



User Guide



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Overview

Product Overview

The RocketPort EXPRESS SMPTE is a high-speed in-server serial expansion card for use in a PCI-Express (PCIe) compatible slot in a host system. The RocketPort EXPRESS SMPTE was designed to support speeds up to 921Kbps and supports RS-422 exclusively, in either DCE or DTE mode.

The RocketPort EXPRESS SMPTE uses Control Application Specific Integrated Circuit (ASIC) technology to replace most hardware functionality to minimize components, including:

- The processor
- A serial controller
- Bus interface logic and other miscellaneous logic

You can install up to four RocketPort EXPRESS SMPTE cards in one computer, providing a maximum of 32 additional serial ports. The RocketPort EXPRESS SMPTE is an 8-port card with a DB9F interface box.

Before Installing the RocketPort EXPRESS SMPTE

If you are planning on installing the RocketPort EXPRESS SMPTE in a Windows system make sure that you have placed the device driver assembly to a location that is available to the host system before installing the card in the host.

You can use the *Software and Documentation* CD to locate the latest device drivers and documentation or the links in the following table.

You may want to record the model and serial number of the RocketPort EXPRESS SMPTE before installing the card in the event you need to call technical support.

Locating the Latest Drivers and Documentation

This table contains links the software and installation documentation. Optionally, you can locate the latest device drivers, software, and installation documentation.

Software or Document	Location
Device drivers	ftp://ftp.comtrol.com/html/rp_express_smpte_drivers.htm
Diagnostic and Utilities	ftp://ftp.comtrol.com/html/rp_express_smpte_diag.htm
User Guides	ftp://ftp.comtrol.com/html/rp_express_smpte_docs.htm

Card and Interface Installation

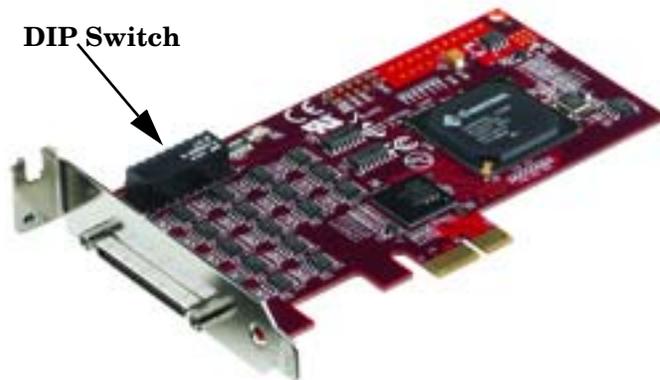
This section discusses the following:

- [Installing the Card](#)
- [Attaching an Octacable Interface Cable](#) on Page 8
- [Attaching an Interface Box](#) on Page 9
- [Installing a Rackmount Interface Box](#) on Page 10

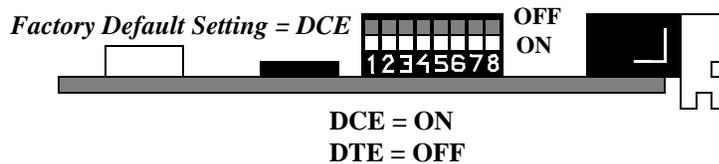
Installing the Card

Use the following procedure to install a RocketPort EXPRESS SMPTE card.

1. Turn off the host computer.
2. If necessary, set the DCE/DTE DIP switch for your environment.



- **DCE mode:** verify that the DIP switches are set to **ON** for DCE mode on the appropriate ports.
- **DTE mode:** set the switches to **OFF** as needed for any ports that require DTE mode.



3. Remove the system cover from your computer.
4. Select a PCI-Express (PCIe) compatible slot.
5. Remove the slot cover or release the clamp.
6. If necessary, replace the low-profile mounting bracket with the standard mounting bracket shipped with the RocketPort EXPRESS SMPTE.
7. Insert the card into the slot and seat it securely.
8. Reinstall the expansion slot retaining screw or clamp.

Note: You may want replace the system cover after the driver is installed and running in the event that you need to change the DTE/DCE switch setting.



Do not connect an interface to the card when the host system is powered on, this can cause the card to fail.

9. Attach the appropriate interface (octacable or interface box) to the RocketPort EXPRESS SMPTE:
 - [Attaching an Octacable Interface Cable](#) on Page 8
 - [Attaching an Interface Box](#) on Page 9
 - [Installing a Rackmount Interface Box](#) on Page 10

Attaching an Octacable Interface Cable

Use this procedure to complete the octacable installation.

