

USER MANUAL

DGE-550SX

VERSION 2.1

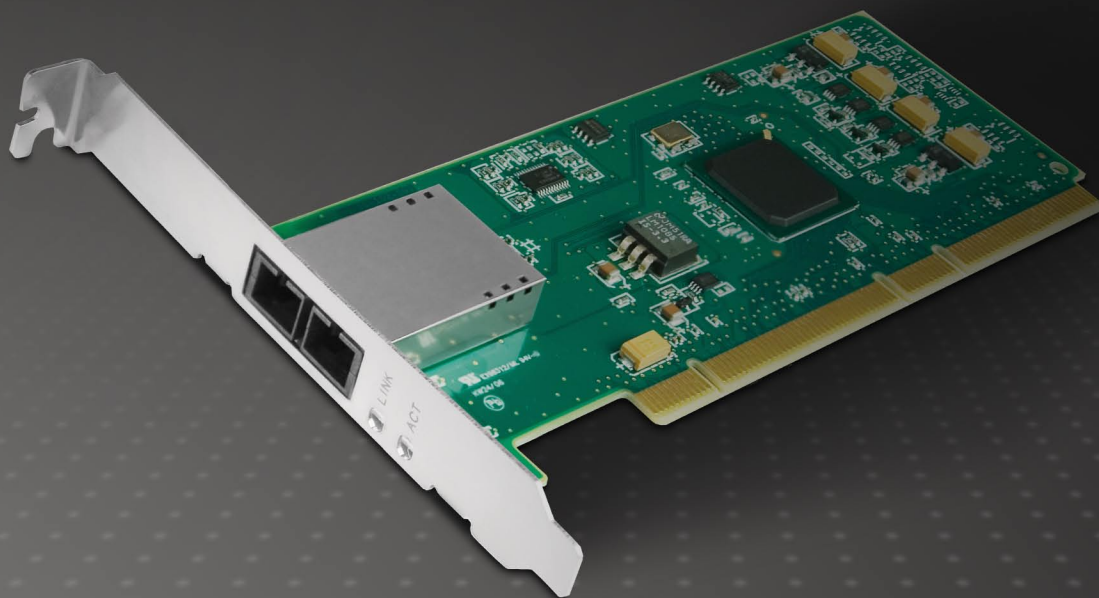
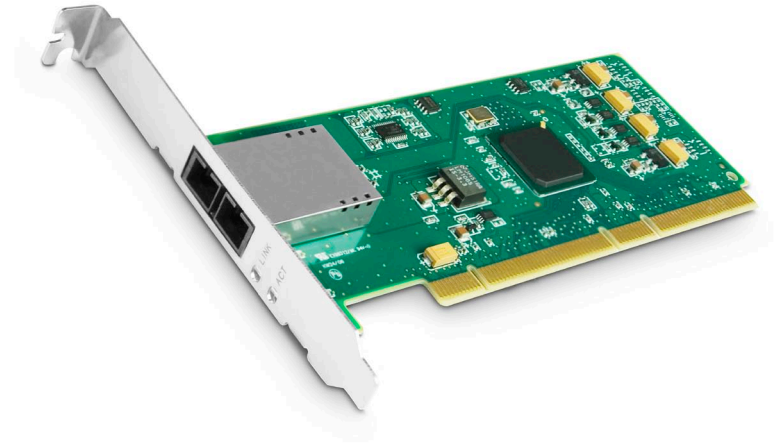


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Package Contents

- D-Link DGE-550SX PCI-X 1000Base-SX Network Adapter
- Drivers, Manual, and Warranty on CD



System Requirements

Before installing the DGE-550SX, check your system for the following minimum configuration requirements.

- Windows® XP SP2, 2000 SP4, Vista™, or 2003*
- CD-ROM Drive
- 20MB of Hard Disk Space
- 32-bit PCI Slot

Introduction

The D-Link DGE-550SX is a high-bandwidth network adapter, providing up to 2000Mbps full-duplex bandwidth capacity to support high-end servers. This adapter delivers added performance to the network while working with the existing LAN infrastructure. In addition, with advanced functions like VLAN filtering and hardware-based Chip-Level IP (CLIP) packet processing, the adapter provides added performance, flexible configuration and secure networking to users in a standards-based environment. Inside its compact form, the DGE-550SX network adapter holds a Gigabit Ethernet controller and a standard-based PCI/PCI-X interface with a fiber SC duplex connector. Its front panel includes LEDs to indicate linkage and activity states.

The DGE-550SX network adapter can be installed in (short) 32-bit or long (64-bit) PCI/PCI-X slots at 33MHz, 100MHz, or 133MHz. Best performance, however, is reached with a 64-bit/133MHz bus.

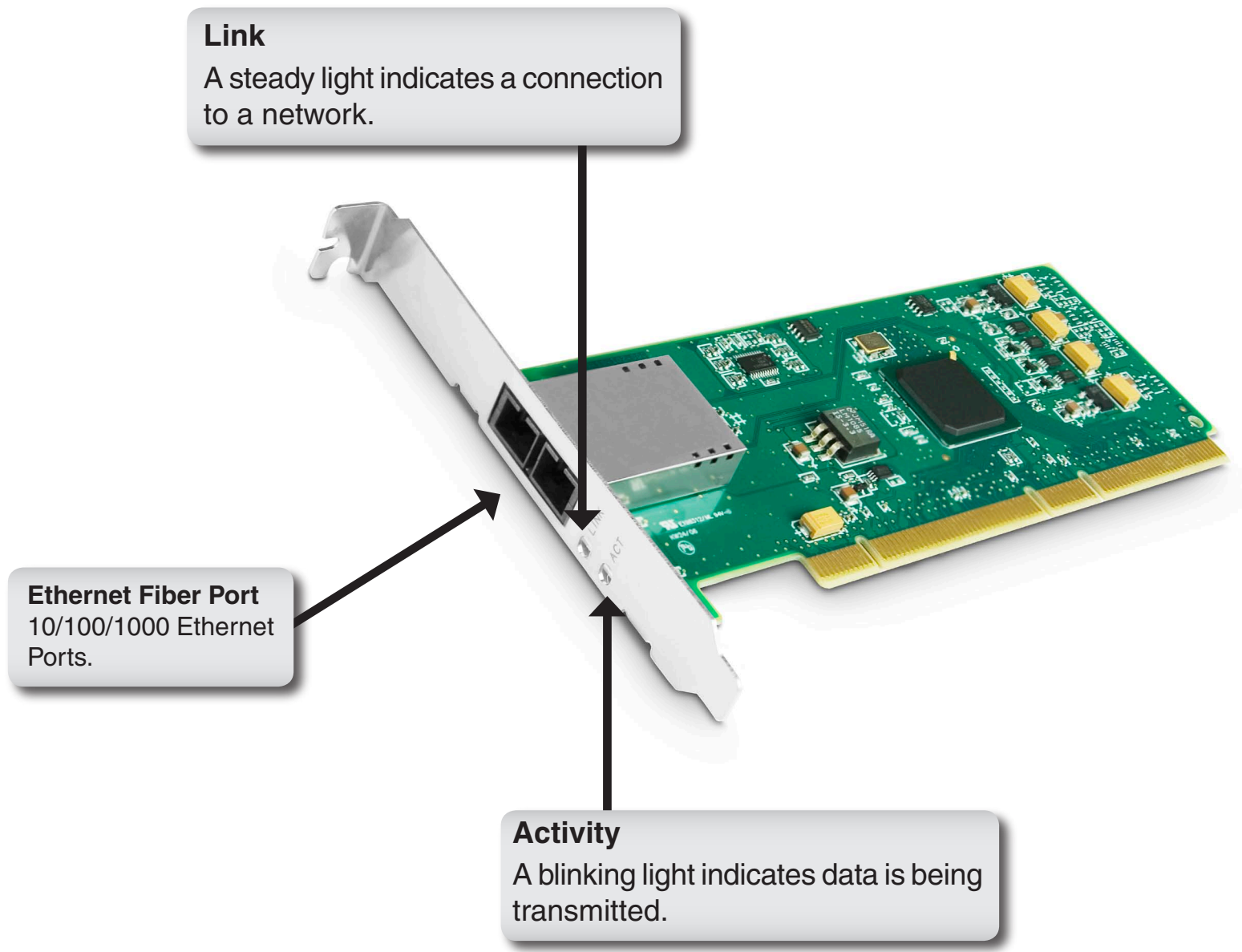
No pre-installation is required to setup the DGE-550SX network adapter, simply insert it into the PCI/PCI-X slot.

Features

Features of the D-Link DGE-550SX PCI-X 1000Base-SX Network Adapter:

- IEEE 802.3z 1000Base-SX Gigabit Ethernet standard
- IEEE 802.3ad Link Aggregation Control Protocol standard
- IEEE 802.3x Flow-Control and Auto-Negotiation standard
- IEEE 802.1p Quality of Service standard
- IEEE 802.1q/802.3ac VLAN/VLAN Tagging Standard
- PCI Specification 2.3 and PCI-X Specification 1.0
- Offloads host operating system's overhead by providing features such as onboard verification of the IP header and TCP/UDP checksum
- Parity Monitoring on all data paths
- TCP Segmentation
- Jumbo Frames (up to 9K frame size)
- Dynamic Interrupt Moderation
- Promiscuous Mode
- Multicast Support
- Advanced Power Management
- Supported driver list:
 - Microsoft Windows® 2000
 - Microsoft Windows XP
 - Microsoft Windows Vista™
 - Microsoft Windows Vista x64
 - Microsoft Windows Server 2003
 - Novell Netware 5.10
 - Novell Netware 6.x
 - Linux kernel 2.4.13 and higher stable versions
 - FreeBSD 5.x (x86)

Hardware Overview



Installation

Unpack and Inspect

CAUTION: Under ordinary circumstances, a DGE-550SX card will not be affected by a static charge that may be received through your body during handling of the unit. In special circumstances, the user may carry an extraordinarily high static charge and it is good practice to reduce the charge by touching a ground before handling the adapter card.

Open the shipping carton and carefully remove all items. Ensure that the following items are included:

- One DGE-550SX PCI-X 1000Base-SX Network Adapter
- DGE-550SX Drivers and Manual on CD-ROM
- DGE-550SX Quick Install Guide

If any of these items are missing or damaged, please contact your local reseller for replacement.

