Node Address

The node address is used for network troubleshooting purposes. Node addresses are hard coded by the device manufacturer, and they are unique among all Ethernet devices in the world.

I/O Address

I/O address identifies the address in the system I/O space that the processor uses to communicate with the NIC. The I/O address is used for network troubleshooting purposes.

Device ID

Device ID is a PCI bus standard that identifies a NIC within a PC. It is used for network troubleshooting purposes and is not a configurable setting.

Node Address

The node address is used for network troubleshooting purposes. Node addresses are hard coded by the device manufacturer, and they are unique among all Ethernet devices in the world.

Device Number

The device number is the PCI bus device identification assigned to the NIC by the PC's BIOS. This number is dependent on the physical slot in which the NIC is installed. The device number is used for troubleshooting and is not a configurable setting.

Bus Number

Bus number identifies the PCI bus within the PC. This number is dependent on the physical slot in which the NIC is installed. The bus number is used for troubleshooting and is not a configurable setting.

I/O Port Range

The I/O port range specifies which portion of the PC's I/O address space is used for communication between the NIC and the PC. The NIC uses 16 bytes of I/O space, starting at the I/O base address. Make sure that no other device is using any I/O addresses in the same range. This resource is assigned by the Plug and Play BIOS in your PC and is not a configurable setting.

Interrupt Request Level

The interrupt request level is used by the NIC for communication between the NIC and the PC. The interrupt request level is the communications channel through which a device issues interrupts to the PC's interrupt handler. This resource is assigned by the PC's BI OS and is not a configurable setting.

Display Media Type

The media type describes the way that data is signaled on the Ethernet network. The media type is defined by the kind of connector on the NIC that you use to attach to the network.

Auto Select allows the NIC to automatically determine the media type.

Boot PROM

The boot PROM setting indicates if the NIC's boot ROM is enabled or disabled (if the NIC has a boot ROM installed).

Network Speed

Network speed is the speed at which your PC is connected to the network. This speed is detected and set automatically.

Duplex Mode

Duplex mode determines how the NIC transmits information across the network (in both directions simultaneously [full-duplex] or in one direction at a time [half-duplex]).

Auto Select allows the NIC to automatically connect at the duplex mode of the connected hub or switch.

Receive FIFO Size

The receive FIFO is the size, in bytes, of the receive buffer on the NIC. This value is not a configurable setting.

Transmit FIFO Size

The transmit FIFO is the size, in bytes, of the transmit buffer on the NIC. This value is not a configurable setting.

Product Date Code

This code is used for diagnostic purposes.

Division Code

This code is used for diagnostic purposes.

Remote Wake-Up Connector

This setting indicates if a 3-pin Remote Wake-Up connector is physically present on the NIC.

ASIC Revision

The ASIC revision is the manufacturing production version of the ASIC installed on the NIC.

Set Factory Defaults Button

Returns the configuration settings to their factory default settings:

{button ,JI(`',`HIDS_CFG_OPTIMIZATION')} Network Driver Optimization—Normal

{button ,JI(`',`HIDS_CFG_DUPLEX')} Duplex—Auto Select

{button ,JI(`',`HIDS_CFG_PROM')} Boot PROM—Enabled

{button ,JI(`',`HIDS_CFG_MEDIA')} Media Type—Auto Select

{button ,JI(`',`HIDS_CFG_REMOTE_WAKEUP')} Remote Wake-Up—Enabled Defaults

{button ,JI(`',`HIDS_CFG_WORKGROUP_KA')} Workgroup Keep-Alive—Enabled

{button ,JI(`',`HIDS_CFG_ALERTS')} Alerts—Disabled

NOTE: The Workgroup Keep-Alive and Alerts settings are supported by the 3C905CX and 3C905C NICs only.

Network Driver Optimization

Network Driver Optimization specifies how to optimize the network driver for your network environment by allowing trade-offs between network performance and CPU utilization.

Normal balances CPU utilization and network performance.

Minimized CPU Utilization saves CPU resources for other tasks.

Maximized Network Performance is appropriate if no other applications are making major demands on CPU resources.

Configure Duplex Mode

Duplex determines how the NIC transmits information across the network (in both directions simultaneously [full duplex] or in one direction at a time [half-duplex]).

Full Duplex manually sets the NIC to operate in full-duplex mode. To use this setting, the hub or switch that you are connecting to must support full-duplex. You must also manually set the Media Type to the appropriate setting for your network.

Half-Duplex manually sets the NIC to operate in half-duplex mode. To use this setting, you must also manually set the Media Type to the appropriate setting for your network.

Auto Select allows the NIC to automatically connect at the duplex mode of the connected hub or switch. When you select this setting, the Media Type is automatically set to Auto Select.

Boot PROM

The Boot PROM is firmware that resides in an extended BIOS device (flash ROM) installed on a NIC (or on the motherboard in a ROM socket). The boot PROM controls the boot process for a PC when the PC is attached to a network (it allows the PC to boot from the server rather than from its local hard drive). Boot firmware can also reside in the PC's BIOS on the motherboard if the manufacturer has chosen to include this code in their build of their BIOS.

Disabled disables the NIC's boot ROM (if a boot ROM is installed on the NIC).

Enabled enables the NIC's boot ROM (if a boot ROM is installed on the NIC).

Configure Media Type

The Media Type describes the way that data is signaled on the Ethernet network. The Media Type is defined by the kind of connector on the NIC that you use to attach to the network. Unless your system administrator advises you to change the setting, you should accept the default **Auto Select** setting.

When **Auto Select** is selected, the Duplex setting is automatically se to **Auto Select**.

If **10BASE-T** or **100BASE-TX** is selected, the Duplex setting must be manually set to **Half-Duplex** or **Full-Duplex**.

NOTE: If you change from one port to another on a 3C905B-COMBO NIC, you must reboot your PC to reestablish network connectivity.

WakeUp From ShutDown

WakeUp From ShutDown is the ability to remotely power on the PC after a shutdown.

Enabled Defaults configures the system for the default events that will wake the PC, typically Magic Packet events.

Disabled disables WakeUp From ShutDown on the NIC.

Enabled Custom allows you to determine which events can wake the system from shutdown.

Workgroup Keep-Alive

The workgroup keep-alive packet is sent periodically by the NIC when the PC is powered off to ensure that the PC's MAC address is not aged-out of switch forwarding tables.

NOTE: The workgroup keep-alive packet is supported by the 3C905CX and 3C905C NICs only.

Workgroup Keep-Alive Interval

Sets the time interval (in seconds) for sending the workgroup keep-alive packet.

Options are: 32, 64, 128, 256, 512, 1024, 2048, 4096, or 8192 seconds.

