ROCKETPORT
MULTIPORT SERIAL CARDS ®
EXPRESS

ROCKETPORT
MULTIPORT SERIAL CARDS ®
EXPRESS SMPTE

ROCKETPORT
MULTIPORT SERIAL CARDS ®
INFINITY

Device Driver Installation Guide
Windows® 2000

COMTROL®
Network Enabling Devices

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Overview

Products Supported

This *User Guide* provides device driver installation for the Windows 2000 operating system and configuration information for the following products:

- RocketPort EXPRESS
- RocketPort EXPRESS SMPTE
- RocketPort INFINITY

In the remainder of this *User Guide*, the products are merely referred to as RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.

Downloading the Latest Software and User Guides

You can use the CD or the following table to locate the latest version of the software and documentation for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY from the Comtrol ftp site.

Product	Driver, Applications, and Documents	Location
RocketPort EXPRESS	Device Driver	ftp://ftp.comtrol.com/html/rp_express_drivers.htm
	Diagnostics and Utilities	ftp://ftp.comtrol.com/html/rp_express_diag.htm
	User Guides	ftp://ftp.comtrol.com/html/rp_express_docs.htm
RocketPort INFINITY	Device Driver	ftp://ftp.comtrol.com/html/rp_infinity_drivers.htm
	Diagnostics and Utilities	ftp://ftp.comtrol.com/html/rp_infinity_diag.htm
	User Guides	ftp://ftp.comtrol.com/html/rp_infinity_docs.htm
RocketPort EXPRESS SMPTE	Device Driver	ftp://ftp.comtrol.com/html/rp_express_smpte_drivers.htm
	Diagnostics and Utilities	ftp://ftp.comtrol.com/html/rp_express_smpte_diag.htm
	User Guides	ftp://ftp.comtrol.com/html/rp_express_smpte_docs.htm

Initial Driver Installation

Review *Preparing for Driver Installation* and *Driver Installation* (below) before installing the driver.

Preparing for Driver Installation

If you have not done so, use this procedure to prepare for the driver installation:

1. Unzip the latest driver assembly to a location that is available to the host. You can use one of the following methods to access the device driver.

   - Links to the latest files on the ftp site in <u>Downloading the Latest Software and User Guides</u> on Page 5.

   - The CD shipped with the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY contains links to check the driver version on the CD against the Comtrol ftp site for the latest driver or documentation.

2. Install the adapter and connect the interface. If you need hardware installation procedures, see <u>Downloading the Latest Software and User Guides</u> on Page 5).

   Note: *Install new RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapters one at a time to minimize installation problems.*

⚠ Caution *Do not connect RS-422/485 devices until the appropriate port interface type has been configured in the device driver. The RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY default port setting is RS-232.*

Driver Installation

After installing the adapter, a *Found New Hardware* message starts the driver installation for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY on most Windows operating systems when you apply power to the system. When the new driver is installed, the system loads default COM ports. You may need to configure the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY COM ports (Page 13) for your serial device or RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY properties (Page 17).

After driver installation and configuration, connect the serial devices to the ports. For information about the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY connectors, refer to the appropriate *User Guide* (Page 5).

⚠ Caution *Do not connect RS-422/485 devices until the appropriate port interface type has been configured in the driver. The RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY default port setting is RS-232.*

1. If you have not done so, copy the driver assembly to your hard drive and extract it to a temporary location.

2. Click **Next** at the *Found New Hardware Wizard*.

3. Click **Display a list of the known drivers for this device so that I can choose a specific driver** and then click **Next**.

4. Click **Multi-port serial adapters** and then click **Next**.

5. Click **Have Disk**.

6. Click **Browse** and select the directory where the driver files are located and then click **Open**.

7. Click **OK** when *Install from Disk* dialog reappears.

8. Select the appropriate RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY model from the list and then click **Next**.

9. Click **Next** on the *Start Device Driver Installation* dialog.

10. If necessary, click **Yes** if the *Digital Signature Not Found* dialog appears to complete the driver installation.

11. Click **Finish**. The driver is installed and the system will start configuring the RS-232 COM ports.

12. Click **Finish** to complete the driver installation process.

13. Click **Ok** to restart the system so that the changes take effect.

14. Click **Yes** to restart the computer.

15. To install an additional adapter, power the system down, install a RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY, and power on the system. The driver installs automatically.

