Version 1.0

PCI Multi-I/O
User's Manual

*Plug into A
Brand-new World*

◆ *INDEX*
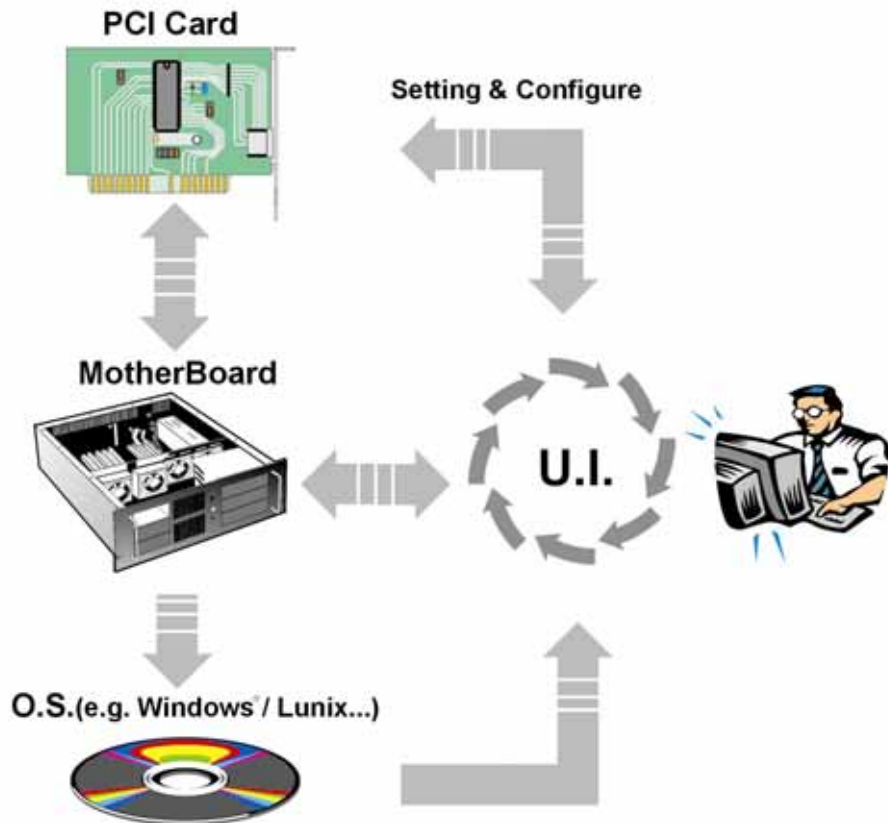
WHQL Certification Approval

The Designed for Microsoft Windows XP logo identifies products that meet Microsoft's quality standards, our I/O products carry with this logo and listed on Windows Catalog.

User Interface

We provides User Interface software application program, user can use this software driver to control Serial cards **RS-232** hardware directly.

As the flowchart, plug the PCI card on the Motherboard, then install the User Interface software application program under O.S. (e.g. Windows XP). User can control and configure PCI Serial card hardware parameter through this application program..

* Configure the bits per second, Data bits, Parity, Stop bits and Flow control if you want to change.

*There are three kinds of flow control: Xon/Xoff, Hardware and None.　Xon/Xoff is using software protocol. Hardware means the flow control is using RTS/CTS, but the RTS/CTS is controlled by software. None means there is no flow control.

*Configure the Enable Auto CTS/RTS Flow Control, 16/32/64 bytes FIFO length, and Receive/Transmit Buffer trigger level if you want to change.

*The detail of setting and configuring steps, please skip to page 30.

128K software FIFO

FIFO (First-in-First-out) memories size decide computer interrupter frequency. The size of FIFO length is bigger, the data flow is more, the system will work constantly at anytime, and the resource of CPU will be saved, the system performance can be increased. The detail of FIFO adjust please skip to the page 30.

Testing Environment :
CPU: Celeron 1 G
M/B : MSI MS-6547 (P4)
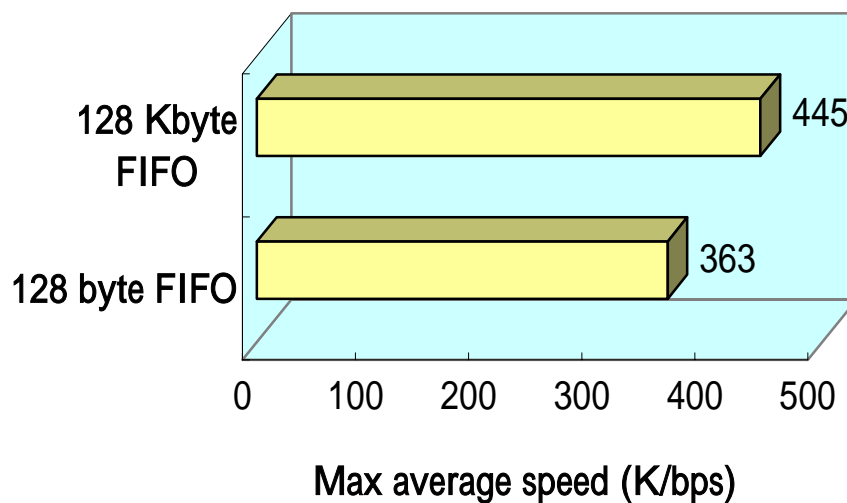Memory : 128MB
OS : Microsoft Windows XP

Testing Device :
I/O Card : 4 port RS-232 PCI interface Card
Test Driver : V5.560
Test program: Windows XP HyperTerminal

Increased FIFO butter for better performance

	Max average speed (K/bps)
128 Kbyte FIFO	445
128 byte FIFO	363

◆ 1.0 Introduction

Thank you for purchasing of the **Multi-I/O Card**. This unique PCI I/O card allows you to attach your computer to support DB-9M Serial & DB-25F Parallel ports, and get faster devices results.

The PCI I/O Card function of PCI Bus is for Plug and Play. Users do not need a jumper to set I/O address and IRQ location, and the system will search the device automatically. There is no conflict with other interface card or devices.

◆ 2.0 Specification

➢ 2.1 Features:

1. Provides FIFO maximize size 128K memories, it is 1024 times faster than existing PCI-bus serial ports. Reduces CPU loading and improves system performance dramatically.
2. High speed serial ports support baud rates up to 921Kbps.
3. Plug and Play and Re-Map to ISA address 3F8, 3E8, 2F8, 2E8
4. Improves I/O access speed up to 8 times faster than existing ISA-bus serial ports. Reduces CPU load and improves system performance dramatically.
5. IRQ sharing feature eliminates IRQ conflicts
6. Works with various type of parallel DB25F & serial DB9M devices.

➢ 2.2 Universal Multi I/O PCI Card:

1. **Bus type:** Supports both 64-bit & 32-bit PCI Bus
                    3.3V & 5V connector keys

64 bit PCI / 3.3V

32 bit PCI / 5V
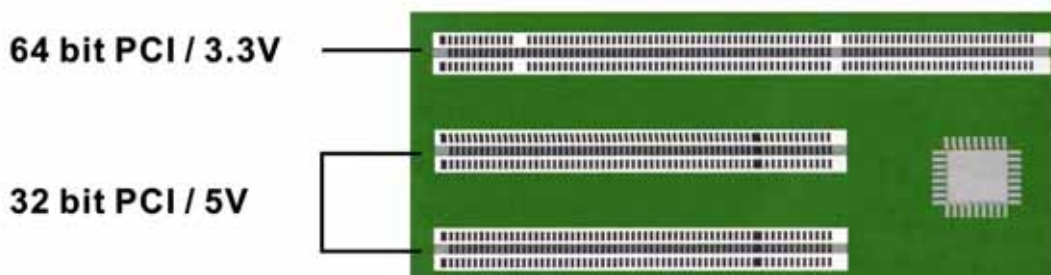
2. **Chip:**

Serial-SUN1889

Parallel-SUN1689

3. **Interface:**

Serial

High-Speed RS-232 Standard Serial-Interface ports.

Parallel

Support ECP(Enhance Capacity Port) / EPP(Enhance Parallerl Port)

SPP(Stander Parallerl Port) / BPP(Bi-direction Parallerl Port)

Conforms to IEEE 1284-1994 parallel port standard

4. **Speed:**

Serial

Up to 921 Kbps

Parallel

Up to 21.4MBps ECP/EPP/SPP/BPP（PS-II）

Full support for DOS and Windows based software

5. **Port type:**

Two or four DB9 Serial ports &

One or two DB25M parallel ports.

6. **FIFO Length:**

Serial

Built-in high-speed with 32-byte transmit/receive hardware FIFO buffers,

and support 128Kbyte software FIFO under OS Windows 2000/XP.

Parallel

Built-in high-speed with 32-byte transmit/receive hardware FIFO buffers

7. **I/O Address:**

Serial

Plug and Play

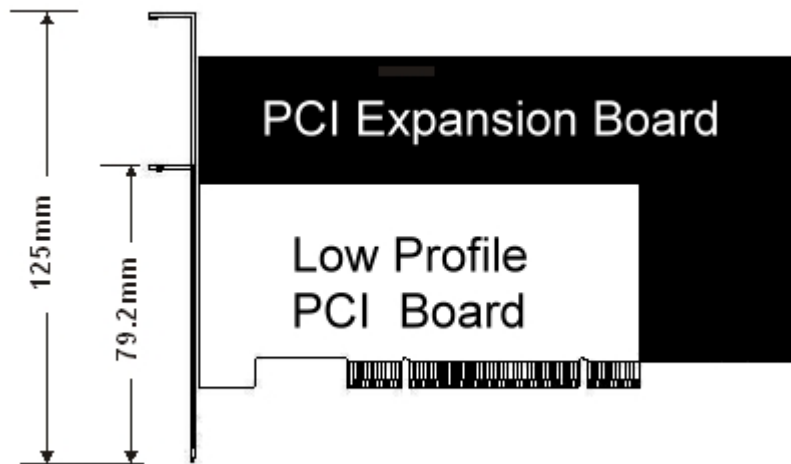Re-Map to ISA address 3F8, 3E8, 2F8, 2E8 (Re-Map function card only)

Parallel

Plug and Play or RE-Map to ISA address 278, 378

8. **IRQ** sharing feature eliminates IRQ conflicts.

➢ *2.3 Low Profile:*

Low Profile PCI cards are so small that they easily fit into almost any system.

➢ *2.4 System Requirements*

1. Pentium or equivalent computer with an available PCI slot.

2. CD-ROM / DVD-ROM required for software installation.

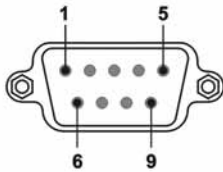3. Windows 3.1x/ 95/98SE/ME/NT4.0/2000/XP, DOS, Linux.

