13. A *Logon* screen will appear and require you to enter a **User Name** and **Password**. Make up a user name and password (if you haven't already), and click the **OK** button. Do not click the **Cancel** button, or press the **Escape [ESC]** key as this will prevent you from logging into the network. If the logon does not appear or if it does not allow you to log on, refer to the "Appendix A: Troubleshooting."

14. When you are at the Windows Millennium desktop, double-click on the **Network Neighborhood** icon. You should see one icon for the entire network and the names of the other PCs on the network.

   • If you can see your computer along with all the other computers on the network in Network Neighborhood, then the Windows Millennium network configuration is complete.

Refer to the "Appendix A: Troubleshooting" if you run into any problems, such as:

   • If you don't see anything at all in Network Neighborhood after pressing the **F5** key on your keyboard a few times to refresh the screen;

   • If you only see your own computer in Network Neighborhood;

   • If you see all computers on the network except yours after pressing the **F5** key a few times; or

   • If you only see computers that are running the same operating system as you and you don't see any other computers.

Chapter 7: Windows 2000 Installation

Overview

After physically connecting the Adapter to your computer's USB port or hub, follow these instructions to install the hardware device driver. The installation procedure for the hardware device driver may vary slightly depending on your current system configuration. If at any time during the installation you encounter problems, consult "Appendix A: Troubleshooting."

Windows 2000 Driver Installation

1. If you haven't already, start your computer.

2. Windows 2000 will automatically detect the Adapter connected to your PC. When the *Welcome to the Found New Hardware Wizard* screen appears, insert the Driver CD into your CD-ROM drive, and click the **Next** button.

3. Select **Search for a suitable driver for my device (recommended)**. Click the **Next** button.

Figure 7-1

Note: Throughout this guide, it is assumed that "D" is the letter of your CD-ROM drive.

4. Select **Specify a location** to find the correct driver. Click the **Next** button to continue.
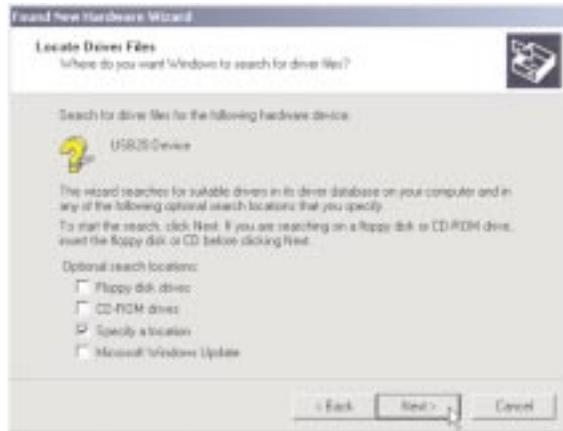
Figure 7-2

5. In the *Copy manufacturer's files from:* field, enter **D:\win2000**. Then click the **OK** button.

Figure 7-3

 Note: Do not click **Cancel** at any time during the installation process. Doing so will prevent your driver from being properly installed on your PC.

6. The *Driver Files Search Results* screen will appear. Click the **Next** button.

7. For Windows 2000, you may be informed that a digital signature has not been found (see Figure 7-4). This is normal, and it has been verified that the Adapter does work with Windows 2000. Click the **Yes** button to continue.

Figure 7-4

8. The *Completing the Found New Hardware Wizard* screen will appear. Click the **Finish** button, and remove the Driver CD from the CD-ROM drive.

Congratulations! The installation of the Compact USB 2.0 10/100 Network Adapter is complete.

For more information about networking under Windows 2000, refer to your Microsoft Windows 2000 documentation.

Chapter 8: Windows XP Installation

Overview

After physically connecting the Adapter to your computer's USB port or hub, follow these instructions to install the hardware device driver. The installation procedure for the hardware device driver may vary slightly depending on your current system configuration. If at any time during the installation you encounter problems, consult "Appendix A: Troubleshooting."

Windows XP Driver Installation

1. If you haven't already, start your computer.

2. Windows XP will automatically detect the Adapter connected to your computer and display the *Welcome to the Found New Hardware Wizard* screen. Select **Install from a list or specific location (Advanced)**, and insert the Driver CD into the CD-ROM drive. Then click the **Next** button.

