MOXA Multiport Board

Windows XP Driver Installation Guide

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We explain in this manual how to configure Moxa Multiport Boards to operate under the Windows XP operating system. The installation and configuration procedure is substantially different than for Windows NT/95/98/ME, but is quite similar to Windows 2000.

Note that there are two different methods for installing Moxa Multiport Boards under Windows XP. Listed by name, they are:

(1) Automatic Installation by Windows XP

| | Product Name |
|--------------------|---------------|
| Intelligent Family | C32010T PCI |
| | C218Turbo/PCI |

(2) Manual Installation by Add New Hardware

| | Product Name |
|--------------------|--------------------------|
| Intelligent Family | C320Turbo/ISA |
| | C218Turbo/ISA |
| | CP-204J |
| Smartio Family | C168H & C168H/PCI series |
| | C104H & C104H/PCI series |
| | CI-104J & CI-104JS |
| Industio Family | CI-132 series |
| | CI-134 series |
| | CP-132 series |
| | CP-114 series |

Check the product name of your Moxa Multiport Board, and then refer to the installation procedure that applies to your product.

Automatic Installation - for C218T/PCI and C32010T/PCI only

The examples in this section where produced using MOXA Intelligent C218T/PCI, which is an 8-port, RS-232/422/485 PCI Multiport Board for embedded systems. If you are installing an C32010T/PCI multiport board, the procedures you need to follow may be slightly different, but you should be able to use this as a guide to see how to install and manage your board.

Installing the C218T/PCI Multiport Board

- 1. After first making sure your PC is powered off, remove the PC's cover and insert your C218T/PCI Multiport Board into an empty PCI slot.
- 2. Replace the PC's cover and then power-up the computer.
- 3. The Windows XP operating system will automatically alert you with the **Found New Hardware** message shown in the following figure.



4. After waiting several seconds, the Windows XP Found New Hardware Wizard will automatically start up. Insert the software CD or diskette containing the Intellio driver software into either the CD or floppy disk drive. Select the Install the software automatically option, and then click on Next to continue.



5. The Windows XP operating system will take a few seconds to search for the new hardware.



6. You may safely ignore any warnings from the operating system about compatibility with Whistler. Click on **Continue Anyway** to proceed.

| Hardwa | are Installation Commuter |
|--------|---|
| ⚠ | The software you are installing for this hardware: Moxa Intelligent C218T/PCI |
| | has not passed Windows Logo testing to verily its compatibility with Whistler, (<u>Tell me why this testing is important</u> .) |
| | Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing. |
| - | Continue Anyway STOP Installation |

7. Wait patiently while the appropriate files are copied to your hard drive.



8. Click on **Finish** to complete the installation.



9. This completes the installation of your MOXA C218T/PCI. You should see the following message from the Windows XP operating system.



Continue in the Multiport Board Properties section to learn how to manage your board's ports.

Manual Installation

The examples in this section where produced using MOXA Smartio C168H, which is an 8-port, RS-232 or RS-422/485 ISA multiport board. If you are installing a different Multiport Board, then the procedures you need to follow may be slightly different, but you should be able to use this manual as a guide to see how to install and manage your Moxa Multiport Board.

Installing Moxa Multiport Board via Add New Hardware

- 1. After first making sure your PC is powered off, remove the PC's cover and insert your MOXA Multiport Board into an empty ISA slot.
- 2. Replace the PC's cover and then power-up the computer.

NOTE: The Windows XP operating system does not automatically recognize the existence of uninstalled ISA boards, so you will need to invoke the Windows XP Add New Hardware wizard yourself, as described below.

3. From the Windows XP desktop, click on Start \rightarrow Control Panel.



4. [To work from "Classic View", skip to step 6.] If your operating system is set to the new XP "Category View" style, click on <u>Printers and Other Hardware</u>.







6. If your operating system is set to the older "Classic view" style, double click on the Control Panel's Add Hardware icon.



7. When the **Welcome to the Add Hardware Wizard** window opens, click on **Next** to continue with the installation process.



 The Windows XP operating system will take a few seconds to search for new hardware. Keep in mind that it does not have the capability to locate ISA boards, so that at this stage of the installation process it will not be able to locate your Moxa ISA Multiport Board.