➢ *2.5 Package list*

1. Hardware:

   PCI Multi IO Card × 1

   Cable × 1

2. CD Driver

3. User's Manual

➢ *2.6 Pin Assignments*

Serial:
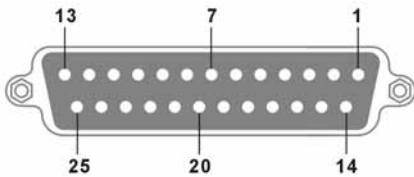
DB9 Male

PIN	Signal
1	DCD
2	RD
3	TD
4	DTR
5	GROUND
6	DSR
7	RTS
8	CTS
9	RI

Parallel:

DB25 Female

PIN	Signal	PIN	Signal
1	STROBE	14	AUTO FEED
2	DATA0	15	ERROR
3	DATA1	16	INIT
4	DATA2	17	SELECT INPUT
5	DATA3	18	GROUND
6	DATA4	19	GROUND
7	DATA5	20	GROUND
8	DATA6	21	GROUND
9	DATA7	22	GROUND
10	ACKNOWLEDGE	23	GROUND
11	BUSY	24	GROUND
12	PAPER EMPTY	25	GROUND
13	SELECT		

◆ *3.0 Operation Environment*

1. Operation temperature: 0   ~ 57

2. Operation humidity: 5 to 95% RH

3. Storage temperature:-20   ~ 85

◆ *4.0 Driver Installation*

➢ *4.1 Driver Installation Guide (Windows XP)*

Follow the steps below on installing the PCI Parallel Printer Card for the first time:

1. Open your computer case and plug the PCI Parallel Printer Card into your PCI slot.
2. Power on your computer and screen will show the PCI device listing display in a very short time (The data is reference resources).

Bus No	Device No	Func No	Vendor ID	Device ID	Device Class	IRQ
0	7	1	8086	7010	IDE Controller	14
0	13	0	1409	7268	Simple COMM Controller	10

3. When PCI Parallel Printer Card working normally, the system will detect the **PCI Parallel controller** automatically and run the **Add New Hardware Wizard** to assist you in setting up the new device.
   Please insert the CD Driver into the CD/DVD-ROM, and select "**Install the software automatically**", then click "**Next**" to continue install driver.


4. The system will search the driver automatically. Please choose the CD driver location: D:\IO\PCI\Win2k and xp, and click "**Next**"
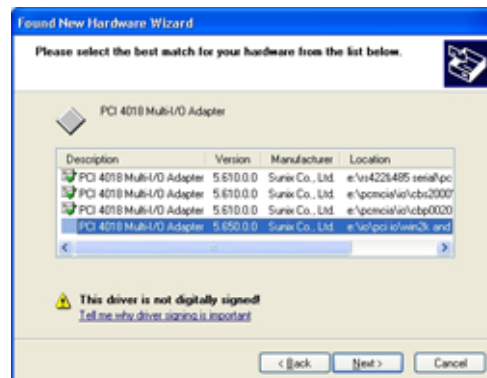
*If the system can't find the suitable driver, please click "**Back**" and follow the step:

Please select "**Install from a list or specific location**", and click "**Next**"

Please select "**Specify a location**" and click **Browse**. Change the folder of your CD-ROM drive **D:\IO\PCI IO\Win2k and xp**. Please click "**Next**" to continue installation.
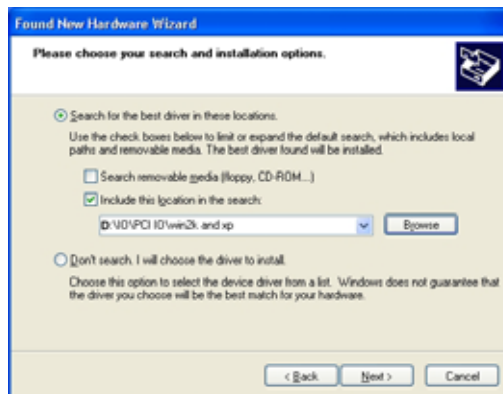
5. When this picture show up, please select "**Continue Anyway**".

The system will copy the needed files automatically.

6.Please click "**Finish**" to finish installing the software.

➢ Note: If you install PCI parallel ports to your system, you will be requested to restart your computer when you finish setting up each parallel port. Click 〝Yes〞 if all parallel ports have been installed, others click 〝No〞. For example, if you install two parallel ports in your system, click 〝No〞 for the first System Setting Change and click 〝Yes〞 for the last System Setting Change.

7. When Windows finished installing the software. You have to check the Control Panel-System-Hardware-Device Manager-Ports[COM&LPT] will show the additional ports.
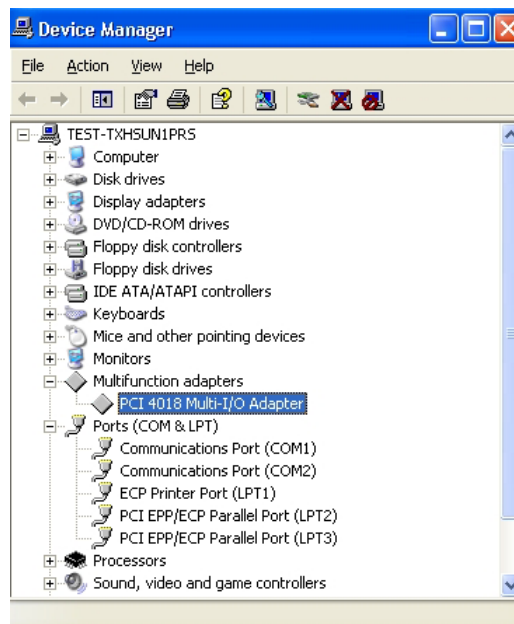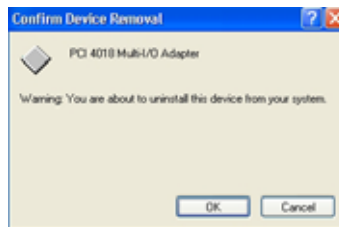

➢ *Driver Uninstall Guide (Windows XP)*

1. Please shot down your computer, and remove **PCI I/O Card** from PCI slot.
   The system will uninstall the device automatically after rebooting the computer, or follow the step to uninstall:
2. Please check the Control Panel-System-Hardware-Device Manager-Multifunction adapters-**PCI Multi-I/O Adapter**, and right check the mouse select "**Uninstall**".
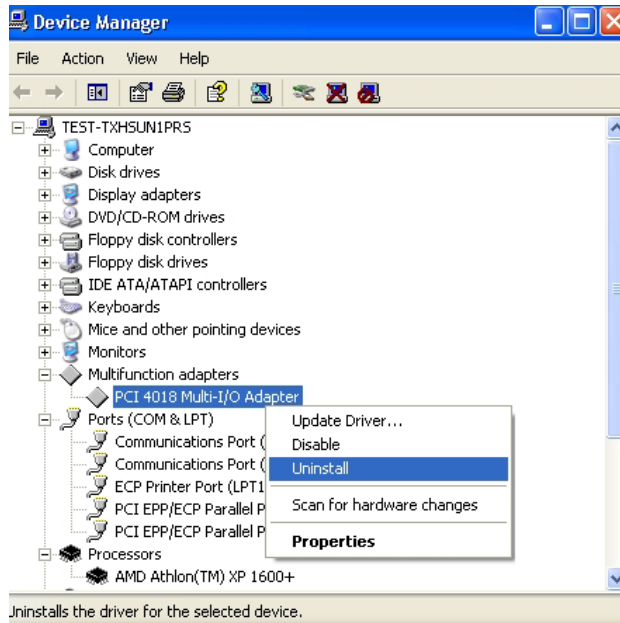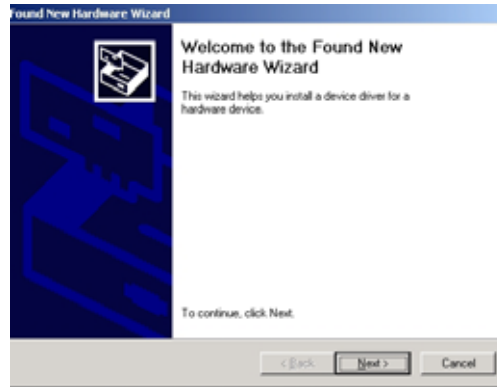
3.Please click "**OK**" to uninstall the device.

➢ *4.2 Driver Installation Guide (Windows 2000)*

Follow the steps below on installing the PCI Parallel Printer Card for the first time:

1. Open your computer case and plug the PCI Parallel Printer Card into your PCI slot.

2. Power on your computer and screen will show the PCI device listing display in a
   very short time (The data is reference resources).

| Bus No	Device No	Func No	Vendor ID	Device ID	Device Class	IRQ
0	7	1	8086	7010	IDE Controller	14
0	13	0	1409	7268	Simple COMM Controller	10

3. When PCI Parallel Printer Card working normally, the system will detect the
   PCI Parallel controller automatically and run the **Add New Hardware Wizard** to
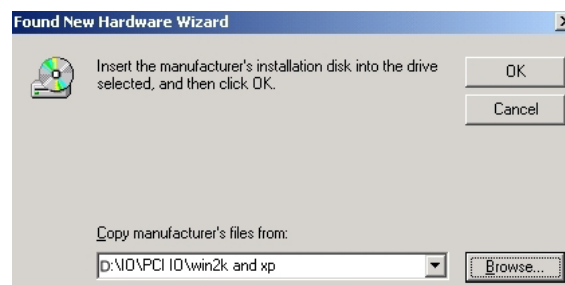   assist you in setting up the new device. Click "**Next**" to continue.