16. Configure the COM ports for your serial devices (Page 13) or RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapter properties (Page 17).

After driver and adapter configuration, connect your serial devices to the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY ports. For information about RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY connectors, see the appropriate *User Guide* (Page 5).

If the attached serial device is a plug and play device, Windows 2000 automatically detects and installs or allows you to locate the driver or drivers for your serial devices.

If the serial device is not a plug and play device, see *Configuring Non-Plug and Play Devices* on Page 27.

Updating the Driver

Use the following procedure to update the device driver for an existing Windows 2000 host.

1. If necessary, download and extract the latest driver (Page 5).

2. Use the *Device Manager* to disable the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.

   a. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

   b. Click **Device Manager**.

   c. Double-click *Multi-port serial adapters* to expand the view.

   d. Right-click the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY and then click **Disable**.

   e. Click **Yes** when queried, *Do you really want to disable it?*

Note: *If you have multiple RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapters installed, disable each adapter in the system.*

3. Click **Display a list of the known drivers for this device so that I can choose a specific driver** and then **Next**.

4. Click **Have Disk**, browse to the driver location, **Open**, and then **OK**.

5. Select the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY hardware description from the *Models* list and then click **Next**.

6. Click **Next** to start the driver update process.

7. If necessary, click **Yes** at the *Digital Signature Not Found* dialog.

8. Click **Finish** to complete the driver update.

9. Click **Close** in the *RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY Properties* dialog

10. Click **Ok** to restart the system so that the changes take effect.

11. After restarting the host, use the *Device Manager* to enable the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.

    To enable the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY, use Step 2a through d (above), and click **Enable** for each disabled adapter.

After restarting the system, you can re-configure the ports (Page 13) or change device options (Page 17), if necessary.

Adding an Adapter (Existing Installation)

If you have a RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY installed and configured in your system, make sure that you have the latest driver before installing any new RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapters. If necessary, use *Updating the Driver* on Page 9 to update the existing driver.

After updating the driver, install the new RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapter. If you need hardware installation procedures, see the appropriate *User Guide* (Page 5).

Note: *If you are adding multiple RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapters, Comtrol recommends adding them one at a time.*

Caution

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

The new RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY installs automatically after powering on the system. You may need to configure COM port properties (Page 13) for your applications or serial devices or the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapter properties (Page 17).

- *Configuring COM Port Properties* on Page 13
- *Configuring Device Properties* on Page 17

Configuring COM Port Properties

Advanced and standard COM port configuration procedures are discussed in this section.

- *Advanced* COM port configuration using the *Port Setup* tab (below) for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY port. You may need to change one or more of the default values to match your serial device.

Field	Default
RS mode	RS-232
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

- *Standard* COM port configuration using the **Port Settings** tab (Page 16) 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 EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY, see *Configuring Device Properties* on Page 17.

> **!** **Caution**
>
> ***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.***

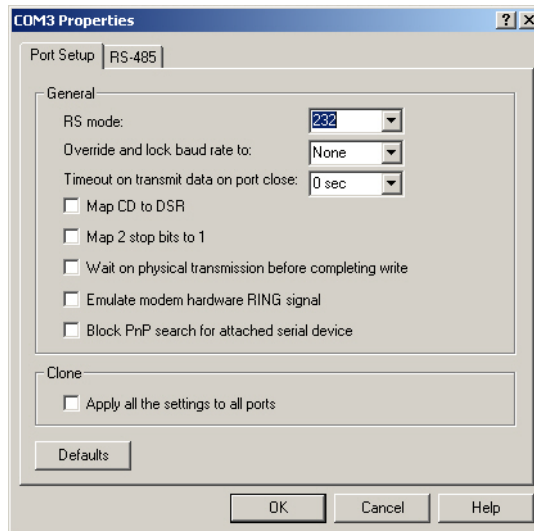## Advanced COM Port Configuration

Use the following procedure to change COM port properties on a RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY port or ports.

1. Access the **Main Setup** tab for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY using the *Device Manager*.

   a. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

   b. Click **Device Manager**.