Alerts

Alerts are transmitted to an alert target management station when a specific event, such as a power problem or a case intrusion, is generated by the PC.

NOTE: Alerts are supported by the 3C905CX and 3C905C NICs only. To generate alerts, the NIC must be connected to the PC motherboard using the NIC's SMBus (SMB) or SOS connector. See your PC documentation or contact your PC manufacturer if you are unsure whether the NIC is connected to the PC motherboard using one of these connectors.

Packets Received

Packets received is the number of data packets received during the test.

Packets Transmitted

Packets transmitted is the number of data packets transmitted during the test.

Transmit Deferrals

Transmit deferrals is the number of times the NIC deferred to another transmitting node while waiting to transmit. This number increases as other stations contend with this NIC for access to the Ethernet network.

Receive Overrun

Receive overrun is the number of lost packets that cannot be stored in the PC's receive buffer because the buffer is already full.

Late Collisions

A late collision occurs when another node on the Ethernet network does not properly defer once the NIC has started transmitting. If a large number of late collisions occur, contact your network administrator.

Carrier Sense Lost

Carrier sense lost is the number of packets transmitted with carrier sense loss. This normally occurs as a result of collisions. For more information, refer to an Ethernet reference guide.

SQE Errors

SQE errors are the number of times that the SQE signal was detected during transmission from the PC's NIC. This count should be either zero or the total number of packets transmitted. Any other number indicates that the NIC transceiver is malfunctioning.

Multiple Collisions

Multiple collisions are a normal occurrence on an Ethernet network; however, excessive collisions may indicate problems. If this occurs, contact your network administrator.

Single Collisions

Single collisions are the number of packets that had one collision during transmission from the NIC.

CRC Errors

Each packet that is sent on an Ethernet network has a calculated cyclic redundancy check (CRC) appended to it. When the packet is received, this CRC is compared with the calculated CRC. If the calculated CRC is different from the CRC, the packet was corrupted, most likely by line noise.

Excessive Collisions

Excessive collisions may indicate network or cabling problems. Contact your network administrator.

Transmit Underrun

Transmit underrun is the number of times a packet was transmitted without adequate data by the NIC.

Frame Alignment Errors

Frame alignment errors are the number of alignment errors for the packets received by the NIC. An alignment error is caused when an incoming packet does not end on a byte boundary and the CRC does not match at the last byte boundary.

Enter IP addresses Dialog Box

Enter the IP address and, if necessary, the gateway IP address of the alert target management station that is to receive the traps when they are generated.

Alert IP Address is a required field. Enter the IP address of the alert target management station. This field cannot be 0.0.0.0.

Gateway IP Address is an optional field. Enter the gateway IP address of the alert target management station, if applicable.

Alert IP Address

Enter the valid IP address of the alert target management station that is to receive the traps when they are generated. This field is required and cannot be 0.0.0.0.

Gateway IP Address

Enter the gateway IP address of the alert target management station, if necessary. This field is optional.

Alerts Dialog Box

This screen controls which alerts can be generated by the 3C905CX or 3C905C NIC.

To generate alerts:

- The 3C905CX or 3C905C NIC must be connected to the PC motherboard using the NIC's SOS or SMBus (SMB) connector. See your PC documentation or contact your PC manufacturer if you are unsure whether the NIC is connected to the PC motherboard using one of these connectors.

- The alert target management station that is to receive the alerts must have software that supports the Platform Event Trap Format (PETF) specification for alerts.

NOTE: A PC can support a maximum of seven alerts. The alerts that are supported by your PC depend on your PC's configuration.

To configure the alerts:

1 Click the *Alert Target Addresses* button to set the IP address and, if necessary, the gateway IP address of the alert target management station that is to receive the alerts.

2 After you set the IP address(es), select the alert(s) you want to enable.

3 Click OK.

Click on an alert for its description:

PC Presence

BIOS Boot Failure

Invalid BIOS Password

Operating System Load Failure

Temperature Problem

Fan Problem

Power Problem

Case Intrusion

Portable PC Undock

PC Presence

An alert packet is sent periodically to indicate that the PC is still connected to the network.

BIOS Boot Failure

An alert packet is sent if the PC's BIOS did not boot successfully.

Invalid BIOS Password

An alert packet is sent if the PC's BIOS password was entered incorrectly.

Operating System Load Failure

An alert packet is sent if the PC's operating system did not start up.

Temperature Problem

An alert packet is sent if the PC detects a problem with its temperature.

Fan Problem

An alert packet is sent if the PC detects a problem with its cooling fan.

Power Problem

An alert packet is sent if the PC detects a problem with its power supply.

Case Intrusion

An alert packet is sent if the PC's cover is removed.

Portable PC Undock

An alert packet is sent if the laptop PC is removed from its docking station.

NOTE: This alert applies to docking-station PCs only.

Remote Wake-Up Dialog Box

This screen controls which events can wake-up the NIC.

NOTE: These Remote Wake-Up events are supported in non-Advanced Configuration Power Interface (ACPI) PCs only. In PCs that support ACPI, the operating system controls the events that can wake up the NIC. See your PC documentation if you are unsure whether or not your PC supports ACPI, and if it does, which events can wake up the NIC.

To configure the Remote Wake-Up events:

1. Click on a Remote Wake-Up event to enable it.

2. You can select more than one even, as well as any combination of events.

3. Click OK.

Click on an event for its description:

Magic Packet Wake-Up

Ping Packet Wake-Up

ARP Packet Wake-Up

Link State Change Wake-Up

Magic Packet Wake-Up

Enables or disables the NIC's ability to power on the PC when it receives a Magic Packet wake-up packet over the network from a network management application.

The default is **Enabled**.

Ping Packet Wake-Up

Enables or disables the NIC's ability to power on the PC when it receives a ping packet that was directed at the PC.

The default is **Disabled**.

ARP Packet Wake-Up

Enables or disables the NIC's ability to power on the PC when it receives an Address Resolution Protocol (ARP) request that was directed at the PC.

The default is **Enabled**.

Link State Change Wake-Up

Enables or disables the NIC's ability to power on the PC when the network cable is disconnected from or reconnected to the NIC or the hub or switch.

The default is **Disabled**.

Invalid Test (50500)

Internal error. The GUI attempted to run a test that is invalid on this NIC. Reinstall the diagnostic program from known good disks.

Bad Resource (50501)

Internal error. Attempted to find a resource string describing an item that failed. Reinstall the diagnostic program from known good disks.

Bad Config (50502)

Internal error. The GUI attempted to configure the NIC with an invalid option. Reinstall the diagnostic program from known good disks.

Fail Core Loop (50503)

Obsolete.