4.Please insert the CD Driver into the CD/DVD-ROM, and select "**Search for a suitable driver for my devices**", then click "**Next**" to continue install driver.
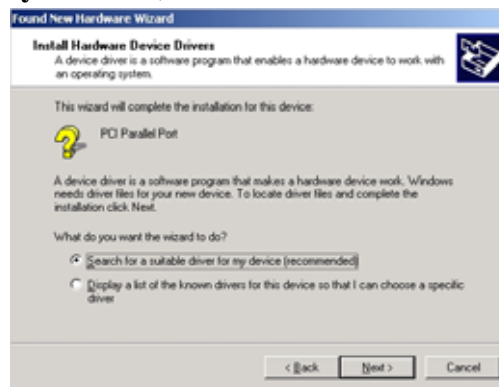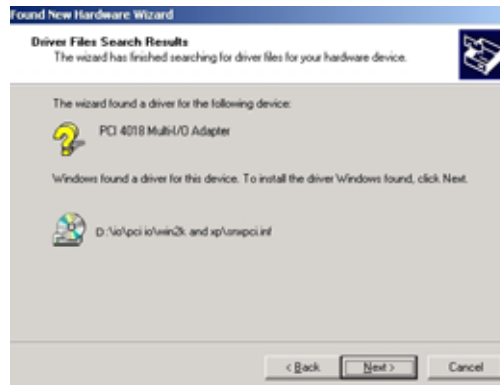

5. Please select "**specific location**", and click "**Next**".
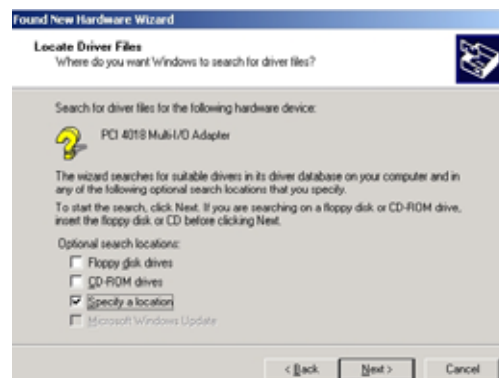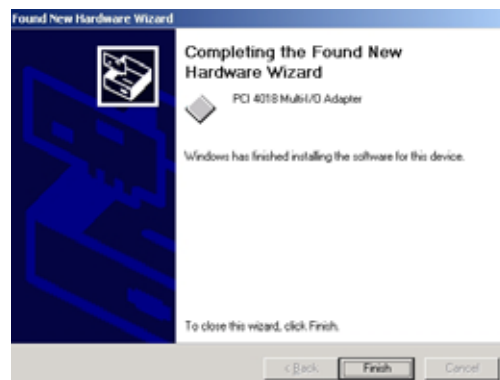

6. Click "**Browser**" to install driver from CD-ROM "**D:\IO\PCI IO\Win2k and xp**".
   Please click "**Next**" to continue installation.

7. Windows will detect the driver (snxpci.inf) and shows the device: **PCI Multi IO Adapter**. Click "**Next**" to copy the needed files to your computer .

8. e Please click "**Finish**" to finish installing the software.

➢ Note: If you install PCI parallel ports to your system, you will be requested to restart your computer when you finish setting up each parallel port. Click 　Yes 　 if all parallel ports have been installed, others click 　No 　. For example, if you install two parallel ports in your system, click 　No 　 for the first System Setting Change and click 　Yes 　 for the last System Setting Change.

9. When Windows finished installing the software. You have to check the Control Panel-System-Hardware-Device Manager-Ports[COM&LPT] will show the additional ports.
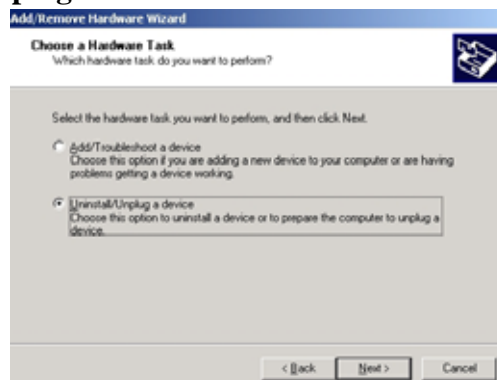

14
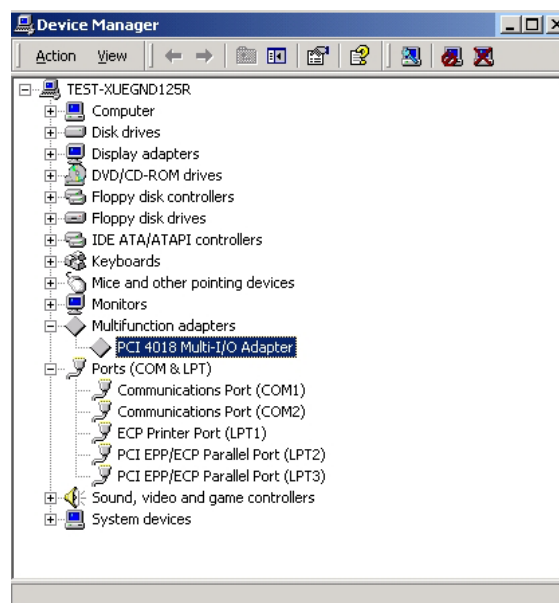
➢ *Driver Uninstall Guide (Windows 2000)*

1. Please shot down your computer, and remove **PCI I/O Card** from PCI slot.
   The system will uninstall the device automatically after rebooting the computer, or
   follow the step to uninstall:
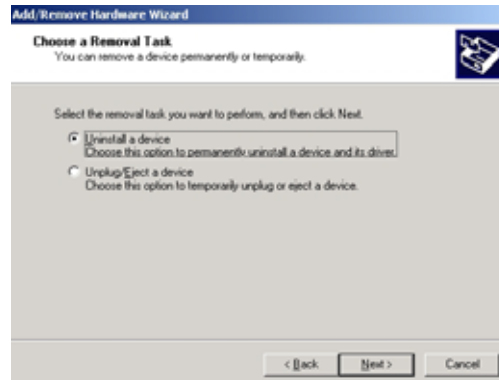2. Click the "Hardware Wizard" in "Hardware" of System Properties.
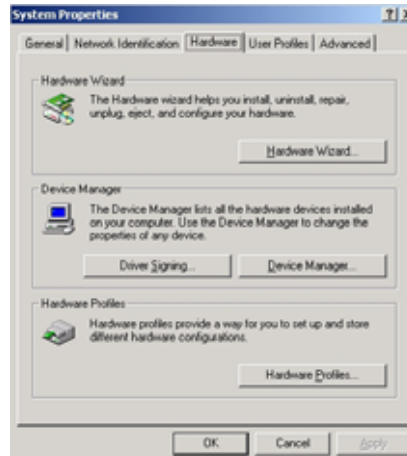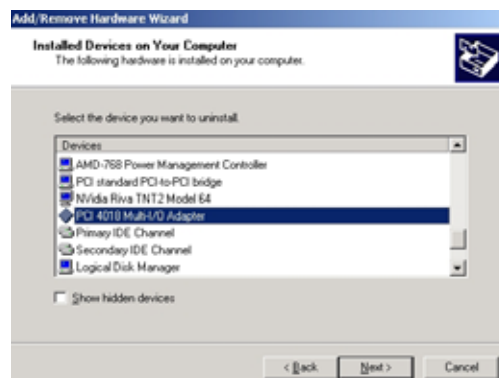
3.Please "**Next**" to continue.

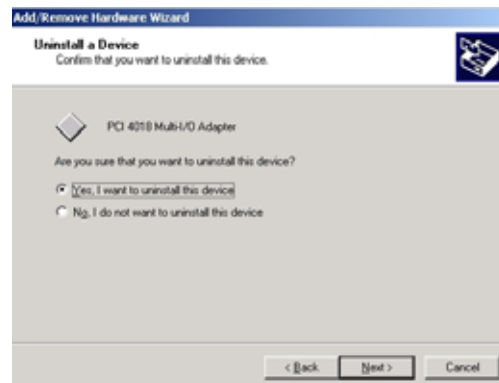4. Select "**Uninstall/Unplug a device**" and click "**Next**".

5. Select "Uninstall a device and click "**Next**".

6. Select the "PCI Multi I/O Adapter" and click "**Next**".

7. Select the "**Yes, I want to uninstall this device**" and click "**Next**"

8. Please click "**Finish**" to complete the Add/Remove Hardware wizard.

➢ *4.3 Driver Installation Guide (Windows 95/98SE/ME)*

Follow the steps below on installing the PCI Parallel Printer Card for the first time:

1. Open your computer case and plug the PCI Parallel Printer Card into your PCI slot.

2. Power on your computer and screen will show the PCI device listing display in a
   very short time (The data is reference resources).

Bus No	Device No	Func No	Vendor ID	Device ID	Device Class	IRQ
0	7	1	8086	7010	IDE Controller	14
0	13	0	1409	7268	Simple COMM Controller	10

3. When PCI Parallel Printer Card working normally, the system will detect the
   PCI Parallel controller automatically and run the **Add New Hardware Wizard** to
   assist you in setting up the new device. Click "**Next**" to continue.

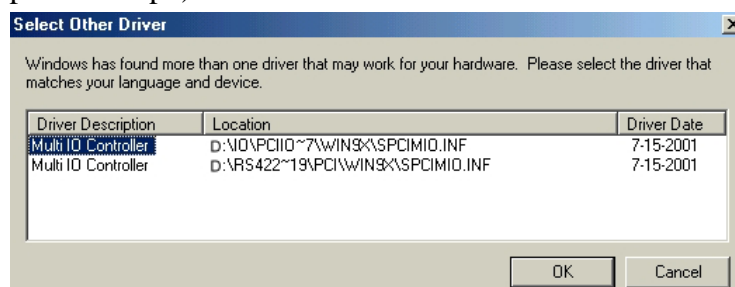4. Please insert the CD-Driver into your CD/DVD-ROM.
   Please select "**Search for the best driver for your device**" and click "**Next**".
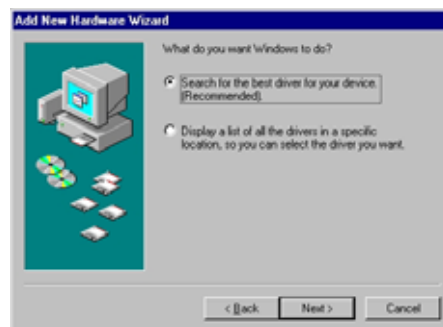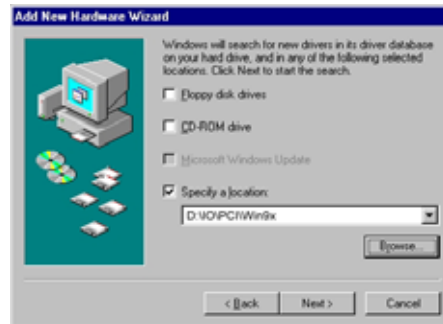

   Windows ME will search the drive automatically. Please select the driver:
   "Multi IO Controller" "E:\IO\PCI IO\Win9x\SPCIMIO.INF and click "**OK**"
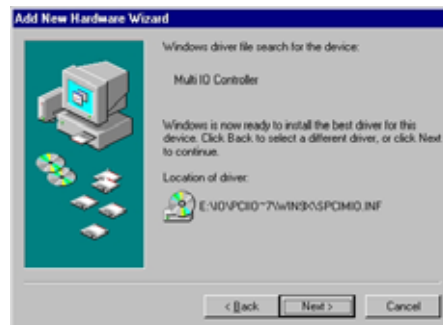   (Please skip to the step7)

5. Please select "**Specify a location**" and click **Browse**. Change the folder of your CD-ROM drive **D:\IO\PCI IO\Win9x**. Please click "**Next**" to continue installation.