Driver Installation

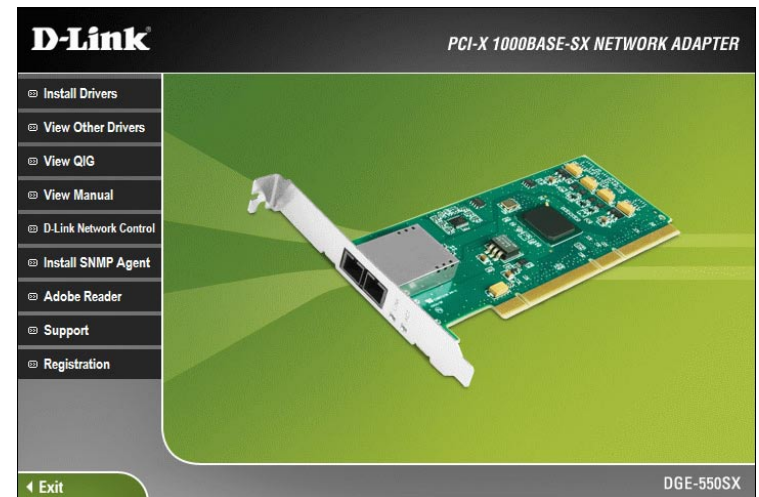
Turn on your computer and insert the D-Link DGE-550SX Autorun CD in the CD-ROM drive.

Note: Do not install the adapter until you install the drivers.

If the Autorun CD function does not automatically start on your computer, go to **Start > Run**. In the run command box type "**D:\Autorun.exe**" (where **D:** represents the drive letter of your CD-ROM drive).

When the autorun screen appears, click **Install Drivers**.

Drivers for non-Windows® operating systems are located on the D-Link CD, and can be accessed via the **View Other Drivers** button.



Connecting the Network Cable

1000Base-SX Gigabit Ethernet enables operation over 50.0µm or 62.5µm multimode fiber-optic cabling systems. With 62.5µm multimode fiber-optic cabling link lengths are limited to 275 m (max distance), 50.0µm multimode fiber-optic cabling allows for link lengths of 550 m (max distance).

Hardware Installation

- (1) Shut down the computer and unplug the power cord.
- (2) Remove the chassis cover. If you are installing a network adapter in a tower computer, we recommend to put the computer on its side in order to be able to apply the correct force to insert the adapter into the PCI/PCI-X slot.
- (3) Locate an empty PCI or PCI-X slot on the motherboard.

Note: *This adapter can be installed in (short) 32-bit or (long) 64-bit PCI/PCI-X slots at 33 MHz, 66 MHz, 100 MHz, or 133 MHz. Best performance, however, is reached with a 64-bit/133 MHz bus.*

- (4) Insert the network adapter into the PCI/PCI-X slot and push it down vertically into the slot until it is firmly seated.
- (5) Install the bracket screw to secure the network adapter to the computer chassis.
- (6) Replace the computer chassis cover.
- (7) Reconnect the power and switch the computer power on. If the BIOS section of your computer's boot program is plug-and-play compliant, then at power-up the BIOS will automatically configure any newly installed DGE-550SX Network Adapter.

Alternate Driver Installation

Note: *If you've installed the adapter before installing the driver, please continue with the following procedures.*

Windows® 2000

D-Link offers an NDIS 5.0 32-bit Miniport driver for the DGE-550SX network adapter supporting Windows 2000. To install the driver, proceed as follows:

1. After you have installed the network adapter in your computer, boot Windows 2000. Windows 2000 detects the DGE-550SX network adapter as “Ethernet Controller” during the boot operation. The window “Found New Hardware Wizard” is displayed.
2. Click **NEXT**. In the same window the menu “Install Hardware Device Drivers” is displayed.
3. Select the check box **Search for a suitable driver for my device (recommended)**.
4. Click **NEXT**. The menu “Locate Driver Files” is displayed.
5. Select the source from which the driver is to be installed.
6. Type the path to the driver.
7. Click **OK**.
8. Click **NEXT**. The menu “Driver Files Search Results” is displayed, listing the found driver and its location.
9. To install the driver, click **NEXT**. In case the driver does not have a Microsoft Digital Signature yet, the window “Digital Signature Not Found” is displayed.
10. To continue the installation, click **YES**. The window “Completing the Found New Hardware Wizard” is displayed.
11. Click **FINISH** to complete the installation.

Windows® XP and Windows Server 2003, 32-bit Systems

D-Link offers an NDIS 5.1 32-bit Miniport driver for the DGE-550SX network adapter supporting Windows XP and Windows Server 2003. The installation procedure for Windows XP and Windows Server 2003 is identical. It is described for Windows Server 2003.

To install the driver, proceed as follows:

1. After you have installed the network adapter in your computer, boot Windows Server 2003. The window “Welcome to Found New Hardware Wizard” is displayed. On the screen the menu “Can Windows connect to Windows Update to search for software” is displayed.

If you are installing the driver using Windows XP Service Pack 1 or earlier, continue with step 3.

2. Select **NO, NOT THIS TIME**.
3. Select the check box **Install from a list or specific location (Advanced)**.
4. Click **NEXT**. The menu “Please choose your search and installation options” is displayed.
5. Select the check box **Search for the best driver in these locations**.
6. Select the check box **Include this location in the search**.
7. Type the path to the driver.
8. Click **OK**.
9. Click **NEXT**.

In case the network adapter has not passed Windows Logo testing to verify its compatibility with Windows Server 2003, the window “Hardware Installation” is displayed.

10. To continue the installation, click **Continue Anyway**. In the window “Found New Hardware Wizard”, the menu “Completing the Found New Hardware Wizard” is displayed.
11. Click **FINISH** to complete the installation.

Windows® XP and Windows Server 2003, 64-bit Systems

D-Link offers an NDIS 5.1 64-bit Miniport driver for the DGE-550SX network adapter supporting Windows XP and Windows Server 2003 on x64 systems.

The installation procedure for 64-bit systems resembles that for the 32-bit systems described in section “Windows XP and Windows Server 2003, 32-bit Systems” above. Only the start sequence differs as follows (here described for Windows Server 2003):

1. After you have installed the network adapter in your computer, boot Windows Server 2003.
The window “Welcome to Found New Hardware Wizard” is displayed. On the screen the menu “Can Windows connect to Windows Update to search for software” is displayed.
2. Select **NO, NOT THIS TIME**.
3. Click **NEXT**.
The menu “What do you want the wizard to do?” is displayed.
4. Select the check box **Specify the location of the driver (Advanced)**.
5. Proceed with step 4 of the installation procedure described in section “Windows XP and Windows Server 2003, 32-bit Systems” above.

Windows® Vista™ 32/64-bit Systems

To install the driver, proceed as follows:

1. After you have installed the network adapter in your computer, boot Windows Vista. The Window “Found New Hardware” is displayed. On the screen the menu “Locate and install driver software (recommended)”, “Ask me again later”, and “Don’t show this message again for this device” three options are displayed.
2. Select **Ask me again later**.
3. Click on **Start > Control Panel > System and Maintenance > Device Manager**. The Window “Windows needs your permission to continue” is displayed. To continue the installation, Click **Continue anyway**.
4. Expand **Other devices** plus (+) sign.
5. Click on **Ethernet Controller** and right click mouse button to then choose **Properties**.
6. Click **Driver** in the tab menu.
7. Click **Update Driver...**
The window “How do you want to search for driver software” is displayed. On the screen the menu “Search automatically for updated driver software” and “Browse my computer for driver software” two options are displayed. For locating drivers, click **Browse my computer for driver software**.
8. The window “Browse for driver software on your computer” is displayed.
9. Browse the path to the driver.
10. Click Next.
11. The window “Windows has successfully updated your driver software” is displayed.
12. Click **Close** to complete the installation.

Linux

The Linux driver for the DGE-550SX network adapter supports the Linux kernel 2.4.13 and higher stable versions. The installation procedure described in this manual is a general description for Intel/x86 computers, which is valid for all distributions.

The installation package offers the following two installation procedures:

- Installation Mode
- Patch Generation Mode

The INSTALLATION MODE is recommended for normal users. Using this mode, the driver is installed automatically without any user interaction. In case of installation problems, the driver installation script autonomously tries to solve the problems. The driver is compiled automatically and the resulting driver module object file is installed in a suitable location (usually somewhere below the directory `/lib/modules/...`). No source files of the driver are installed into the kernel directory. Only the driver module object file and the manual page (man page) of the driver are installed on your system permanently.

Using the PATCH GENERATION MODE, a driver patch is created, which can be integrated into the Linux kernel instead of compiling and installing the driver on your system. This mode is recommended for advanced users only. For more information, refer to the corresponding readme file. In the following, the INSTALLATION MODE is described.

Prerequisites

The following prerequisites have to be met in order to install the Linux driver:

- Any device using the Linux kernel module needs to be stopped.
- Your system has to be equipped with a network adapter. Without a network adapter the full driver functionality cannot be checked.
- The Linux kernel source must be stored in the directory `/usr/src/linux`. The kernel source and the kernel version have to be consistent.
- A compilation tool, e.g. “gcc”, has to be installed on your Linux system.

Prepare the installation package

1. Login as “root”.
2. Unpack the installation package with one of the following commands:

```
tar xfvj install-???.tar.bz2
```

or

```
bunzip2 -c install-???.tar.bz2 | tar xfv -
```

The installation script can now be started.

Install the driver

To start the installation script, proceed as follows:

1. Execute the following command to start the script:

```
cd DriverInstall
```

```
./install.sh
```

2. Select the option INSTALLATION MODE.

The driver is now compiled and loaded. This process can take a few minutes. For more information on the Installation Mode or any information on the Patch Generation Mode, refer to the corresponding readme file or to the kernel documentation (which usually can be found in the directory `/usr/src/linux/ Documentation/` on your system).

Novell Netware

The driver is a 32-bit ODI HSM Novell NetWare server driver for the DGE-550SX network adapter. It supports both Netware 5.10 and Netware 6.x. In addition to the 32-bit server driver, a Novell ODI 16-bit DOS client MLID driver is available for the latest Novell NetWare VLM Client.

Note: To perform the installation, you must have access to the server console.

Note: The setting for Minimum Packet Receive Buffers in the *startup.ncf* must be increased to at least 120 per network adapter (e.g. for three network adapters you should add *Set Minimum Packet Receive Buffers = 360 to startup.ncf*). On SMP Systems (Symmetric Multi Processing Systems), you may have to multiply this number with the number of active processors.