2. Double-click *Multi-port serial adapters* to expand the view.

3. Double-click the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY that contains the COM ports you want to configure.

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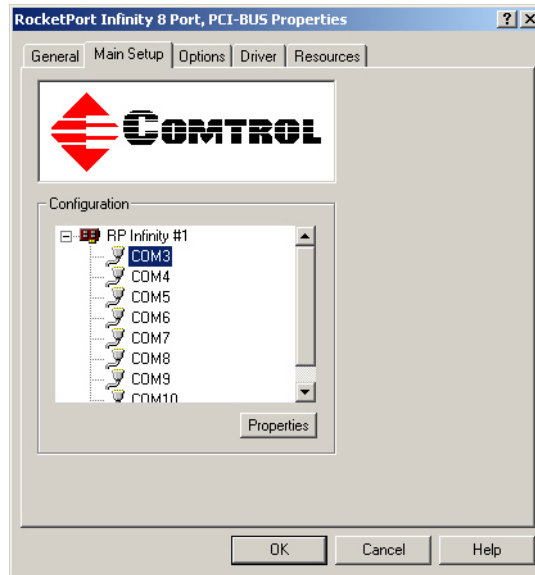

5. Enable the features (Page 20) you want to use, such as setting the appropriate communications mode for your serial device.

Displays default values

Note: *You can use the "What's this?" help to find information about each option.*

6. If the device is RS-485, you may need to configure RS-485 for your serial device.

    a. Click the **RS-485** tab.

    b. Click the features (Page 22) that correspond to your serial device.

7. Click **OK** after configuring this port or click the **Clone** check box to set all of the ports on this RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY to these characteristics.
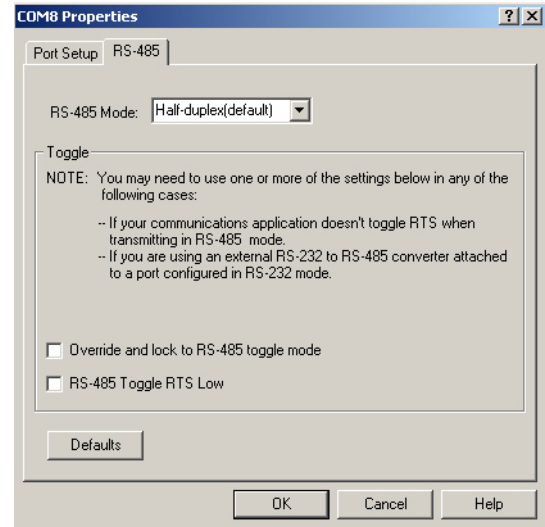
Standard COM Port Configuration

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 20).

Use the following procedure to change standard COM port parameters default values (Page 25).

1. Access the Device Manager.

   a. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

   b. Click **Device Manager**.

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

   Note: *RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY are displayed as Comtrol RocketPort Unity ports. in the Device Manager.*
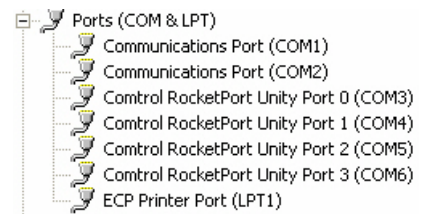
3. Double-click the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY COM port for which you want to change port parameters.

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.
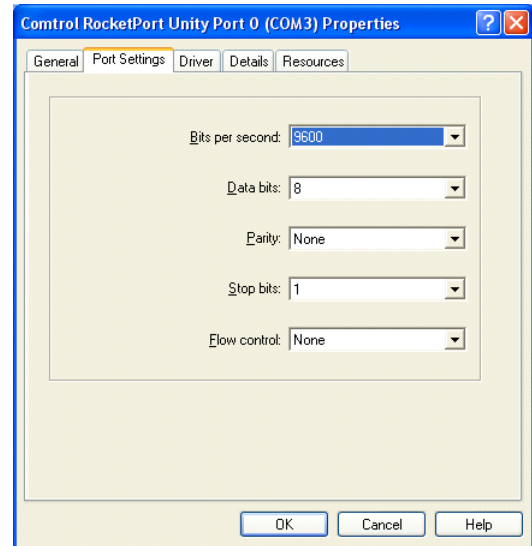
Configuring Device Properties

You may want to change the device **Name** or the **Starting COM Port** number on the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.