6. Windows will detect the driver (SPCIMIO.INF) and shows the device: **Multi IO Controller**. Click "**Next**" to copy the needed files to your hard disk .


7.The system will show that **Multi IO Controller** software had been installed successfully, and please click "**Finish**".
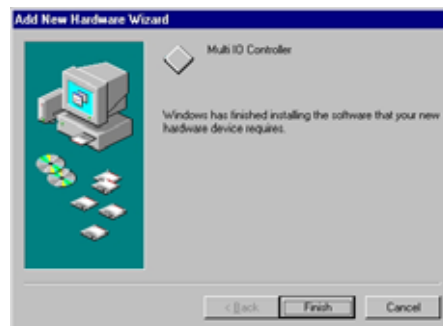
➢ Note: If you install PCI parallel ports to your system, you will be requested to restart your computer when you finish setting up each parallel port. Click 　Yes　 if all parallel ports have been installed, others click 　No　. For example, if you install two parallel ports in your system, click 　No　 for the first System Setting Change and click 　Yes　 for the last System Setting Change.

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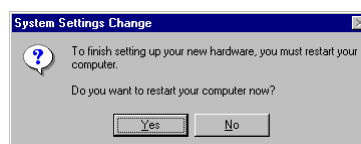
7. When Windows finished installing the software. You have to check the Control Panel-System-Hardware-Device Manager-Ports[COM&LPT] will show the additional ports.
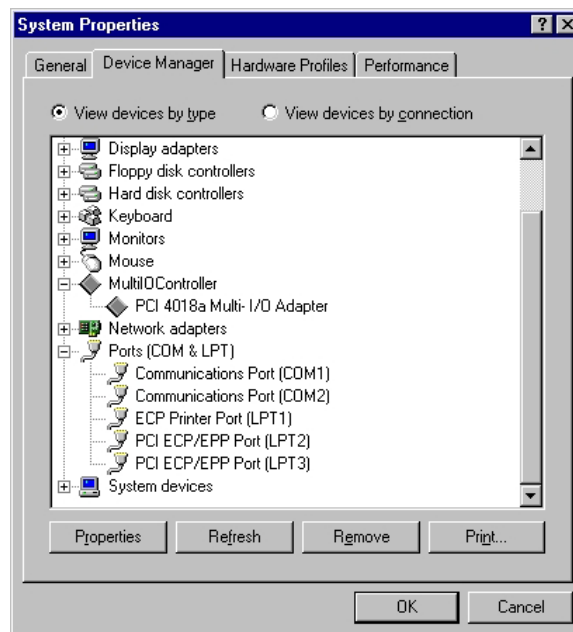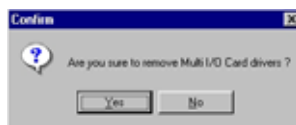

> *Driver Uninstall Guide (Windows 95/98SE/ME)*

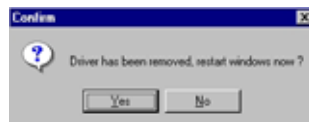1. Double click **Add/Remove** Programs in Control Panel.

2. Choose "**PCI Multi-I/O Card**", and click "**Add/Remove**", and click "**OK**"

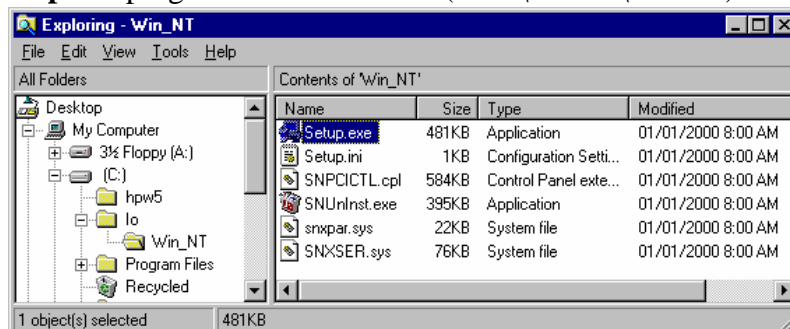3.Click "**Yes**" to remove Multi-I/O Card driver

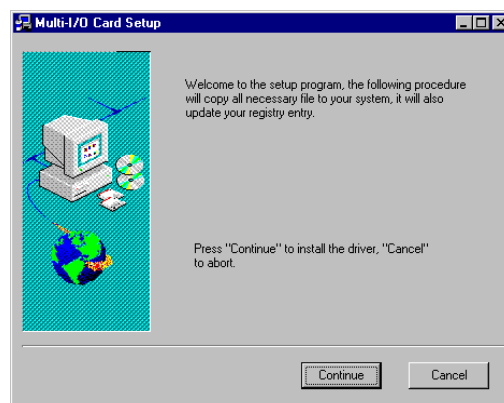4. Click "**Yes**" to restart the computer.

➢ *4.4 Driver installation Guide (NT4.0)*

1. Run the **setup.exe** program in CD Driver　(D:IO\PCI IO\WinNT)

2. Press "**Continue**" to install the driver.

3. Click "**OK**" to reboot computer to load the new installed driver to NT.
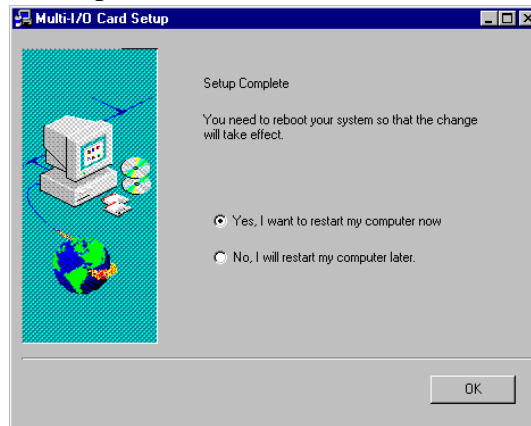
4. Check Your Windows NT 4.0 Installation

Click   Start   Programs   Administrative Tools [Common]
Windows NT Diagnostics
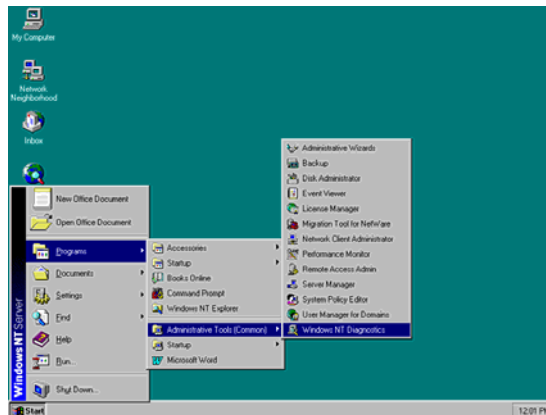
➢ Press Resources then press I/O port.You can find the I/O address of one parallel
port (SNXPAR) and two serial ports (SNXSER). You can find the IRQ
information by press "IRQ". You can find the IRQ information by press "**IRQ**".

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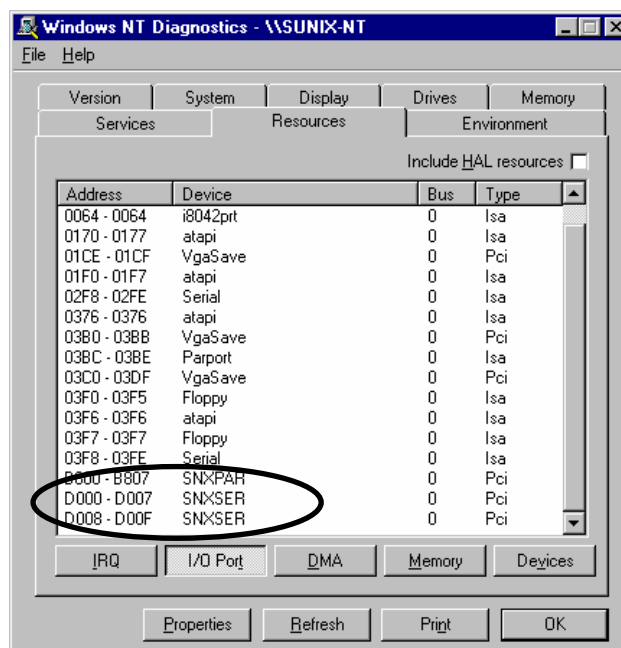
➢ *Windows NT 4.0 Uninstall Guide*

1. Double click **Add/Remove Programs** in Control Panel.

2. Select Multi-I/O Card Uninstall, press "**Add/Remove**".

3. Press "**OK**" to remove Multi-I/O Card driver.

4. Click "**OK**" to reboot the computer.

➢ *4.5 Driver installation Guide (DOS)*

This installation guide describes the procedures to install PCI serial / parallel ports in MS-DOS environment.

Normally serial and parallel I/O ports can be supported by BIOS call services in DOS environment. However there are only support 4 serial ports (3F8h,2F8h,3E8h,2E8h) and 3 parallel ports (3BCh/378h/278h) are supported by BIOS/DOS.
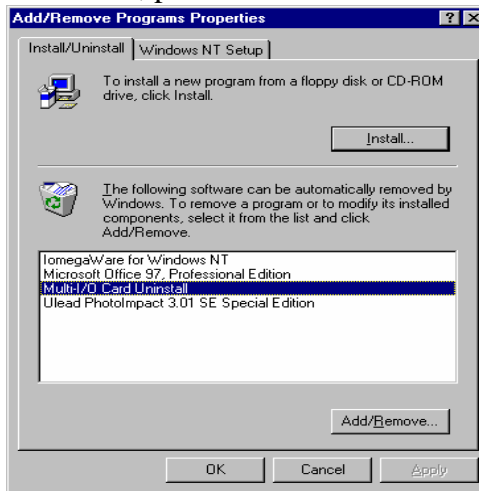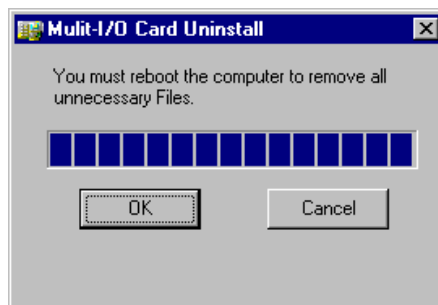
In case the PCI serial and parallel ports are different from the above configurations (e.g. I/O address or more than 4 serial ports / 3 parallel ports), they are not supported by BIOS/DOS directly. However some applications (e.g. "PComm Plus" could support 8 serial ports and each I/O address is settable) have their own driver, thus the PCI cards could work correctly.

