

Device Driver Installation Guide

Windows 7
Windows Server 2008
Windows Vista
Windows Server 2003
Windows XP

Operating Systems



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Overview

Products Supported

This *Installation Guide* provides device driver installation and configuration procedures for the following operating systems:

- Windows 7
- Windows Server 2008
- Windows Vista
- Windows Server 2003
- Windows XP

The following products are supported by this device driver:

- RocketModem Universal PCI (RocketModem IV)
- RocketPort Universal PCI
- RocketPort Universal PCI SMPTE
- RocketPort Plus Universal PCI
- RocketPort Plus Universal PCI 422

In the remainder of this guide, the products are merely referred to as RocketPort/RocketModem.

How to Use this Guide

Use this guide to install and configure the device driver for Windows for the RocketPort and RocketModem Universal PCI families. It provides the following procedures and information:

- Initial device driver installation ([Initial Driver Installation](#) on Page 7)
- Updating the existing device driver ([Updating the Driver](#) on Page 13)
- Adding another adapter ([Adding an Adapter \(Existing Installation\)](#) on Page 19)
- Configuring ports ([Configuring COM Port Properties](#) on Page 21)
- Configuring device properties ([Configuring Device Properties](#) on Page 25)
- RocketPort/RocketModem configuration screens ([Configuration Screens](#) on Page 27)
- Removing the RocketPort/RocketModem device driver ([Removing the Adapter and Driver](#) on Page 33)
- Troubleshooting and testing ports ([Troubleshooting and Technical Support](#) on Page 37)
- Setting up non-plug and play modems and printers ([Configuring Non-Plug and Play Devices \(Windows XP and Windows Server 2003\)](#) on Page 41)

Downloading the Latest Software and User Guides

You can use the CD shipped with your product or the following table to locate the latest version of the software and documentation for the RocketPort/RocketModem from the Control ftp site.

	Files	Download Pages
RocketModem IV	Device Drivers	ftp://ftp.comtrol.com/html/RM4_drivers.htm
	Diagnostics Control Utility	ftp://ftp.comtrol.com/html/RM4_Diag.htm
	User Guides	ftp://ftp.comtrol.com/html/RM4_Docs.htm
RocketPort Universal PCI	Device Driver	ftp://ftp.comtrol.com/html/RPuPCI_Drivers.htm
	Diagnostics Control Utility	ftp://ftp.comtrol.com/html/RPuPCI_Diag.htm
	User Guides	ftp://ftp.comtrol.com/html/RPuPCI_Docs.htm
RocketPort Universal PCI SMPT	Device Driver	ftp://ftp.comtrol.com/html/RPuPCIsmppte.htm
	Diagnostics Control Utility	ftp://ftp.comtrol.com/html/RPuPCIsmppte_Diag.htm
	User Guides	ftp://ftp.comtrol.com/html/RPuPCIsmppte_Docs.htm
RocketPort Plus Universal PCI	Device Driver	ftp://ftp.comtrol.com/html/RPuPCIplus_Drivers.htm
	Diagnostics Control Utility	ftp://ftp.comtrol.com/html/RPuPCIplus_Diag.htm
	User Guides	ftp://ftp.comtrol.com/html/RPuPCIplus_Docs.htm
RocketPort Plus 422 Universal PCI	Device Driver	ftp://ftp.comtrol.com/html/RPuPCIplus422_Drivers.htm
	Diagnostics Control Utility	ftp://ftp.comtrol.com/html/RPuPCIplus422_Diag.htm
	User Guides	ftp://ftp.comtrol.com/html/RPuPCIplus422_Docs.htm

Initial Driver Installation

Use the following procedure to install the RocketPort/RocketModem device driver for Windows.

Note: Close any applications that are using serial ports before the device driver installation.

1. Locate the latest driver assembly (.msi) and copy it to a location that is available to the host PC.

You can use one of the following methods to locate the device driver:

- Download the latest device driver using the appropriate link in the [Downloading the Latest Software and User Guides](#) subsection on Page 6.
- The *Software and Documentation* CD contains all of the files for installation, configuration, and troubleshooting. The CD also provides download links to the Control ftp site to locate the latest files.

2. Install the adapter and connect the interface. If you need detailed hardware installation procedures, see [Downloading the Latest Software and User Guides](#) on Page 6 to locate the *User Guide* for your RocketPort/RocketModem.

Do not connect RS-422/485 devices until the appropriate port interface type has been configured in the device driver. The RocketPort/RocketModem default port setting is RS-232.

3. Click Cancel if a *Found New Hardware* message appears.

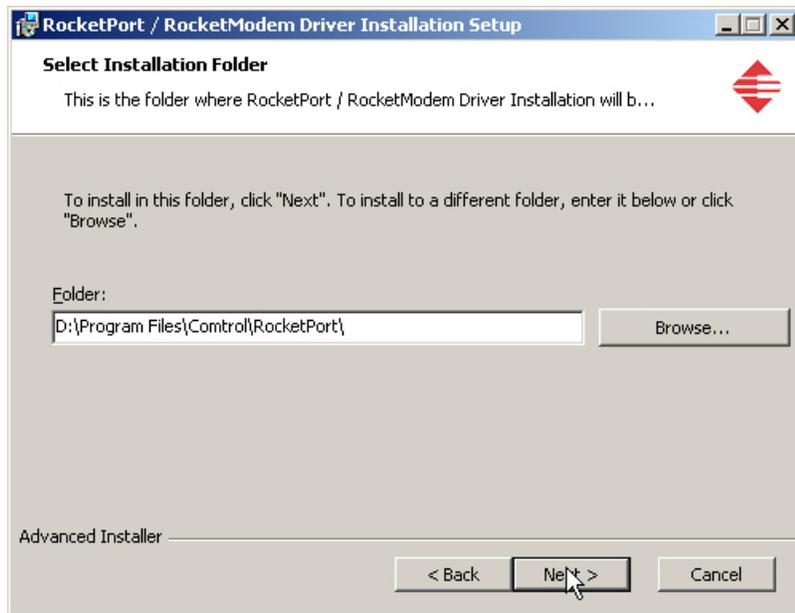


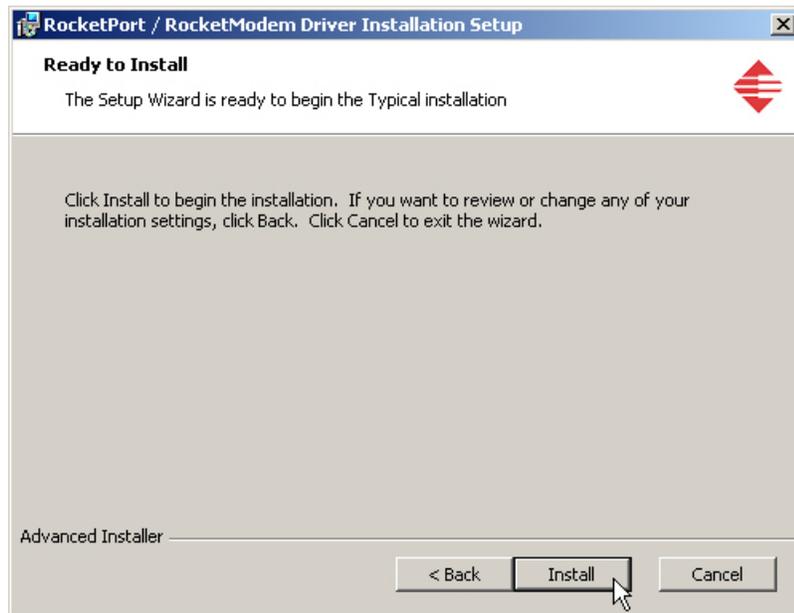
4. Start the installation by executing the **RocketPort_Windows_x.xx.msi** file, where x.xx is the driver assembly version.