Fail ENDEC Loop (50504)

Obsolete.

Fail EEPROM (50505)

Obsolete.

Fail Register

Obsolete.

Fail FIFO (50507)

FIFO test failed.

Fail Interrupt

The NIC failed the interrupt test. Reseat the NIC, check for an IRQ conflict, or update the BIOS.

Warn Duplex (50509)

The duplex setting was automatically changed by the diagnostic program to correspond to the new Media Type set by the user. This is informational only.

Warn Media (5050a)

The Media Type was changed by the diagnostic program to correspond to the new duplex value set by the user. This is informational only.

Warn Set Master (5050b)

The PCI bus-master mode was enabled for the slot in which the NIC is installed. This is informational only.

Warn No Master (5050c)

An attempt to enable the PCI bus-master mode failed. Try inserting the NIC into another slot, preferable closer to the CPU.

Fail Echo Init (5050d)

Obsolete.

Fail EEPROM Read (5050e)

An attempt to read the EEPROM failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail EEPROM Write (5050f)

An attempt to write the EEPROM failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the *EtherCD* in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail EEPROM Verify (50510)

Comparing the EEPROM (by reading after writing it) failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Init NIC (50511)

Obsolete.

Fail Transmit (50512)

Obsolete.

Fail Receive (50513)

Obsolete.

Invalid Card Number (50514)

Internal error. The GUI attempted to select a NIC that does not exist. Reinstall the diagnostic program from known good disks.

Fail Shutdown DOS (50515)

Obsolete.

Fail NDIS (50516)

Obsolete.

Fail Srv Disconnect

Obsolete.

Fail Srv Echo (50518)

Obsolete.

Invalid Auto Type (50519)

This NIC does not support auto configuration.

Warn Media Type (5051a)

The Media Type was changed by the user, but no connection to the network on that media was found. Check that a cable is attached to the appropriate connector on the NIC and to a functional network.

Fail Carrier Lost (5051c)

The CARRIER LOST register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Frame Def (5051d)

The FRAMES DEFERRED register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Frame Rcv OK (5051e)

The FRAMES RECEIVED OK register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Frame Xmit OK (5051f)

The FRAMES TRANSMITTED OK register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Internal Config (50520)

The INTERNAL CONFIGURATION register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Late Collision (50521)

The LATE COLLISIONS register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Mac Control (50522)

The MAC CONTROL register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Master Addr (50523)

The MASTER ADDRESS register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    `D:\3C90XCFG.EXE`

If the error reoccurs, please call Technical Support.

Fail Master Len (50524)

The MASTER LENGTH register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Media Status (50525)

The MEDIA STATUS register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Mult Collision (50526)

The MULTIPLE COLLISIONS register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Network Diag (50527)

The NETWORK DIAGNOSTIC register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail RX Overrun (50528)

The RECEIVE OVERRUNS register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Single Collision (50529)

The SINGLE COLLISION FRAMES register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail SQE Error (5052a)

The SQE ERRORS register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Station Addr0 (5052b)

The STATION ADDRESS 0 register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Station Addr2 (5052c)

The STATION ADDRESS 2 register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Station Addr4 (5052d)

The STATION ADDRESS 4 register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Station Mask0 (5052e)

The STATION MASK 0 register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Station Mask2 (5052f)

The STATION MASK 2 register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Station Mask4 (50530)

The STATION MASK 4 register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Int Status Cmd (50531)

The INTERRUPT STSTUS/COMMAND register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Indication En (50532)

The INDICATION ENABLE register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Interrupt En (50533)

The INTERRUPT ENABLE register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Rx Early Thresh (50534)

The RECEIVE EARLY THRESHOLD register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Tx Avail Thresh (50535)

The TRANSMIT AVAILABLE THRESHOLD register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Tx Start Thresh (50536)

The TRANSMIT START THRESHOLD register failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail EEPROM Get (50537)

An attempt to set the checksum into the EEPROM failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail EEPROM Chksum (50538)

An attempt to write/read/verify the checksum in the EEPROM failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Init FIFO (50539)

An attempt to initialize the NIC for the FIFO loopback test failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail LP Xmit Frame (5053a)

An attempt to transmit a frame to the NIC in the loopback test failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail LP Recv Frame (5053b)

An attempt to receive a frame from the NIC in the loopback test failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail LP Size Mismatch (5053c)

The size of the frame received from the NIC in the loopback test did not match that of the one sent.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

    D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail LP Data Mismatch (5053d)

The data in the frame received from the NIC in the loopback test did not match that of the one sent.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Init Core (5053e)

An attempt to initialize the NIC for the Core loopback test failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.

2. Insert the EtherCD in the CD-ROM drive.

3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Init ENDEC (5053f)

An attempt to initialize the NIC for the Encoder/Decoder loopback test failed.

If multiple NICs are installed, run the 3Com DOS diagnostic program:

1. Reboot the PC using a DOS-bootable diskette.
2. Insert the EtherCD in the CD-ROM drive.
3. Enter the following command at the DOS prompt, where D is the letter of your CD-ROM drive:

   D:\3C90XCFG.EXE

If the error reoccurs, please call Technical Support.

Fail Old Drivers (50540)

Obsolete.

Fail Drmon (50541)

Obsolete.

Fail NDIS W95 (50542)

Obsolete.

Warn Duplex2 (50543)

The Duplex or Media Type setting was changed by the user from *Auto Select*. Verify that the new settings correspond to the actual network environment. This is informational only.

Warn BIOS (50544)

The BIOS has disabled interrupts from the NIC. Try installing the NIC in another slot, check your BIOS setting, or update your BIOS.

Warn No TDI (50545)

Warning—the diagnostic TDI is not loaded. If this message appears after installation, and an NDI S 3 (or higher) driver is running, click Close and check the Network Control Panel for proper diagnostic program installation.

Bus Type (50546)

This is the type of bus in the system. This is informational only.

Warn Change Config (50547)

Warning—the diagnostic TDI is not loaded and no DOS driver was found. Any change in the NIC configuration at this time may hang the system; therefore, do not make changes. Check that the network drivers are loaded properly using the Network Control Panel and Device Manager.

Fail Driver Restart (50548)

An attempt to restart the Windows NDIS driver failed. Reboot the system to reconnect to the network.

Error No Such Help (50549)

No help is available on this topic. Update the help file.

Warn Reboot (5054A)

You must reboot your PC after changing the Media Type (from AUI or coax [BNC] to TP [RJ-45 connector] and vice versa).

Before rebooting your PC, verify that the cable for the selected Media Type is properly connected to the NIC, and then run the Network Test (located on the Diagnostics screen) to ensure that the NIC's connection tot he network is functioning.