1. Make sure that the host system is powered off before connecting the cable.
2. Attach the 68-pin end of the octacable to the card.



Make sure that the connectors are properly aligned and forcefully push the connector of the Octacable with a rocking motion into the card connector. Make sure that the connector is seated tightly before tightening the retaining screws on the connector.



3. Tighten the retaining screws.
4. Power on the host system.
5. Click **Cancel** if a *Found New Hardware* message appears on a Windows operating system.

Execute the device driver assembly to start the driver installation.

For other operating system device drivers, see [Locating the Latest Drivers and Documentation](#) on Page 5.

6. After installing the driver, you should verify that the ports are functioning properly and then connect your serial devices.

You can use the [Troubleshooting](#) section on Page 15 for port testing procedures.

Refer to [Connecting Serial Devices](#) on Page 11 for information about connecting serial devices.

Attaching an Interface Box

Use this procedure to complete the installation with an interface box.



Caution

Do not connect the cable to the RocketPort EXPRESS SMPTE card or interface box when the computer is powered on. The interface is not hot-swappable.

Connecting the cable to the RocketPort EXPRESS SMPTE card or interface box while the computer is powered on may damage the electronics on the card or interface box.

1. Make sure that the host system is powered off before connecting the cable.
2. Attach the LFH60 end of the interface cable to the RocketPort EXPRESS SMPTE card and the DB37 end to the connector the interface box.

Make sure that the connectors are properly aligned. Do NOT use force when connecting the cables to the host adapter card.

3. Tighten the retaining screws.
4. Power on the host system.
5. Click **Cancel** if a *Found New Hardware* message appears on a Windows operating system.

Execute the device driver assembly to start the driver installation.

For other operating system device drivers, see [Locating the Latest Drivers and Documentation](#) on Page 5.

6. After installing the driver, you should verify that the ports are functioning properly and then connect your serial devices.

You can use the [Troubleshooting](#) section on Page 15 for port testing procedures.

Refer to [Connecting Serial Devices](#) on Page 11 for information about connecting serial devices.



Caution

Installing a Rackmount Interface Box

Rackmount interface boxes are sturdy enough to allow you to stack several units on a shelf, or you can mount it directly into a rack.



Do not connect the cable to the RocketPort EXPRESS SMPTE card or interface box when the computer is powered on. The interface is not hot-swappable.

Connecting the cable to the RocketPort EXPRESS SMPTE card or interface box while the computer is powered on may damage the electronics on the card or interface box.

1. Make sure that the host system is powered off before connecting the cable.
2. Place the Rackmount interface box on a stable surface or attach the brackets to the interface box using the screws supplied with the unit and attach the bracket into your rack.
3. Attach the cable shipped with the card between the interface box and the card.

Make sure that the connectors are properly aligned. Do NOT use force when connecting the cables to the host adapter card.

4. Power on the host system.
5. Click **Cancel** if a *Found New Hardware* message appears on a Windows operating system.

Execute the device driver assembly to start the driver installation.

For other operating system device drivers, see [Locating the Latest Drivers and Documentation](#) on Page 5.

6. After installing the driver, you should verify that the ports are functioning properly and then connect your serial devices.

You can use the [Troubleshooting](#) section on Page 15 for port testing procedures.

Refer to [Connecting Serial Devices](#) on Page 11 for information about connecting serial devices.



Connecting Serial Devices

This section provides information about the RocketPort EXPRESS SMPTE connectors, in the event that you need to build cables or loopback plugs.

A *loopback plug* is a serial port plug with pins wired together that you can use with application (for example, the diagnostic, Test Terminal, or minicom) to test serial ports. See [Before Calling Technical Support](#) on Page 15 for information about using the test application shipped with the RocketPort EXPRESS SMPTE.

DTE Versus DCE

Most devices, except modems, are Data Terminal Equipment (DTE) devices. Modems are Data Communication Equipment (DCE) devices. RocketPort EXPRESS SMPTE ports are set to DCE by default.

The RocketPort EXPRESS SMPTE conforms to the ANSI/SMPTE 207M-1997 Television – Digital Control Interface – Electrical and Mechanical Characteristics standard. The Society of Motion Picture and Television Engineers (SMPTE) 207M protocol permits the control of video and audio tape decks for editing purposes and can be used to connect controlled device such as, video routers and servers.