Accessing the Properties Page with the Device Manager

To change RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY or COM port configuration, you need to access the **Properties** page for that RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.
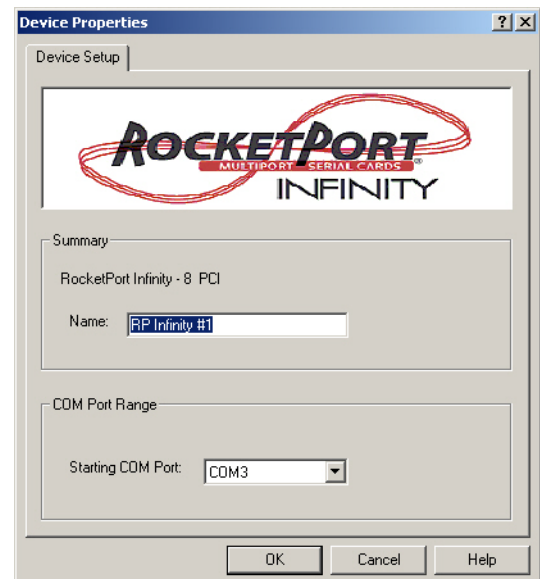
Note: You must be logged in with Administrator privileges to access the Device Manager.

1. Access the **Main Setup** tab for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY using the *Device Manager*.

   a. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

   b. Click **Device Manager**.

   c. Double-click **Multi-port serial adapters** to expand the view.

   d. Double-click the appropriate RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapter.

2. Click the **Main Setup** tab.

3. Highlight RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY device name and then click **Properties**.

   Make the desired changes:

   • 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 EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.

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

Configuration Screens

Use the *Device Manager* to access the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY driver *Main Setup* tab, if you need to change configuration of the default (Page 22) advanced COM port settings.

Use the *Device Properties* dialog to rename the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY, or change the starting COM port number.

Main Setup Tab

The **Main Setup** tab for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY is accessed through the *Device Manager*.

1. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

2. Click **Device Manager**.

3. Double-click *Multi-port serial adapters* to expand the view.

4. Double-click the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY that contains the COM ports you want to configure.

5. Click the **Main Setup** tab to access the following RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY 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 EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY or the starting COM port number of the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.
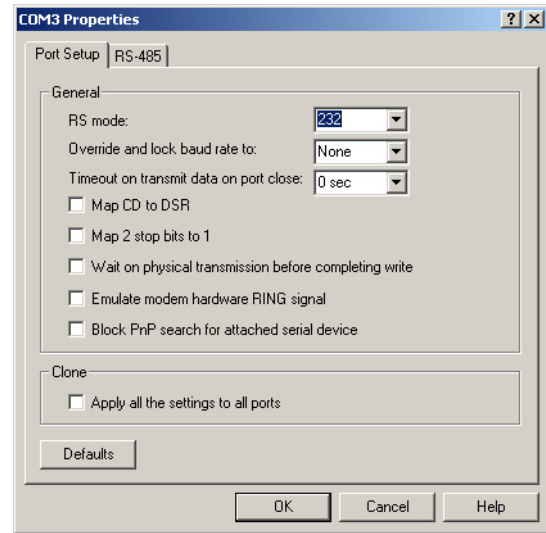
     Highlight the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapter that you want to configure and then click **Properties**.
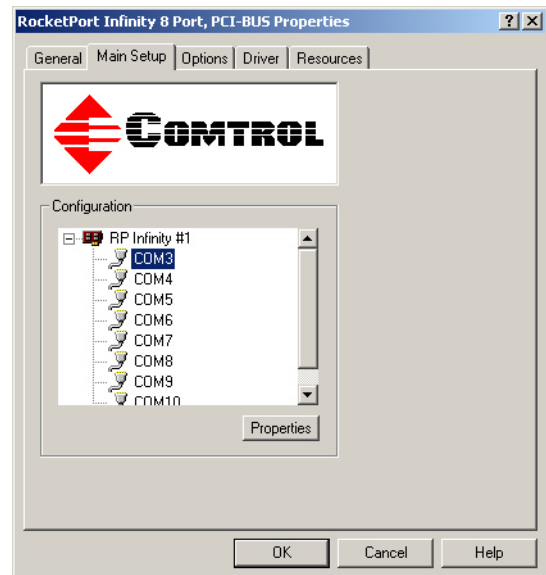
Port Setup Tab

The *Port Setup* tab is used to configure advanced COM port properties. See *Advanced COM Port Configuration* on Page 13 for configuration procedures.