After you verify the cable and run the Network Test, reboot your PC to enable the driver to use the new Media Type.

Field Is Empty

This field cannot be empty. Enter a valid IP address.

ERROR: Driver Rejected Configuration Change Request

The driver rejected the configuration change request. Make sure that you have installed the latest version of the NIC's driver.

Fail Registry (5054C)

Unable to access Windows registry information for this NIC. You may be able to correct this by uninstalling and then reinstalling the NIC.

ERROR: Unable to Initialize NIC for Packet Transmission

Unable to initialize the NIC for transmitting packets. Run the NIC diagnostic tests to verify that the NIC is functional.

ERROR: Unable to Transmit Packets

Unable to transmit packets. Make sure that the NIC is properly connected to the network. Run the NIC and Network tests in the 3Com NIC Diagnostic program to verify that the NIC is functional.

ERROR: Unable to Initialize NIC for Packet Reception

Unable to initialize the NIC for receiving packets. Run the NIC diagnostic tests to verify that the NIC is functional.

Unable to Receive Packets

Unable to receive packets. Make sure that the NIC is properly connected to the network. Run the NIC and Network tests in the 3Com NIC Diagnostic program to verify that the NIC is functional.

Support Databases button

Select one of the following categories for more information:

[Release Notes](#)

[Frequently Asked Questions](#)

[KnowledgeBase Topics](#)

Release Notes

The following are tips about installing and using a 3Com PCI NIC.

Click a topic below for more information:

[3Com PCI NIC installation hints](#)

[Troubleshooting installation problems](#)

[Canceling the installation in Windows 95](#)

[3Com NIC diagnostic tests](#)

[DOS diagnostic program](#)

[Auto negotiation is not reliable with a crossover cable](#)

[Resource conflicts under Windows NT](#)

[Running the DOS ODI driver with a non-Novell protocol](#)

[Disabling the driver in a Windows NT system](#)

[Sharing interrupts under Windows 95](#)

[Warm booting with the DOS-based drivers running](#)

3Com PCI NIC installation hints

To install the NIC in a PCI slot:

1. Select a bus-mastering PCI slot and insert the NIC in the slot.
2. Turn the power on.
3. In most cases the PC automatically configures the NIC. If this does not happen, you may need to manually configure the PC's BIOS to work with the NIC. In this case, see your PC documentation or contact your PC manufacturer.

For more information, see the user guide that came with you PC.

Troubleshooting installation problems

3Com has observed that some PCI PCs require additional configuration steps in order to install a PCI NIC. 3Com recommends these steps:

1. Determine whether you have the latest BIOS version for your PC. Contact your PC manufacturer to obtain the latest version of the BIOS

2. Make sure that the BIOS is set up correctly. In some PCI PCs, you may need to enable the PCI slot using the BIOS Setup program. This is especially common in PCI PCs with a Phoenix BIOS.

3. After installing the NIC, turn the power on and enter the Setup program during system initialization. Refer to the BIOS section in your PC documentation.

4. Once in the Setup program, find the entry for PCI slots in the main menu or in Advanced System Configuration. Set the configuration parameter as follows:

Bios System Parameter	Setting
PCI Slot Number	Slot where the 3Com PCI NIC is installed (1-3)
Master	ENABLED
Slave	ENABLED
Latency Timer	40
Interrupt	Choose from available interrupts
Edge or Level	Level Triggered Interrupt

(**NOTE:** The exact name of each parameter may vary.)

1 Save the changes, exit the Setup program, and continue with the installation.

Canceling the installation in Windows 95

When you install a 3Com NIC in a PC running Windows 95, the operating system automatically detects the presence of the NIC and asks for the *EtherCD* containing the network driver for the NIC.

At this point, you can choose to cancel the installation of driver and install it later. Even though the driver installation has been cancelled, the fact that the NIC is installed is recorded in the system registry.

Later, when you install the driver, the operating system assumes that you are installing another instance of the NIC, not installing the driver for the already recorded instance. This results in tow instances of the NIC being recorded in the system registry. The NIC does not operate correctly under these circumstances.

To correct this problem:

1. Double-click the System icon in the Control Panel.
2. In the Device Manager, under Network Adapters, the two instances of the NIC appear.
3. Remove the NIC that is marked as disabled.
4. Restart the PC.

3Com NIC diagnostic tests

Network connectivity is disabled automatically when you run any of the 3Com NIC diagnostic tests (the NIC Test, Network Test, or Remote Wake-Up Test). No applications other than the NIC diagnostic tests are able to access the network during these tests.

Your connection to the network is automatically restored when you exit the diagnostic tests. If the network connection is not automatically restored, reboot your PC.

DOS diagnostic program

The 3Com Configuration and Diagnostic program for DOS is for PCs running DOS, Windows 3.x, Windows for Workgroups, or Windows NT 3.51. The program runs in DOS-mode only. Do not run the program from the MS-DOS box or from a DOS shell within the operating system. Reboot with a DOS-bootable diskette, and then run the program.

To run the 3Com configuration and Diagnostic program for DOS:

1. Create installation diskettes from the EtherCD.
2. Reboot the PC with a DOS-bootable diskette.
3. Insert EtherDisk diskette 2 in the PC's floppy drive.
4. Enter the following command at the DOS prompt, where A is the letter of the floppy drive:

   `A:\3c90xcfg.exe`

NOTE: If you are running Windows 95, Windows 98, or Windows NT 4.0, use the windows-based 3Com NIC Diagnostic program. To access this program, make sure that the program is installed, open the Windows **Start** menu, select **Programs**, **3Com NIC Utilities**, and then click **3Com NIC Doctor**.

Auto negotiation is not reliable with a crossover cable

Auto negotiation is unreliable when using a crossover cable. 3Com therefore recommends that you use the same Media Type and Duplex settings (full or half) for the two NICs. Use the NIC diagnostic program to configure these settings.

Resource conflicts under Windows NT

This information applies to Intel (x86)-based PCs running one of the following operating systems:

- Microsoft Windows NT Workstation versions 3.5 and 3.51
- Microsoft windows NT Server versions 3.5 and 3.51

On these PCs, adding a 3Com NIC can occasionally cause a PCI resource conflict. When this occurs, the system stops responding (hangs), or one or more of the PCI devices fail to operate. These resource conflicts occur because the Windows NT Hardware Abstraction Layer sometimes assigns overlapping I/O port addresses for the NIC and other PCI devices.