9. The next window to open reads: **The following hardware is already installed on your computer**. Click on the **Add a new hardware device** option to highlight it, and then click on **Next** to continue.



10. The next window to open reads: **The wizard can help you install other hardware**. Select the **Install the hardware that I manually select from a list (Advanced)** option, and then click on **Next** to continue.



11. The next window to open reads: From the list below, select the type of hardware you are installing. Click on the Multiport serial adapters option to highlight it, and then click on Next to continue.



12. The next window to open reads: Select the device driver you want to install for this hardware.

If **Moxa Technologies Inc.** appears in the left selection window under **Manufacturers**, click on the company name to highlight it, and then search for the model of your Multiport Board from the right selection window under **Models**. If you locate the correct model, click on the model name to highlight it, and then click on **Next** to continue.



If the company name, **Moxa Technologies Inc.**, is not listed, or you are unable to find the correct model name for the ISA Multiport Board you are installing, click on the **Have Disk.**.button to continue.

NOTE: The rest of these instructions are written assuming you are using this second option.

13. The next window to open gives you the ability to easily select the location of your ISA Multiport Board's driver files. The easiest way to proceed is to click on the **Browse...** button.

| Install F | rom Diek | Contrents? 🔀 |
|-----------|--|--------------|
| _ | Insert the manufacture's installation disk, and then make sure that the correct drive is selected below. | ОК |
| | | Calka |
| | Copy manufacturer's files from: | |
| | | Втомзя |

- 14. Use the folder selection tool located to the right of **Look in:** to find the folder in which your ISA Multiport Board's driver files are located. For this explanation, we copied the files into a folder located on the computer's hard disk, although the more normal circumstance would be for the files to be located on either a floppy disk or CD. Use the left mouse button to click on the appropriate folder.
- 15. You should next see a window that shows two files: MXSER and MXSPORT. One file is for installing the ISA Multiport Board, and the other is for installing ports—as long as you' ve chosen the correct folder, it does not really matter which file appears in the File name input box. The system will choose the correct file to use as needed. Click on the Open box to continue.

| Locate F | ile | | 9 | innents? 😰 🔀 |
|--------------|------------------------------|---|-----|--------------|
| Lookja | III (A:) | * | 0 보 | 📁 🔟 - |
| MASE MASE | e Der | | | |
| File pame | MMSER.INF | | ~ | Open |
| Files of by | e: Solup Information (* ini) | | | Cancel |

16. Click OK, located in the window's top right corner.



17. Click on the correct model to highlight it—for this example, we installed MOXA Smartio C168 Series (ISA Bus)—and then click on **Next** to continue.



18. The next window to open reads: **The wizard is ready to install your hardware**. Click on **Next** to continue.

| Add Hardware Wizard | Connerts? |
|--|-----------|
| The wizard is ready to install your hardware | ₹\$ |
| Herdware to install: MCMA Smartio C168 Series (ISA Bus) To start installing your new hardware, click Next. | |
| | |
| (Back Next) | Cancel |

19. You may safely ignore any warnings from the operating system about compatibility with Whistler. Click on **Continue Anyway** to proceed.

| Hardwa | re Installation <u>Communis</u> 2 |
|--------|---|
| ⚠ | The software you are installing for this hardware: MDRA NPort Server Life DE-301 |
| | has not passed Windows Logo tasing to verify its compatibility with Whistler. (Tell me why this testing is important.) |
| | Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing. |
| | Continue Anyway |

20. A series of windows indicating the progress of the installation procedure will open and then close.

| dd Hardwar | Wizard | |
|---------------|--|--------|
| Please wait | while the wizard installs the software | Ś |
| Installing | ofware to support: | |
| ₩ | NDVA Sreatio C168 Sales (ISA Bur) | |
| | | |
| | | |
| | | |
| | | |
| | (End: End) | Cercel |
| | | |
| Copying Filer | wa Connentri 🔀 | |
| ~ 5 | | |

Cancel

norpol.sys To D/WINDDWS/System32/DRIVERS

21. The next window verifies that the driver software for your ISA Multiport Board has been installed. Click on **Finish** to continue.