After configuring a port, you can use the **Clone** feature to set all of the ports on the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY to these characteristics.

| COM Properties	Description
RS Mode	Use this drop list to select the communications mode for the serial device that you will be connecting to this port. If you click RS-485, you may need to change settings on the *RS-485 tab*.
Override and lock baud rate to	This option allows you to lock selected ports. 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. The Quad/Octacable models support up to 921.6Kbps and the 8/16/32-port models with an interface box support up to 460.8Kbps. After locking a baud rate, no matter what baud rate is selected in a host application, the *actual* rate used is the rate specified here.

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 *RING* signal (or an alternate code, as defined in the AT command set for the modem), it sends an *RI* 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.
Clone: Apply all the settings to all ports	If this check box is *not* clicked, changes apply to the selected port only. If this check box *is* clicked, changes apply to all ports on this board.

COM Properties	Description
Defaults	Click this to return to the driver default values. • **RS mode** = RS-232 • **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

RS-485 Tab

The **RS-485** tab allows you to configure RTS (Request to Send) options for RS-485 mode in the following situations:

• If your communications application does not toggle RTS when transmitting in RS-485 mode.

• If you are using an external RS-232 to RS-485 converter attached to a port configured in RS-232 mode.

• **RS-485 Mode** provides these choices:

- **Half-duplex (default)** supports transmit and receive data. The **485txe** signal is active to enable the driver portion of the connected RS-485 transceiver which generates the RS-422 transmit data signals.

- **Full-duplex (Master)**, supports transmit and receive data. The driver portion of the connected RS-485 transceiver is enabled by the **485txe** signal. This mode is the same as RS-422.

- **Full-duplex (Slave)**, supports transmit and receive data. The driver portion of the connected RS-485 transceiver is enabled by the **485txe** signal when the RTS signal is active.

Note: Modem control lines are not supported when using RS-485 mode.

• **Override and lock to RTS toggle mode** allows you to lock the port in RTS (Request to Send) toggle mode, then set the mode (low or high) as desired for RS-485 mode.

• **RTS Toggle RTS Low** allows you to toggle the RTS output signal low during data transmission, which may be needed for relay devices for RS-485.
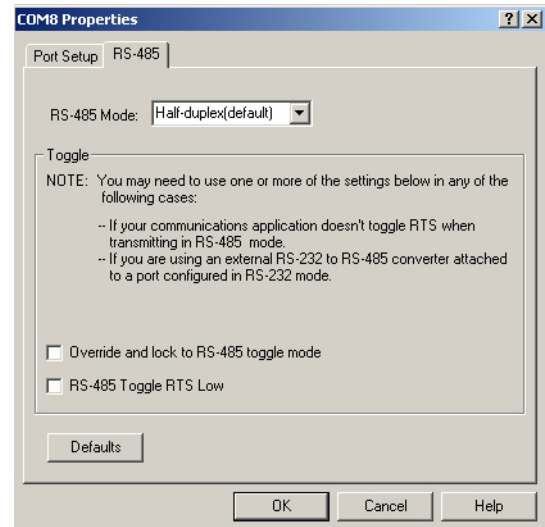
Device Properties Screen

You can change the default device name and starting COM port with the *Device Properties* screen. See [Configuring Device Properties](#) on Page 17 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 EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.
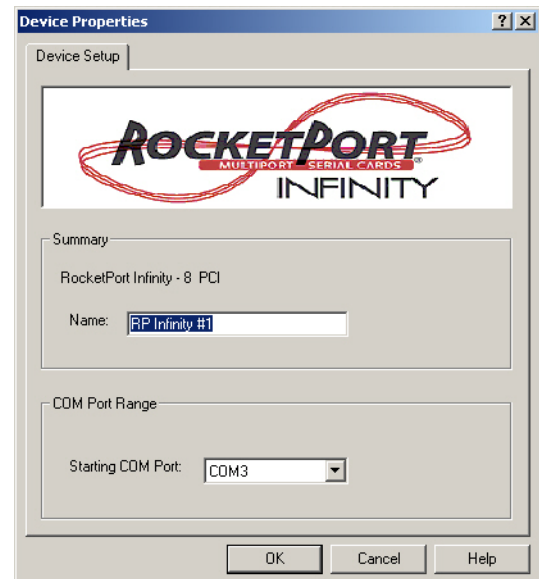
In addition, you can use **Starting COM Port** to set nonsequential starting COM port numbers for each adapter, thus leaving gaps in the COM port numbering sequence.

