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**FCC Statement**

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 measure:

- ✓ Reorient or relocated the receiving antenna.
- ✓ Increase the separation between the equipment and 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.
- ✓ Shielded cables must be used to comply with FCC regulations.

**WARNING(Part15,Section 15.21)**

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

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## Before you Start!

The DW-8000P Installation Guide tells you everything you need to know to install and use the DW-8000P card. This guide is designed to walk you through the installation of the DW-8000P card and drivers, and then through the establishment of an Internet service connection.

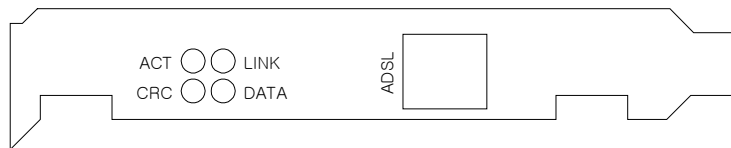
This is a (3) step process.

### Step 1 – Gather system and service connection information

### Step 2 – Install the ADSL modem card

### Step 3 – Install the drivers and establish an Internet service connection

- **If you're a beginner to the Internet** – or if you're experienced but have never installed an ADSL PCI card before – Start at the beginning and work your way carefully through the instructions. It is important to gather all the information required before you actually install the PCI card and ADSL drivers.
- **If you're familiar with installing PCI cards and drivers** - you may be able to browse the chapters to get the basics - However, it is still important to gather all the information required before you actually install the PCI card and ADSL drivers.
- Your ADSL board only has one RJ-11 connector for ADSL connection. POTS splitters or microfilters can be plugged outside from the board using multiple port phone jacks.



## Step 1 – Gather system and service connection information

### System Requirements

Make sure your PC system meets **ALL** of the following minimum hardware and software requirements:

#### Hardware:

- IBM PC/AT or compatible
- Pentium 66Mhz or faster
- 2Mbytes available hard disk space or more
- 2x CD-ROM drive or better
- 32Mbyte available system memory or more

#### Software: Your Operating System must be one of the following:

- Microsoft Windows 95 – Win 95A, Win 95B
- Microsoft Windows 98 – Win 98, Win 98A
- Microsoft Windows Millennium Edition – Win ME
- Microsoft Windows NT 4.0 with Service Pack 5 or latest – Win NT
- Microsoft Windows 2000 – Win 2k

### Determining Your Operating System

You will need to know the exact version of Microsoft Windows installed in your computer. If you do not know or are unsure, please proceed as follows to determine your version of the Microsoft Operating System. On the desktop, right click **My Computer**. Then select **Properties**. The version number of the Microsoft Windows Operating System installed in your computer will be displayed on the **General** tab. Refer to the following table for more detailed information.

<u>Version</u>	<u>System Description</u>	<u>Release Name</u>
Win 95A	4.00.950A	Windows 95 OSR1
Win 95B	4.00.950B	Windows 95 OSR2
Win 98	4.10.1998	Windows 98
Win 98A	4.10.2222A	Windows 98 2 <sup>nd</sup> Edition
Win 2k	5.00.2195	Windows 2000
Win NT	4.00.1381	Windows NT 4.0
Win ME	4.90.3000	Windows Millennium Edition

## Determining Your Connection Address and Configuration

You will need to know the connection address and configuration for your Internet service. Find your Internet Service Protocol below and proceed gathering the connection address and configuration. If you are unsure or do not have all the information, please contact your Internet Service Provider (ISP).