Figure 8-1

Note: Throughout this guide, it is assumed that "D" is the letter of your CD-ROM drive.

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3. Select **Search for the best driver in these locations**. Only select **Include this location in the search:**, and enter **D:\winxp** in the field provided. Then click the **Next** button.

Figure 8-2

4. Windows will notify you that the driver has not passed Windows Logo testing. This is normal, and it has been verified that the Adapter does work with Windows XP. Click the **Continue Anyway** button.

Figure 8-3

Note: Do not click **Cancel** at any time during the installation process. Doing so will prevent your driver from being properly installed on your PC.

5. The *Completing the Found New Hardware Wizard* screen will appear. Click the **Finish** button. Then remove the Driver CD from the CD-ROM drive.

Figure 8-4

Congratulations! The installation of the Compact USB 2.0 10/100 Network Adapter is complete.

For more information about networking under Windows XP, refer to your Microsoft Windows XP documentation.

Appendix A: Troubleshooting

1. Windows doesn't detect new hardware when I connect the Compact USB 2.0 10/100 Network Adapter, or it continues to detect the Adapter each time I restart the PC.
    • You might not have correctly or securely installed the Adapter in your computer. Check that the Adapter is securely inserted into the PC's USB port.
    • There may be difficulties with the PC. The system BIOS might not be USB compatible, or your PC's USB settings may not be enabled. Another possibility is that the motherboard may have USB options not supported by Windows 98, Windows Millennium, or Windows 2000. Check your PC's hardware and settings. If you are not sure about your PC's USB compatibility, contact your PC's manufacturer.
    • Refer to the PC's documentation for additional information on installing USB peripherals.

2. Windows can't locate the driver for the Compact USB Network Adapter.
    • You may have inserted the wrong Driver CD into your PC's CD-ROM drive. Check the Driver CD.
    • The Driver CD may be defective, or files may be missing. Make sure that the Driver CD includes the files "USB200M.inf" and "USB200M.sys".
    • You may be directing Windows to the wrong drive. Make sure that you are directing Windows to your CD-ROM drive.

3. The Windows Logon screen doesn't appear after restarting the computer.
    • Click **Start** and then **Log Off.** Log back in. If this doesn't solve the problem, your PC's manufacturer may have disabled Windows' networking. Contact your computer's manufacturer for help. If using Windows 2000, refer to your Microsoft documentation.

4. On the Access Control Tab, User Level Access is selected, but Shared Level Access is grayed out and not accessible.
    • You previously had your primary network logon set to *Client for NetWare Networks*. On the *Configuration* tab of the *Network Properties* screen, make sure that your primary network logon is set to *Client for Microsoft Networks*.
    • Your personal web server PC or Microsoft Front Page may require you to choose a user level for security reasons.

5. In Network Neighborhood I can see myself but no other computers.
 • Make sure that the cables are connected correctly. Make sure you are get-ting Link or Activity lights on both the Compact USB 2.0 10/100 Network Adapter and your hub if you are using one. Try changing to a new cable that you know is working.
 • Make sure that the other PCs are turned on.

6. I've decided that I don't want to share a drive or printer anymore, or I have decided to physically remove a drive or printer from my network.
 • You're going to have to manually reconfigure your File and Printer Sharing settings. To do so, double-click the **My Computer** icon. Click the **Printers** folder. A window of available printers will appear. Using your right mouse button, click the printer that you want to disable on the network. Click **Sharing** and then the **Sharing** tab. Click **Not Shared**. When you're done, click the **Apply** button and then the **OK** button.
 • You can disable shared drives in the same way. In Windows Explorer, right-click the drive you want to stop sharing. Click **Sharing** and then the **Sharing** tab. Click **Not Shared**. When you're done, click the **Apply** button and then the **OK** button.