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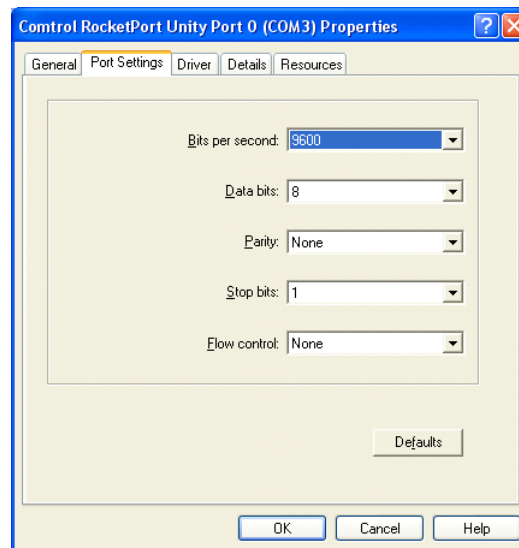
Options Tab

The *Options* tab contains the **Verbose Event Log** option, which causes detailed messages to be sent to the operating system *Event Log*. This added information can be useful when debugging communications and configuration problems.
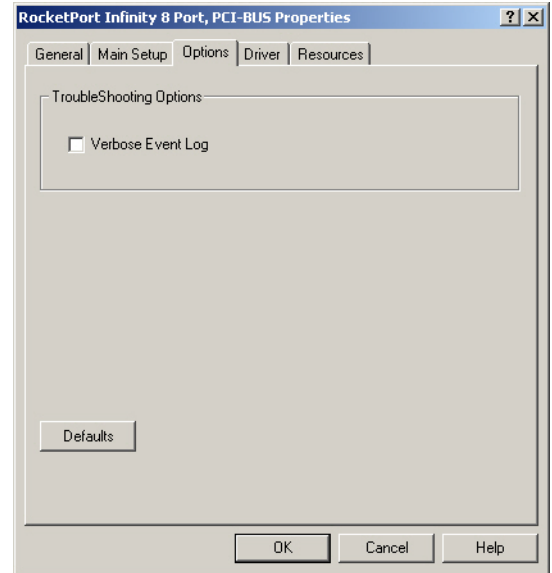
Port Settings Tab

The **Port Settings** tab for each RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY 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**.

Configuring Non-Plug and Play Devices

After installing the hardware and driver for Windows 2000, you can use this discussion to configure modem COM ports.

Installing Modems

Use the following procedure to install modems on RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY ports:

1. Connect the modem to the desired port.

2. Turn on the modem.

3. Open the **Control Panel** and double-click the **Phone and Modem Options** icon.

4. Click **Add**. The *Add/Remove Hardware Wizard* starts.

5. Click **Don't detect my modem; I will select it from a list** and then click **Next**.

    Note: While Windows 2000 can automatically detect modems, we advise against using this option as auto-detect feature may cause some multiprocessor systems to lock up.

6. Click the appropriate manufacturer and model and then click **OK**.

    If the correct manufacturer and model do not appear on the list, click **Have Disk** to install software from a manufacturer-supplied installation diskette.

7. Click the port you to which you want to install the modem.

8. Click **Next**.

9. Click **Finish**. The modem software is installed on the selected ports.

Note: For help configuring modem properties, see the Windows Help system.

10. If you need to configure dialing properties (country, area code, calling card number, and so on), click the **Dialing Rules** tab, make the needed changes, then click **OK**.

11. Click **Close** when the *Phone and Modem Options* dialog reappears.

Removing the Adapter and Driver

This discusses removing the device driver for the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.