- **RFC1483 - Bridged Ethernet over ATM** service requires the following information:

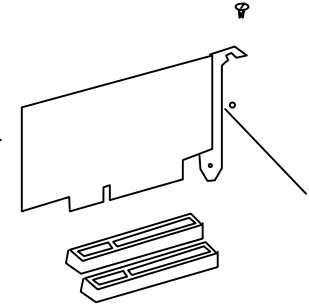
IP Address \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_  
Subnet Mask \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_  
Gateway \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_  
(Domain Name Service) DNS Host \_\_\_\_\_  
DNS Domain \_\_\_\_\_  
DNS Server \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_  
VPI value VPI = \_\_\_\_ (Default VPI=0)  
VCI value VCI = \_\_\_\_ (Default VCI=32)  
ADSL Mode Type  ANSI T1.413 Issue 2  
 ITU G.992.1 Annex A (G.dmt)  
 ITU G.992.2 Annex A (G.lite)

## Step 2 – Install the ADSL modem card

### Hardware Installation

**WARNING!** To avoid possible damage to your **DW-8000P** card you need to use an anti-static grounding device or hold onto the metal chassis of the PC to provide anti-static grounding.

1. Shut down the system and switch the power **off**.
2. Unplug the AC power cable from the PC.
3. Remove the cover from the PC chassis.
4. Unscrew the “slot cover bracket” from an unused PCI slot.
5. Insert the card into an empty PCI slot.
6. Firmly press the DW-8000P card into the slot and secure the card to the chassis with the chassis bracket screw.
7. Connect one end of a phone cable to the RJ-11 port on the DW-8000P card and plug the other end of the cable into the ADSL data service.
8. Replace the cover of the PC chassis



## Step3 – Install the drivers

### Driver Installation and Internet Service Connection

#### Installing from floppy disk

The supplied CD-ROM contains both NDIS (RFC1483) and NDISWAN (PPPoATM) software drivers. It is recommended to copy desired drivers from the CD-ROM to the root directory of a blank formatted floppy disk for software driver installation. NDIS comes in three parts, two device drivers (ADI PCI NIC and CommAgent) and a Connection Manager (CM). NDISWAN comes with PPP driver.

#### Installing latest service pack

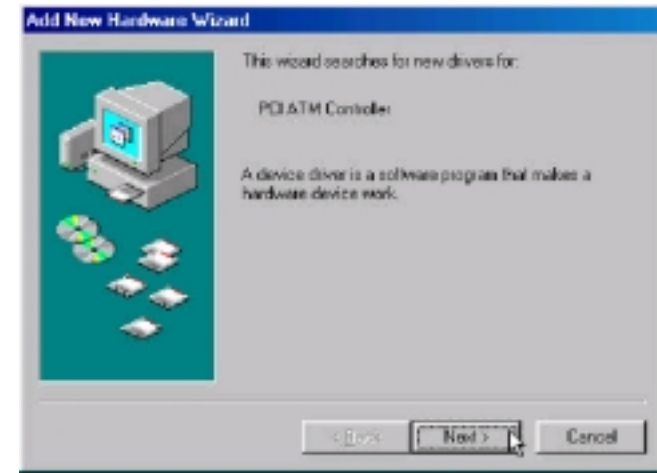
It is important to remember to install/reinstall latest service pack for Windows whenever you are adding components to your system since older system files may be copied back to Windows during installation. And after that you should reboot machine again.

**NOTE:** You may need the Microsoft Windows Operating System installation files (CAB files) to complete the installation. The CAB files are contained in the Microsoft's system CD. Some systems may have already installed the CAB files to the hard drive, but you should have the Microsoft CD handy just in case.

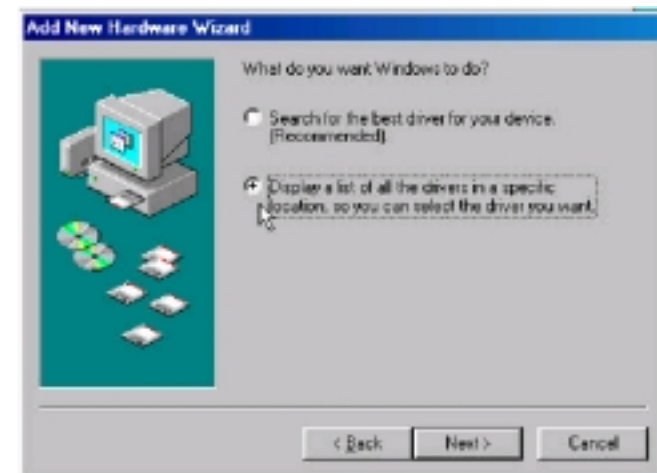
### NDIS Driver Install for Windows 95/98