When a resource conflict occurs, try one of the following procedures (click on a procedure below for more information):

- Swap slots
- Swap slot numbers in the Registry
- Change the load order of drivers

Running the DOS ODI driver with a non-Novell protocol

Add the keyword NO_PIPELINE to your NET.CFG file when running the DOS ODI driver with a non-Novell protocol in a DOS environment.

Follow these steps to add the NO_PIPELINE command to your NET.CFG file:

1. Access the C:\NWCLIENT directory and open the NET.CFG file. Enter:

   EDIT NET.CFG

2. Scroll through the file to the LINK DRIVER 3C()X section and locate the following line:

   LINK DRIVER 3C90X

3. Add NO_PIPELINE after LINK DRIVER 3C90X. Your file should now look like this:

   LINK DRIVER 3C90X

   NO_PIPELINE

Disabling the driver in a Windows NT system

3Com has observed that if you disable the driver when protocols are not installed in your system, your PC may crash. When this error occurs, you must reboot the PC.

Microsoft has acknowledged this problem in Windows NT and had provided a fix in Service Pack 2.0. To avoid this problem, keep at least one protocol loaded (Windows NT does not let you disable the driver).

Sharing interrupts under Windows 95

If two or more PCI NICs in your PC use the same interrupt, you may get a blue screen or continuous PC reboots.

To fix this problem, assign a different PCI interrupt number to the 3Com NIC using system setup. Consult your PC documentation for more information about changing the interrupt values in your PC.

Warm booting with the DOS-based drivers running

3Com has found that some PCs do not reset the PCI bus when the Ctrl+Alt+Del key combination (a "warm boot") is used to restart the PC.

If the PC does not reset the PCI bus when pressing Ctrl+Alt+Del, the 3Com NIC stays in a running state that can cause problems if there is any network activity before the driver is reloaded. Avoid this problem by pressing the Reset button (if your PC has one) or by turning the power off before restarting. Also, make sure that your PC has the latest BIOS.

Frequently Asked Questions

The following are frequently asked questions about a 3Com PCI NIC. Before calling 3Com Technical Support, please review these topics to determine if they can resolve your problem.

Click a topic below for more information:

Which slot should I use to install my PCI NIC?

How can I identify bus-master slots in my PC?

Do I have to configure the NIC?

Does my 3Com PCI NIC support shared interrupts?

What interrupts should I avoid?

Which interrupt should I use?

Is the NIC compliant with PCI Specifications 2.1 or 2.2?

How do I update to the latest drivers on the current EtherCD?

How can I install a second 3C90x NIC in my PC?

Can I use a 3C509B-COMBO NIC with a 3C905/3C900 NIC?

Can I use an 3Com NIC in a DEC Alpha PC?

How can I run 3Com NIC diagnostics in Windows NT 3.51?

How can I run the 3Com NIC Diagnostic program with Novell Client 32?

Which NetWare server driver should I use?

Why does Windows 95/98 detect the NIC as a PCI controller?

Why does the NIC connect at half-duplex?

Why are the Windows 95 CD-ROM files not found during installation?

What is PIPELINE in the NET.CFG file for the 3C90x NIC?

Which slot should I use to install my PCI NIC?

3Com NICs are designed to work in any bus-mastering PCI slot. The NICs are not supported in "slave only" slots. Refer to your PC user guide for information on which slots support bus master data transfers.

How can I identify bus-master slots in my PC?

Generally, if you have three PCI slots in your PC, one slot will be designated as a "slave-only" slot (that is, it does not support bus-mastering data transfers). Slots are not always clearly marked to distinguish between slave-only and bus master slots. It is best to refer to your owner's manual or contact the PC manufacturer for this information. Also, make sure that you have the latest version of your system's BIOS installed.

Do I have to configure the NIC?

PCI is a self-configuring bus architecture. Most of the time you only need to install the NIC in your system; PCI does the rest. However, on some PCI PCs, (mostly with combination PCI/ISA or PCI/EISA buses in the same PC) you may be required to configure the PC BIOS manually after installing your PCI NIC. If you need to configure your PC manually, refer to the user guide for your PC.

3Com testing has demonstrated that the AST Premmi a GX P90 PC seems to require running the EISA configuration utility once the NIC is installed to make sure that the I/O base address of the device does not conflict with other devices in the system.

Does my 3Com PCI NIC support shared interrupts?

The drivers for the 3Com PCI NICs support shared interrupts. However, because there is no industry-standard way to support shared interrupts, other NICs may support them differently, or not at all. If you have another PCI device that does not support shared interrupts (for example, a SCSI adapter host), either contact the manufacturer for a shared interrupt driver or try running the system setup program to assign it a different interrupt.

3Com has observed that the OS/2 NDIS 2.011 driver in LAN Manager version 1.3 does not support shared interrupts, but it is only a problem if you are using the OS/2 NDIS 2.01 driver in LAN Manager 2.2. If this is a problem, refer to your PC documentation to give each NIC a different IRQ and change the BIOS on your system to match.

What interrupts should I avoid?

You should avoid using any interrupts used by ISA/EISA boards that do not properly support shared interrupts (level-triggered). If you do not know or are unsure whether you NIC supports shared interrupts, then avoid using them.

In addition, try to avoid using the same interrupt as that of your local hard drive (normally IRQ 14 for IDE drives and IRQ 11 for most SCSI host adapters), since not all hard drives support shared interrupts at this time.

For Novell NetWare servers, you should also avoid using IRQ 7 or 15. These IRQs support only nonshared devices and may cause problems if they are shared between two devices.

Which interrupt should I use?

Unless your system is a PCI-ISA/EISA combination PC that requires manual configuration, you should not have to worry about setting interrupts. However, if your PC is not self-configuring, you will need to set your PCI NIC's interrupts manually.

To do this, you may need to set a jumper on your motherboard or set the interrupt in the system's BIOS. In either case, you will need to assign the PCI interrupt (INTA) to any available interrupt not being used by an ISA or EISA add-in board already in your PC. Keep in mind that the interrupt configuration on your PC's motherboard and in your BIOS must match. Because PCI supports shared interrupts, multiple 3Com PCI NICs can use the same PCI interrupt.

Is the NIC compliant with PCI Specifications 2.1 or 2.2?

3Com NICs comply with PCI Specification 2.1. The 3C905CX and 3C905C NICs comply with PCI Specification 2.2.

For more details, see the 3Com product data sheet.

How do I update to the latest drivers on the current EtherCD?

The latest drivers can be downloaded from 3Com's World Wide Web site (http://www.3com.com).