Use the following procedure to remove the existing device driver in your operating system.

1. Use the *Device Manager* to uninstall the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY driver.

    a. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

    b. Click **Device Manager**.

    c. Double-click *Multi-port serial adapters* to expand the view.

2. Right-click on the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY that you want to uninstall.

3. Click **Uninstall** and then click **Ok** to completely remove the adapter.

    Note: *Windows Vista users should click the check box to remove the software from the system on the last (or only) RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY.*

4. Exit the *Device Manager* and turn off the system.

5. **REMOVE** the adapter from the system before re-applying power.

Troubleshooting and Technical Support

Troubleshooting

If you are having trouble with a RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY, try the following.

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

1. Verify that you are using the *correct types of cables* in the correct places and that all cables are tightly connected.

   Refer to the appropriate *RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY User Guide* or *[download the latest version](#)* (Page 5) to verify cabling.

2. Verify that the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY has installed using the *Device Manager* to confirm that the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY adapter displays.

3. After driver installation, *if a port does not open*; open the *Device Manager*, go to *Ports COM & LPT*. If a yellow exclamation mark represents the port, right-click on the exclamation mark, and click **Update Driver**. See *[Updating the Driver](#)* on Page 9 for detailed procedures.

4. Verify that you are *addressing the port correctly*. In many applications, device names above COM9 require the prefix **\\.** to be recognized. For example, to reference COM20, use **\\.\COM20** as the file or port name.

5. Run the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY diagnostic*s*. The RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY is shipped with a bootable CD that executes the hardware diagnostics. If necessary, you can download the Diagnostics **.iso** file and burn the bootable *Diagnostics CD*.

6. Enable the **[Verbose Event Log](#)** feature on the *Options* tab in the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY driver and then reboot the server. See *[Enabling Verbose Event Logging](#)* on Page 33 for procedures.

7. Install and use one of the tools in the **Comtrol Utility** package. The **Comtrol Utility** is available on the *RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY Software and Documentation* CD or you can [download the latest version](#). The file is a self-extracting zip file that automatically starts the installation procedure. It is not necessary to reboot the PC after installation.

   The **Comtrol Utility** package includes the following applications that you can access from the *Comtrol Program* group:

   - **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 if you are missing the loopback plug shipped with the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY using the *RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY User Guide*.

   - **Port Monitor** checks for errors, modem control, and status signals. In addition, it provides you with raw byte input and output counts.

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 as either RS-422 or RS-485 this test fails and is expected to fail since RS-422 and RS-485 do 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 > Comtrol > 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.

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.

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 EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY driver.

   a. On the Windows desktop, right-click the **My Computer** (or **Computer**) icon and then click **Manage**.

   b. Click **Device Manager**.

   c. Double-click *Multi-port serial adapters* to expand the view.

2. Double-click the RocketPort EXPRESS, RocketPort EXPRESS SMPTE, and RocketPort INFINITY for which you want to enable the *Verbose Event Log*.

3. Click the **Options** tab.

4. Select the **Verbose Event Log** option.
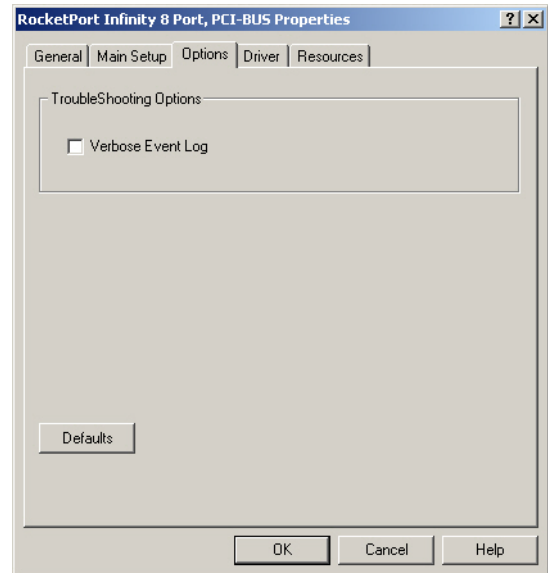
Before calling Technical Support

Comtrol has a staff of support technicians available to help you. You should review *Troubleshooting* on Page 31 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 Comtrol 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

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