7. In Network Neighborhood, you can only see computers running the same oper-ating system as you. For example, if you are running Windows 98, you can see other Windows 98 computers but not any Windows 95 computers.
 • Click **Start**, **Find**, and then **Computer**. Enter the name of any other com-puter in the window that comes up. Click **Find Now**.
 • Make sure that you are using the same protocols and workgroup names on the computers. To do this, click **Start**, **Settings**, and then **Control Panel**. Double-click the **Network** icon. Click the **Configuration** tab and verify your protocol settings. If any protocols are missing, add any needed proto-col(s) using the **Add** button in the Network window. Next, click the **Identification** tab for Workgroup settings. Make sure they are consistent with your other PCs.
 • If all computers are using the same protocol(s) and workgroup name, and Windows 95 computers can't see Windows 98 computers, enable NetBIOS on all the computers using Windows 95 and 98.
 • IPX/SPX-compatible Protocol should be installed on all computers.
 • Bring up the properties of the IPX/SPX-compatible Protocol. To do this, click **Start**, **Settings**, and **Control Panel**. Double-click **Network**, and click the **Configuration** tab. Highlight **IPX/SPX-compatible Protocol** (only one of them), and click **Properties**.

 • Click the **NetBIOS** tab. Put a check next to *I want to enable NetBIOS over IPX/SPX* and click **OK**. Click **OK** again.
 • After Windows finishes copying the appropriate files, restart your comput-er. When you've returned to the desktop, open **Network Neighborhood** or **My Network Places**, and look for the other PCs on your network.

8. In Network Neighborhood, I can only see some of the computers.
 • Choose **Start**, **Find**, and **Computer**. Enter the name of the computer in the window that comes up, and click **Find Now**.
 • Now make sure that you are using the same protocol(s) and workgroup name on all other computers. To do this, click **Start**, **Settings**, **Control Panel** on two computers running different Windows operating systems. Click the **Network** icon, choose the **Configuration** tab, and then click the **Identification** tab for workgroup name. Compare the protocols on both computers and make sure that they are the same. If any protocols are miss-ing, refer to the Windows documentation to install any needed protocol(s).
 • Ensure that file and print sharing is enabled on every computer.

9. Network Neighborhood is empty.
 • Verify that *Client for Microsoft Networks* is installed. Right-click the **Network Neighborhood** icon, and select **Properties**. On the *Network* screen, click the **Configuration** tab and see if *Client for Microsoft Networks* is installed. If it is not, see your Windows documentation for instructions.
 • Verify that you have logged in correctly. Refresh the screen by pressing F5 several times.

10.On some notebook PCs, the Compact USB 2.0 10/100 Network Adapter fails to configure correctly after the drivers have been loaded.
 • After loading the software drivers, it may be necessary to do the following:
    1. Log off and unplug the device from your PC's USB port.
    2. Turn off your PC.
    3. Plug the device back in and reboot.
    4. Log on after the PC reboots.

11. If you are connecting the Adapter to a hub, switch, or other network device, and the Adapter is experiencing difficulties, you may need to check the Advanced properties of the Adapter.
   • For Windows 98 and Millennium, do the following:
       1. Right-click **Network Neighborhood** or **My Network Places**.
       2. Select **Properties**.
       3. Click the **Configuration** tab.
       4. Highlight **Linksys Compact USB 2.0 10/100 Network Adapter**, and right-click it.
       5. Click the **Properties** button.
       6. Click the **Advanced** tab.
       7. Select **Properties**.
       8. Select **Connection Type**. Select the appropriate value for your network device. In most cases, **AutoSense** should be selected.
       9. Select **Flow Control**. Select the appropriate value for your network device. In most cases, **Enable** should be selected.
       10. Select **Remote Wakeup** (Wake-on-LAN). Select the appropriate value for your network device. In most cases, **Link up** or **Magic Packet** should be selected.
       11. Click the **OK** button.

   • For Windows 2000, do the following:
       1. Right-click **My Computer**.
       2. Select **Properties**.
       3. Click the **Hardware** tab.
       4. Click the **Device Manager** button.
       5. Click the + sign next to *Network adapters*.
       6. Highlight **Linksys Compact USB 2.0 10/100 Network Adapter**, and right-click it.
       7. Select **Properties**.
       8. Click the **Advanced** tab.
       9. Select **Connection Type**. Select the appropriate value for your network device. In most cases, **AutoSense** should be selected.
       10. Select **Flow Control**. Select the appropriate value for your network device. In most cases, **Enable** should be selected.
       11. Select **Remote Wakeup** (Wake-on-LAN). Select the appropriate value for your network device. In most cases, **Link up** or **Magic Packet** should be selected.
       12. Click the **OK** button.