Windows 98 and Windows 95 (OSR2)

To update to the latest drivers on the *EtherCD* in a PC running Windows 98 or Windows 95 (OSR2):

1. Open the Windows Start menu, select Settings, and then Control Panel.
2. Double-click the System icon, and then click the Device Manager tab.
3. Double-click Network Adapters, and then select the 3Com EtherLink NIC.
4. Click Properties.
5. Select the drivers tab, and then click Update Driver.
6. Click Next.
7. Select Display a list of all the drivers in a specific location, so you can select the driver you want, and then click Next.
8. Click Have Disk.
9. Insert the EtherCD in the CD-ROM drive, and then click OK.
10. Follow the prompts on the screen.
11. The update is complete when you are prompted to click Finish.
12. Restart the PC.
13. When Windows restarts, right mouse click on the Network Neighborhood icon, and then click Properties.
14. Click OK to close the Network screen.

    The driver update is complete.

NOTE: for Instructions on updating the network driver in a PC running Windows 95 (Build 950) or Windows NT, see the text file appropriate for your operating system in the HELP directory on the *EtherCD*.

How can I install a second 3C90x NIC in my PC?

To install multiple 3Com NICs, follow the steps appropriate for you operating system.

Windows 95 and Windows 98

1. Install the first NIC in your PC and connect it to the network.

    CAUTION: Do not physically install the second NIC in your PC until you complete the network driver installation for the first NIC, following the steps below.

2. Turn the power on to the PC and start Windows.

3. When Windows detects the NIC and prompts you for a diskette, insert the EtherCD in the CD-ROM drive.

4. Follow the prompts on the screen to install the network driver.

5. After the network driver is installed, reboot the PC.

6. After the PC reboots, exit Windows and turn off the power to the PC. Make sure that the PC is unplugged.

7. Install the second NIC in the PC and connect it to the network.

8. Plug the power cord in, and turn the power on to the PC.

    Windows displays a message about multiple NIC installations.

9. Click OK.

10. Install the network driver for the second NIC.

11. Reboot the PC.

12. Repeat the process for each additional NIC to be installed.

Windows NT 4.0

To install multiple NICs in a PC running Windows NT 4.0:

1. Install the NICs in your PC and connect each to the network.

2. Turn on the power to the PC and start Windows NT.

3. Double-click the My Computer icon, then the Control Panel icon, and then the Network icon.

    The Network screen appears.

4. Select the Adapters tab, and then click *Add*.

    The select Network Adapter screen appears.

5. Insert the *EtherCD* in the CD-ROM drive, and then click *OK.*

    The Select OEM Option screen appears.

6. Make sure that the name of the 3Com EtherLink PCI NIC is selected, and then click *OK*.

    Files are copied.

7. Follow the prompts on the screen to install the network driver for the first NIC.

8. When prompted, reboot the PC.

9. Repeat step 3 through step 9 for each additional NIC to be installed.

Can I use a 3C509B-COMBO NIC with a 3C905/3C900 NIC?

The 3C509B-COMBO NIC can lose network connection when it is installed with a 3C905x or 3C900x NIC in the same PC.

The loss of network connection only occurs if you attempt to run the 3Com NIC Diagnostic program on the 3C905 NIC when the 3C509B NIC (in Plug and Play mode) is still connected to the network. When the diagnostics run, the operating system reallocates resources to the 3C905 NIC, which causes the 3C509B NIC to lose the network connection.

To avoid this problem, boot the PC in DOS mode and execute the DOS Configuration and Diagnostic program for the 3C509B NIC. Under Adapter Configuration, disable Plug and Play, and save the changes. Reboot the PC. Windows 95 assigns new resources. The driver for the 3C509B NIC functions properly.

Can I use an 3Com NIC in a DEC Alpha PC?

EtherCD version 5.1 does not support DEC Alpha PCs. However, *EtherDisk* 4.x does support the NDIS driver for the DEC Alpha PC for Windows NT 4.0. You can download it from the 3Com World Wide Web site (http://www.3com.com).

How can I run 3Com NIC diagnostics in Windows NT 3.51?

Use the 3Com Configuration and Diagnostic program for DOS to troubleshoot problems or change configuration settings for a 3Com NIC installed in a PC running Windows NT 3.51.

To run the 3Com Configuration and Diagnostic program for DOS:

1. Create installation diskettes from the EtherCD.

2. Reboot the PC with a DOS-bootable diskette.

3. Insert EtherDisk diskette 2 in the PC's floppy drive.

4. Enter the following command at the DOS prompt, where A is the letter of the floppy drive :

`A:\3c90xcfg.exe`

NOTE: Do not run the DOS diagnostic program from the MS-DOS box in Windows NT 3.51.

How can I run the 3Com NIC Diagnostic program with Novell Client 32?

The 3Com NIC Diagnostic program does not support driver suspension in a PC that is configured with Novell Client 32 with the 32-bit ODI driver.

To run the 3Com NIC Diagnostic program with Novell Client 32, do one of the following:

- Create installation diskettes from the *EtherCD*, boot the PC in DOS mode, and execute 3C90XCFG.EXE (the DOS Configuration and Diagnostic program) from *EtherDisk* diskette 2.

- Reconfigure Novell Client 32 to use an NDIS driver. (For exact directions, refer to your Client 32 instructions.)

If you see a message stating that the 3Com NIC diagnostic program does not support driver suspension when you attempt to run the 3Com NIC diagnostics program, verify that the hardware device is enabled before rebooting the PC.

To verify that the hardware device is enabled:

1. Right-click the My Computer icon, and then click Properties.

2. On the Device Manager tab, double-click Network adapters, and then double-click the EtherLink NIC.

   Look at the device Usage box and make sure the Current Configuration is checked. If you have only one hardware profile, it appears as "Original Configuration (Current)." If you have multiple hardware profiles, check the box where the NIC should be enabled.

3. Click OK.

4. Click OK to save settings.

Which NetWare server driver should I use?

The Hardware Support Module (HSM) standard for NetWare 4.11 is called HSM v3.3. NetWare 4.11 requires an HSM v3.3-compliant LAN driver. An HSM v3.3-compliant driver is located in the \ NWSERVER directory on the *EtherCD*. An HSM v3.3-compiant driver can also be used for NetWare versions 3.12 and 4.10. See Novell for the correct NLMs and support files for this environment. Other versions of NetWare are no longer supported on this *EtherCD* release.

Why does Windows 95/98 detect the NIC as a PCI controller?

Windows 95/98 detects the NIC as a generic PCI Ethernet controller (rather than a 3Com EtherLink NIC) under Other Devices in the Device Manager.

To enable Windows 95/98 to recognize the NIC:

1.Double-click the Control Panel Icon, and then the System icon.

2.Click the Device Manager tab.

3.Double-click Other Devices.

4.Select the PCI Ethernet controller entry, and then click Remove.

5.Reboot the PC and reinstall the NIC software. Insert the EtherCD when prompted.