- 5. Click **Next** to start the installation process.



- 6. Optionally, enter a different location to install the driver files.



7. Click **Install**.8. Click **Finish**.

Note: Leave the *Launch RocketPort / RocketModem Driver Installation* box checked.

If you do not check this box, you can use the shortcut under the **Start** button at: **Programs/Control/RocketPort/Driver Installation Wizard**.

9. Click **Next** to install the driver.



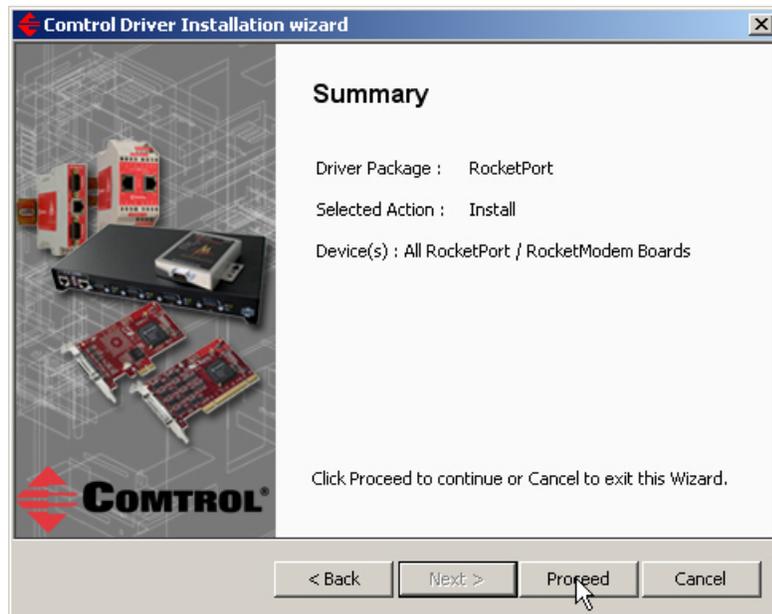
10. Click **Install** and **Next**.



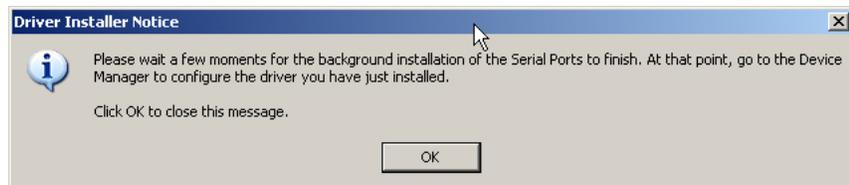
11. Click **Next** to start the driver installation.



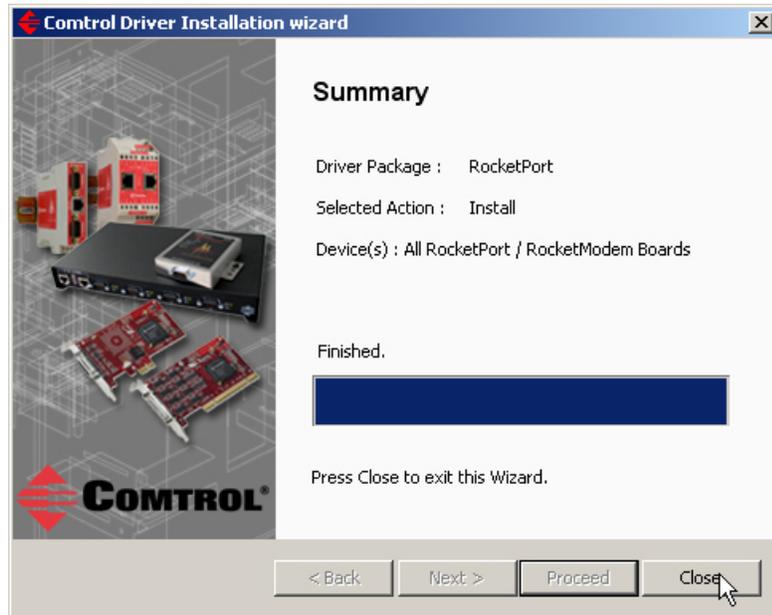
12. Click **Proceed**.



13. Click **Ok** to close the *Driver Installer Notice*.



14. Click **Close** to exit the wizard.



15. Go to [Configuring COM Port Properties](#) on Page 21 to configure the COM port properties.
16. If necessary, go to [Configuring Device Properties](#) on Page 25 to set up advanced device properties such as: changing the device name and starting COM port number.

After driver installation and configuration, connect the serial devices to the ports. For information about the RocketPort/RocketModem connectors, refer to the appropriate *User Guide* (Page 6) for your RocketPort/RocketModem model.

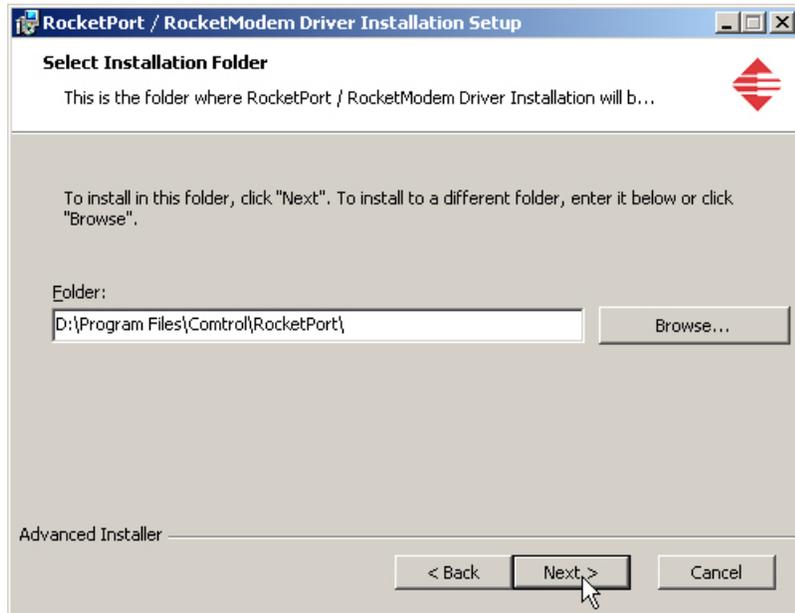
Updating the Driver

Use this procedure to update the RocketPort/RocketModemdevice driver after initial installation.

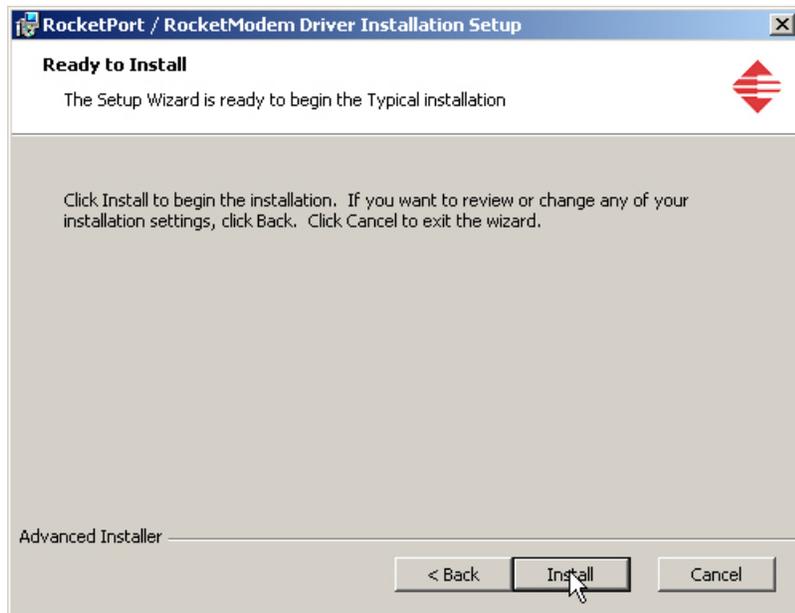
1. Locate the latest driver assembly (Page 6) and copy it to a location that is available to the host PC.
2. Start the update by executing the **RocketPort_Windows_x.xx.msi** file, where *x.xx* is the driver assembly version.
3. Click **Next** to start the *Installation Setup Wizard*.