Installing the Multiport Board's Serial Ports

- 1. Once you have successfully installed your ISA Multiport Board, the Windows XP operating system will automatically detect the board's ports, and then begin installing them—one by one.
- 2. You should see the following Found New Hardware message. Wait patiently.



3. When the **Found New Hardware Wizard** starts up, choose the option **Install the software automatically (Recommended)**, and then click on **Next** to continue. For this example, we installed the driver software from a floppy disk located in the computer's 'a:' drive.

| Found New Hardware Wi | zard <u>Connerts?</u> |
|-----------------------|--|
| | Welcome to the Found New Hardware Wizard This wizard helps you instal coffware for: MDRA Part0 |
| | If your hardware came with an installation CD or floppy disk, insert it now. |
| | What do you want the weald to do? (install the software suformatically (Recommended) (install from a list or gpecific location (Advanced) Cick, Next to continue. |
| | < <u>B</u> ack <u>N</u> ext > Cancel |

4. Wait patiently while the software is copied to your hard drive. Note that it starts off installing **MOXA Port 0**.



5. The next window to open verifies that the software for **MOXA Port 0** has been successfully installed. Click on **Finish** to complete the installation procedure.



 For multiport boards, you will receive the Found New Hardware message, indicating that another communication port has been located. Follow the above procedure for installing this and subsequent ports.



7. Once all ports have been successfully installed, you will receive the following message, indicating that your hardware has been installed and is ready to use.



8. Continue in the section Multiport Board Properties to learn how to configure your MOXA Multiport Board's individual ports.

Multiport Board Properties

Your Multiport Board's configuration parameters are easily changed from within the Windows XP system's device manager.

1. From the Windows XP desktop, click on Start \rightarrow Control Panel.



2. [To work from "Classic View", skip to step 4.] If your operating system is set to the new XP "Category View" style, click on **Printers and Other Hardware**.



3. To evoke the device manager, click on System, located under the See Also options.



4. If your operating system is set to the older "Classic View" style, double click on the Control Panel's **System** icon.



5. The Windows XP System Properties window opens next.



6. Select the Hardware tab, and then click on Device Manager...

| System | System Restore | | atic Updates | Remote |
|---------------|--|---|---|---------------------------|
| General | Com | puter Name | Hardware | Advanced |
| Add New | Hardware W | izard | | |
| Ż | The Add Ne hardware. | w Hardware Wi | and helps you install | new |
| | | | Add New Hard | ware Wizard |
| Device M | anager | | | |
| 1 | The Device on your com | Manager lists all puter. Use the D | the hardware devic levice Manager to c | es installed hange the |
| | properties of | any device. | | |
| (| properties of Drive | any device. « <u>S</u> igning | Device M | anager |
| (Hardware | Properties of Drive Profiles | any device. « Signing | Device M | anaget |
| (Hardmare | Properties of Drive Profiles Hardware pr different has | any device. <u>x Signing</u> ofiles provide a dware configural | Device M | anager |

7. Click on the plus sign to the left of **Multi-port serial adapters** and then double click on **MOXA [Multiport Board installed] (eg., Intelligent CP-204J Series)** to open the **Properties** window.



General

Information on the **General** page gives basic details about the Multiport Board and its current status.

| : Conliguiali KA Intellio D ice type: wlacturer ation: us | on Driver Re P-204J Series Multi-port ser Moxa Techn PCI Slot 3 (P | ial adapters ologies Inc. Cl. bus 1, device | e 10, function 0) | 1 |
|--|--|---|--|------------------|
| KA Intellio Cl ice type: wlacturer ation: us | P-204J Series Multi-port ser Moxa Techn PCI Slot 3 (P | ial adapters ologies Inc. CI bus 1, device | e 10, function 0) | 0 |
| ice type: sufacturer ation: us | Multi-port ser Moxa Techn PCI Slot 3 (P | ial adapters ologies Inc. CI bus 1, device | e 10, function 0) | |
| ulacturer ation: us | Moxa Techn PCI Slot 3 (P | ologies Inc. CI bus 1, device | e 10, function 0) | i) |
| ation: us | PCI Slot 3 (P | CI bus 1, device | e 10, function 0) | |
| us | | 000400000000 | and the second s | 2 |
| 0.4 | | | | |
| e is working having proble subleshooter | propeny. ems with this dev | ice, click Troub | leshoot to | |
| | | Iroub | leshoot | |
| ĸ | | | | |
| ice (enable) | | | | - |
| | i: ice (enable) | k ce (enable) | t ce (enable) | x ce (enable) |

Configuration

Select the **Properties** window's **Ports Configuration** tab to change parameter settings for your Multiport Board.