   • For Windows XP, do the following:
       1. Click **Start**, and right-click **My Computer**.
       2. Select **Properties**.
       3. Click the **Hardware** tab.
       4. Click the **Device Manager** button.
       5. Click the + sign next to *Network adapters*.
       6. Highlight **Linksys Compact USB 2.0 10/100 Network Adapter**, and right-click it.
       7. Select **Properties**.
       8. Click the **Advanced** tab.
       9. Select **Connection Type**. Select the appropriate value for your network device. In most cases, **AutoSense** should be selected.
       10. Select **Flow Control**. Select the appropriate value for your network device. In most cases, **Enable** should be selected.
       11. Select **Remote Wakeup** (Wake-on-LAN). Select the appropriate value for your network device. In most cases, **Link up** or **Magic Packet** should be selected.
       12. Click the **OK** button.

12. If you are having difficulty installing the Adapter, you may need to remove the Adapter and re-install it from scratch.
   • For Windows 98, go to "Appendix C: Starting Over in Windows 98."

   • For Windows Millennium, do the following:
       1. Right-click the **My Computer** icon, and select **Properties**.
       2. Click the **Device Manager** tab.
       3. Click the + sign next to *Network adapters*.
       4. Highlight **Linksys Compact USB 2.0 10/100 Network Adapter**, and right-click it.
       5. Select **Remove**.
       6. When you see the *Confirm Device Removal* screen, click **OK**.
       7. When you are asked if you want to restart your computer, click **Yes**.
       8. Go to "Chapter 6: Windows Millennium Installation and Setup" for installation instructions.

   • For Windows 2000, do the following:
       1. Right-click the **My Computer** icon, and select **Properties**.
       2. Click the **Hardware** tab.
       3. Click the **Device Manager** button.
       4. Click the + sign next to *Network adapters*.

5. Highlight **Linksys Compact USB 2.0 10/100 Network Adapter**, and right-click it.
6. Select **Uninstall**.
7. When you see the *Confirm Device Removal* screen, click **OK**.
8. Go to "Chapter 7: Windows 2000 Installation" for installation instructions.

• For Windows XP, do the following:
1. Click **Start**, and right-click the **My Computer** icon.
2. Select **Properties**.
3. Click the **Hardware** tab.
4. Click the **Device Manager** button.
5. Click the + sign next to *Network adapters*.
6. Highlight **Linksys Compact USB 2.0 10/100 Network Adapter**, and right-click it.
7. Select **Uninstall**.
8. When you see the *Confirm Device Removal* screen, click **OK**.
9. Go to "Chapter 8: Windows XP Installation" for installation instructions.

Appendix B: Client for Microsoft Setup for Windows 98

If you are installing the Compact USB 2.0 10/100 Network Adapter in a Windows 98 PC that is used in an NT domain, follow these directions:

1. Start up Windows. Click **Start**, and select **Settings**. Open the **Control Panel**.

2. Double-click the **Network** icon. When the *Network* screen appears, click the **Configuration** tab.

3. In the *Primary Network Logon* box, choose **Client for Microsoft Networks**, which instructs your PC to log into an NT domain or Windows 2000 server where you already have a username and password set up.

4. Highlight **Client for Microsoft Networks**, and click the **Properties** button.

5. The *Client for Microsoft Network Properties* screen will appear. Make sure that *Log on to Windows NT domain* is checked in the *Logon Validation* box. Enter the name of your domain in the *Windows NT Domain* field.

6. From the *Access Control* tab, you can set the level of access that network users will have to this computer.

7. When you are done, click the **OK** button. When asked if you want to restart your PC, click the **Yes** button.

Appendix C: Starting Over in Windows 98

If you experience installation difficulties, you may need to re-install all of the Windows networking components from scratch. The following instructions explain how to give your PC a blank slate so that you can retry the Adapter's driver installation.