Novell Netware 5.10

To install the network driver on Novell NetWare 5.10, proceed as follows:

1. After you have installed the network adapter in your computer, boot your NetWare system. NetWare detects the new network adapter and tries to install a driver.
2. To get a list of available drivers, press <Enter>.
3. The menu “Select a driver” is displayed.
4. To install an unlisted driver, press <Insert> (the D-Link driver is not listed).
5. To specify the path to the driver, press <F3>. The window “Specify a directory path” is displayed.
6. Type the path to the driver.
If you are installing from CD-ROM, the menu “Select an action” is displayed. Here, select CONTINUE AND ACCESS THE CD-ROM. The menu “Select a driver to install” is displayed.
7. Select the driver for your network adapter. The message “Do you want to copy driver <driver name>.LAN?” is displayed.

8. To copy the driver to the server, select YES. If an older version of a D-Link driver is installed on the system, the messages “Save existing file SYS:SYSTEM\<driver name>.LAN?” and “Save existing file SYS:SYSTEM\<driver name>.LDI?” are displayed.
9. To continue, select the desired options (YES or NO). If you selected YES, the old driver is written to a predefined location which is displayed. If you selected NO, the old driver is overwritten.
In any case, the menu “Board M4CXNW_1 (Driver <driver name>) Actions” is displayed.
10. Select SELECT MODIFY DRIVER PARAMETERS/PROTOCOLS.
11. Configure the protocols to be used.
12. Configure the parameters, e.g. “slot number”.
13. After the parameters have been configured, select SAVE PARAMETERS AND LOAD DRIVER.
The driver is loaded.
14. If desired, change the network adapter parameters or bindings in the autoexec.ncf file using the “Nwconfig” tool.

Novell Netware 6.x

To install the network driver on Novell NetWare 6.x, proceed as follows:

1. After you have installed the network adapter in your computer, boot your NetWare system. NetWare detects the new network adapter and tries to install a driver.
2. To get a list of available drivers, press <Enter>.
3. The menu “Select a driver” is displayed.
4. To install an unlisted driver, press <Insert> (the D-Link driver is not listed).
5. To specify the path to the driver, press <F3>. The window “Specify a directory path” is displayed.
6. Type the path to the driver. If you are installing from CD-ROM, the menu “Select an action” is displayed. Here, select CONTINUE AND ACCESS THE CD-ROM. The menu “Select a driver to install” is displayed.
7. Select the driver for your network adapter. The driver is now loaded.
8. Select RETURN TO DRIVER SUMMARY.

9. Select CONTINUE.
10. To configure the protocols to be used, select ADD PROTOCOL.
11. Select RETURN TO THE DRIVER SUMMARY to finish the installation.
12. If desired, change the network adapter parameters or bindings in the autoexec.ncf file using the “Nwconfig” tool.

FreeBSD

The FreeBSD driver supports the DGE-550SX network adapter on FreeBSD 5.x operating systems running on Intel x86 machines.

To install the network driver on FreeBSD, proceed as follows:

1. After you have installed the network adapter in your computer, boot FreeBSD.
2. Login in as “root”.
3. Install the driver software by typing: *pkg_add <drivername>*
e.g., *pkg_add ykbsd60x86-8.12.1.3.tgz*
This installs the driver binary into /boot/kernel and the manpage into the directory /usr/share/man/man4.
4. After rebooting, open the file /boot/loader.conf.
5. Add the following line to the file: *if_myk_load="YES"*
This enables the system to load the driver automatically.
6. Open the file /etc/rc.conf.
7. Add the following line to the file:
ifconfig_myk0="inet <local ip address>"
If you use DHCP, add DHCP instead of the local IP address: *ifconfig_myk0="DHCP"*
Thus, the interface is configured.
8. Repeat step 7 for each network adapter installed.
9. Reboot your system. On reboot, the driver will be loaded and the network adapter will be configured automatically.

Network Control for Windows®

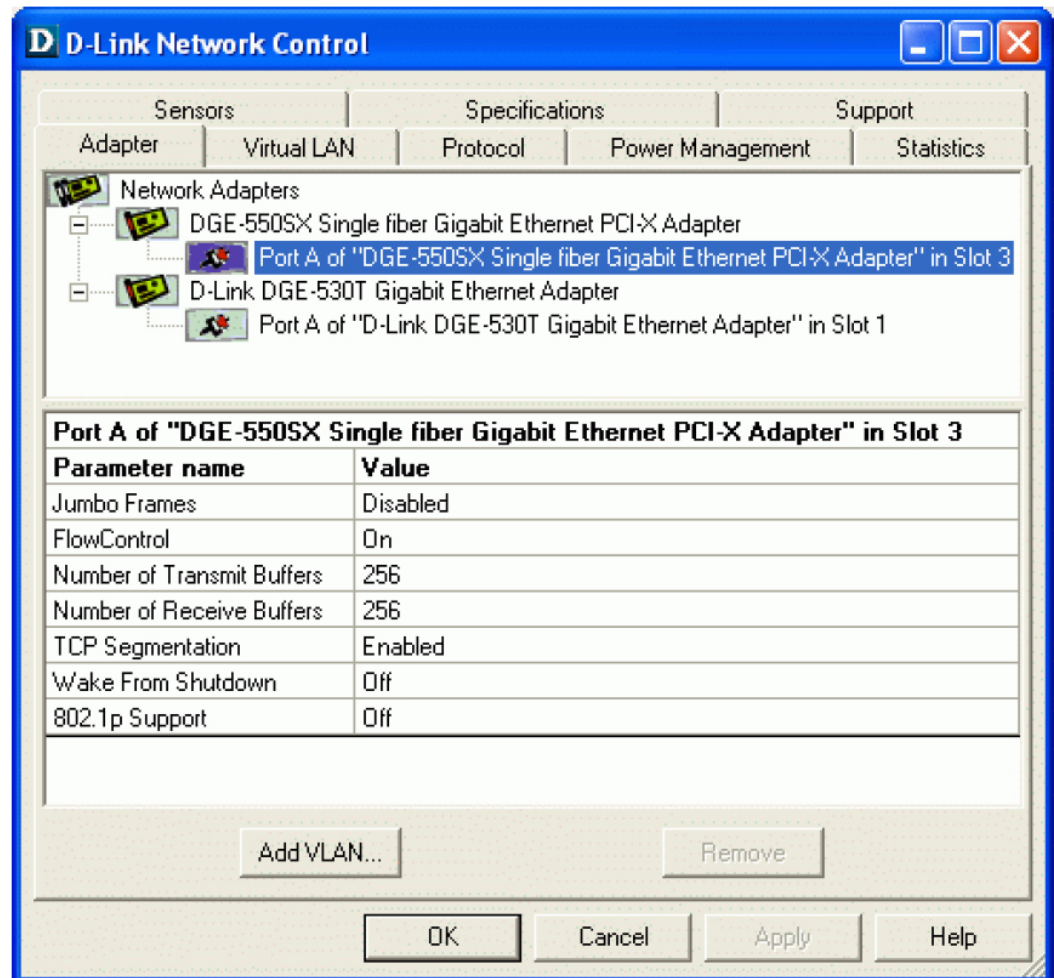
“D-Link Network Control” is part of the Driver Installation Packages available for Windows 2000, Windows XP, and Windows Server 2003. This program displays the current configuration and status of the DGE-550SX network adapter. Predominantly, it helps to perform the following tasks:

- Configuration of the network adapters and their corresponding ports
- Monitoring of the status of the network adapters installed
- Establishment of Virtual LANs (VLANs)
- Building of teams and enabling of link aggregation according to IEEE 802.3ad

To start the “D-Link Network Control” go to **Start > Settings > Control Panel > D-Link Network Control**. The various tabs contain trees showing the currently installed network adapters and their configuration:

- The “Adapter” tab displays the network adapters available in your system with their corresponding ports. It also shows the ports which have been configured as VLANs. This tab only serves as an overview. For configuration, select one of the other tabs.
- The “Virtual LAN” tab lists all configured VLANs along with the corresponding ports and the ports which may be bound by VLANs. In this tab, you can add, remove, and configure VLANs, and set VLAN specific parameters.
- The “Team” tab shows all links or ports which may be aggregated in a team or have already been aggregated to form a team. In this tab, the user can add, remove, rename, and configure teams.
- The “Protocol” tab shows all entities (port, VLAN, Team) and the protocols, which have been bound to these entities.
- The “Power Management” tab shows the current power management settings of all installed network adapters.
- The “Statistics” tab lists statistic values, e.g. Transmit Packet OK (XMIT OK).
- The “Sensors” tab (if applicable) shows the values of the voltage and temperature sensors.
- The “Specifications” tab lists fixed values during operating time, e.g. Hardware Revision, Software version, Max. Frame Size
- The “Support” tab provides information on how to reach the D-Link Technical Support.

When a component in the tree is selected, the corresponding parameters are displayed.



Verify Installation

To verify that the drivers are installed, you may view Device Manager. To view the device manager, please follow the steps below:

Step 1:

Windows® 2000: Click on **Start > Settings > Control Panel**

Windows XP: Click on **Start > Control Panel**

Windows Vista™: Click on **Start > Control Panel**

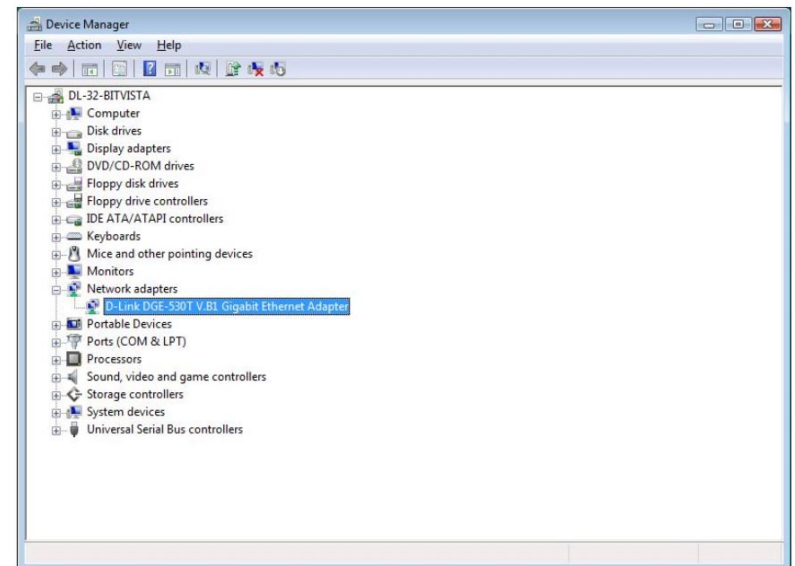
Step 2:

Windows 2000/XP: Click on the **System** icon. Click the **Hardware tab** and then click **Device Manager**.

Windows Vista: Click on the **System and Maintenance** icon and then click on **Device Manager**.

Step 3:

Scroll down and click the plus (+) sign next to **Network Adapters**. The **D-Link DGE-550SX V.B1 Gigabit Ethernet Adapter** will be listed.