DTE and DCE are controlled with the DIP switch on the RocketPort EXPRESS SMPTE. See [Card and Interface Installation](#) on Page 7 for information.

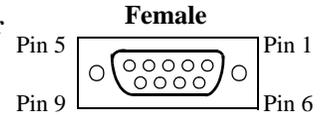
DB9 Serial Cables and Loopback Plugs

The following figures and table illustrate the signals present on DB9 connectors if you need to build your own null-modem or straight-through DB9 serial cables. The RocketPort EXPRESS SMPTE provides female DB9 SMPTE port connections that comply with the SMPTE 207M standard so that you can easily connect Sony DB9 type devices.

- [DB9 Signals](#) on Page 12
- [Straight-Through Cables \(DCE\)](#) on Page 12
- [Null-Modem Cables \(DTE\)](#) on Page 12
- [DB9 Loopback Plugs](#) on Page 12

DB9 Signals

Refer to the manufacturer’s installation documentation if you need help with the connector pinouts or cabling for the serial device.

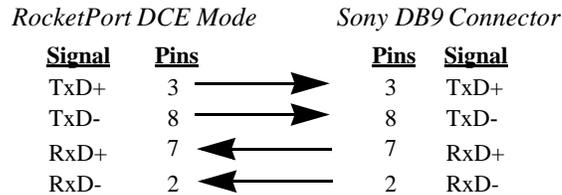


SMPTE 207M DB9 Female Connector		
Pin	DCE Mode (SMPTE)	DTE Mode
1	Chassis Ground	Chassis Ground
2	RxD-	TxD-
3	TxD+	RxD+
4-6	Not used	Not used
7	RxD+	TxD+
8	TxD-	RxD-
9	Chassis Ground	Chassis Ground

Note: DTE and DCE mode are controlled with the DIP switch on the RocketPort EXPRESS SMPTE. See [Installing the Card](#) on Page 7 for information. The factory default is set to DCE. Verify that the DIP switches are ON (down) for DCE mode.

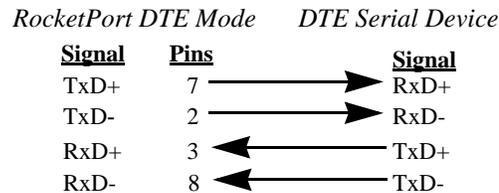
Straight-Through Cables (DCE)

Use the following figure if you need to build an RS-422 straight-through cable for DCE devices.



Null-Modem Cables (DTE)

Use the following figure if you need to build an RS-422 null-modem cable for DTE devices.



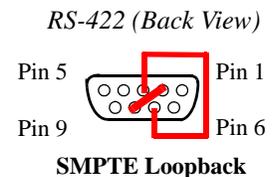
Note: RS-422 signals are not standardized and each serial manufacturer uses different pinouts. Refer to the serial device documentation to determine the pinouts for the signals above.

DB9 Loopback Plugs

RocketPort EXPRESS SMPTE models with DB9 connectors on the interface are shipped with a single loopback plug.

Wire the following pins together to build additional plugs or replace a missing loopback plug.

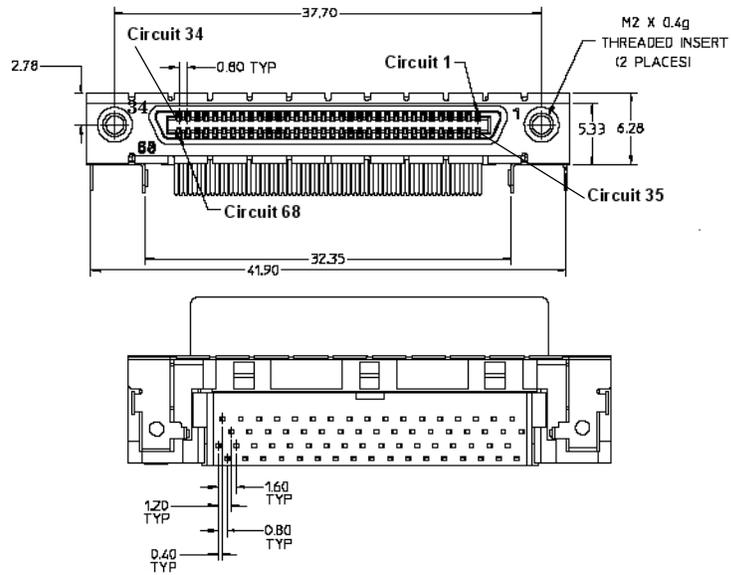
- Pins 2 to 8
- Pins 3 to 7



Building Interfaces

68-Pin VHDCI Connector

Use the following table if you need to build a cable for a proprietary serial device.