To install ADI PCI NIC device drivers for Windows 95/98:

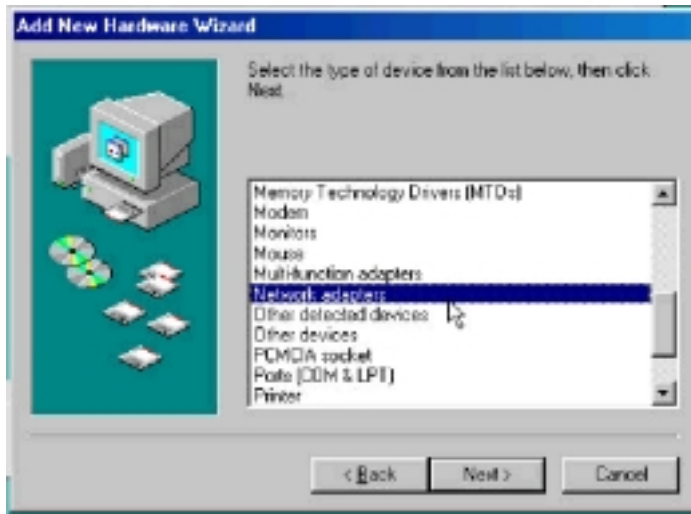
1. Start Windows 95/98 on your computer with the DW-8000P board installed.
2. Windows 95/98 will open a window called "Add New Hardware Wizard" to indicate that it found a "PCI ATM Controller" board.



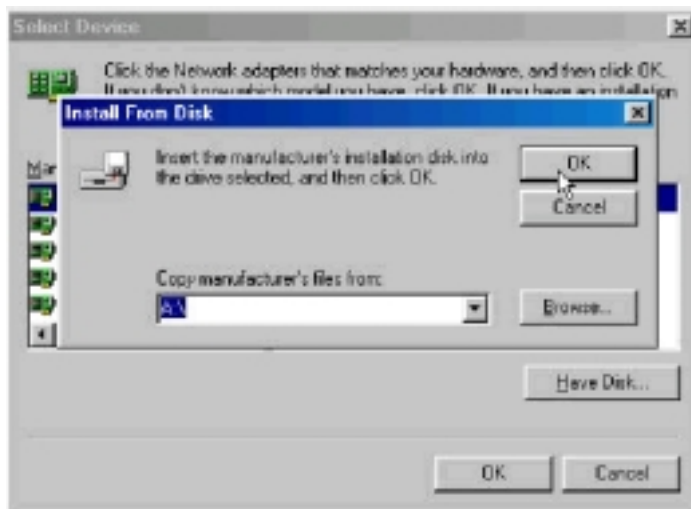
3. Click "Next" then select the bullet next to "Display a list of all the drivers in a specific location, so you can select the driver you want."



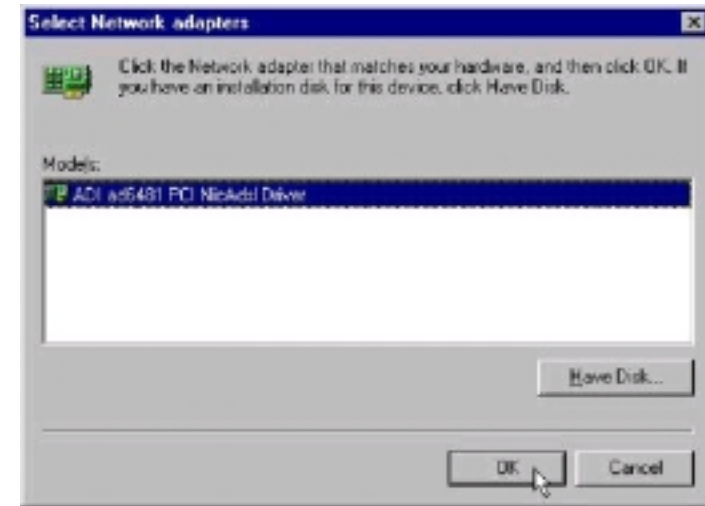
- Click "Next" and select the device type as "Network adapters".