Verify Connectivity

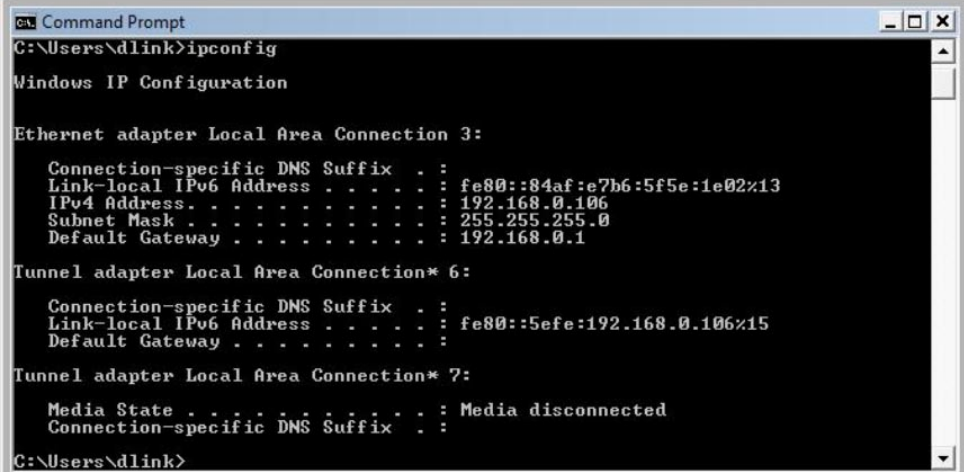
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e router) automatically. To verify your IP address, please see the following steps below.

Windows® 2000/2003/XP: Click on **Start > Run**. In the run box type **cmd** and click **OK**.

Windows Vista™: Click on **Start > All Programs > Accessories > Command Prompt**.

At the prompt, type **ipconfig** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.



```
C:\Users\dlink>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection 3:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::84af:e7b6:5f5e:1e02%13
    IPv4 Address. . . . . : 192.168.0.106
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.1

Tunnel adapter Local Area Connection* 6:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::5efe:192.168.0.106%15
    Default Gateway . . . . . : 

Tunnel adapter Local Area Connection* 7:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

C:\Users\dlink>
```

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

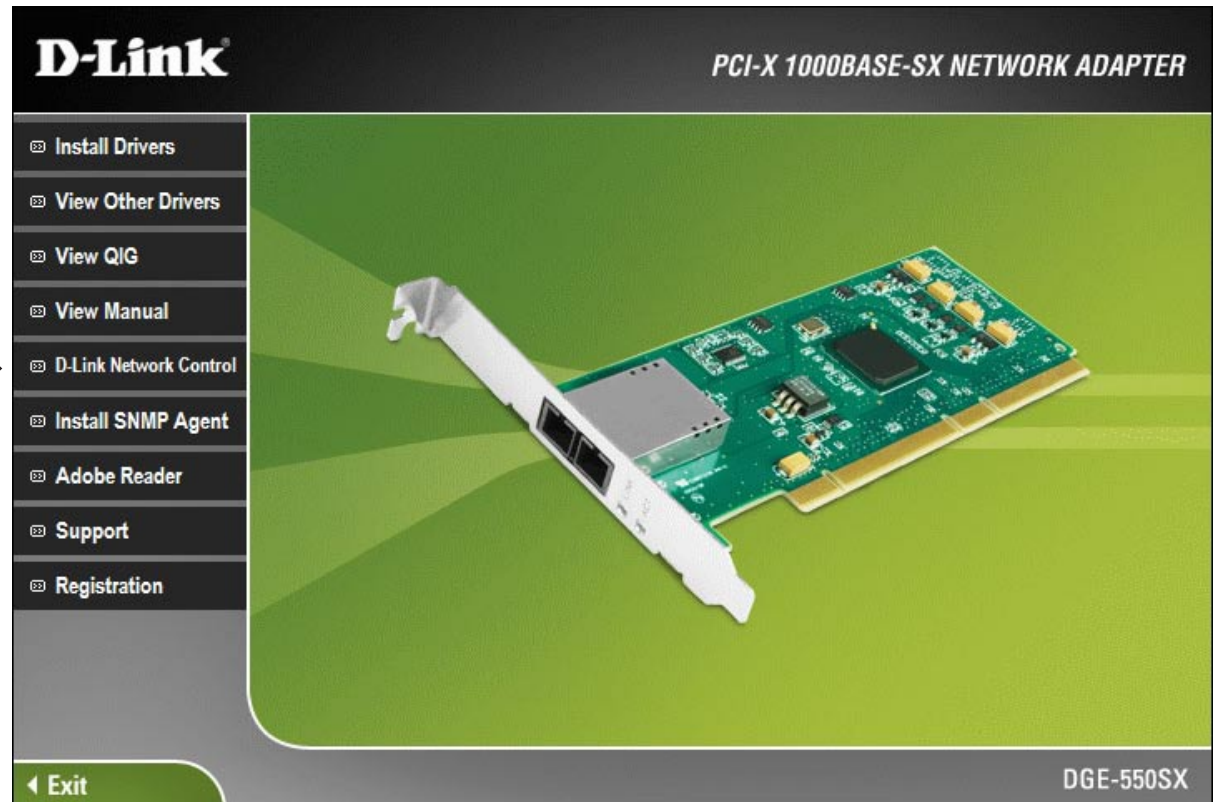
D-Link Network Control Program Software Installation

The D-Link Network Control Program is used to monitor the adapter and create VLAN information, including the VLAN Identifier and the name for the system in which it is installed.

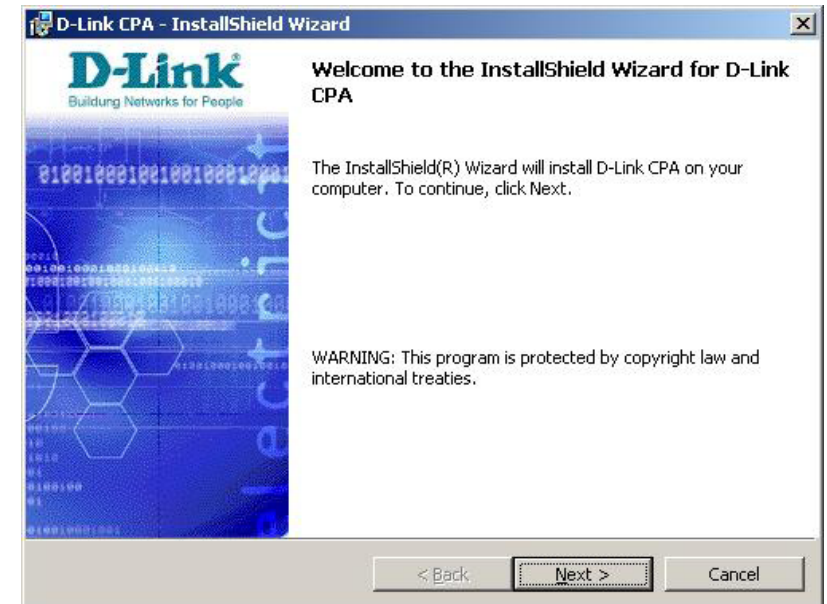
Please follow the procedures for installing the D-Link Network Control program.

1. To launch the D-Link Network Control installation program, click the **D-Link Network Control** button from the autorun screen.

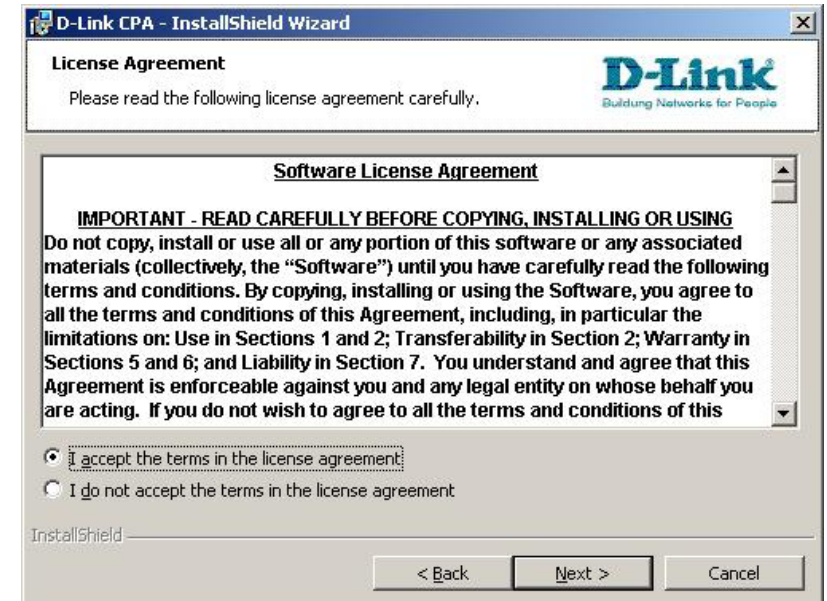
Click the **D-Link Network Control** button.