4. Optionally, enter a different location to install the latest driver files.



5. Click **Install**.



6. Click **Finish**.



Note: Leave the **Launch RocketPort/RocketModem Driver Installation** box checked.

If you do not check this box, you can use the shortcut under the **Start** button at: **Programs/Control/RocketPort/Driver Installation Wizard**.

7. Click **Next** to update the driver.



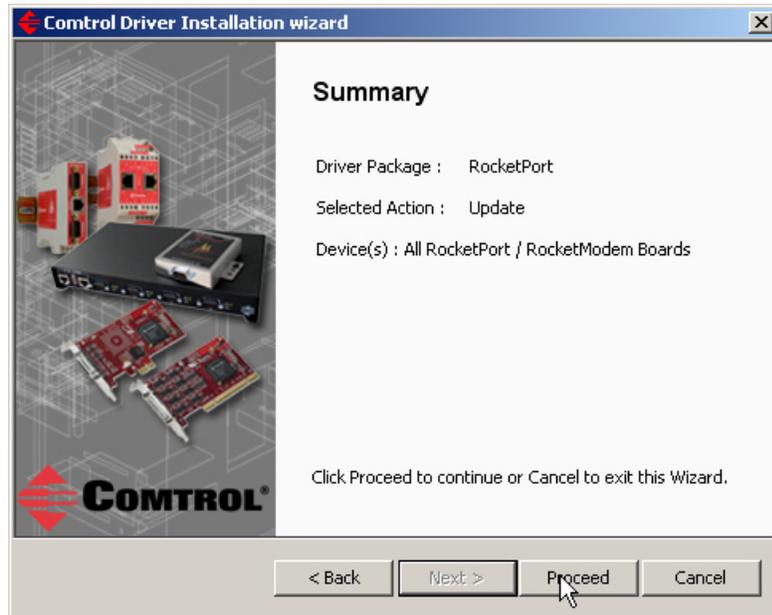
8. Click **Update** and **Next**.



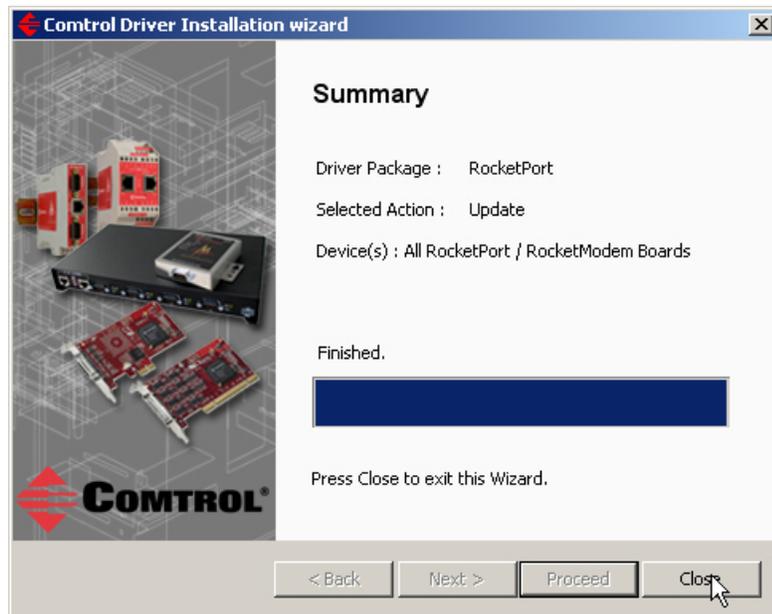
9. Click **Next** to update the driver.



10. Click **Proceed**.



11. Click **Close**.



12. Go to [Configuring COM Port Properties](#) on Page 21 to configure the COM port properties.
13. If necessary, go to [Configuring Device Properties](#) on Page 25 to set up advanced device properties such as: changing the device name and starting COM port number.

After driver installation and configuration, connect the serial devices to the ports. For information about the RocketPort/RocketModem connectors, refer to the appropriate *User Guide* (Page 6) for your RocketPort/RocketModem model.

Adding an Adapter (Existing Installation)

Use the following procedure to add an adapter to an existing RocketPort/RocketModem installation.

1. Install the adapter and connect the interface. If you need hardware installation procedures, see [Downloading the Latest Software and User Guides](#) on Page 6).



Caution

Do not connect RS-422/485 devices until the appropriate port interface type has been configured in the device driver. The RocketPort/RocketModem default port setting is RS-232.

2. Click Cancel if a *Found New Hardware* message appears.



3. From the Start button, click **Programs/Control/RocketPort/Driver Installation Wizard**.

4. Click **Next** to start the *Control Driver Installation Wizard*.



5. Click **Install** and **Next**.



6. Click **Next** and follow the *Installation Wizard*. Refer to [Step 11](#) on Page 11, for the remainder of the installation steps if needed.

Configuring COM Port Properties

Port Configuration Overview

Advanced and standard COM port configuration procedures are discussed in this section. Each configuration parameter is discussed in detail in the [Configuration Screens](#) section on Page 27.

- *Advanced* COM port configuration using the [Port Setup](#) tab (below) for the RocketPort/RocketModem port. You may need to change one or more of the [default](#) values to match your serial device.

COM Port Properties Field	Default	Acceptable Values
Override and lock baud rate to	None	300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 38400, 57600, 115200, 230400, 460800, or 921600
Timeout on transmit data on port close	0 seconds	1, 6, 30, 60, and 240 sec
Map CD to DSR	Disabled	N/A
Map 2 stop bits to 1	Disabled	N/A
Wait on physical transmission before completing write	Disabled	N/A
Emulate modem hardware RING signal	Disabled	N/A
Block PnP search for attached serial device	Disabled	N/A
Clone	Disabled	N/A

- *Standard* COM port configuration using the **Port Settings** tab (Page 24) if you need to change any of the [default](#) COM port parameters.

If you want to change the starting COM port number on the RocketPort/RocketModem, see [Configuring Device Properties](#) on Page 25.

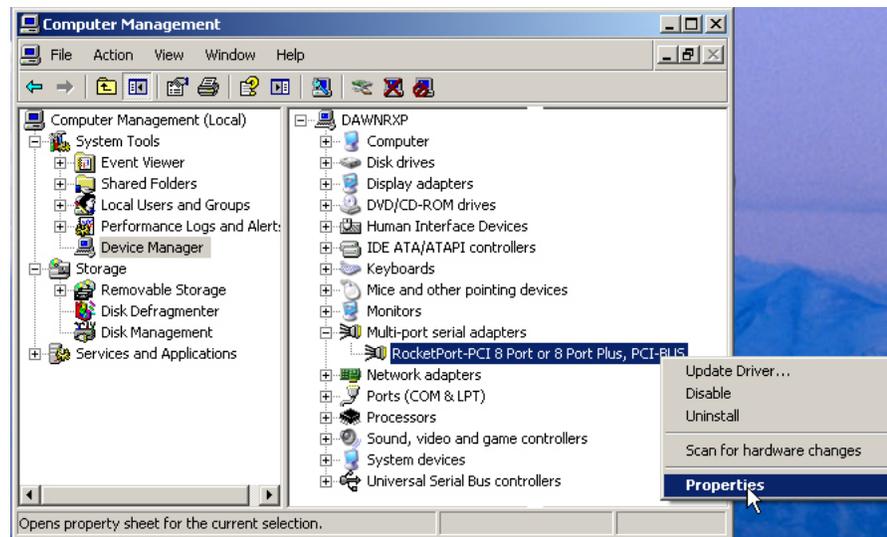
Do not connect RS-422/485 devices until the appropriate port interface type has been configured in the driver. The driver default port setting is RS-232.