Why does the NIC connect at half-duplex?

When the NIC's duplex setting is configured to *Auto Select* and the NIC diagnostics or the driver initializes, the NIC attempts to establish a link with the hub or switch to determine its duplex capability. If this communication is unsuccessful, the NIC connects at half-duplex for stability.

If you know that the hub or switch does support full-duplex, you can force the NIC to connect at full-duplex by running the NIC diagnostic program and setting the Duplex setting to *Full-Duplex*.

Why are the Windows 95 CD-ROM files not found during installation?

When Windows 95 detects the NIC and installs the drivers from the *EtherCD*, it asks for files from the Windows 95 CD (beginning with NETAPI.DLL). When you enter the correct path to the CD, the files are not found. The new NIC is detected and the drivers have been installed, but the CD has not yet been initialized by Windows 95.

When Windows 95 prompts you for files from the CD, enter the path as follows:

   x:\win95

(Where x is the CD drive letter for your PC.)

What is PIPELINE in the NET.CFG file for the 3C90x NIC?

Novell implemented a new feature in its IPX protocol that allows a faster, more robust handoff from the driver to the protocol stack. This feature is known as pipeline mode. This means that with Parallel Tasking technology, even if the frame length of the packet is unknown because it has not been read yet, the driver can still pass up a "no known frame length" value to the protocol and have the protocol allocate a set buffer for the packet. This is implemented by setting the PB register to –1, which allows Novell's IPX protocol to take full advantage of 3Com's integrated Parallel Tasking technology.

Since pipeline mode is relatively new, only Novell's IPX protocol supports it. Other implementations of IPX from Microsoft, ODI PKT, ODI NSUP, or older versions of LSL or IPXODI do not support this feature. Pipeline needs to be turned off in order for it to work in these cases.

A routine in the driver checks to see if you are running Windows. If the pipeline feature is commented out in the NET.CFG file, pipeline mode will be active until the PC starts Windows. At that point, pipeline mode is dynamically disabled until Windows is exited. If the pipeline feature is turned off in the NET.CFG file, pipeline is disabled whether you are in DOS or Windows.

KnowledgeBase Topics

KnowledgeBase topics provide solutions for specific problems. Please review these topics to determine if they can resolve your problem before calling 3Com technical Support.

Click a topic for more information:

Compaq Proliant 5000 PC

Dell Dimension XPS Pro 200n PC

Diamond Stealth 64 PCI video card

HP Vectra hangs at POST during memory check

HP Vectra VL5200

HP Vectra XU-6150

IBM clones with Award BIOS 4.50g

Micron Millennia (M55HI) PC

Net Server LS2 5/166, 3C90xB NICs, Windows NT 4.0 (Service Pack 3)

S3 Video and Windows NT

SNI PC with the 82440LX chip set and NetWare 4.1

Toshiba Tecra 720 CDT and Tecra 500 CS PCs

Tyan 16 Dual Pro with Matrox Video, PVR

NEC Mate NX MA30D and NEC Mate NX MA26D

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Compaq Proliant 5000 PC

Windows 95 detects the 3Com NIC as a PCI RAM device when the NIC is installed in a Compaq Proliant 5000 PC.

The Compaq Proliant 5000 PC is equipped with a primary and secondary PCI bus. If the NIC is installed in the secondary bus, Windows 95 mistakes it as a PCI RAM device. To avoid this problem, install the NIC in the primary PCI bus. Although Windows 95 may still find a PCI RAM card, it will also detect the 3Com NIC and install it correctly.

Dell Dimension XPS Pro 200n PC

When a 3C509B NIC and a 3C905 or 3C900 NIC are installed in the same PC running Windows NT 4.0, you may get a blue screen. When the 3C509B NIC is installed and configured for Plug and Play, the driver's request for PCI resources is not granted. To avoid this situation, disable Plug and Play for the 3C509B NIC.

To disable Plug and Play:

1. Insert the EtherCD in the CD-ROM drive.
2. Open the Windows Start menu, and then click Run.
3. Enter: `D:\pnpdsabl.bat`
4. The DOS PNPDSABL screen appears.
5. Click the X in the upper right corner of the screen to close the DOS screen and return to Windows 95.
6. Remove the EtherCD.
7. Shut down the PC and turn the power off.
8. Turn on the PC.

   The 3C509B NIC is not detected.

Diamond Stealth 64 PCI video card

When using a 3C905-TX NIC (configured at IRQ 11) in a 100 MHz Pentium PC (with an Intel motherboard with the Triton chip set) with Windows 95 and a Diamond Stealth 64 PCI video card (configured at IRQ 9) installed in a peer-to-peer network, large files do not transfer.

To correct this, use a standard VGA driver for the Diamond Stealth video card.

HP Vectra hangs at POST during memory check

The PC only hangs if the NIC is installed onto a live network. Because HP implements a PCI Reset differently than the way that the 3C90x NIC detects this signal, the NIC is still active when the PC is rebooted.

Contact HP for an updated BIOS that resolves this issue. After updating the BIOS, enter the system setup and under PCI Devices, set PCI Warm Reset to Yes.

HP Vectra VL5200

3Com has observed during testing that the 3C905 NIC using the NDIS driver under Windows 95 (OSR2) causes the PC to boot in Safe Mode. There is no known workaround, and 3Com recommends that you not use the 3C905 NIC in this PC.

HP Vectra XU-6150

The 3C90x NIC is not recognized by the 3Com diagnostic program in an HP Vectra XU-6150 PC running Windows NT with a Matrox video card.

When Windows NT loads the driver, the PC does a screen dump. The 3C90x NIC is not recognized by 3Com diagnostics for the following configuration:

- HP Vectra XU-6150
- Windows NT 3.561
- 3C905-TX
- Matrox video card
- BIOS, version GG.06.03

Install the NIC in slot 2 and the Matrox video card in slot 3.

IBM clones with Award BIOS 4.50g

The Windows 95 and Windows for Workgroup configuration utilities running in IBM clones with the Award BIOS, version 4.50g, automatically set a 3Com NIC's IRQ to 0, which causes the operating system to fail to detect the NIC in the PC.

Set the PCI configuration for slot 1 in the BIOS setup program as follows:

Slot 1—RIGHT

    Latency Timer80 PCI Clock

    Using IRQ 10

    Trigger/Routing   Level/Auto

Micron Millennia (M55HI) PC

When attempting to run the DOS configuration utility for the 3C905 NIC in a Micron Millennia (M55HI) PC with BIOS version 3, the following error appears:

> **Incorrect configuration is set by the BIOS. Get an updated BIOS from the PC manufacturer or try to install the NIC in another slot.**

This error only occurs when the 3C905 NIC is installed in slot 1, 2, or 3. To correct this problem, install the NIC in slot 4. If slot 4 is unavailable, disable Plug and Play in the system BIOS. (This eliminates the error in all four slots.) See your PC documentation for the correct procedure to disable Plug and Play in your PC.