- Click "Next" then select "Have Disk", Win95/98 will display the "Install From Disk" window. At this time insert the floppy disk or CD-ROM, which contain the drivers and "Browse" to the desired directory, then click "OK".



- New window will display the "ADI AD6481 PCI NIC ADSL NDIS Driver".



- You should see a "Copying Files" window.
- Win95/98 has finished copying the driver.
- You can set the IP configuration.
- System reboot is required to have the board and the driver fully operational.
- It is important to remember to install/reinstall latest service pack for Windows whenever you are adding components to your system since older system files may be copied back to Windows during installation. And after that you should reboot machine again.

## NDIS Driver Install for Windows 2000

To install ADI PCI NIC device drivers for Windows 95/98:

1. Start Windows 2000 on your computer with the NIC board installed.
2. Windows 2000 will open a window called "Add New Hardware Wizard" to indicate that it found a "PCI ATM Controller" board.
3. Click "Next" then select the bullet next to "Display a list of all the drivers...."
4. Click Next and select the device type as "Network adapters".
5. Click "Next" then select "Have Disk", Windows 2000 will display the "Install From Disk" window. At this time insert the floppy disk or CD-ROM, which contain the drivers and "Browse" to the desired directory, then click "OK".
6. New window will display the ADI AD6481 PCI NIC ADSL driver.
7. You should see a "Copying Files" window.
8. Windows has finished copying the files
9. You can set the IP configuration.
10. System reboot is required to have the board and the driver fully operational.

## NDIS Driver Install for Windows NT4

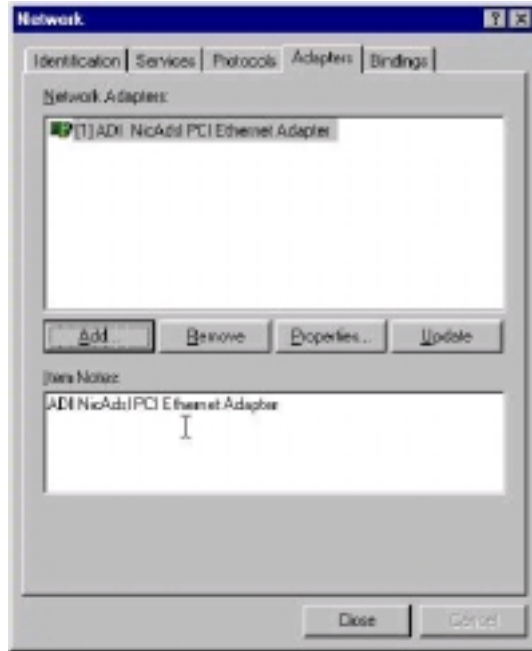
1. Copy desired driver from CD-ROM to floppy disk.
2. To install the drivers, follow the instructions below.

To install the drivers for Windows NT4:

1. Open the Control Panel via "Start->Settings->Control Panel"
2. Open the Network by double clicking on "Network" icon (shown below).



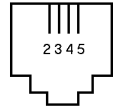
3. Display the Adapters menu by selecting "Adapters".
4. Select "Add..." to begin installing the ADI PCI NIC PC driver.
5. Select "Have Disk..." and type the driver you inserted the CD (for example d:) followed by the desired subdirectory name and press ENTER. For floppy installation, simply press ENTER.
6. Select adapter "ADI NicAdsl PCI Ethernet Adapter" and press "OK"
7. Select protocol "RFC 1483 Bridged" and press "OK"
8. You should see "ADI NicAdsl PCI Ethernet Driver" in the Adapters menu. (See below. What you see will differ depending on the equipment you have already installed in your PC.)