Advanced COM Port Configuration

Use the following procedure to change COM port properties on a RocketPort/ RocketModem port or ports.

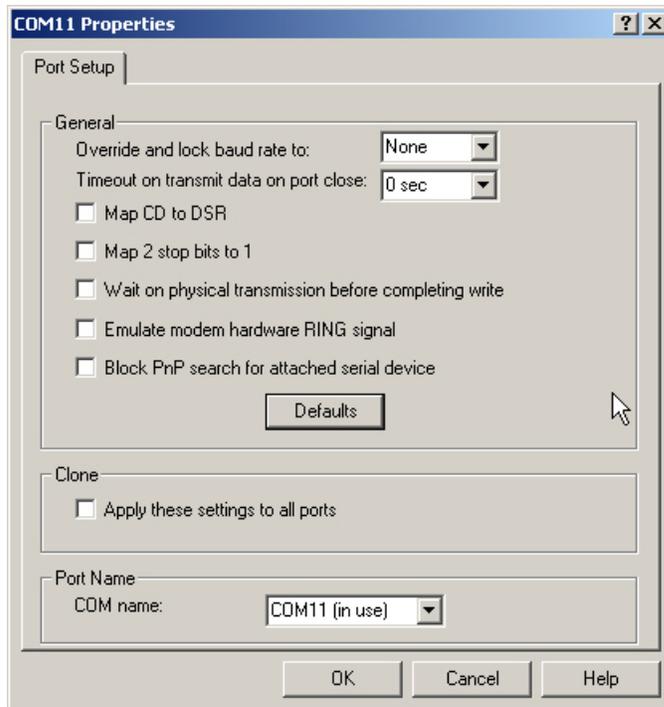
1. Access the **Main Setup** tab for the RocketPort/RocketModem using the *Device Manager*.
 - Windows 7 and Windows Vista: Right-click **Computer**, click **Manage**, and then highlight the **Device Manager**.
 - Windows Server 2008 **R2**: Click **Start**, right-click **Computer**, and then click **Properties**.
 - Windows Server 2003: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.
 - Windows XP
 - Not logged into a domain controller*: Right-click **My Computer**, click **Manage**, and then highlight the **Device Manager**.
 - Logged into a domain controller*: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.
2. Expand the Multi-port serial adapters entry, right-click the RocketPort/ RocketModem you want to configure, and then click **Properties**.



3. Select the **Main Setup** tab, highlight the COM port you want to configure, and then click **Properties**.



4. Enable the [features](#) (Page 27) you want to use, such as setting the appropriate communications mode for your serial device.



5. Click **OK** after configuring this port or click the **Clone** check box to set all of the ports on this RocketPort/RocketModem to these characteristics.

Standard COM Port Configuration

Use the appropriate procedure for your operating system if your application does not set COM port properties.

If the application sets COM port properties, those settings take precedence over the standard COM port settings. The exception to this guideline is if you use the *Override and Lock Baud Rate* advanced COM port setting (Page 28).

Use the following procedure to change standard COM port parameters [default values](#) (Page 29).

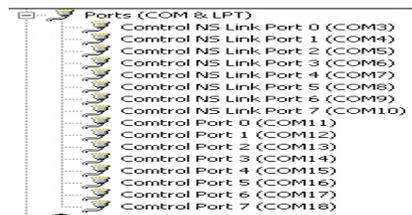
1. Access the Device Manager.
 - Windows 7 and Windows Vista: Right-click **Computer**, click **Manage**, and then highlight the **Device Manager**.
 - Windows Server 2008 R2: Click **Start**, right-click **Computer**, and then click **Properties**.
 - Windows Server 2003: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.
 - Windows XP

Not logged into a domain controller: Right-click **My Computer**, click **Manage**, and then highlight the **Device Manager**.

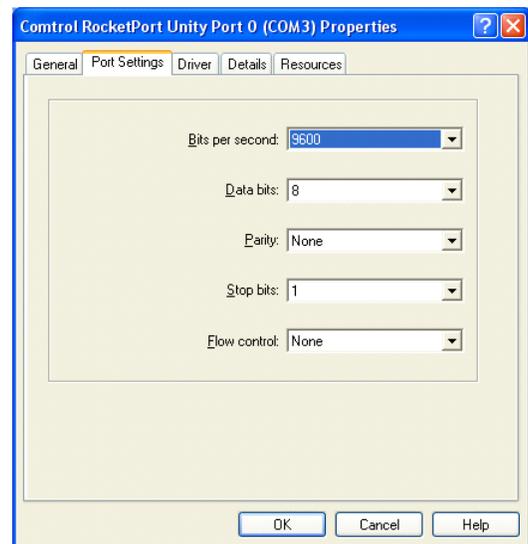
Logged into a domain controller: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.

2. Double-click *Ports (COM & LPT)* to expand the view.

Note: *RocketPort / RocketModem are displayed as Control RocketPort ports. in the Device Manager.*



3. Double-click the RocketPort/RocketModem COM port for which you want to change port parameters.
4. Click the **Port Settings** tab.
5. Make any necessary changes for the port.
6. Repeat this process for each port you that you need to change the COM port parameters.



Configuring Device Properties

You may want to change the device Name or the **Starting COM Port** number on the RocketPort/RocketModem.

To change RocketPort/RocketModem or COM port configuration, you need to access the **Properties** page for that RocketPort/RocketModem.

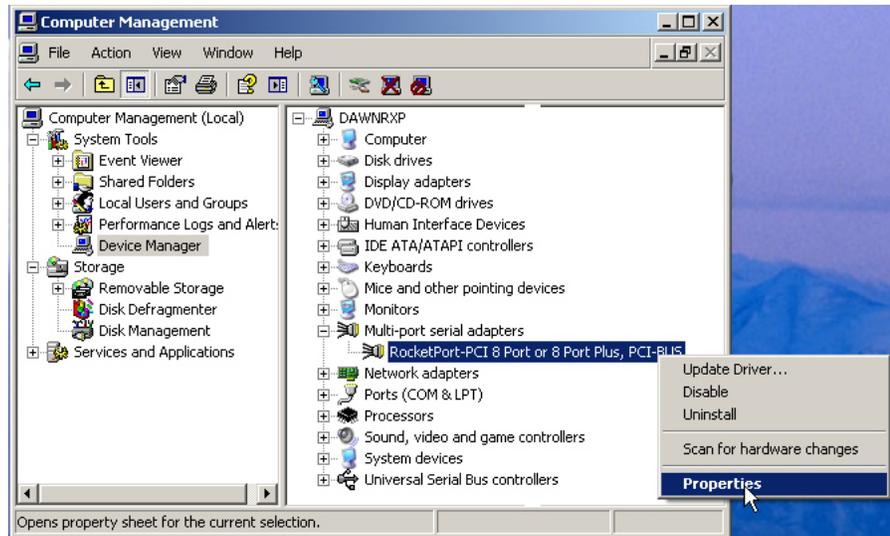
Note: *You must be logged in with Administrator privileges to access the Device Manager.*

1. Access the **Properties** page for the RocketPort/RocketModem using the *Device Manager*.
 - Windows 7 and Windows Vista: Right-click **Computer**, click **Manage**, and then highlight the **Device Manager**.
 - Windows Server 2008 **R2**: Click **Start**, right-click **Computer**, and then click **Properties**.
 - Windows Server 2003: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.
 - Windows XP

Not logged into a domain controller: Right-click **My Computer**, click **Manage**, and then highlight the **Device Manager**.