Pins	DCE	DTE
1	TXD-1	RXD-1
2	TXD+1	RXD+1
3	RXD-1	TXD-1
4	RXD+1	TXD+1
5	TXD-2	RXD-2
6	TXD+2	RXD+2
7	RXD-2	TXD-2
8	RXD+2	TXD+2
9	TXD-3	RXD-3
10	TXD+3	RXD+3
11	RXD-3	TXD-3
12	RXD+3	TXD+3
13	TXD-4	RXD-4
14	TXD+4	RXD+4
15	RXD-4	TXD-4
16	RXD+4	TXD+4
17	N/C	N/C
18	GND	GND

Pins	DCE	DTE
19	TXD-5	RXD-5
20	TXD+5	RXD+5
21	RXD-5	TXD-5
22	RXD+5	TXD+5
23	TXD-6	RXD-6
24	TXD+6	RXD+6
25	RXD-6	TXD-6
26	RXD+6	TXD+6
27	TXD-7	RXD-7
28	TXD+7	RXD+7
29	RXD-7	TXD-7
30	RXD+7	TXD+7
31	TXD-8	RXD-8
32	TXD+8	RXD+8
33	RXD-8	TXD-8
34	RXD+8	TXD+8
35-50	N/C	N/C
51	GND	GND
52-68	N/C	N/C

Troubleshooting

If you are experiencing problems with the RocketPort EXPRESS SMPTE, review the troubleshooting procedures for your system before calling Technical Support.

Before Calling Technical Support

Review the following information before calling Technical Support because they will request that you perform many of the procedures or verifications before they will be able to help you diagnose a problem.

- Verify the cabling using [Connecting Serial Devices](#) on Page 11.
Note: Most customer problems reported to Control Technical Support are eventually traced to cabling or network problems.
- If you have not done so, run the diagnostics ([RocketPort EXPRESS SMPTE Diagnostics](#) on Page 15).
- Verify that you have installed the latest RocketPort EXPRESS SMPTE device driver, see [Locating the Latest Drivers and Documentation](#) on Page 5.
If necessary, remove or update the existing driver using the procedures in the *RocketPort EXPRESS SMPTE Device Driver Installation Guide for Windows* or README file packaged with the FreeBSD, Linux, QNX, or SCO OpenServer driver.

If none of the above work, you can refer to one of these subsections:

- [Troubleshooting Windows Systems](#) on Page 17
- [Troubleshooting Linux Systems](#) on Page 24

RocketPort EXPRESS SMPTE Diagnostics

This subsection describes how to run the bootable diagnostic CD to verify that the RocketPort EXPRESS SMPTE hardware is functioning properly. The RocketPort EXPRESS SMPTE is shipped with a bootable CD that executes hardware diagnostics.

In the event that you cannot locate the CD, you can [download](#) (Page 5) the latest version and burn the .iso image to a CD-ROM.

Note: An .iso file cannot be copied onto a CD but must be burned using an application that burns the image to the CD. If you do not have an application available, you can use a freeware application that is on the Control Software and Documentation CD or download it at: <ftp://ftp.control.com/iso/IsoBurner/>.

You can use the diagnostic to:

- Confirm that the hardware is functioning
- Determine resolutions to conflicts during installation
- Perform a stress test on all RocketPort EXPRESS SMPTE ports in the system

The diagnostic requires a loopback plug to test a port or ports. A single loopback plug is shipped with the RocketPort EXPRESS SMPTE. You can build additional loopback plugs or move the loopback plug to the port you want to test. See [Connecting Serial Devices](#) on Page 11 if you want to build loopback plugs.

If you cannot locate the Diagnostic CD, you can burn a replacement with the .iso file on the Control Software and Documentation CD shipped with your adapter or download the latest version from the ftp site (Page 5).

Running the Bootable Diagnostic

Use the following procedure to run the diagnostics.