1. Start up Windows. Click **Start**, and select **Settings**. Open the **Control Panel**.

2. Double-click the **Network** icon. When the *Network* screen appears, click the **Configuration** tab.

3. If the *Configuration* box has a component called *Dial-Up Adapter*, go to step 5. If it doesn't, go to step 4.

4. Remove any instance of the name Linksys in the box. This includes *IPX/SPX...Linksys*, *NetBEUI...Linksys*, and *TCP/IP...Linksys*. Also remove *Client for Microsoft Networks*, *Client for NetWare Networks*, and *File and printer sharing for Microsoft Networks*.

   In some cases, removing one of these components may in turn automatically remove other components as well. If this happens, go to step 6.

5. For PCs with dial-up networking and/or an AOL adapter, remove any instance of the name Linksys, all IPX/SPX protocols, all NetBEUI, all clients, and File and printer sharing for Microsoft Networks. Do NOT remove *Dial-Up Adapter*, *AOL Adapter*, *TCP/IP-Compatible Protocol-AOL Adapter*, or *TCP/IP-Compatible Protocol-Dial-Up Adapter*.

6. When you have completed the removal of the aforementioned components, click the **OK** button. When you are asked to restart the computer, click the **No** button.

 Note: Linksys does not provide technical support for network configuration or troubleshooting.

7. Return to the Windows Control Panel. Double-click the **System** icon. The *System Properties* screen will appear. Click the **Device Manager** tab.

8. If Network adapters is listed, then expand it by clicking the + sign. Remove all devices with the name Linksys in its description. (If at any point you are asked to restart the computer, click the **No** button.)

9. If Other Devices is listed, click the + sign beside it. Remove the **Linksys Compact USB 2.0 10/100 Network Adapter**.

10. Click the **OK** button. Shut down Windows, and restart your computer.

6. After your computer has restarted, go to "Chapter 5: Windows 98 Installation and Setup" for installation instructions.

Appendix D: Manually Installing Network Components in Windows 98

There may be times when you will need to manually install missing Windows networking components.

1. Start up Windows. Click **Start**, and select **Settings**. Open the **Control Panel**.

2. Double-click the **Network** icon. When the *Network* screen appears, click the **Configuration** tab.

3. Make sure the following network components are installed:
    • *Client for Microsoft Networks*
    • *Linksys USB 2.0 10/100 Adapter*
    • *TCP/IP*

There may be other components listed in addition to the ones shown above. If any needed components are missing, add them now by following the instructions below.

> **Note:** You may need your Windows CD-ROM to install network components. If your CD-ROM isn't available, try directing Windows to **C:\windows\options\cabs** when asked for a file location.

Client for Microsoft Networks

1. If you plan on connecting to an NT file server or peer-to-peer network, click the **Add** button.

2. Highlight **Client**, and click the **Add** button.

3. Choose **Microsoft** as the manufacturer.

4. Highlight **Client for Microsoft Networks**, and click the **OK** button.

5. If you've added all the components you require, click the **OK** button again.

6. The computer will begin copying files to your system. When the installation is complete, you will be asked if you want to reboot the computer. Click the **Yes** button.

Client for NetWare Networks

1. If you plan on connecting to a Novell NetWare server (3.x), click the **Add** button.

2. Highlight **Client**, and click the **Add** button.

3. Choose **Microsoft** as the manufacturer.

4. Highlight **Client for NetWare Networks**, and click the **OK** button.

5. If you've added all the components you require, click the **OK** button again.

6. The computer will begin copying files to your system. When the installation is complete, you will be asked if you want to reboot the computer. Click the **Yes** button.

IPX/SPX-compatible Protocol

1. If you need to use the IPX/SPX-compatible protocol, click the **Add** button.

2. Highlight **Protocol**, and click the **Add** button.

3. Choose **Microsoft** as the manufacturer.

4. Highlight **IPX/SPX-compatible Protocol**, and click the **OK** button.

5. If you've added all the components you require, click the **OK** button again.

6. The computer will begin copying files to your system. When the installation is complete, you will be asked if you want to reboot the computer. Click the **Yes** button.