2. Click **Next**



3. Check "I accept the terms in the license agreement" radio button and click **Next**.



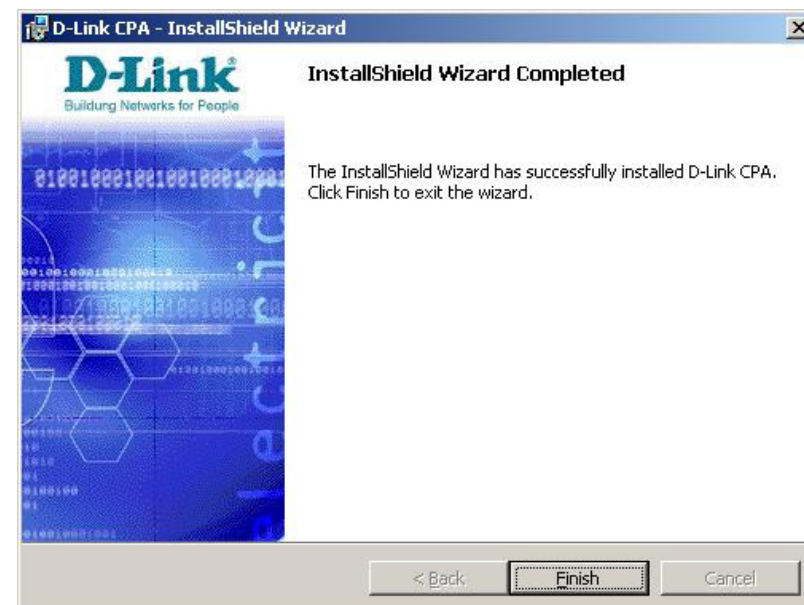
4. Click **Next**



5. Click **Install**



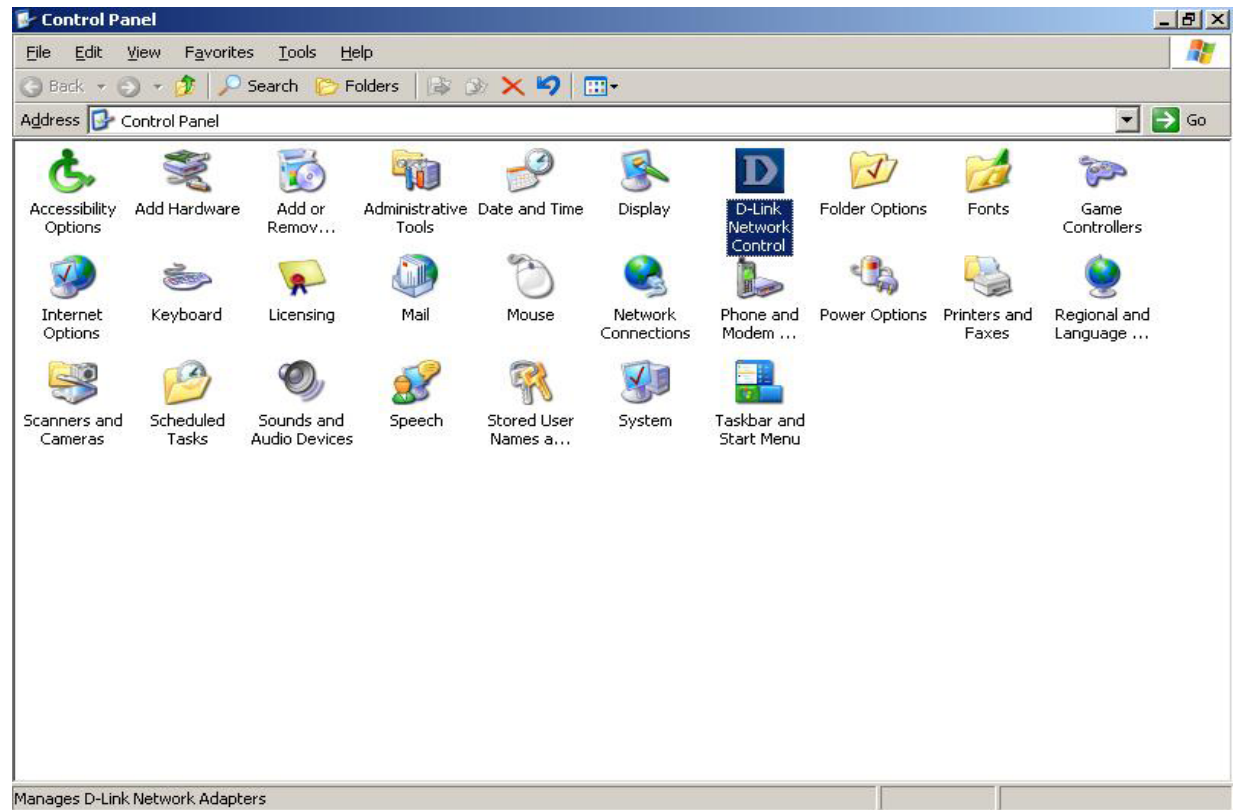
6. Click **Finish** after installing.



D-Link Network Control Program

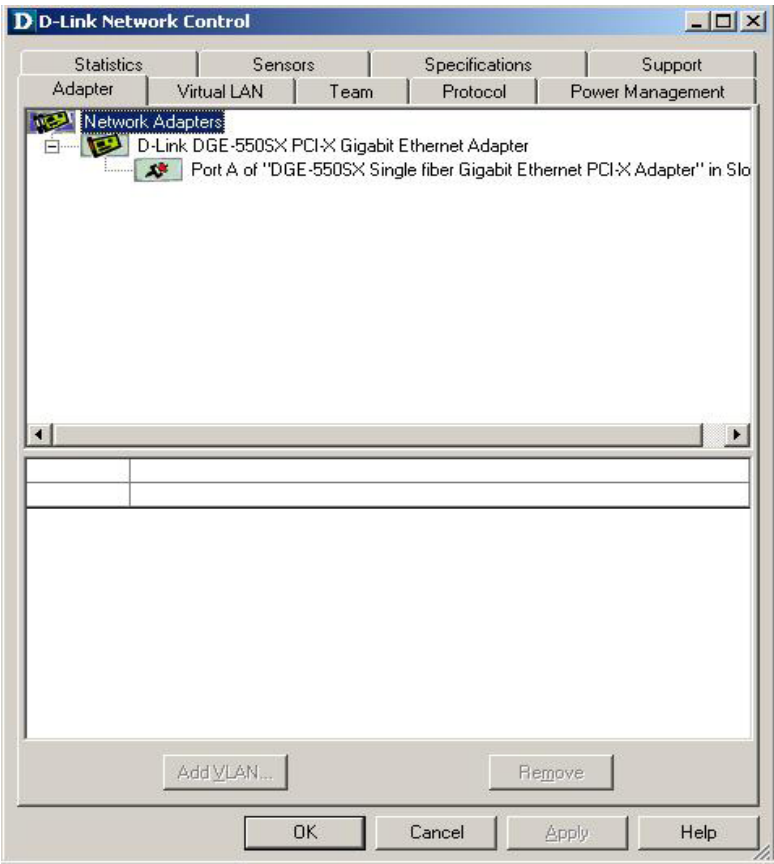
To launch the D-Link Network Control Program, go to **Start > Settings > Control Panel**, then double-click the **D-Link Network Control** icon in the Control Panel folder.

Note: *D-Link Network Control Program can be installed and used on Windows® 2000, Windows XP, and Windows Server 2003 except Windows Vista™.*

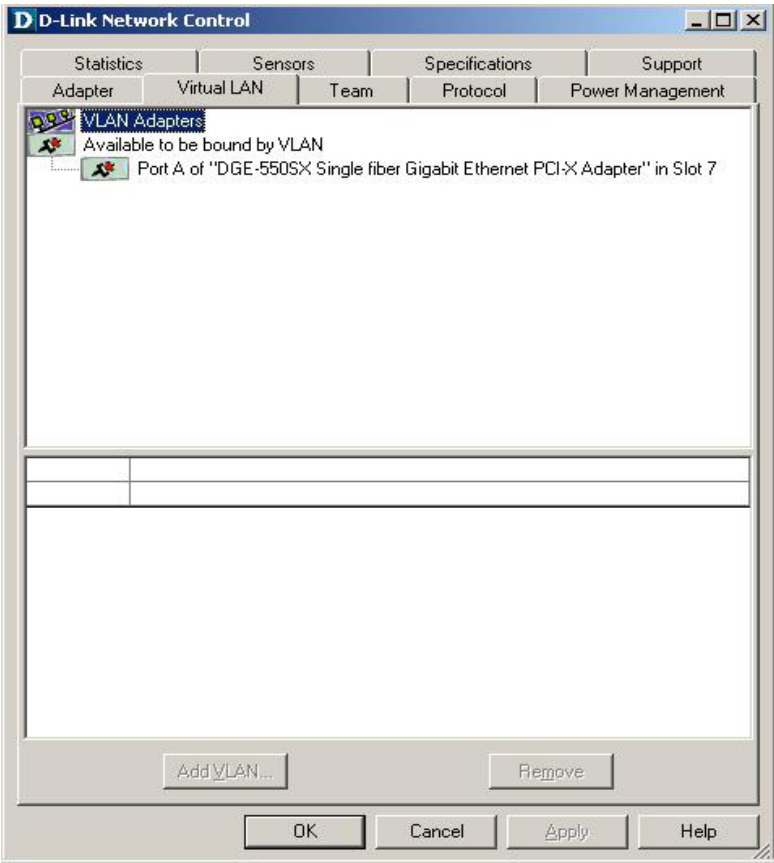


The Network Control menu lists adapters installed on the system. For systems with multiple adapters installed, select the DGE-550SX from the list and click **OK**. Click the menu tab for the menu you want to view.

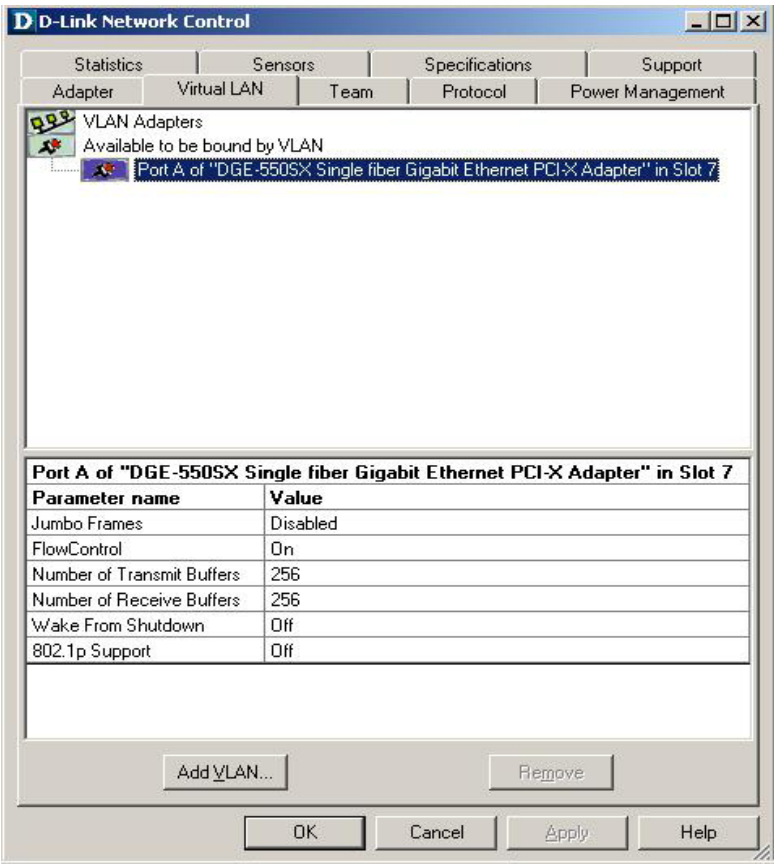
Note: The Power Management and Sensors functions are not currently supported on the adapter.