[DOS platform]

● Microsoft DOS   : V5.0/V6.0/ V6.22

[Installation Steps]

(1) Run Install.exe   (from CD Drive disk : \PCI IO\DOS\INSTALL.exe)

```
Please enter the directory path for installation
C:\PCI_DOS                    (return for default)
```

(2) Enter the destination subdirectory
     You could enter your preferred destination subdirectory for installation, RETURN for default path. Once the dos driver has been installed successfully, the response looks like below.

```
  succeed ...Press Any Key

```

Note:
    1. The installation program will add the dos driver (one command line)
        "C:\Sunix\SunixPCI.exe   AUTO" to autoexec.bat file. The original batch
        file will be saved to autoexec.SNX.
    2. For uninstallation, just restore autoexec.snx into autoexec.bat.

(3) Start the dos driver automatically

Once the installation is completed, Install.exe will start the dos driver
(SunixPCI.exe) automatically. This means that it is not necessary to restart the
system once again.

```
    On-Board/ISA Serial COM1     3f8H
    On-Board/ISA Serial COM2     2f8H
    PCI Serial COM3 Remap        3e8H,IRQ 11
    PCI Serial COM4 Remap        2e8H,IRQ 11


    On-Board/ISA Parallel LPT1  3bcH
    PCI Parallel LPT2 Remap      378H IRQ 11
```

Note : This display is dependent on which PCI card you have.

(4) Check / inquire the PCI card information

You could run SunixPCI.exe any time to inquire the PCI serial and parallel port's
I/O address & IRQ information.

```
   ISA      PCI          Setup      Card       About
   On-Board/ISA Serial COM1      3f8H
   On-Board/ISA Serial COM2      2f8H
   PCI Serial COM3 Remap         3e8H,IRQ 11
   PCI Serial COM4 Remap         2e8H,IRQ 11


   On-Board/ISA Parallel LPT1    3bcH
   PCI Parallel LPT2 Remap       378H,IRQ 11
   PCI Parallel LPT3 Remap       278H,IRQ 10
```

ESC: Exit

ISA   : Detect on-board/ISA legacy serial /parallel ports.
PCI   : Find PCI serial /parallels ports.
Setup: Remap PCI serial port to legacy port / display port resources.
Card   : Display PCI card model.
About   : Version Information.

NOTE :
  1. All PCI parallel ports are possible to be remapped to legacy I/O address
     (378h,278h), thus the DOS driver will start remapping function
     automatically if any one of legacy ports is free.

2. Since some PCI serial ports can support the remapping function
   (e.g. /4027D/4037D/4056D/4079D).Thus please check it by PCIDOS.exe

Clock= 1.8432 Mhz for remapable port in DOS

Item	Actual Baudrate	BIOS/DOS setting	Remark
1	921600		Do not support
2	460800		Do not support
3	230400		Do not support
4	115200	115200	
5	57600	57600	
6	38400	38400	
7	19200	19200	
8	9600	9600	
9	4800	4800	
10	2400	2400	
11	1200	1200	
12	300	300	

3. Since PCI serial card are drived by a higher CLK (14.7456 Mhz), thus the
   actual baud rate is 8 times higher than the BIOS/DOS baud rate setting. The
   below table shows the relation.

Clock=14.7456 Mhz for all non-remapable port

Item	Actual Baud rate	BIOS/DOS setting	Remark
1	921600	115200	
2	460800	57600	
3	230400	28800	Non BIOS standard
4	115200	14400	Non BIOS standard
5	57600	7200	Non BIOS standard
6	38400	4800	
7	19200	2400	
8	9600	1200	
9	4800	600	Non BIOS standard
10	2400	300	
11	1200	150	
12	300	37.5	Non BIOS standard

➢ *4.6 Driver installation Guide (Windows3.1)*

This installation guide describes the procedures to install PCI serial / parallel ports in MS WINDOWS 3.1 environment.

Normally serial and parallel I/O ports can be supported by WINDOWS 3.1 default device driver. However there are only 4 serial ports (3F8h,2F8h, 3E8h,2E8h) and 3 parallel ports (3BCh/378h/278h) are supported by default.

Most likely the PCI serial ports are different from the above configuration (eg. I/O address or IRQ), these ports setting need to changed / modified in WINDOWS 3.1 manually. However it is necessary to inquire these PCI serial and parallel ports's resources in advance.

[OS platform]

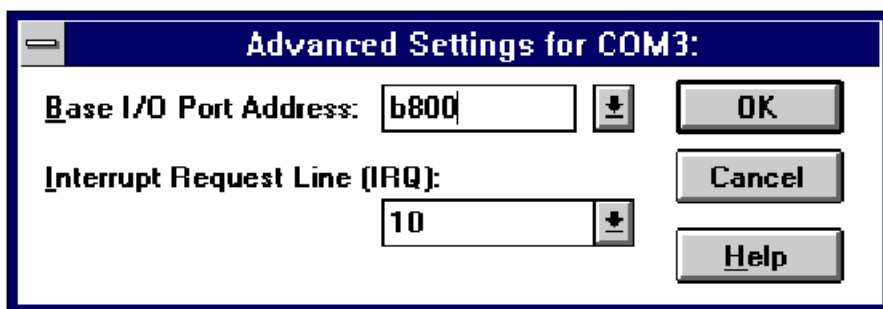Microsoft WINDOWS   : V3.1/V3.11

[Installation Steps]
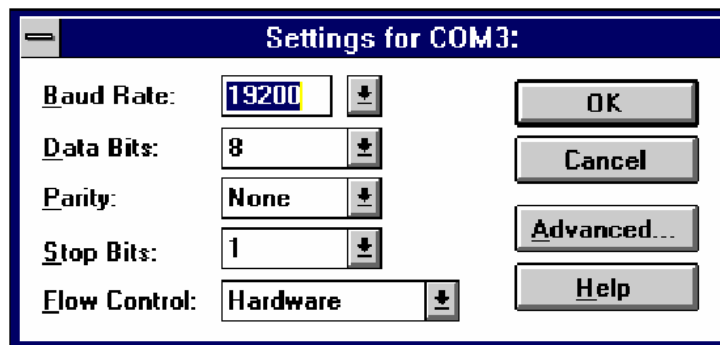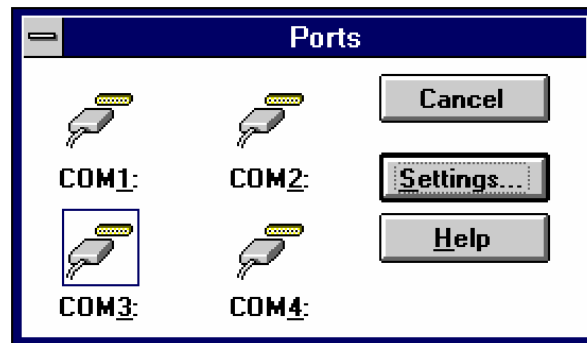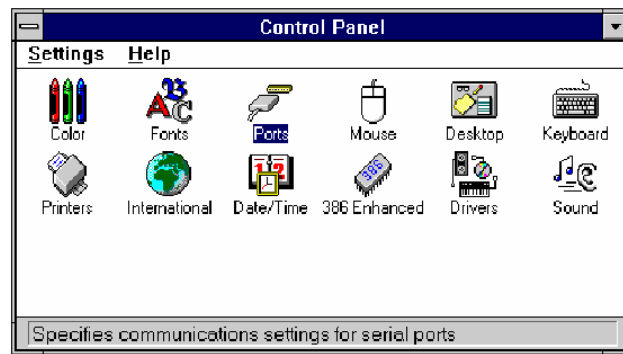
Run PCIDOS.exe   (from CD Drive disk : \PCI IO\DOS\ PCIDOS.exe)

```
   On-Board/ISA Serial COM1    3f8H

   On-Board/ISA Serial COM2    2f8H

   PCI Serial COM3             b800H,IRQ  10

   PCI Serial COM4             b808H,IRQ  10


   On-Board/ISA Parallel LPT1  3bcH
```
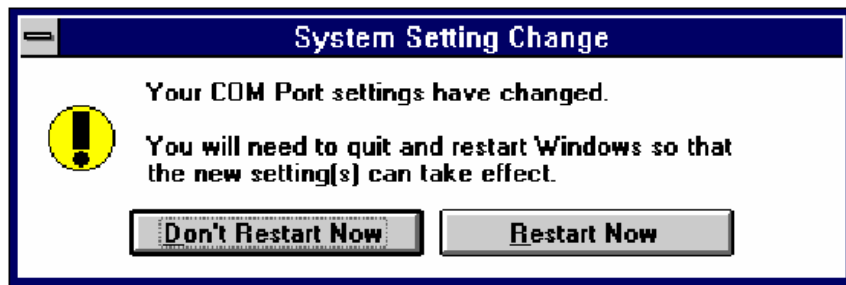
Start the WINDOWS 3.1
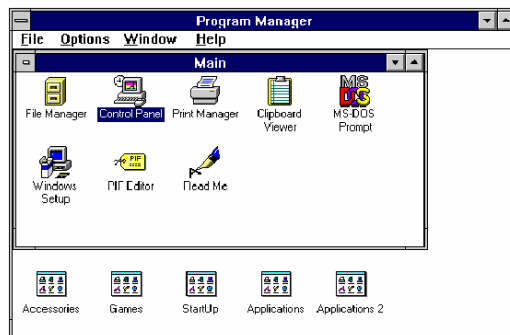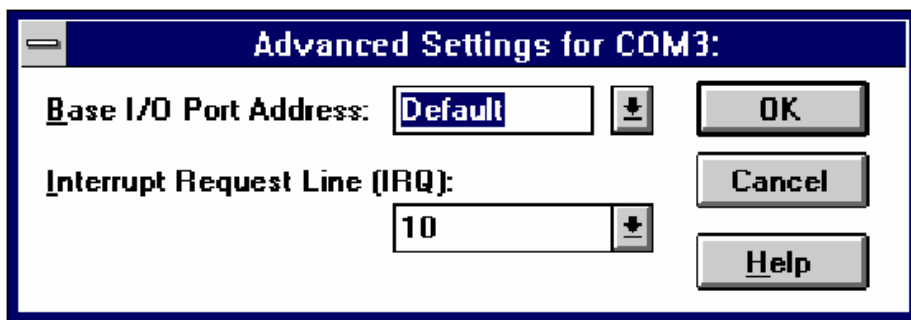
Change the port setting in Control Panel

Restart the system

Check the new setting

After system restart, the I/O port setting maybe become DEFAULT.