Note: *If the diagnostic goes into sleep mode while unattended, press the Num Lock key to activate the screen. Use **Ctrl/Alt Delete** to kill the diagnostic process at any time.*

1. Insert the bootable CD that contains the diagnostic and restart your machine.

Note: *If the Diagnostic CD does not boot the PC, you may need to change your BIOS settings so that the PC can boot from a CD drive.*

The diagnostic starts automatically and takes a few minutes before the first screen appears.

Note: *If the diagnostics did not detect the RocketPort EXPRESS SMPTE, the adapter has a hardware failure, contact Technical support (Page 25).*

2. Press **Enter** at the Copyright screen to begin the diagnostic.
3. Select from the following options and use the appropriate steps.

- [Testing a Port or Ports](#)
- [Stress Testing the RocketPort EXPRESS SMPTE](#)

Testing a Port or Ports

4. Enter **1 to 4** and then press **Enter** to test a port or ports on a specific RocketPort EXPRESS SMPTE or multiple adapters.
5. Press **Enter** to test all ports on the RocketPort EXPRESS SMPTE or enter the port number of a port that you want to test and then **Enter**.
6. Place the loopback plug on the appropriate port and press **Enter**. If you are testing all of the ports and have only one loopback plug, you must move it from port to port during the test.

Note: *Use Shift Page Up/Down to review the diagnostic report.*

To end the diagnostic, you may need to select **b** to return to a screen that contains a **q** to quit. Type **reboot**, select **Enter**, and remove the CD from the drive when prompted.

Stress Testing the RocketPort EXPRESS SMPTE

The stress test requires a loopback plug for each port on each card.

Select **S** and press **Enter** to run the stress test on all RocketPort EXPRESS SMPTE cards installed in the system. Make sure that you have a loopback port installed and each port on each adapter.

The stress test uses a default configuration to simultaneously stream data to all ports of the RocketPort EXPRESS SMPTE cards in a system until you stop the test.

To stop the test and review the results of the stress test, enter **S**.

Exiting the Diagnostic

To end the diagnostic, you may need to select **b** to return to a screen that contains a **q** to quit. Type **reboot**, select **Enter**, and remove the CD from the drive when prompted.

If the Diagnostic Fails

If the diagnostics fails, try one of the following before contacting Technical Support:

1. Turn off the power and reseal the RocketPort EXPRESS SMPTE card into the slot.
2. Try running the diagnostics again. If they fail again, you may have a bad port, contact [Technical Support](#) on Page 25.

Troubleshooting Windows Systems

If you are using a RocketPort EXPRESS SMPTE driver on a Windows system and the diagnostic verified that the card is functional, you can check the following:

1. Verify that the RocketPort EXPRESS SMPTE has installed by checking the *Device Manager* to verify that the RocketPort EXPRESS SMPTE card displays.
2. Verify that you are addressing the port correctly.
In many applications, device names above COM9 require the prefix \\.\ in order to be recognized. For example, to reference COM20, use \\.\COM20 as the file or port name.
3. After driver installation, *if a port does not open*; go to *Ports COM & LPT*, right-click on the yellow exclamation mark on the port, and click **Update Driver**. Use the same procedure used when installing the ports that are detected with plug and play systems.
4. Enable the *Verbose Event Log* feature on the *Options* tab of the RocketPort EXPRESS SMPTE driver and then reboot the server.
5. Install and use one of the tools in the **Control Utility** package. Use the following subsection, *Control Utility*, below for installation and adapter testing procedures.

Control Utility

The **Control Utility** is available on the *Software and Documentation* CD or you can [download](#) (Page 5) 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 **Control Utility** package includes the following applications that you can access from the *Control Program* group:

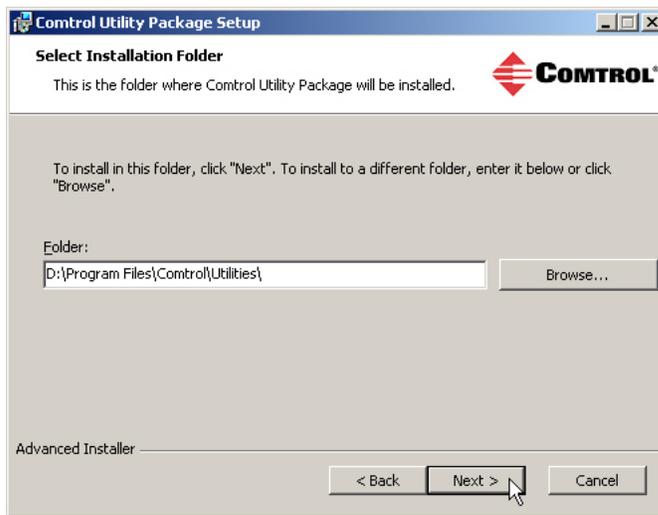
- **Port Monitor** (PortMon2) checks for errors, modem control, and status signals. In addition, it provides you with raw byte input, output counts, and confirm that the device driver is functioning. It can determine if the ports are in use by another application.
- **Test Terminal** (WCOM2) can be used to troubleshoot communications on a port-by-port basis ([Using Test Terminal to Test a Port](#) on Page 22). Test Terminal requires a loopback plug. You can build a loopback plug if you are missing the loopback plug shipped with the adapter ([DB9 Loopback Plugs](#) on Page 12).

Use the following procedure to install the Control Utility package.

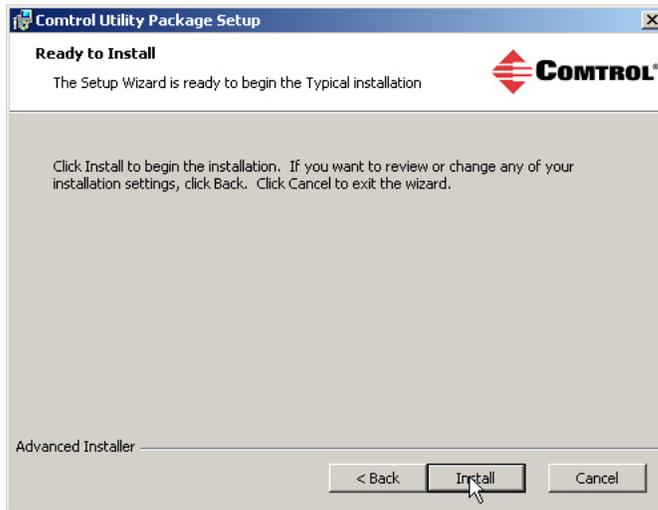
1. Execute the **Control_Utility_Package_x.xx.msi** file, where **x_xx** is the Control Utility version number.
2. Click **Next**.



3. Click Next.



4. Click Install.



5. Click Finish.

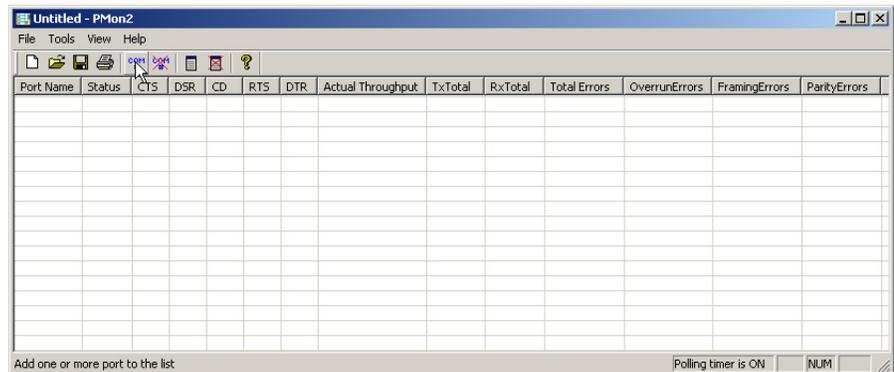


Using PortMon to Test the Driver Installation

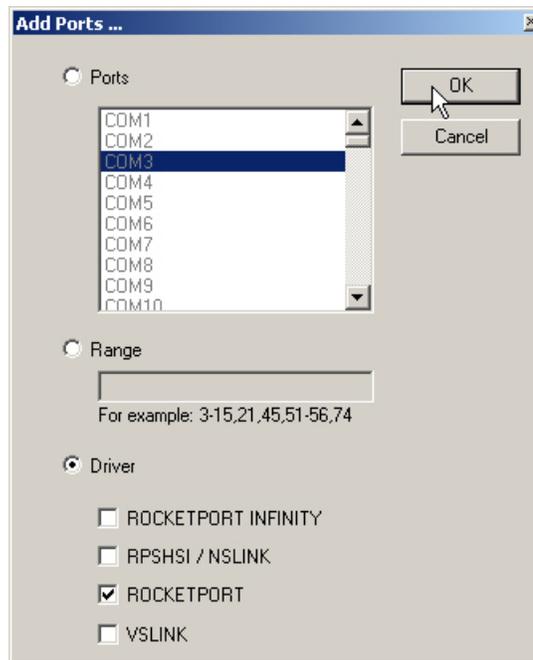
6. Go to [Using PortMon to Test the Driver Installation](#) on Page 19.