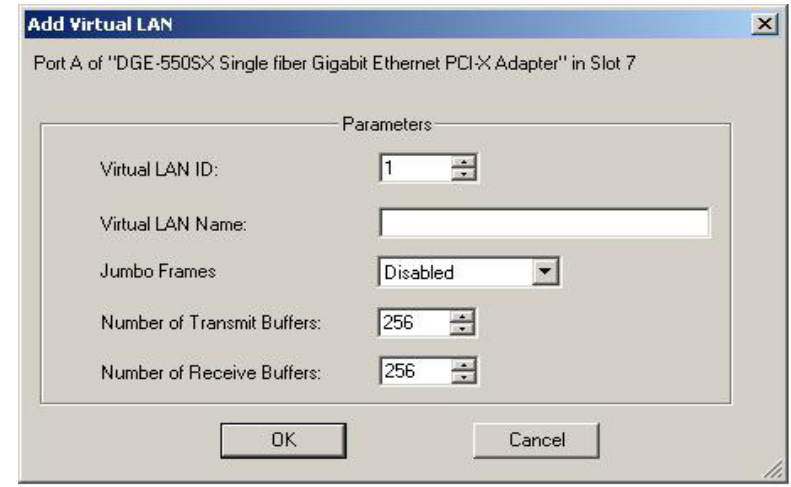
To add VLAN ID, click the Virtual LAN menu tab.



In the Virtual LAN menu tab, pick the adapter you want to add then click the Add VLAN button.

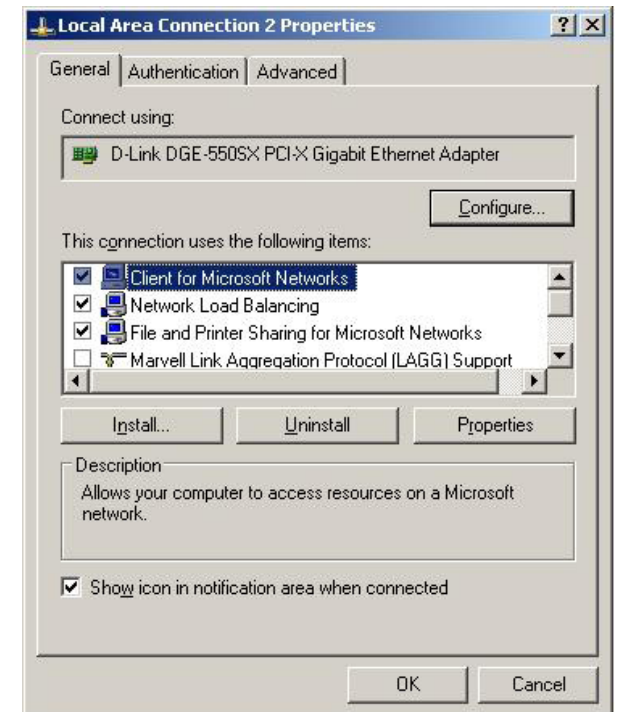
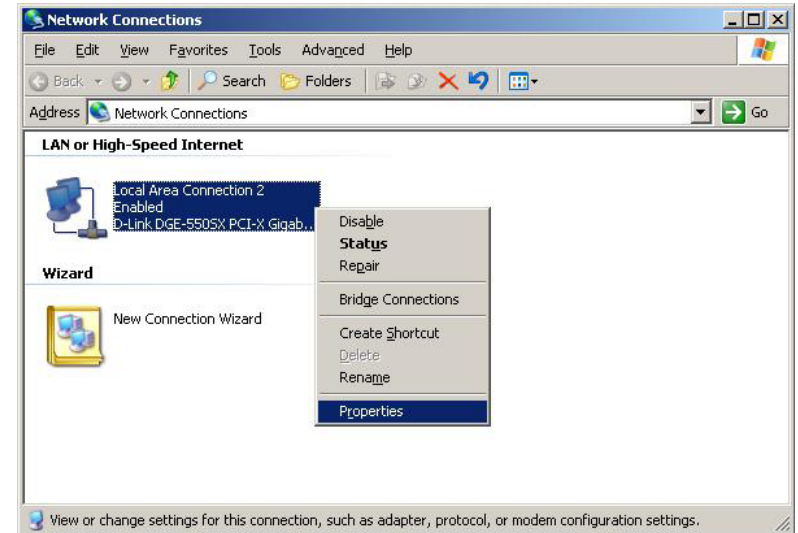


In the Add Virtual LAN pop-up menu, select the **Virtual LAN ID (VID)** number used for the system. A **Virtual LAN Name** can also be created but is optional. The Add Virtual LAN menu is also used to configure Jumbo Frames, Transmit Buffers, and Receive Buffers. Remember to click **OK** after you have finished.



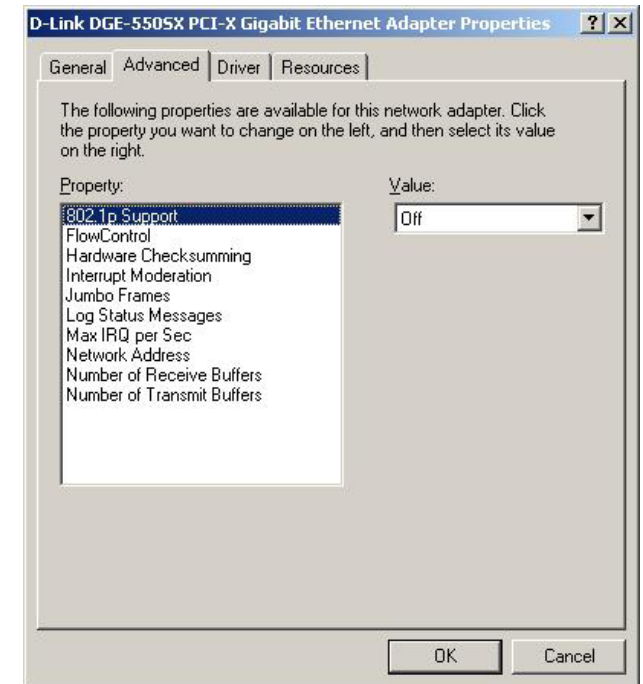
Advanced Adapter Configuration

The DGE-550SX supports advanced features including the SNMP agent described on page 33, and support for 802.1p priority. To enable or disable 802.1p support on the adapter, go to the **Properties** menu (right-click on **Local Area Connection** icon in **Network Connections**.) and click the **Configure** button:

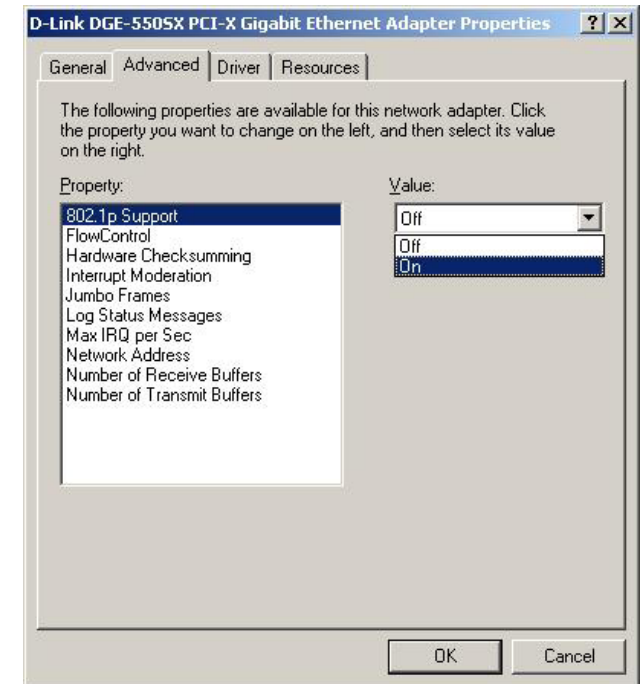


Click the Advanced tab in the tab menu:

Use the Advanced configuration menus to configure 802.1p, select **802.1p Support** from the Property list and choose **On** to enable or **Off** to disable from the Value drop-down list menu.



Other advanced configuration features that can be changed or enabled include Flow Control, Jumbo Frames, Log Status Messages, Transmit and Receive buffers and others.



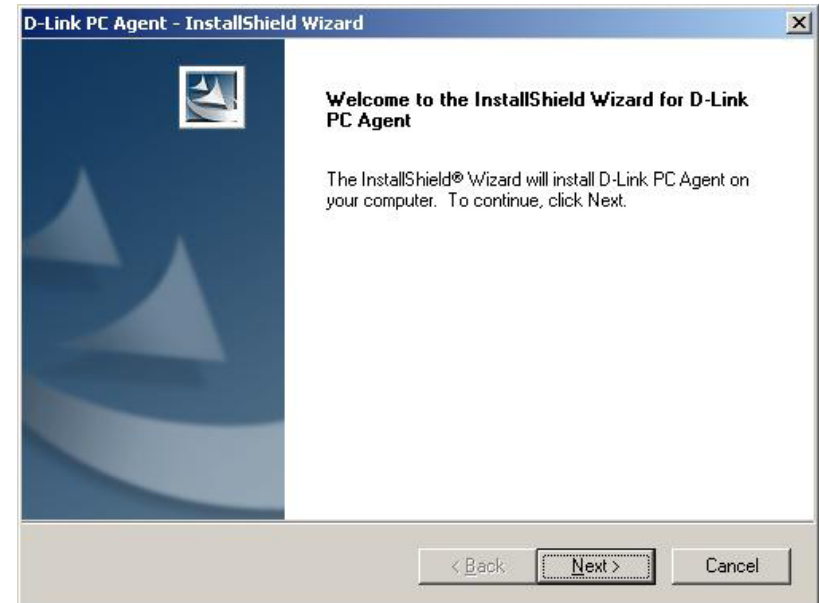
SNMP Agent Installation

Follow these steps to install the SNMP Agent on the PC on which the DGE-550SX adapter and driver have already been installed. Make sure that the PC is running Microsoft Windows® 2000, 2000 server, server 2003, server 2003 x64 Edition, XP or XP 64bit operating system. The SNMP Agent includes MIB files used for device management using a MIB browser.