> **Note:** Linksys does not provide technical support for network configuration or troubleshooting.

NetBEUI

1. If you need to use the NetBEUI protocol, click the **Add** button.

2. Highlight **Protocol**, and click the **Add** button.

3. Choose **Microsoft** as the manufacturer.

4. Highlight **NetBEUI**, and click the **OK** button.

5. If you've added all the components you require, click the **OK** button again.

6. The computer will begin copying files to your system. When the installation is complete, you will be asked if you want to reboot the computer. Click the **Yes** button.

TCP/IP

1. If you need to use the TCP/IP protocol, click the **Add** button.

2. Highlight **Protocol**, and click the **Add** button.

3. Choose **Microsoft** as the manufacturer.

4. Highlight **TCP/IP**, and click the **OK** button.

5. If you've added all the components you require, click the **OK** button again.

6. The computer will begin copying files to your system. When the installation is complete, you will be asked if you want to reboot the computer. Click the **Yes** button.

Appendix E: Linux, Open Source, and Beta Operating Systems

Linksys does not provide technical support for Linux, BSD, or other freeware and open source operating systems. Although many Linksys products have been proven to perform well under Linux and other freeware operating systems, technical support for setup and troubleshooting is not provided. For information on where to find device drivers and setup instructions for Linux and other freeware operating systems, visit the support pages and FAQ files on the Linksys website, *www.linksys.com*.

Linksys does not provide technical support for Beta operating systems.

Appendix F: Glossary

10BaseT - An Ethernet standard that uses twisted wire pairs.

100BaseTX - IEEE physical layer specification for 100 Mbps over two pairs of Category 5 UTP or STP wire.

Adapter - Printed circuit board that plugs into a PC to add to capabilities or connectivity to a PC. In a networked environment, a network interface card is the typical adapter that allows the PC or server to connect to the intranet and/or Internet.

Boot - To cause the computer to start executing instructions. Personal computers contain built-in instructions in a ROM chip that are automatically executed on startup. These instructions search for the operating system, load it and pass control to it.

Buffer - A buffer is a shared or assigned memory area used by hardware devices or program processes that operate at different speeds or with different sets of priorities. The buffer allows each device or process to operate without being held up by the other. In order for a buffer to be effective, the size of the buffer and the algorithms for moving data into and out of the buffer need to be considered by the buffer designer. Like a cache, a buffer is a "midpoint holding place" but exists not so much to accelerate the speed of an activity as to support the coordination of separate activities.

CAT 5 - ANSI/EIA (American National Standards Institute/Electronic Industries Association) Standard 568 is one of several standards that specify "categories" (the singular is commonly referred to as "CAT") of twisted pair cabling systems (wires, junctions, and connectors) in terms of the data rates that they can sustain. CAT 5 cable has a maximum throughput of 100 Mbps and is usually utilized for 100BaseTX networks.

CSMA/CD (**C**arrier **S**ense **M**ultiple **A**ccess/**C**ollision **D**etection) - The LAN access method used in Ethernet. When a device wants to gain access to the network, it checks to see if the network is quiet (senses the carrier). If it is not, it waits a random amount of time before retrying. If the network is quiet and two devices access the line at exactly the same time, their signals collide. When the collision is detected, they both back off and each wait a random amount of time before retrying.

Domain - A subnetwork comprised of a group of clients and servers under the control of one security database. Dividing LANs into domains improves performance and security.

Ethernet - IEEE standard network protocol that specifies how data is placed on and retrieved from a common transmission medium. Has a transfer rate of 10 Mbps. Forms the underlying transport vehicle used by several upper-level protocols, including TCP/IP and XNS.

Fast Ethernet - A 100 Mbps technology based on the 10Base-T Ethernet CSMA/CD network access method.

Hardware - Hardware is the physical aspect of computers, telecommunications, and other information technology devices. The term arose as a way to distinguish the "box" and the electronic circuitry and components of a computer from the program you put in it to make it do things. The program came to be known as the software.

Hot Swap - The ability to replace a card or other hardware part in a hardware device without turning it off or losing functionality.