At this time, it is possible to check the PCI serial port setting in
\windows\system.ini file.

…..
…..
[386Enh]
…..
…..
COM3Base=B800
COM4Base=B808
COM3Irq=10
COM4Irq=10
…

NOTE :

1. Since some PCI serial ports can support the remapping function (4025D/4027D/4028D/4036D/4037D/4038D/4079D/E/F), thus please check the PCI card by SunixPCI.exe utility.

Clock= 1.8432 Mhz for remapable port

Item	Actual Baudrate	BIOS/DOS setting	Remark
1	921600		Do not support
2	460800		Do not support
3	230400		Do not support
4	115200	115200	
5	57600	57600	
6	38400	38400	
7	19200	19200	
8	9600	9600	
9	4800	4800	
10	2400	2400	
11	1200	1200	
12	300	300	

2. Since The PCI serial card are drived by a higher CLK (14.7456 Mhz), thus the actual baud rate is 8 times higher than the BIOS/DOS baud rate setting. The below table shows the relation.

Clock= 14.7456 Mhz for all non-remapable port

Item	Actual Baud rate	BIOS/DOS setting	Remark
1	921600	115200	
2	460800	57600	
3	230400	28800	Non BIOS standard
4	115200	14400	Non BIOS standard
5	57600	7200	Non BIOS standard
6	38400	4800	
7	19200	2400	
8	9600	1200	
9	4800	600	Non BIOS standard
10	2400	300	
11	1200	150	
12	300	37.5	Non BIOS standard

➢ *4.7 Driver installation Guide (Linux)*

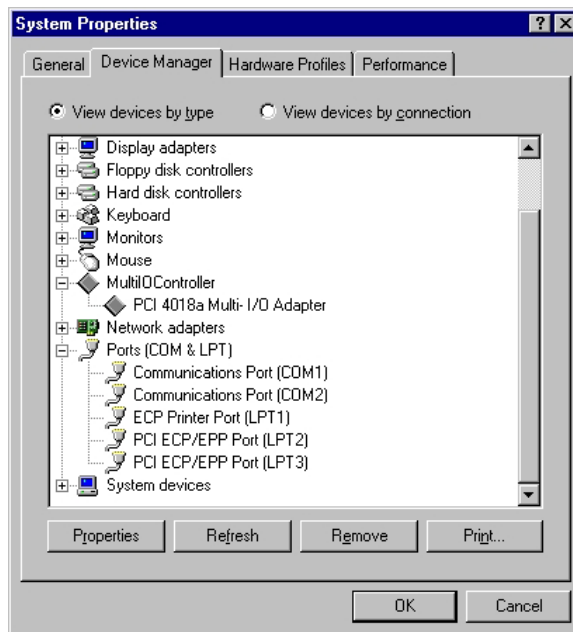Please read the detail files about the Linux OS system installation step from

CD ROM: \ IO\ PCI IO\Linux\Red Hat V8.0.pdf

CD ROM: \ IO\ PCI IO\Linux\Red Hat V6.0.pdf
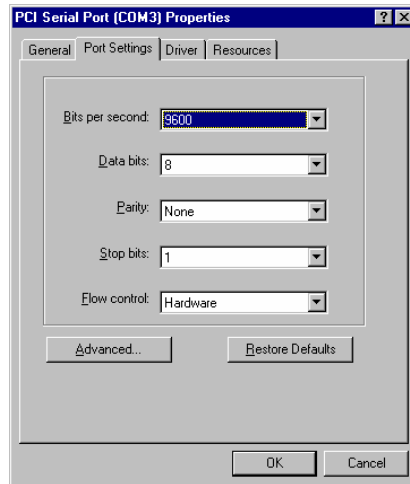
◆ *5.0 Configure COM port*

➢ *5.1 How to configure COM port (Windows 95/98/98SE/ME)*

1. Select the PCI Serial Port you want to configure for example **COM3**.
   Right check the mouse, and select the "**Properties**".

2. Click the "**Port Settings**".
   Configure the Bits per second, Data bits, Parity, Stop bits and Flow control if you want to change.

There are three kinds of flow control: Xon/Xoff, Hardware and None. The Xon/Xoff is using software protocol. The Hardware means the flow control is using RTS/CTS, but the RTS/CTS is controlled by software. The None means there is no flow control. Click the "**Advanced**" if you want to set more advanced features.

3. Configure the **"Enable Auto CTS/RTS Flow Control"**, "**16/32/64 bytes FIFO length"**, and Receive/Transmit Buffer trigger level if you want to change.
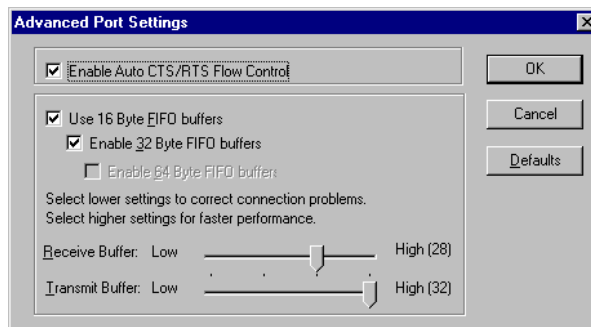

Enable Auto CTS/RTS Flow Control means the CTS/RTS flow control is controlled by hardware automatically. System will be more stable if the function is enabled.

If your card can support 32 bytes FIFO, you can use 16 or 32 bytes FIFO. The default value is Use 16 Byte FIFO buffers. If your card cannot support 32 bytes FIFO, the Enable 32 Byte FIFO buffers will be shadowed.

Set the Receive/Transmit Buffer to higher value will get faster performance because the interrupts will be reduced, but the time for interrupt service routine will become shorter. The receive buffer overflow will be easily happened if the CPU speed is not enough to handle. If the system is not stable, select the lower value to correct problems.

➢ **5.2 How to configure COM port (Windows 2000/XP)**

1. Select the PCI Serial Port you want to configure for example **COM3**.
   Press the right button and select "**Properties**".
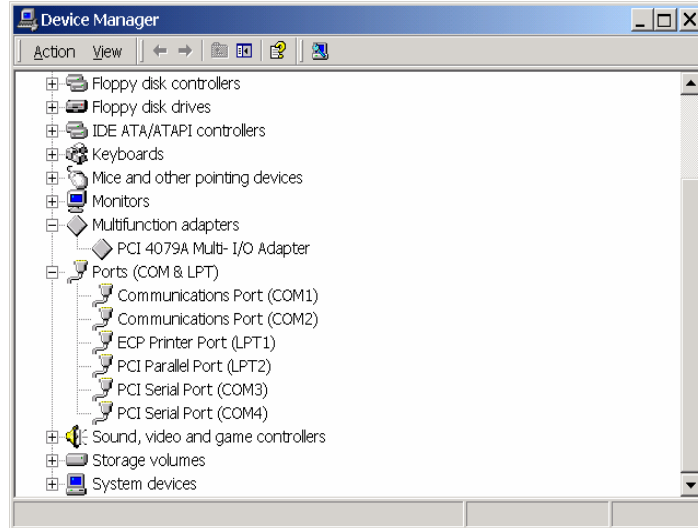
2. Click the "**Port Settings**". Configure the Bits per second, Data bits, Parity, Stop
   bits and Flow control if you want to change.
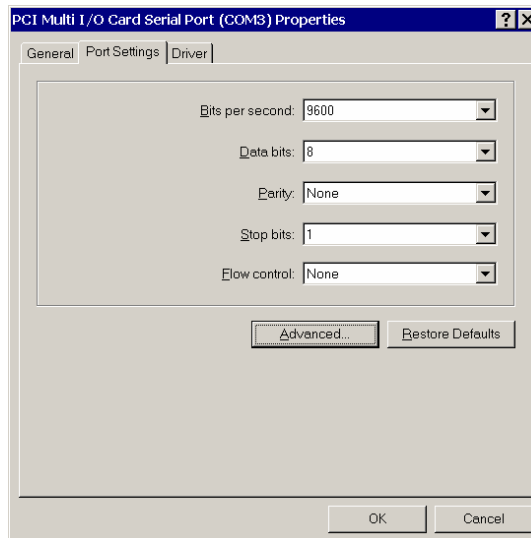
There are three kinds of flow control: Xon/Xoff, Hardware and None. The Xon/Xoff
is using software protocol. The Hardware means the flow control is using RTS/CTS,
but the RTS/CTS is controlled by software. The None means there is no flow control.

3. Click the "**Advanced**" if you want to set more advanced features.
   FIFO (First-in-First-out) memory size decision Computer interrupter frequency,
   When FIFO memory size more big, they can process more data flow, so don't need
   anytime use interrupter, CPU resource save, and system performance going up.