9. You can set the IP configuration.
10. The driver installation is now almost completed. Click on "Close" for exit. You should see various window messages.
11. It is important to remember to install/reinstall latest service pack for Windows whenever you are adding components to your system since older system files may be copied back to Windows during installation. And after that you should reboot machine again.

## Appendix A - Connector Pinout

The **DW-8000P** card is equipped with a RJ-11 jack for connection to the ADSL data port – identified by the ADSL installation. The center two pins, pins 3 and 4, are used for ADSL data. For the **DW-8000P** card to make a proper ADSL connection, the installed ADSL data port should also use pins 3 and 4 for data. If the ADSL data port installation uses pins 2 and 5 for data, then a wiring converter will be required. Do not alter or remove the wiring converter if present.



**NOTE:** Consult with your ADSL provider before attempting any wiring changes.

## Appendix B - Trouble Shooting

Please use the following checklist to help debugging problems with your ADI PCI NIC product.

### Determine if ADI PCI NIC driver is installed correctly.

Open the Network panel in the Control Panel. The 'ADI PCI NIC PCI Adapter' entry under the Adapter tab should exist. This shows that ADI PCI NIC driver is correctly installed.

### Determine if modem is trained.

On your ADI PCI NIC board, when LED "LINK" is blinking, it indicates that the modem is correctly linked to the central office modem. If the modem is not trained, please retrain the modem by rebooting the machine.

### Determine if CRCs are occurring.

On your ADI PCI NIC board, when LED "CRC" is blinking, it indicates that CRCs are occurring over the ADSL link. CRCs can cause a reduction in data flow. To remove CRCs, please retrain the modem and check improvement.

### Determine if data flow is occurring.

To determine if data flow is occurring, please execute the program Netstat.exe (e.g. 'netstat -e' to view Ethernet statistics). If data flow is occurring, the values given by Netstat should be increasing every time it is executed.

### Determine if you MAC address is valid.

To determine your MAC address, please execute the program ipconfig.exe (e.g. 'ipconfig /all'). The MAC address is located on the line 'Physical Address'. For example:

Physical Address .....: 00-60-F9-01-02-03

Please report your MAC address to your network administrator or service provider to determine if it is valid or not. No duplicated address is allowed for all systems in the same network.

### Determine if your IP address is valid.

To determine your IP address, please execute the program ipconfig.exe (e.g. 'ipconfig /all'). The IP address is located on the line 'IP address'. For example:

IP Address .....: 196.168.0.2

Please report your IP address to your network administrator or service provider to determine if it is valid or not.

## Appendix C - Removing DW-8000P Drivers

### Windows 95/98

1. To Delete **DW-8000P** drivers; on the desktop, right-click on **My Computer**, then select **Properties**, then click on the **Device Manager** tab, then double click **Network adapters**.
2. Select the **ADI AD6481 PCI NIC ADSL Driver**, then click on the **Remove** button.
3. A warning message "You are about to remove this device from your system" will appear. Click **OK** to remove drivers or click **Cancel** to abort the driver removal.
4. The PC system must be restarted for the changes to take effect. Click **Yes**.

### Windows 2000

1. On the desktop; **right-click** on the Network neighborhood icon, then select **Properties**. Right-click on the **Local Area Connection** icon, then select **Properties**.
2. Click the **Configure** in the **Local Area Connection Properties**.
3. Select Drivers tab in the **ADI AD6481 PCI NIC ADSL Driver Properties**, then click **Remove**.
4. Click **Yes**.

### Windows NT4.0

**NOTE:** For driver removal, you need to logon as **Administrator**.

1. On the desktop; double click **My Computer**, double click **Control Panel**, double click the **Network** icon and select the **Adapters** tab.
2. Select the **ADI NIC ADSL PCI Ethernet Adapter**, then click **Remove**.
3. A warning message will inform you that a component is about to be removed. Click **Yes**.
4. Once the **ADI NIC ADSL PCI Ethernet Adapter** is removed from the adapter list, click **Close**.
5. The PC system must be restarted for the changes to take effect. Click **Yes**.