1. To change settings for a port, click on the port to highlight it (such as Port 1, as shown below), and then click on the **Port Setting** button.

| neial | Ports Conf | iguration Driv | | |
|-------|--------------------------------------|--------------------------------------|--|--------------|
| Port | COM No. | UART FIFD | Transmission Mode | Ports |
| 234 | COM 12 COM 13 COM 14 COM 15 | Enable Enable Enable Enable | Hi-Performance Hi-Performance Hi-Performance | 4 ports 💌 |
| | | | | Port Setting |

2. This allows you to make changes to **Port Number**, **UART FIFO**, and **Transmission Mode**.

| cunert) |
|-----------------------------------|
| |
| nable isable e to gil ports |
| i Performance lassical |
| e to all ports |
| |

Driver

The **Driver** page displays important information about the driver. Use the buttons at the bottom of the window for **Driver Details...**to **Uninstall** the driver, or **Update Driver**.

| MOXA In | tellio CP-204. | Series Properties | Com | entsî 🕐 🔀 |
|----------|-------------------|---|-----------------------------|-----------|
| General | Ports Configurati | on Driver [Resources] | | |
| M | MEXA Intellio C | P-204J Series | | |
| | Driver Provider: | Mova Technologies Inc. | | |
| | Driver Date: | 10/8/2001 | | |
| | Driver Version | 1.2.1.0 | | |
| | Digital Signer. | Not digitally signed | | |
| Dive | r Detaie | To view details about the drive | er Nex. | |
| Upda | ite Drivet | To update the driver for this de | evice. | |
| Boll | Back Driver | If the device fails after updatin back to the previously installed | ig the difver. d driver. | rol |
| <u> </u> | ninstall | To uninstall the driver (Advanc | sad). | |
| - | | | DK | Cancel |
| 1 | | | | |

Resources

The Resources page displays information about I/O Range, Memory Range, and IRQ.

| OXA Intellio CP-2 | 204J Series Properties | Connental 🕐 🔯 |
|---|--|----------------|
| General Ports Conlig MOVA Inte Besource settings: | uration Driver Resources lio CP-204J Series | 1 |
| Resource type | Setting | |
| Memory Range | 1000 - 107F 000D 0000 - 000D 3FFF 07 | |
| Setting based on | | - |
| F | I Use automatic settings | Change Setting |
| Conflicting device list | t. | |
| No conflicts. | | < × |
| | | OK Cancel |

Port Configuration

In this section, we describe how to access and modify certain port settings.

1. From the **Device Manager** window, click on the plus sign to the left of **Ports (COM & LPT)**, and then double click on one of the **MOXA Communication Ports** listed.



2. The MOXA Communication Port 1 (COM 12) Properties page opens.

| AOXA C | anmunication | Port 1 (COM12) P | Properties | 2 🛛 |
|----------------|---|------------------------|--------------------------------------|--------|
| General | Port Settings Dr | iver | | |
| Z | MOXA Communi | ation Port 1 (COM12) | | |
| | Device type: | Ports (CDM & LPT) | E | |
| | Manufacturer: | Moxa Technologie | s Inc. | |
| | Location | on MOXA Smartio | C168 Series (IS | A Bus |
| Devic | e status | | | |
| if yo start | u are having proble the boubleshooter. | me with this device, d | ick Troublesho <u>T</u> ioublesho | ot to |
| Device | usage: | | | |
| Use th | io device (enable) | | | - |
| | | | DK. | Cancel |

3. Click on the **Port Settings** tab to view and/or make changes to **Baud Rate**, **Data bits**, **Parity**, **Stop bits**, and **Flow control**.

| D (D) | |
|-------------------|---|
| Baud Hate: 1900 | |
| Data bits: 8 | • |
| Early: None | * |
| Stop bits: 1 | • |
| Elow control None | • |
| | |
| | Data bits: 8 Early: None Stop bits: 1 Elow control: None |