Logged into a domain controller: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.

2. Expand the **Multi-port serial adapters** entry, right-click the RocketPort/RocketModem you want to configure, and then click **Properties**.



3. Click the **Main Setup** tab.

4. Highlight RocketPort/RocketModem device name and then click **Properties**.



5. Make the desired changes.

For example:

- Change the [device name](#).
The name that you assign is not saved until you click **OK** to exit the *Main Setup* tab. The new device name may not be present itself until the *Device Manager* is closed and reopened.
- Click the [starting COM port number](#) in the drop list for this RocketPort/RocketModem.

6. After making your changes, click **OK** and follow any other driver prompts.



Configuration Screens

Use the *Device Manager* to access the RocketPort/RocketModem driver *Main Setup* tab, if you need to change configuration of the [default](#) (Page 29) advanced COM port settings.

Use the *Device Properties* dialog to rename the RocketPort/RocketModem, or change the starting COM port number.

Main Setup Tab

The **Main Setup** tab for the RocketPort/RocketModem is accessed through the *Device Manager*.

1. Access the *Device Manager* in your Windows operating system.
 - Windows 7 and Windows Vista: Right-click **Computer**, click **Manage**, and then highlight the **Device Manager**.
 - Windows Server 2008 R2: Click **Start**, right-click **Computer**, and then click **Properties**.
 - Windows Server 2003: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.
 - Windows XP

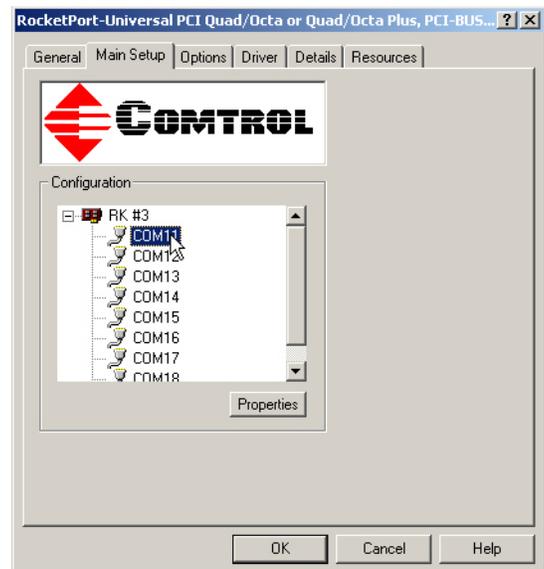
Not logged into a domain

controller: Right-click **My Computer**, click **Manage**, and then highlight the **Device Manager**.

Logged into a domain controller: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.

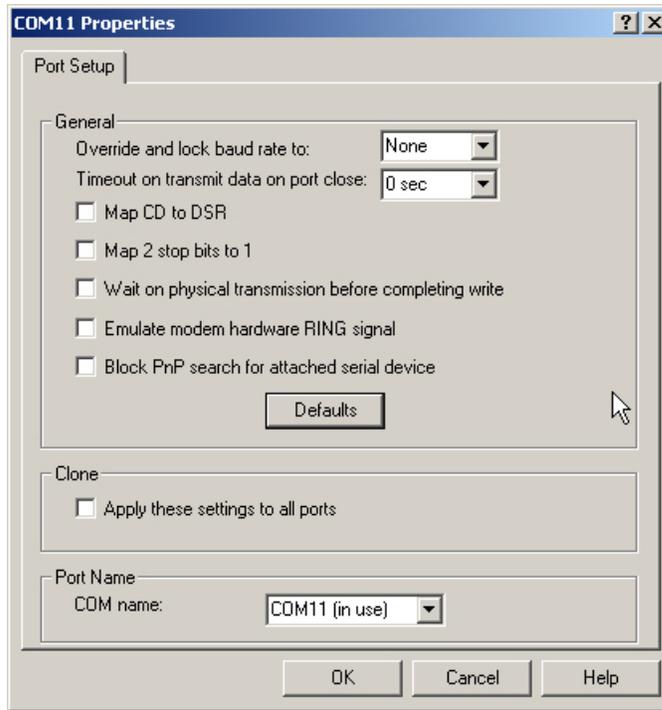
2. Click the **Main Setup** tab to access the RocketPort/RocketModem configuration screens:
 - [COM Port Properties](#) for a COM port configuration. Highlight the COM port that you want to configure and then click **Properties**.
 - [Device Properties](#) to change the name of the RocketPort/RocketModem or the starting COM port number.

Highlight the RocketPort/RocketModem adapter that you want to configure and then click **Properties**.



Port Setup Tab

The *Port Setup* tab is used to configure advanced COM port properties. See [Advanced COM Port Configuration](#) on Page 22 for configuration procedures.



After configuring a port, you can use the **Clone** feature to set all of the ports on the RocketPort/RocketModem to these characteristics.

COM Properties	Description
<p>Override and lock baud rate to</p>	<p>This option allows you to lock selected ports.</p> <p>You can select a value from the drop list or enter an appropriate value from the following standard baud rates: 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 38400, 57600, 115200, 230400, 460800, or 921600.</p> <ul style="list-style-type: none"> • RocketModem IV models support from 300 to 115.2Kbps • RocketPort Universal PCI Quad/Octacable and 4J/8J models support from 300 to 460.8Kbps. • RocketPort Universal PCI 8/16/32-port models with an interface box support from 200 to 230.4Kbps. • RocketPort Plus Universal PCI models from 200 to 921.6Kbps • RocketPort Plus Universal PCI 422 models from 200 to 921.6Kbps • RocketPort Universal PCI SMPTE models from 200 to 921.6Kbps <p>After locking a baud rate, no matter what baud rate is selected in a host application, the <i>actual</i> rate used is the rate specified here.</p>

COM Properties	Description
Timeout on transmit data on port close	This option allows you to select the length of time to wait for data to clear the transmit buffer after a host application has closed the port. This is typically used with serial devices such as printers, to give the data sufficient time to flush through the system.
Map CD to DSR	This option is used in installations where there is no connection to the port's DSR input. Click this check box to cause the CD input to appear as DSR to the host application, and to perform hardware handshaking with CD rather than DSR.
Map 2 stop bits to 1	If your application is hard-coded to use two stop bits and you receive framing errors, click this check box to map 2 stop bits to 1 bit. Leave this check box blank to enable stop bits to pass through unchanged.
Wait on physical transmission before completing write	This option forces all write packets to wait until the transmit data has physically completed the transmission before returning completion to the host application. The default mode (check box not clicked) is to buffer the data in the transmit hardware buffer, and return completion as soon as the packet is in the buffer.
Emulate modem hardware RING signal	Click this check box to emulate the ring indicator signal. If this box is checked and the port receives a <i>RING</i> signal (or an alternate code, as defined in the AT command set for the modem), it sends an <i>RI</i> signal to the communications application.
Block PnP search for attached serial device	This option disables plug and play from searching for a device attached to the serial port. For example, data received during device discovery on a device is assumed to be a mouse to plug and play.
Defaults	Click this to return to the driver default values. <ul style="list-style-type: none"> • Override and lock baud rate to = None • Timeout on transmit data on port close = 0 • Map CD to DSR = Disabled • Map 2 stop bits to 1 = Disabled • Wait on physical transmission before completing write = Disabled • Emulate modem hardware RING signal = Disabled • Block PnP search for attached serial device = Disabled • Clone = Disabled
Clone: Apply all the settings to all ports	If this check box is <i>not</i> clicked, changes apply to the selected port only. If this check box <i>is</i> clicked, changes apply to all ports on this board.