4. At Market, The Biggest FIFO size only 128 byte, **we provider 128K byte memory size to customer, it is market's 1024 times**.
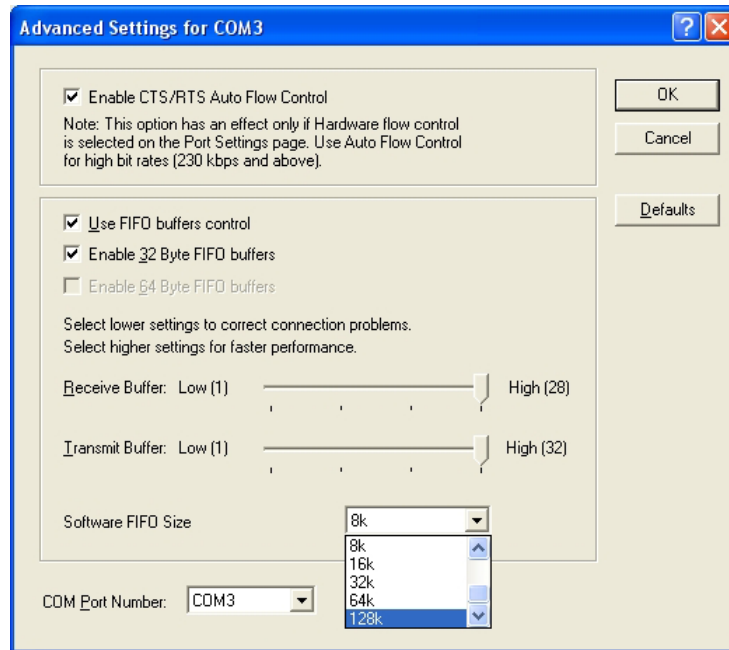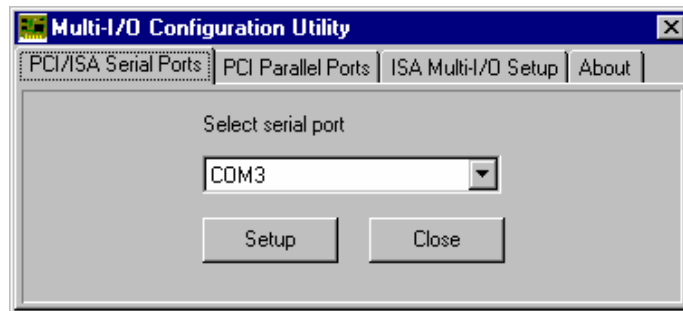

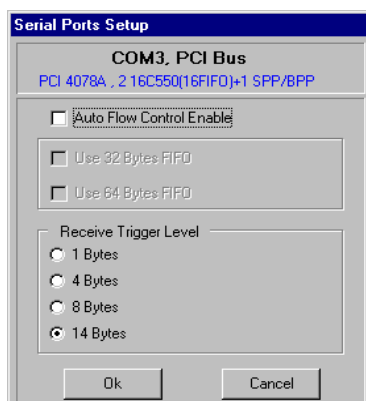➢ *5.3 How to configure COM port (NT4.0)*

1. Double click Multi-I/O Card Configuration icon.
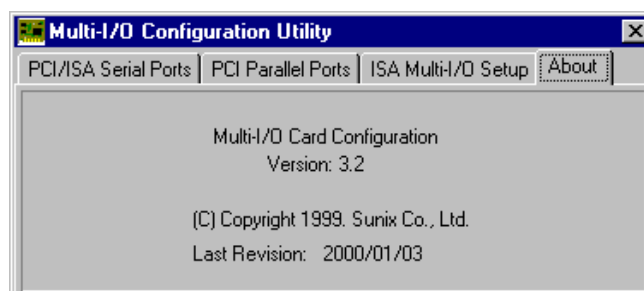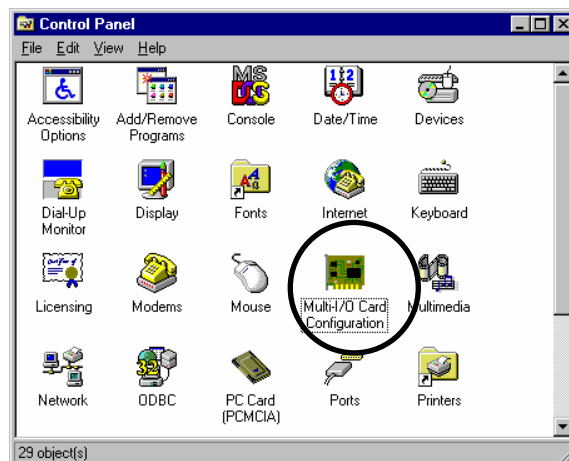
2. Press "**PCI/ISA Serial Ports**" and select the serial port you want to configure.
   Press "**Setup**" to configure the serial port .

3. Set the 32 byte FIFO or Auto Flow Control or Receive Trigger Level, click "**Ok**".

If your card can support 32 (64) bytes FIFO, you can use 16 or 32 (or 64) bytes FIFO.
The default value is Use 16 Byte FIFO buffers. If your card cannot support 32 (64)
bytes FIFO, the Use 32 (32 and 64) Bytes FIFO will be shadowed.

Auto Flow Control Enable means the CTS/RTS flow control is controlled by
hardware automatically. System will be more stable if the function is enabled.

Set the Receive Trigger Level to higher value will get faster performance because the
interrupts will be reduced, but the time for interrupt service routine will become
shorter. The receive buffer overflow will be easily happened if the CPU speed is not
enough to handle. If the system is not stable, select the lower value to correct
problems.

Note:
If you stall the modem that is using auto detect by windows NT, the Auto Flow
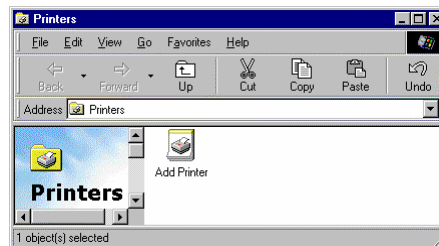Control Enable shall be disabled.

◆ 6.0 Configure LPT port

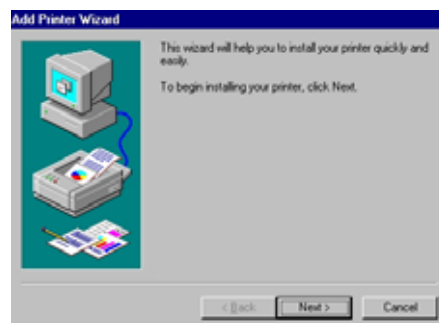## ➢ 6.1 How to connect your peripheral LPT device

1. Be sure your printer or other parallel peripheral had connected to PCI Multi I/O Parallel card.
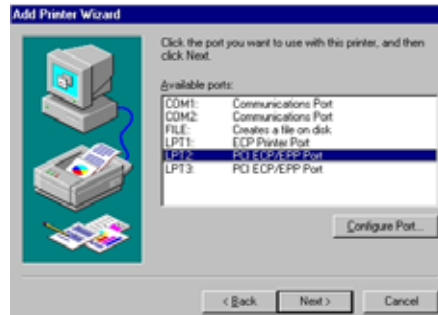2. Double click my computer icon, Double click "**Printers**" icon.

3. Double click Add Printer icon and click "**Next**".

4. Pleas ckick "**Next**" when Add Printer Wizard show up.

5. Please install your printer driver. If you want to connect the printer to your PCI Multi I/O Parallel Card, select PCI ECP/EPP Port to your device. Please click "**Next**", and finish the add new printer step.

Note: If you want to connect the scanner or the zip disk to PCI multi I/O Card, you
need to remap the Parallel Port I/O address to 0x378 or 0x278.

➢ *6.2Remap the Parallel Port I/O address*

1.Double click **"Multi IO Controller"** in Device Manager of System Properties.
Select **PCI Multi-I/O Adapter**, and right click the mouse choose "**Properties**".
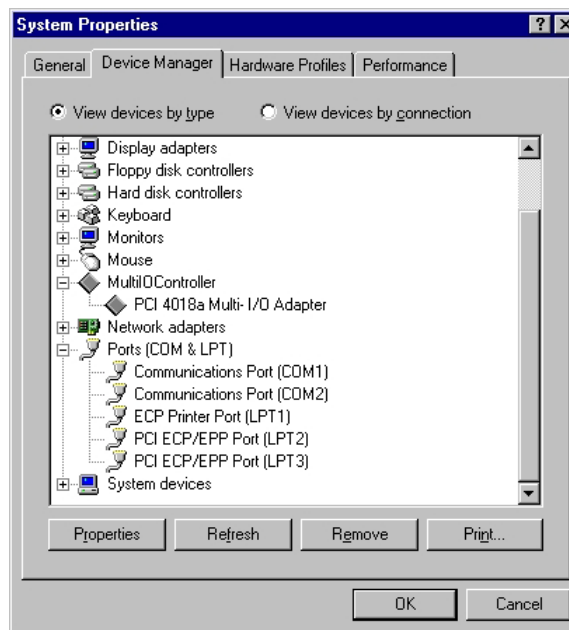
2. Please choose the "**Configure**" page. If you want to remap I/O address, select
Remap to legacy 0x378 and/or 0x278 I/O ports. Click "**OK**", then it will be set
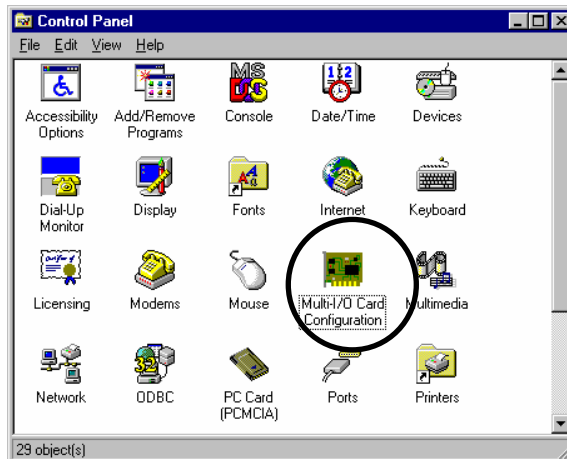after reboot computer
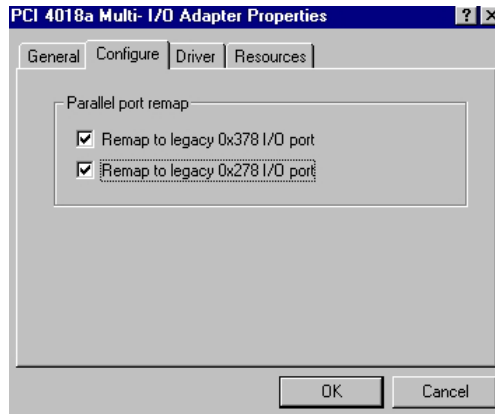
3. After reboot computer, you can check Parallel Port I/O address from System Properties.

Note: If you don't want to remap Parallel Port I/O address to 0x378 or 0x278, unselect Remap to legacy 0x378 and/or 0x278 I/O port. Click "OK", then it will be set after reboot computer.

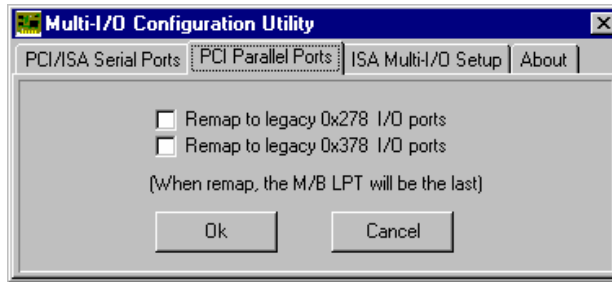➢ *6.3 How to configure LPT port (NT4.0)*

1. Double click Multi-I/O Card Configuration icon.

Click PCI Parallel Ports to configure the I/O address of parallel port.
Select Remap to legacy 0x378 and/or 0x278 I/O Ports, if you want to remap I/O address to 0x378 and/or 0x278.
Click "**Ok**"

It will be set after reboot computer.