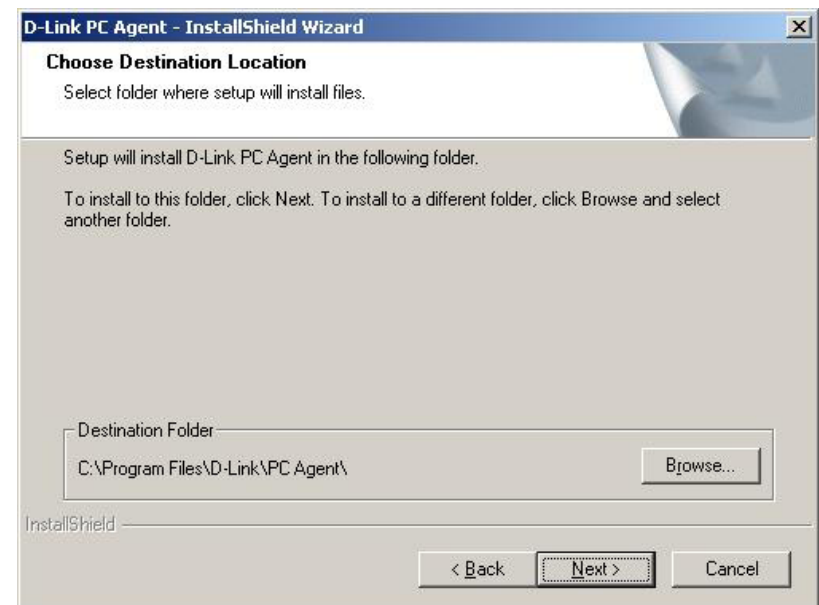
1. To launch the SNMP Agent installation program, click on the **Install SNMP Agent button** from the autorun screen.



2. Click on **Next** to continue with the installation.



3. Select the location for the agent. The default location is in the Program File folder. To select a different location, click **Browse** and find the preferred location or type a complete file name and path in the Browse menu. To continue click on **Next**.



4. Select the Program Folder in which the file will be located and click on **Next**.



5. The InstallShield will transfer the files needed for installation to the PC. In order to use this program, you are required to restart the system. Make sure to select the “**Yes, I want to restart my computer now**” option and click **Finish**. To restart later, select “**No, I will restart my computer later**” and click **Finish**.



Using the SNMP Agent

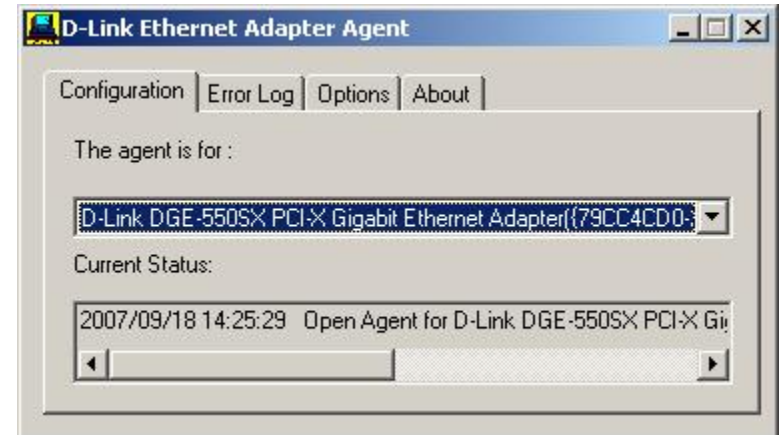
The SNMP Agent will launch automatically after it has been installed and the system has rebooted. Automatic launch of the SNMP Agent for Windows start up can be enabled or disabled as desired.

When the SNMP Agent is active, a MIB browser can be used for device management. These MIB files are located in the D-Link PC Agent folder. The three MIB files are included with the SNMP Agent are named:

- dlk_pc.mib
- RFC1213-MIB(DLK).mib
- Transmission.mib

A dialog box appears asking to select the default adapter card used with the PC Agent program. The DGE-550SX adapter will be selected automatically if it is the only adapter used for the system. If multiple adapters are present, select the DGE-550SX from the drop down list and click **OK**. The D-Link Ethernet Adapter Agent menu appears with the Configuration tab displayed.

NOTE: The drop-down menu in the Configuration tab lists any installed adapters capable of using the SNMP Agent.



In the Options menu tab, click the **Personal** button to add Name, Location and Contact information; click the **Password** button to set a new password. A password is required before changing the password or when exiting the PC Agent.

To automatically launch the SNMP Agent at Windows start up, check the **Auto launch when Windows start up** box. If this option is not selected, the SNMP Agent can be launched manually.



To manually launch the SNMP Agent program, go to the Start menu, open the Programs folder (if you chose to install it in a different folder open that folder), find the **D-Link PC Agent** folder, open it and double-click the **D-Link PC Agent** icon. Configure Name, Location and Contact information in the Personal Setting menu and click **OK**. Personal Setting information is shared with SNMP capable devices on the network.



To change Personal Setting, enter information as desired in the spaces provided and click **OK** to save the changes.

To change the administrative password, click the **Password** button in the Options menu tab of the D-Link Ethernet Adapter Agent menu. The current password must be entered to view the Password Setting menu. Enter the default password *private* or the current password if it has been changed from the default.



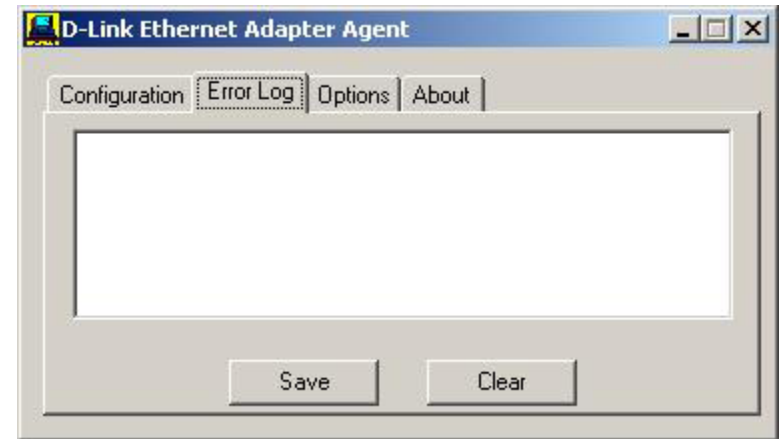
In the Password Setting menu, enter the new password to be assigned. Re-type the password again to confirm it has been typed correctly. Click the **OK** button to set the new administrative password.

Note: To exit the PC Agent, it is necessary to enter the administrative password.



The D-Link Ethernet Adapter Agent maintains and allows the user to view an error log for the adapter. To view the error log, click on the Error Log tab to select it and the error log is displayed:

To save the error log to the system's hard disk, click the **Save** button and choose a location at the prompt. To delete all log entries click the **Clear** button.



Troubleshooting

If you experience any problems with the adapter, check to see:

- that the appropriate driver is loaded;
- that the proper grade of cable is employed for the network connection;
- that the supporting hub is properly qualified for the application.

Confirming the Connection (LED Indicator)

When the computer is powered “ON”, and the DGE-550SX network adapter is inserted into an open PCI/PCI-X slot, please check the following items if your LEDlight is not “ON”. When all items are working, your DGE-550SX network adapter’s LINK LED light should light up green (“linkage” state).

1. Make sure that your fiber-optic cable is in good working order.
2. Make sure that your hub or switch is powered “ON” and is functioning properly.
3. If the LED remains dark without any apparent cause, check the “Device Manager”. If there is an exclamation point next to the DGE-550SX network adapter, then double-click to open. A message indicating the error will appear.
4. After verifying that the DGE-550SX network adapter has been installed correctly, check steps1 and 2 again. If you continue to encounter a problem, please call D-Link Technical Support for assistance.

Troubleshooting the Hardware Installation

If you experience any problems with the hardware installation, first make certain that all network cable connections are firm, and that the proper grade of cable is used for the network connection. Also verify that the cable makeup is correct (straight without un-needed crossovers in the connector wiring). Check that the supporting hub is powered-on and operating normally, and that the hub is properly qualified (under 1000Base-SX standard).

Verifying Each Computer's Identification

If more than one computer on your network has the same “Computer name”, communications may be negatively affected. Also, each computer must have the same “Workgroup” name to communicate properly.

Verifying Network Adapter Installation

If your DGE-550SX network adapter is not installed, including the Network System Software or Device drivers, your network will not function properly. Use these steps to verify that your network adapter is properly installed.

1. Double-Click the “System” icon in the Control Panel.
2. Click the “Hardware” tab on top of the “System Properties” dialog box.
3. Click “Device Manager”.
4. Double-Click “Network adapters” if you do not see any items branching out. You should see “D-Link DGE-550SX PCI-X 1000Base-SX Network Adapter” branching out after double-clicking “Network Adapters”.

If you do not see any items branching out after double-clicking “Network Adapters”, your network adapter has not been properly installed. Start at the beginning of the “Quick Install Guide”.

If you see symbols such as yellow exclamation point or red “X” over the icon adjacent to “D-Link DGE-550SX PCI-X 1000Base-SX Network Adapter”, your network adapter is not installed properly or may have a problem. Double-click the “D-Link DGE-550SX PCI-X 1000Base-SX Network Adapter”, and read the explanation of the problem. This information will be helpful if you require technical support from D-Link.