COM Properties	Description
<p>Port Name - COM name</p>	<p>You may change individual COM names to leave gaps in COM name sequences or change the order of the COM names. You should reboot the server or Disable and then Enable the driver in the <i>Device Manager</i> after you change COM names.</p> <p>If you want to renumber all of the ports sequentially, you can use the <i>Device Properties</i> screen to change the starting COM port number. See Device Properties Screen on Page 30 for more information.</p>

Device Properties Screen

You can change the default device name and starting COM port with the *Device Properties* screen. See [Configuring Device Properties](#) on Page 25 for configuration procedures.

- Name:** The *Add New Hardware Wizard* assigns a default name to each adapter.

Use this field to enter a more descriptive name. The name that you assign is not saved until you click **OK** to exit the *Main Setup* tab. The new device name may not be present itself until the *Device Manager* is closed and reopened.
- Starting COM Port:** You can change the starting COM port number in the drop list for this RocketPort/RocketModem.



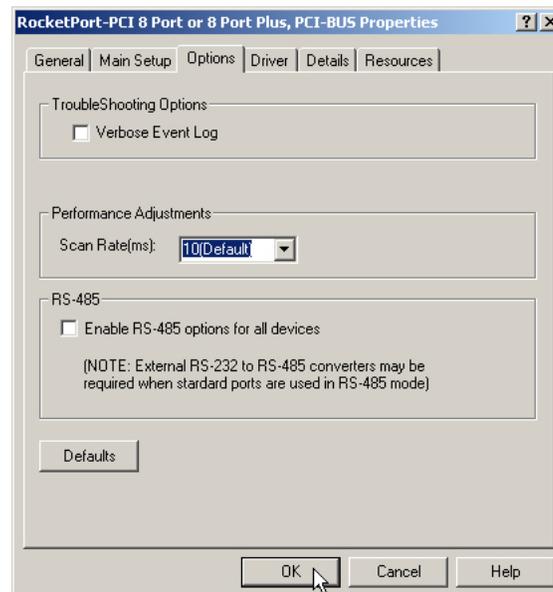
In addition, you can use **Starting COM Port** to set nonsequential starting COM port numbers for each adapter, thus leaving gaps in the COM port numbering sequence.

Note: When you change the starting COM port number, the driver assigns that COM port to the first port on this RocketPort / RocketModem and all other port numbers follow in sequence. Do not overlap COM port numbers between devices or other RocketPort / RocketModem adapters because if you do so, the overlapping ports are disabled.

Options Tab

The *Options* tab contains the following options.

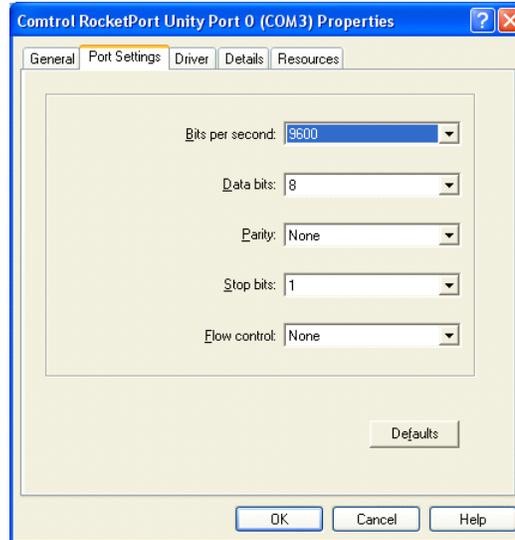
Option	Description
Verbose Event Log	Select this check box to cause longer messages to be sent to the Windows Event Log. This added information can be useful when debugging communications and configuration problems.
Scan Rate	Use this droplist to set the driver servicing rate. As a general rule this is changed only if you are driving ports at rates in excess of 230.4 Kbps. For example, if you are using a RocketPort Universal PCI OctaCable running at 460.8 Kbps, select 4 ms. If you are running a RocketPort Plus Universal PCI at 921.6 Kbps, select 2 ms. <i>Note: The faster the scan rate (lower number), the higher the load on the system processor.</i>
RS-485	You must have an external RS-232/485 convertor attached to the RocketPort adapter port. Otherwise, leave this box blank.



Port Settings Tab

The **Port Settings** tab for each RocketPort/RocketModem COM port is accessed through the *Device Manager* under the *Ports (COM & LPT)* entry.

Use the **Port Settings** tab to [configure standard COM port parameters](#).

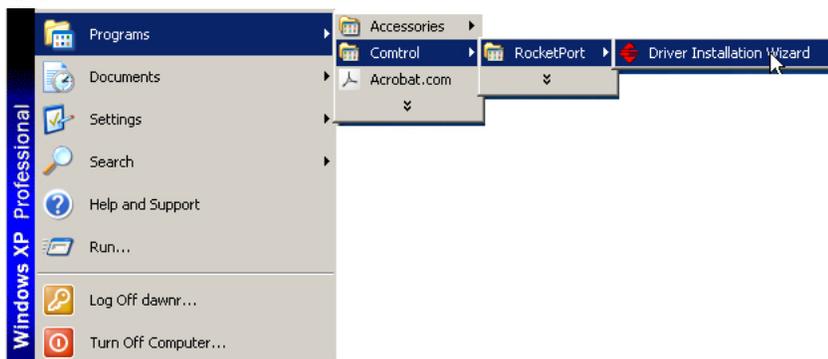


COM Port Parameters	Description
Bits per second	Use this drop list to select the default application baud rate for the data to be transmitted through this port to the serial device. The default is 9600 .
Data bits	If necessary, change the number of data bits to match the serial device connected to this port. The default is 8 .
Parity	If necessary, change parity to match the error checking used with the serial device attached to this port. The default is None .
Stop bits	If necessary, change the stop bits to match the stop bits used by the serial device connected to this port. The default is 1 .
Flow control	It is recommended that flow control be used to prevent data buffer overflow conditions. Hardware flow control (RTS/CTS) is best because most modems default to hardware flow control. Software (Xon/Xoff) flow control is used mostly by dot matrix printers and terminals where high data throughput is not critical. The default is None .

Removing the Adapter and Driver

Use the following procedure to remove the RocketPort/RocketModem device driver.

1. From the **Start** button, click **Programs/Control/RocketPort/Driver Installation Wizard**.



2. Click **Next** to start the *Control Driver Installation Wizard*.



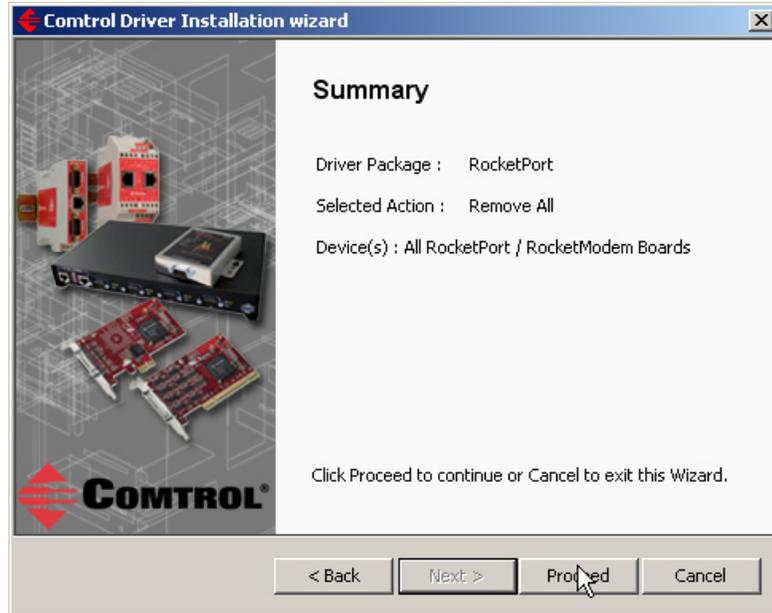
3. Click **Remove All** and **Next**.