Note:
The on board parallel port is always LPT1 if the remap function is disabled. When the parallel port is remap to 0x378 or 0x278, the on board parallel port will become the last LPT port.

When you connect the scanner to the remap parallel port, you must turn on the scanner before the computer.

> *6.4 How to configure LPT port (Windows3.1)*

Since WINDOWS 3.1 only support 3 parallel port (3BCh, 378h,278h) by default device driver. Thus the PCI parallel ports can be recognized in WINDOWS 3.1 if the DOS driver is activated in advance.
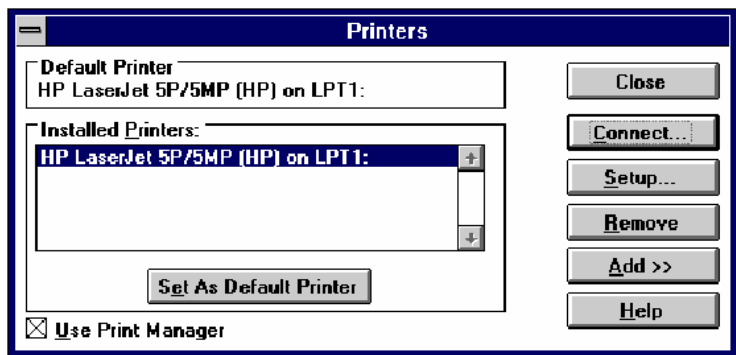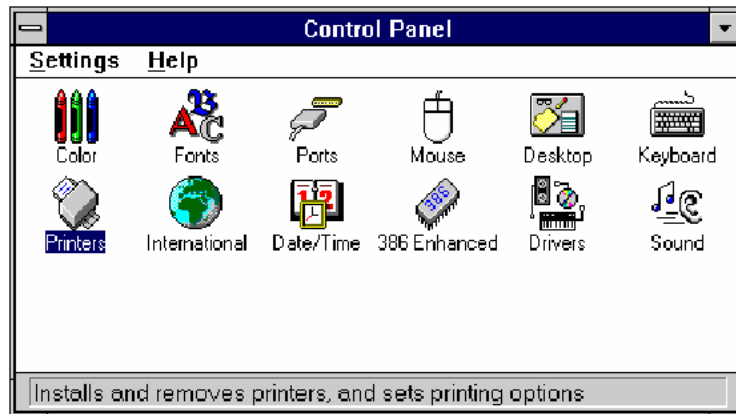
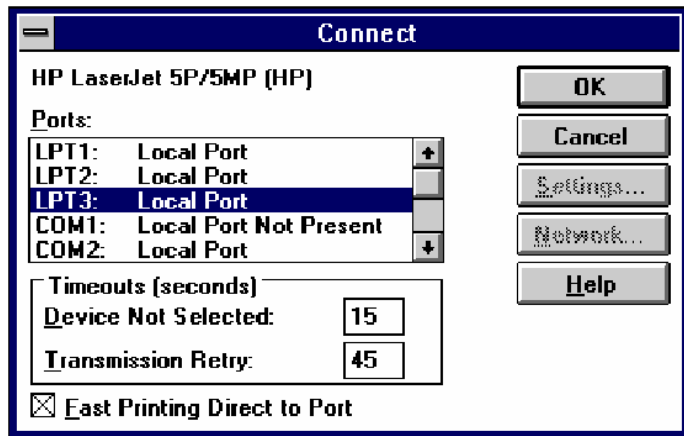[Installation Steps]

Check the PCI parallel port resources in DOS

Run PCIDOS.exe   (from CD Drive disk : \PCI IO\DOS\ PCIDOS.exe)

```
On-Board/ISA Serial COM1      3f8H
   On-Board/ISA Serial COM2   2f8H
   PCI Serial COM3            b800H,IRQ  10
   PCI Serial COM4            b808H,IRQ  10


   On-Board/ISA Parallel LPT1  3bcH
```

Install the Printer in Control Panel

Select Parallel Port for Printer Connection

NOTE :

All PCI parallel ports are possible to be remapped to legacy I/O address (378h,278h), thus the DOS driver will start remapping function automatically if any one of the legacy ports is free.

For the better compatibility, it is recommended that on-board LPT1 is set to 3BCh.

◆ *7.0 Trouble Shooting*

1. Why does the PCI serial port not behind the on board Communication Port?
Ans: Sometimes you may find the PCI serial port does not locate just behind the on board Communication Port. It may happen as following. The COM3 and COM4 are not used.
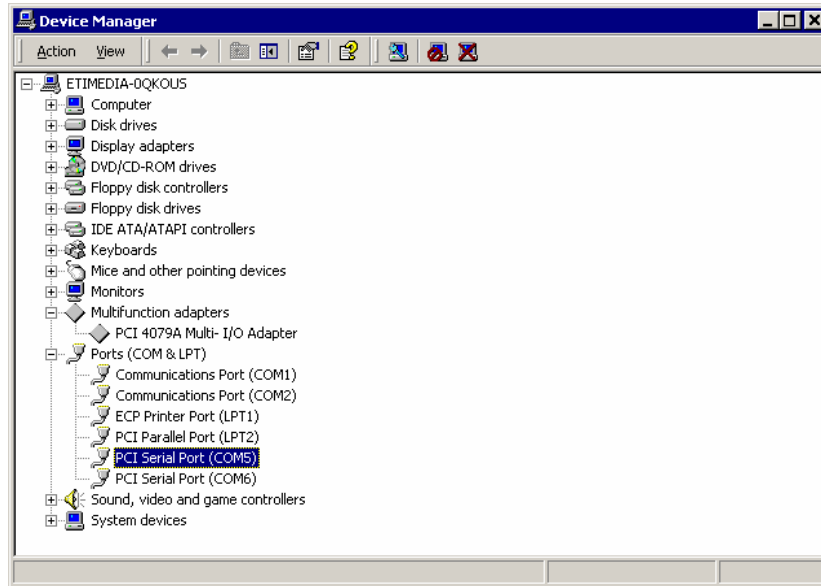

This problem is caused from the following reasons.

1. When you plug the installed PCI card to another PCI slot without uninstalling and reinstalling the driver.
2. When you remove the installed PCI card and installed a different PCI card without uninstalling and re-installing the driver.

There are three methods to solve this problem.

1. When you want to remove or change the PCI card, please uninstall the driver first.
2. Change the individual COM port number in Advanced Setting for COM port. For example, change the COM5 to the actually unused COM3 port.
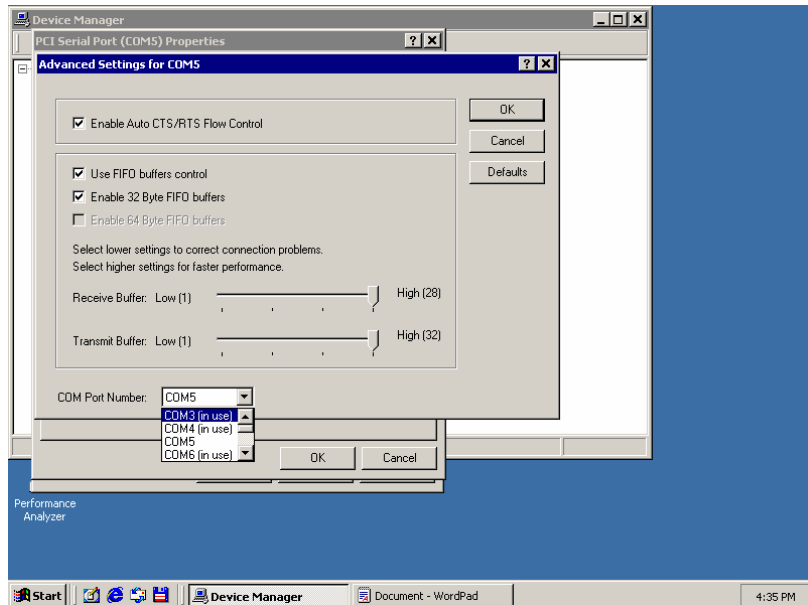
3. Delete the hidden and unused COM port from uninstalling a device.
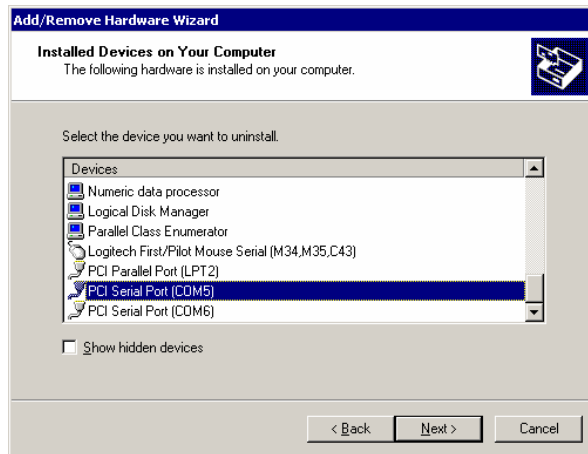
Click the "**Show hidden devices**", You will find all COM ports. Please remove the driver and all COM ports and reinstall the driver. You will find the continuous COM port index for the COM ports.

41
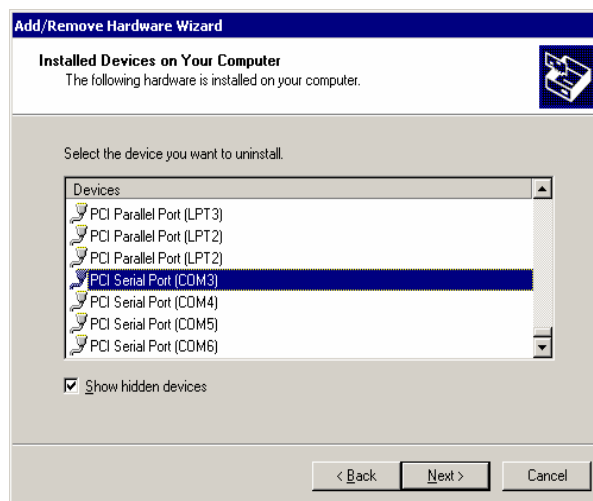
2. When Display Vendor ID, Device Id, Device Class or IRQ aren't DISPLAY or ERROR value.

Ans: Because motherboard ignore the screen or show that immediately, you can press "Pause" key on the keyboard to see the message when PCI device listing display. If the Device Class or IRQ value error, please change other slot, clean your slot, or clean PCI card golden finger.

The problem still can't be solve, and please return PCI I/O card to manufacture.