Hub - The device that serves as the central location for attaching wires from workstations. Can be passive, where there is no amplification of the signals; or active, where the hubs are used like repeaters to provide an extension of the cable that connects to a workstation.

IEEE - The Institute of Electrical and Electronics Engineers. The IEEE describes itself as "the world's largest technical professional society—promoting the development and application of electrotechnology and allied sciences for the benefit of humanity, the advancement of the profession, and the well-being of our members."

The IEEE fosters the development of standards that often become national and international standards. The organization publishes a number of journals, has many local chapters, and several large societies in special areas, such as the IEEE Computer Society.

IP Address - In the most widely installed level of the Internet Protocol (IP) today, an IP address is a 32-binary digit number that identifies each sender or receiver of information that is sent in packet across the Internet. When you request an HTML page or send e-mail, the Internet Protocol part of TCP/IP includes your IP address in the message (actually, in each of the packets if more

than one is required) and sends it to the IP address that is obtained by looking up the domain name in the Uniform Resource Locator you requested or in the e-mail address you're sending a note to. At the other end, the recipient can see the IP address of the Web page requester or the e-mail sender and can respond by sending another message using the IP address it received.

IPCONFIG - A Windows NT or 2000 utility that provides for querying, defining and managing IP addresses within a network.

LAN - A local area network (LAN) is a group of computers and associated devices that share a common communications line and typically share the resources of a single processor or server within a small geographic area (for example, within an office building).

Mbps (**M**ega**B**its **P**er **S**econd) - One million bits per second; unit of measurement for data transmission.

Motherboard - A motherboard is the physical arrangement in a computer that contains the computer's basic circuitry and components.

NetBEUI (**NetB**IOS **E**xtended **U**ser **I**nterface) - The transport layer for NetBIOS. NetBIOS and NetBEUI were originally part of a single protocol suite that was later separated. NetBIOS sessions can be transported over NetBEUI, TCP/IP and SPX/IPX protocols.

NetBIOS - The native networking protocol in DOS and Windows networks. Although originally combined with its transport layer protocol (NetBEUI), NetBIOS today provides a programming interface for applications at the session layer (layer 5). NetBIOS can ride over NetBEUI, its native transport, which is not routable, or over TCP/IP and IPX/SPX, which are routable protocols.

NetBIOS computers are identified by a unique 15-character name, and Windows machines (NetBIOS machines) periodically broadcast their names over the network so that Network Neighborhood can catalog them. For TCP/IP networks, NetBIOS names are turned into IP addresses via manual configuration in an LMHOSTS file or a WINS server.

There are two NetBIOS modes. The Datagram mode is the fastest mode, but does not guarantee delivery. It uses a self-contained packet with send and receive name, usually limited to 512 bytes. If the recipient device is not listening for messages, the datagram is lost. The Session mode establishes a connection until broken. It guarantees delivery of messages up to 64KB long.

Network - A system that transmits any combination of voice, video and/or data between users.

Notebook (PC) - A notebook computer is a battery-powered personal computer generally smaller than a briefcase that can easily be transported and conveniently used in temporary spaces such as on airplanes, in libraries, temporary offices, and at meetings. A notebook computer, sometimes called a laptop computer, typically weighs less than five pounds and is three inches or less in thickness.

Packet - A unit of data routed between an origin and a destination in a network.

Plug-and-Play - The ability of a computer system to configure expansion boards and other devices automatically without requiring the user to turn off the system during installation.

Port - A pathway into and out of the computer or a network device such as a switch or router. For example, the serial and parallel ports on a personal computer are external sockets for plugging in communications lines, modems and printers.

RJ-45 (**R**egistered **J**ack-**45**) - A connector similar to a telephone connector that holds up to eight wires, used for connecting Ethernet devices.

Router - Protocol-dependent device that connects subnetworks together. Routers are useful in breaking down a very large network into smaller subnetworks; they introduce longer delays and typically have much lower throughput rates than bridges.

Server - Any computer whose function in a network is to provide user access to files, printing, communications, and other services.

Software - Instructions for the computer. A series of instructions that performs a particular task is called a "program." The two major categories of software are "system software" and "application software." System software is made up of control programs such as the operating system and database management system (DBMS). Application software is any program that processes data for the user.