4. Click **Next** to remove the driver.



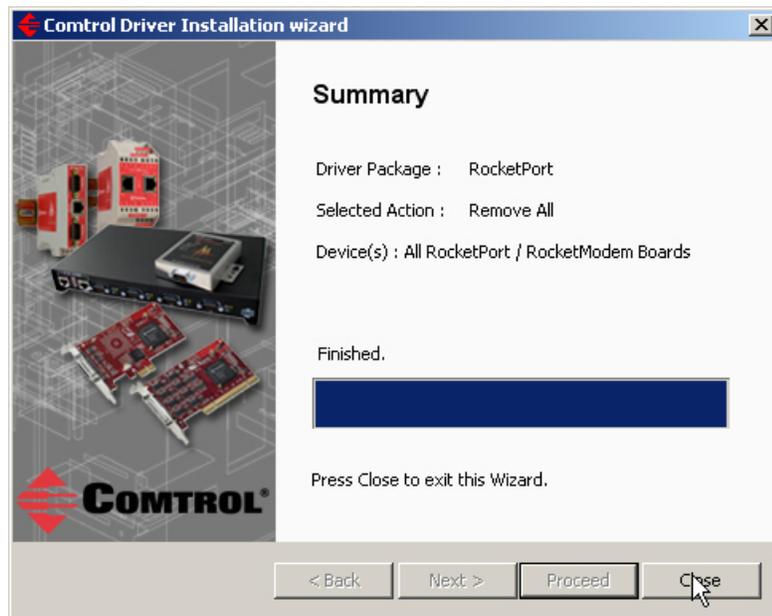
5. Click **Proceed** to continue the driver removal process.



6. Click **OK**.

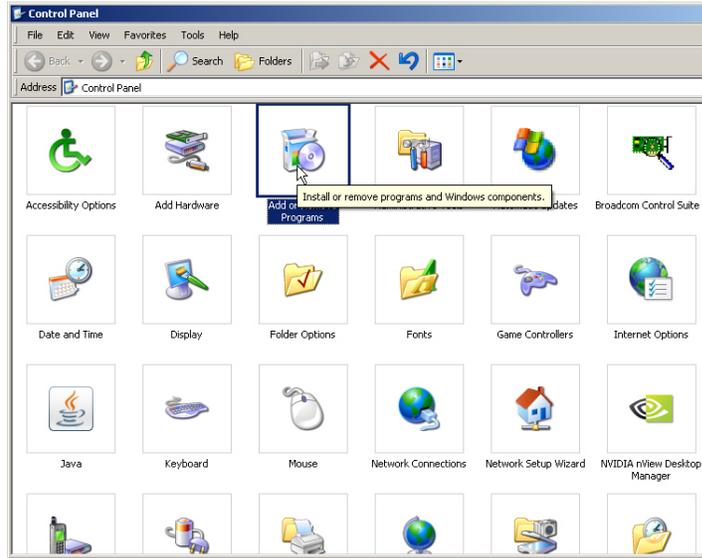


7. Click **Close**.

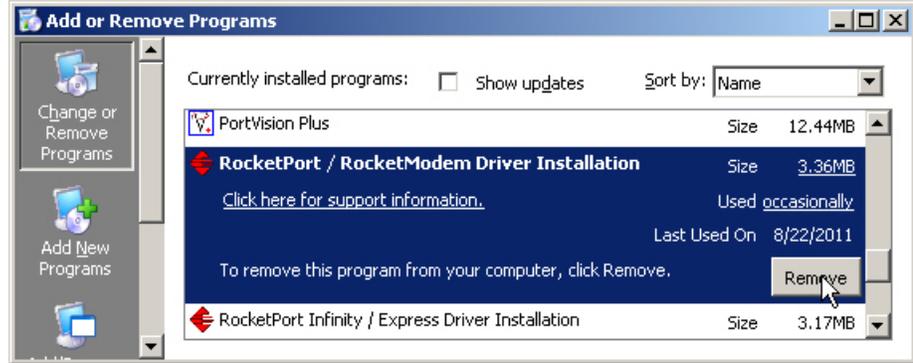


8. Shutdown the system and remove the RocketPort/RocketModem adapter.

9. If you want to completely remove the .msi driver assembly, perform the following steps:
 - a. Delete any copies of the **RocketPort_Windows_x.xx.msi** file residing on the system.
 - b. Delete the driver and devices using the **Add/Remove Programs** control panel:
 - Open the *Control Panel* and click **Add or Remove Programs**.



- Highlight **RocketPort/RocketModem Driver Installation** and click **Remove**.



Troubleshooting and Technical Support

Troubleshooting Checklist

If you are having trouble with a RocketPort/RocketModem installation, try the following.

Note: Most customer problems reported to [Technical Support](#) are traced to cabling or network problems.

Issue	Troubleshooting
Correct cabling	Verify that you are using the <i>correct types of cables</i> in the correct places and that all cables are tightly connected. Refer to the appropriate <i>RocketPort / RocketModem User Guide</i> on the CD or download the latest version (Page 6) to verify cabling.
Device Manager	Verify that the RocketPort/RocketModem has installed using the Device Manager to confirm that the RocketPort/RocketModem adapter displays. Install the device driver , if the adapter is not displayed.
Port does not open	After driver installation, open the Device Manager , go to <i>Ports COM & LPT</i> . If a yellow exclamation mark represents the port, right-click on the exclamation mark, and click Update Driver . See Updating the Driver on Page 13 for detailed procedures.
Port addressing	Verify that you are <i>addressing the port correctly</i> . In many applications, device names above COM9 require the prefix <code>\\.\</code> to be recognized. For example, to reference COM20, use <code>\\.\COM20</code> as the file or port name.
Verify the driver	Check to see if this is the latest driver. To check the driver version, open the Device Manager , expand Multi-port Serial Adapters , right-click the adapter, and select Properties . Click the Drivers tab and note the driver version and date. Check the latest driver version on the ftp site (Downloading the Latest Software and User Guides on Page 6). If the installed driver is older, download the latest driver. Remove the existing driver and install the latest driver.
Test port or ports	Install the Control Utility (Page 38) and use Test Terminal.
Monitor port activity	Install the Control Utility (Page 38) and use Port Monitor.
Verify hardware	Run the RocketPort/RocketModem diagnostics. The adapter is shipped with a bootable CD that executes the hardware diagnostics. If necessary, you can download the diagnostics <code>.iso</code> file and burn the bootable <i>Diagnostics CD</i> .
Enable Verbose mode	Enable the Verbose Event Log feature on the <i>Options</i> tab in the driver and then reboot the server. See Enabling Verbose Event Logging on Page 39 for procedures.

Control Utility (Test Terminal and Port Monitor)

Install the **Control Utility** package, which contains Test Terminal and Port Monitor.

- **Test Terminal** can be used to troubleshoot communications on a port-by-port basis. Test Terminal requires a loopback plug. You can build a loopback plug using the appropriate *RocketPort/RocketModem User Guide* (Page 6).
- **Port Monitor** checks for errors, modem control, and status signals. In addition, it provides you with raw byte input and output counts.

The **Control Utility** is available on the *Software and Documentation* CD or you can download the latest version (ftp://ftp.comtrol.com/utilities/windows/comtrol_utility). To install the Control Utility package, execute the **.msi** file and follow the installation wizard.

Windows Vista, Windows Server 2008, and Windows 7: To run any unsigned application so that it functions properly, right-click on the application icon or shortcut, and click **Run as administrator**.

Use the following subsections for information and procedures to run **Test Terminal** tests.

Test Terminal Explanation

This subsection provides background information about the two tests procedures in the following subsections.