Verifying Cable Connections

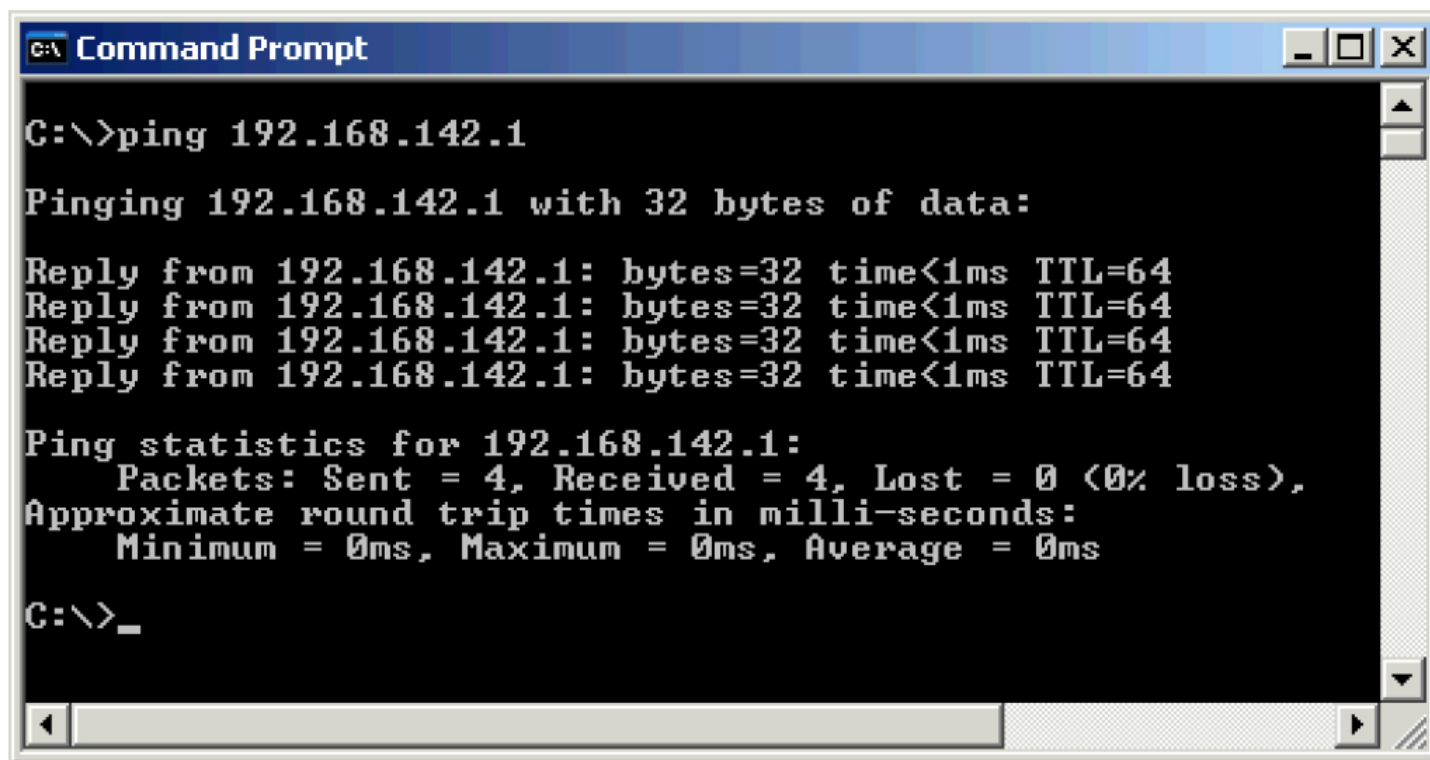
Check to see that the computer you are troubleshooting is properly connected. Each computer must be connected from its DGE-550SX network adapter over its 1000Base-SX SC connector with multimode fiber-optic cables. Examine the network cables and ensure that none have been walked-on, rolled over by chairs, caught in doors, or damaged. Additionally, make note of and alleviate any possible electromagnetic interference that may be affecting your network. Your network cables can be plugged into any port on your hub except the “Uplink” port. The “Uplink” port is only used when connecting your hub to another hub or switch.

Pinging your DGE-550SX Network Adapter

Ping is the acronym for Packet Internet Groper (PING), a utility to determine if a specific IP address is accessible. It works by sending a packet to the specified address and waiting for a reply. Ping is primarily used to troubleshoot Internet connections. By sending out a ping, you are verifying that a specific computer is available. Since all computers on the network must have a unique IP address, getting a reply means that a computer is on the network and it can communicate. If you cannot ping another computer, then there is probably a problem with the hardware. Check the cabling and network adapter installation. If you are unable to network, even when you receive a reply to your ping, it is probably a software configuration issue. Verify that all the settings are correct. Follow these steps to ping a device:

1. Start MS-DOS Prompt.
2. Type in following: ping xxx.xxx.xx.xx
where xxx.xxx.xx.xx is the IP address to be ping'ed (e.g. 192.168.142.1).

A successful ping will show four replies



```
C:\>ping 192.168.142.1

Pinging 192.168.142.1 with 32 bytes of data:

Reply from 192.168.142.1: bytes=32 time<1ms TTL=64
Reply from 192.168.142.1: bytes=32 time<1ms TTL=64
Reply from 192.168.142.1: bytes=32 time<1ms TTL=64
Reply from 192.168.142.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.142.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>_
```

Networking Basics

Check your IP address

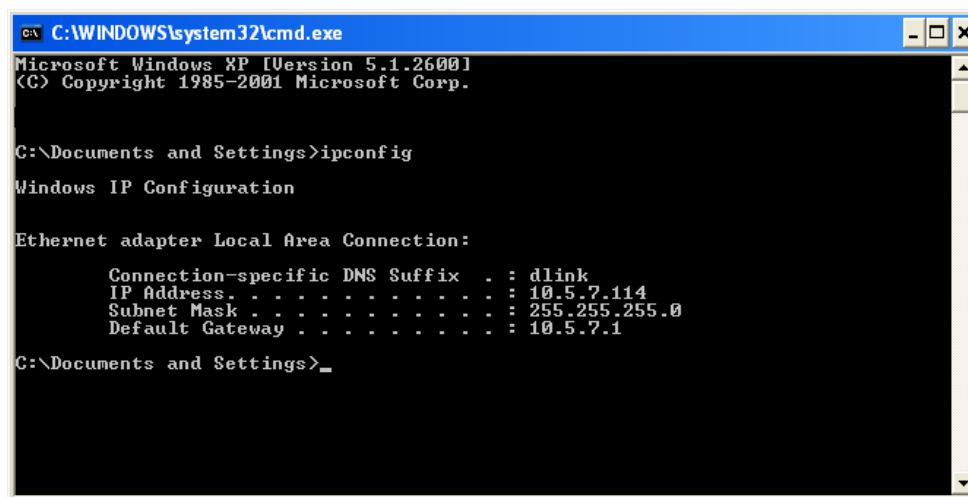
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e router) automatically. To verify your IP address, please see the following steps below.

Windows® 2000/2003/XP: Click on **Start > Run**. In the run box type ***cmd*** and click **OK**.

Windows Vista™: Click on **Start > All Programs > Accessories > Command Prompt**.

At the prompt, type ***ipconfig*** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address. . . . .               : 10.5.7.114
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 10.5.7.1

C:\Documents and Settings>_
```

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

Statically Assign an IP address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below.

Step 1:

Windows® 2000: Click on **Start > Settings > Control Panel > Network Connections**

Windows XP: Click on **Start > Control Panel > Network Connections**

Windows Vista™: Click on **Start > Control Panel > Network and Internet > Network and Sharing Center > Manage network connections**

Step 2:

Right-click on the **Local Area Connection**, which represents your D-Link network adapter, and select **Properties**.

Step 3:

Highlight **Internet Protocol (TCP/IP)** and click **Properties**.

Step 4:

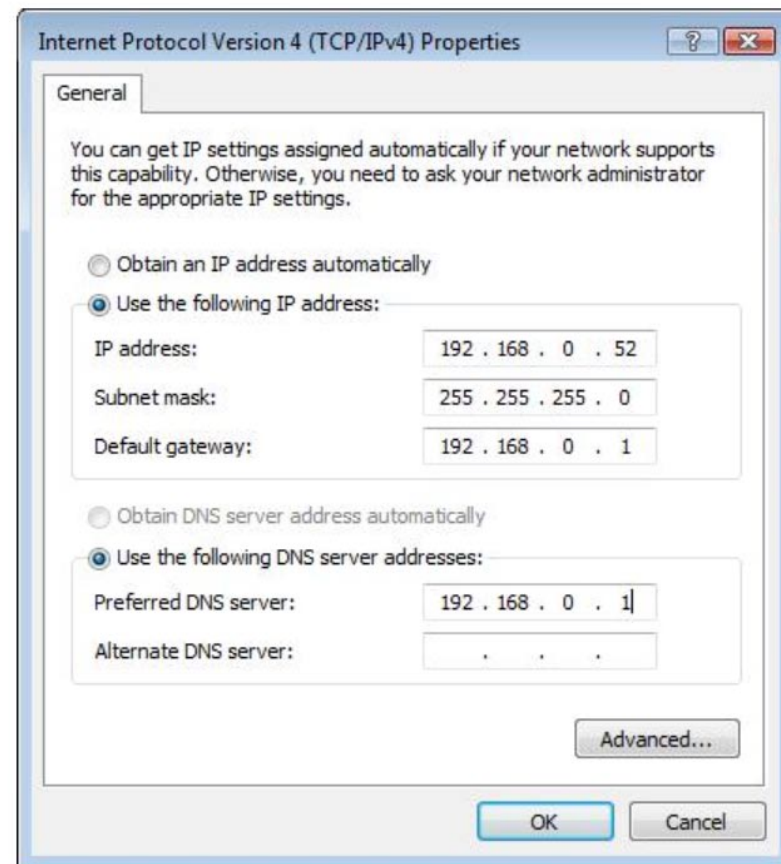
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5:

Click **OK** twice to save your settings.



Technical Specifications

Standards:

- IEEE 802.3z 1000BASE-SX Gigabit Ethernet standard
- IEEE 802.3ad Link Aggregation Control Protocol standard
- IEEE 802.3x Flow-Control and Auto-Negotiation standard
- IEEE 802.1p Quality of Service standard
- IEEE 802.1q/802.3ac VLAN/VLAN Tagging standard
- PCI Specification 2.3 and PCI-X Specification 1.0

Network Media:

- 1000Base-SX 50.0µm/62.5µm multimode fiber-optic cabling with SC connector(SC fiber-optical connector compliant with Laser AEL Class I standard, safe for eyesight)

Transmission Distance:

- up to 275m with 50.0µm multimode fiber-optic cabling
- up to 550m with 62.5µm multimode fiber-optic cabling

Host Interface:

- PCI/PCI-X (32/64-bit, 33/66/100/133MHz)

Network Data Transfer Rate:

- 1000Mbps, with full-duplex support

Diagnostic LEDs:

- Link Indicator (LINK)
- Activity Indicator (ACT)

Physical Dimensions:

- 128.52mm x 68.94mm (without bracket)

Temperature:

- Operating: 0~50°C (32~122°F)
- Storage: -20~70°C (-4~158°F)

Humidity:

- Operating: 30%~80% non-condensing
- Storage: 10%~95% non-condensing

Emission:

- FCC Class B

Driver Support*:

- Microsoft Windows® 2000
- Microsoft Windows XP
- Microsoft Windows Vista™
- Microsoft Windows Vista x64
- Microsoft Windows Server 2003
- Novell Netware 5.10
- Novell Netware 6.x
- Linux kernel 2.4.13 and higher stable versions
- FreeBSD 5.x (x86)

Contacting Technical Support

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product. U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DGE-550SX)
- Hardware Revision (located on the label on the adapter (e.g. rev A1))
- Serial Number (s/n number located on the label on the adapter).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support:
(877) 453-5465

Internet Support:
<http://support.dlink.com>

For customers within Canada:

Phone Support:
(800) 361-5265

Internet Support:
<http://support.dlink.com>

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty: D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty: D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty: The Limited Warranty provided hereunder for Hardware and Software portions of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim: The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer.

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered: The Limited Warranty provided herein by D-Link does not cover: Products that, in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

Disclaimer of Other Warranties: EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

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Governing Law: This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

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CE Mark Warning: This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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 communication. 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 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.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 2.1
September 24, 2007