A common misconception is that software is data. It is not. Software tells the hardware how to process the data.

STP (**S**hielded **T**wisted **P**air) - Telephone wire that is wrapped in a metal sheath to eliminate external interference.

Switch - 1. A data switch connects computing devices to host computers, allowing a large number of devices to share a limited number of ports. 2. A device for making, breaking, or changing the connections in an electrical circuit.

TCP (**T**ransmission **C**ontrol **P**rotocol) - A method (protocol) used along with the IP (Internet Protocol) to send data in the form of message units (datagram) between network devices over a LAN or WAN. While IP takes care of handling the actual delivery of the data (routing), TCP takes care of keeping track of the individual units of data (called packets) that a message is divided into for efficient delivery over the network. TCP is known as a "connection oriented" protocol due to requiring the receiver of a packet to return an acknowledgment of receipt to the sender of the packet resulting in transmission control.

TCP/IP (**T**ransmission **C**ontrol **P**rotocol/**I**nternet **P**rotocol) - The basic communication language or set of protocols for communications over a network (developed specifically for the Internet). TCP/IP defines a suite or group of protocols and not only TCP and IP.

Throughput - The amount of data moved successfully from one place to another in a given time period.

Topology - A network's topology is a logical characterization of how the devices on the network are connected and the distances between them. The most common network devices include hubs, switches, routers, and gateways. Most large networks contain several levels of interconnection, the most important of which include edge connections, backbone connections, and wide-area connections.

USB (**U**niversal **S**erial **B**us) - A "plug-and-play" interface between a computer and peripherals, such as digital cameras, scanners, game controllers, speakers, keyboards, portable data storage, or printers. With USB, you can add a new peripheral to your computer without having to add an adapter card or powering down the computer. USB also supports hot-swapping, the addition or removal of devices while the computer is running.

USB 1.1-compliant devices support data rates of 1.5Mbps (low-speed) and up to 12Mbps (full-speed). USB 2.0-compliant devices are backward compatible with earlier USB devices, and they support data rates of 1.5Mbps (low-speed), 12Mbps (full-speed), and up to 480Mbps (high-speed).

UTP - Unshielded twisted pair is the most common kind of copper telephone wiring. Twisted pair is the ordinary copper wire that connects home and many business computers to the telephone company. To reduce crosstalk or electromagnetic induction between pairs of wires, two insulated copper wires are twisted around each other. Each signal on twisted pair requires both wires. Since some telephone sets or desktop locations require multiple connections, twisted pair is sometimes installed in two or more pairs, all within a single cable.

Workgroup - Two or more individuals that share files and databases.

Appendix G: Specifications

Standards	USB 1.0 1.1, and 2.0; IEEE 802.3, IEEE 802.u
Ports	One USB Type A, Male Connector One RJ-45 Port
Speeds (Mbps)	
USB	1.5 (Low Speed), 12 (Full Speed), up to 480 (High Speed)
Ethernet	10 or 100 (Half Duplex) 20 or 200 (Full Duplex)
Cabling	Category 5 Ethernet Network Cable USB Cable
LEDs	100/ACT, F/H, 10/ACT

Environmental

Dimensions	0.98" x 0.49" x 3.46" (25 mm x 12.4 mm x 87.8 mm)
Unit Weight	2.4 oz. (0.068 kg)
Power	3.3 V low power consumption
Certifications	FCC Class B, CE Mark, VCCI
Operating Temp.	32ºF to 158ºF (0ºC to 70ºC)
Storage Temp.	32ºF to 158ºF (0ºC to 70ºC)
Operating Humidity	10% to 90%, Non-Condensing
Storage Humidity	10% to 90%, Non-Condensing

Appendix H: Warranty Information

Appendix I: Contact Information

For help with the installation or operation of this product, contact Linksys Technical Support at one of the phone numbers or Internet addresses below.

Sales Information	800-546-5797 (LINKSYS)
Technical Support	800-326-7114
RMA Issues	949-271-5461
RMA Fax	949-265-6655
E-mail	support@linksys.com
Web	http://www.linksys.com
FTP Site	ftp.linksys.com

www.linksys.com