- **Send and Receive Test Data:** This sends data out the transmit line to the loopback plug, which has the transmit and receive pins connected thus sending the data back through the Rx line to **Test Terminal**, which then displays the received data in the terminal window for that port. This test is only testing the Tx and Rx signal lines and nothing else. This test works in either RS-232 or RS-422 modes as both modes have transmit and receive capability. A failure in this test essentially prevents the port from working in any manner.
- **Loopback Test:** This tests all of the modem control signals such as RTS, DTR, CTS, DSR, CD, and RI along with the Tx and Rx signals. When a signal is made HI in one line the corresponding signal line indicates this. The **Loopback Test** changes the state of the lines and looks for the corresponding state change. If it successfully recognizes all of these changes, the port passes.

A failure on this test is not necessarily critical as it depends on what is connected and how many signal lines are in use. For example, if you are using RS-232 in 3-wire mode (Transmit, Receive and Ground) a failure causes no discernible issue since the other signals are not being used. If the port is configured for use in RS-422, this test fails and is expected to fail since RS-422 does not have the modem control signals that are present in RS-232 for which this test is designed.

Using Test Terminal to Test a Port

The following procedure shows how to use **Test Terminal** to send and receive test data to the serial ports and run a loopback test.

1. Stop all applications that may be accessing the ports such as RAS, RRAS, or any faxing or production software. See the appropriate help systems or manuals for instructions on stopping these services or applications. If another application is controlling the port, then **Test Terminal** is unable to open the port and an error message displays.

Note: Remember to restart the application once testing of the ports has been completed.

2. From the **Start** menu, click **Programs > Control > Utilities > Test Terminal (WCOM2)**.
3. Click **File > Open Port** and the appropriate port (or ports) from the *Open Ports* drop list.

4. Install the loopback plug onto the port (or ports) that you want to test.

5. Click **Port > Send and Receive Test Data**.

You should see the alphabet scrolling across the port. If so, then the port installed properly and is operational.

Note: Click **Port > Send and Receive Test Data** to stop the scrolling data.

6. Click **Port > Loopback Test**.

This is a pass fail test and takes a second or two to complete. Repeat for each port that needs testing.

The loopback test tests the modem control (hardware handshaking) signals. It only has meaning in RS-232 mode on serial connector interfaces with full RS-232 signals. If performed under the following conditions, the test will always fail because full modem control signals are not present:

Note: If you experience a failure, retest that port a second time.

7. Close **Test Terminal**.

If both of these tests successfully complete, then the port is operational as expected.

Note: Do **NOT** forget to restart the application.

If either of these test does not complete properly, then you can try the following:

- Verify that the [latest device driver](#) is loaded.
- Run the [latest bootable diagnostic](#).

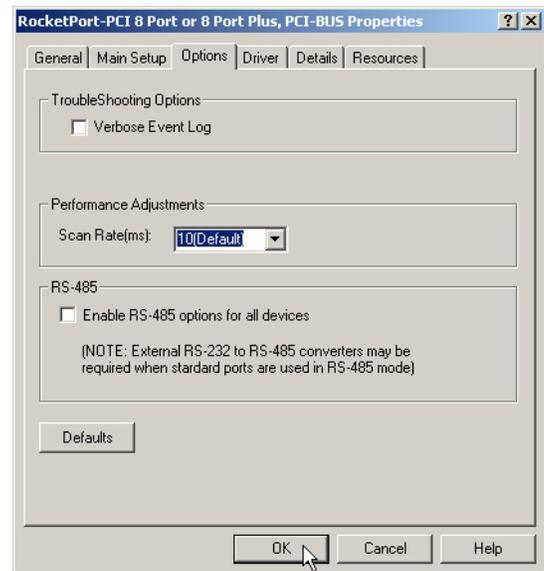
Enabling Verbose Event Logging

You can optionally enable the **Verbose Event Log** option on the *Options* tab for diagnostic purposes to initiate longer messages to be sent to the *Event Log* for your operating system. The added information can be useful when debugging communications and configuration problems.

Access the event log through the *Administrative Tools Event Viewer* option.

Use the following procedure to enable the **Verbose Event Log** option.

1. Use the *Device Manager* to open the RocketPort/ RocketModem driver.
 - Windows 7 and Windows Vista: Right-click **Computer**, click **Manage**, and then highlight the **Device Manager**.
 - Windows Server 2008 R2: Click **Start**, right-click **Computer**, and then click **Properties**.
 - Windows Server 2003: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.



- Windows XP

Not logged into a domain controller: Right-click **My Computer**, click **Manage**, and then highlight the **Device Manager**.

Logged into a domain controller: Right-click **My Computer**, click **Manage**, and then click the **Device Manager** button.

2. Double-click the RocketPort/RocketModem for which you want to enable the *Verbose Event Log*.
3. Click the **Options** tab.
4. Select the **Verbose Event Log** option.

Before calling Technical Support

Control has a staff of support technicians available to help you. You should review [Troubleshooting Checklist](#) on Page 37 before calling Technical Support. If you call for [Technical Support](#), please have the following information available.

Item	Information
Adapter type	
Adapter serial number	
Driver part number and revision or version	
Server computer make, model, and speed	
Other serial port adapters installed in the server and their COM port numbers	
Devices connected to the adapter	

Technical Support

If you need technical support, contact Control using one of the following methods.

Contact Method	Corporate Headquarters
Support	http://www.comtrol.com/pub/en/Support
Downloads	ftp://ftp.comtrol.com/html/default.htm
Web site	http://www.comtrol.com
Phone	763. 494.4100

Configuring Non-Plug and Play Devices (Windows XP and Windows Server 2003)

After installing the hardware and driver for Windows XP or Windows Server 2003, you can use this discussion to configure non-plug and play modem COM ports.

Installing Non-Plug and Play Devices

Use the following procedure to install non-plug and play devices.

1. If you have not so yet, connect the device to a RocketPort/RocketModem port and turn on the device.
2. Open the **Control Panel**.
3. Go to the appropriate subsection to install non-plug and play modems or printers:
 - [Installing Modems](#) on Page 41
 - [Installing Printers](#) on Page 42

Installing Modems

Use the following procedure to install non-plug and play modems.

1. If you have not done so yet, connect the modem (or modems) to the desired RocketPort/RocketModem port (or ports) and turn on the modem (or modems).
Note: This may take a few minutes, depending upon your system and the number of modems you are installing.
2. Open the **Control Panel** and click the **Phone and Modem Options** icon.
3. Click the **Modems** tab.
4. Click **Add**.
5. Click **Don't detect my modem. I will select it from a list** and then click **Next**.
6. Click an appropriate modem model and then click **Next**.
*Note: If you have a driver from the modem manufacturer, click **Have Disk** and browse to the location of the driver. If your modem is not listed, go to the modem manufacturer's web site and download the appropriate driver.*
7. Highlight the port or ports on to which you have connected modems.
8. Click **Finish** to complete the modem installation.
9. Configure modem properties as necessary. For assistance, use the Windows help system.

To use this modem or modems with RRAS, you can refer to the Control [RRAS Configuration Overview for Windows XP](#) document.

Installing Printers

Use the following procedure to install a non-plug and play printer.

Note: *If you want to install a plug and play printer, connect the printer to the appropriate serial port and the driver should automatically install. If it does not automatically install, use the following procedure as a guide with the printer manufacturers documentation.*

1. Open the **Control Panel** and click the **Printers and Faxes** icon.
2. Click **Next** when this screen appears.
3. Click the **Local printer attached to this computer** item.
4. Click the COM port that corresponds to the port to which the printer is connected.
5. Click the Manufacturer, Printer type, and then click **Next**.

Note: *If you have a driver from the printer manufacturer, click **Have Disk** and browse to the location of the driver. If your printer is not listed, go to the printer manufacturer's web site and download the appropriate driver.*

6. Optionally, enter a printer name and then click **Next**.
7. Click **Yes** if you want to print a test page.
8. Click **Finish** to complete the installation.
9. Close the **Printer and Faxes** control panel.

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