Net Server LS2 5/166, 3C90xB NICs, Windows NT 4.0 (Service Pack 3)

3Com has observed that when a 3C90xB NIC is installed in the secondary PCI bus slot of a NetServer LS2 5/166 PC, the PC may intermittently hang. Possible symptoms include a locked-up mouse pointer, steady hourglass, or the inability to execute any programs.

To correct this problem, install the NIC in the primary PCI bus slot.

This problem has been observed only in the LS2 5/166 model of the NetServer. 3Com is currently working with HP to resolve this issue.

S3 Video and Windows NT

During testing, 3com has observed a problem that occurs with Windows NT involving S3 video drivers and PCI memory mapped I/O devices installed on the secondary PCI bus. A symptom includes system lock up upon initialization of Windows NT.

The problem has been observed with the Dell OptiPlex GXPro 6/180 using the 3C905B NIC with Windows NT 4.0 and Service Pack 3.

To correct this problem, do one of the following:

- Update the video driver for the S3 Trio64V+ (765DRV—version 2.00.18)
- Install the NIC in the primary PCI bus slot
- Uninstall Service Pack 3

The S3 driver included with the Service Pack 3 for Windows NT makes several writes to unclaimed memory space in the PCI bridge chip, causing Windows NT to become unstable and freeze.

SNI PC with the 82440LX chip set and NetWare 4.1

If the server abends with stack overflow errors in an SNI PC running NetWare 4.1 with the 92440LX chip set installed, contact Adaptec or SNI for an updated SCSI driver for the PC.

Toshiba Tecra 720 CDT and Tecra 500 CS PCs

3Com has identified issues that may cause data loss with the Toshiba Tecra 720 CDT and Tecra 500 CS PCs that are running DOS with a DeskStation V+ docking station.

To avoid this situation, when using the 3C905-TX or 3C900 NIC and the NetWare DOS ODI client driver, edit the NET.CFG file to turn off the pipeline feature:

LINK DRIVER 3c90x

No_Pipeline

Save the file and reboot the PC.

Tyan 16 Dual Pro with Matrox Video, PVR

Neither the 3com NIC Diagnostic program nor the Window NT 4.0 workstation recognizes the 3C90x NIC in the following configuration:

- Tyan motherboard 16 dual Pentium 200 MHz with PCI slots
- Award BIOS, version 4.5
- Windows NT 4.0 workstation
- Matrox video card with 2 MB RAM (PCI)
- Digital Perception video recorder (PCI) (used for video editing)

To correct this problem, reinstall the 3C90x NIC in slot 2, the Digital Perception video card in slot 3, and the Matrox video card in slot 4.

NEC Mate NX MA30D and NEC Mate NX MA26D

If your NEC Mate NX MA30D or MA26D PC has Phoenix BIOS 4.0 Release 6.0, disable Plug and Play before you install the NIC driver in Windows 95. After you install the NIC driver, re-enable Plug and Play.

Swap slots

If the conflict is with another plug-in PCI device, swapping the PCI slots of the 3Com NIC and the conflicting device may resolve the problem. Swapping the slots may cause the system BIOS to swap the I/O port addresses assigned to the two devices, which will eliminate the conflict that occurs later when Windows boots.

Swap slot numbers in the Registry

If the conflict is between two 3Com NICs, try swapping the PCI slots of the two NICs. If this does not work, you must edit the System Registry using the Registry Editor. The Registry Editor can be found in the \WINNT35\SYSTEM32\REGEDT32.EXE file.

In the HKEY_LOCAL_PC\SYSTEM\Current Control Set\Services tree of the Registry are keys for the two 3Com NICs, EL90X1 and EL90X2. In the Parameters subkey of each of these keys are two values, Slot and Slot Number, which are the same. Swap the slot values for EL90X1 with the slot values for EL90X2. Make sure to swap both the Slot and the Slot Number values.

Changing these values causes the driver to register and activate the two NICs in a different order, which eliminates the conflict.

Change the load order of drivers

If swapping the slot numbers in the Registry did not work, change the load order of the drivers for the 3Com NIC and the conflicting device. In the HKEY_LOCAL_PC\SYSTEM\Current Control Set\Services tree of the Registry Editor, you should find the driver keys for the 3Com NIC (EL90X) and the conflicting device. For the key that comes first in the tree, add a value with the name DependOnService and a string value that is the key of the driver for the other device.

For example, if the conflict is between a 3Com NIC and an older 3Com EtherLink III PCI NIC, then the two driver keys are EL90X and EL59X. EL59X is the first in the tree, so you would add the "DependOnService: EL90X" value to the EL59X key. This forces the 3Com NIC driver to load first, instead of the EtherLink III PCI NIC driver.

Alert Target Addresses Button

Allows you to configure the IP address and gateway IP address of the alert target management station that is to receive the alerts when they are generated.

Invalid Entry

This is not a valid entry for an IP address. This field cannot be 0.0.0.0.

About 3Com NIC Help

3Com NIC Help version 5.4.1.

WakeUp From Standby

WakeUp from Standby is the ability to remotely power on the PC after the PC enters standby or hibernate mode of operation.

Disabled blocks all wake-up events from waking the system from standby mode.

Enabled Custom allows you to determine which events can wake the system from standby mode.

Cable Hold Off Timer

Cable Hold Off Timer is the time, in seconds, that the PHY portion of the network controller chip is powered off.

Cable to Detect Timer is the time, in seconds, that the PHY portion of the network controller chip is powered on.   This interval is used to determine if the network cable has been plugged back in.

These settings are used in combination to extend the battery life on laptop computers. The settings work only when the network cable is unplugged.

NOTE: If the advanced properties tab for the NIC driver includes the parameter **Software Cable Detect**, these parameters have no effect.

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These settings are used in combination to extend the battery life on laptop computers. The settings work only when the network cable is unplugged.

NOTE: If the advanced properties tab for the NIC driver includes the parameter **Software Cable Detect**, these parameters have no effect.

Keep Poll Timer

Keep Poll Timer is used to configure LAN power management for laptop computers.   When enabled, this setting may provide extended battery life while the LAN cable is plugged in.

A setting of 0 is OFF (disabled).

A setting of 10 is ON (enabled).

NOTE: If the advanced properties tab for the NIC driver includes the parameter **Enh. LAN Power Mgmt**, this parameter has no effect.