You can use **PortMon** to check whether the RocketPort EXPRESS SMPTE can communicate through the device driver for Windows. If necessary, use [Control Utility](#) on Page 17 to install **PortMon**.

1. From the **Start** menu, select **Programs > Control > Utilities > Port Monitor (PortMon2)**.



2. Click **Add Ports** using the icon or **Tools > Add Ports**, click **Driver, ROCKETPORT**, and click **Ok**.



3. If the RocketPort EXPRESS SMPTE is communicating with the device driver for Windows, Port Monitor should display **CLOSED** status. If a port is open for

an application, it displays as **OPEN**, and displays **Actual Throughput**, **TxTotal** and **RxTotal** statistics.

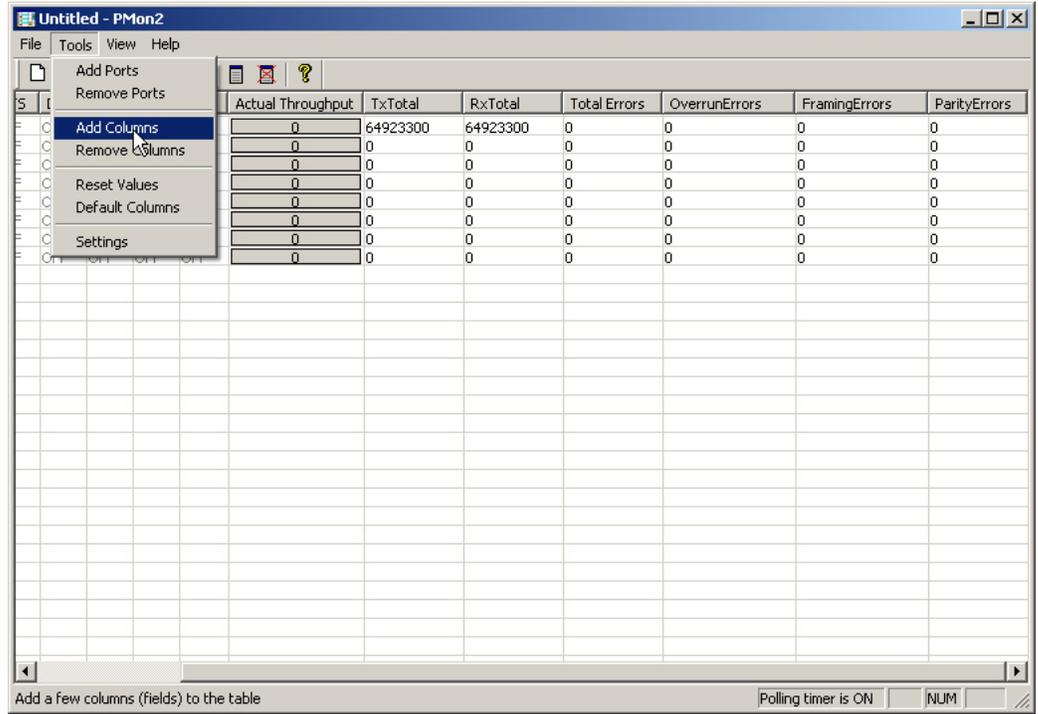
Port Name	Status	CTS	DSR	CD	RTS	DTR	Actual Throughput	TxTotal	RxTotal	Total Errors	OverrunError
COM11	OPEN	ON	ON	ON	ON	ON	114600	205891	205638	0	0
COM12	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0
COM13	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0
COM14	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0
COM15	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0
COM16	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0
COM17	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0
COM18	CLOSED	OFF	OFF	OFF	OFF	OFF	0	0	0	0	0

Normally, there should be no data errors recorded or they should be very small. To find out what the actual errors are, scroll to the right. You will see three columns: **Overrun Errors**, **Framing Errors**, and **Parity Errors**.

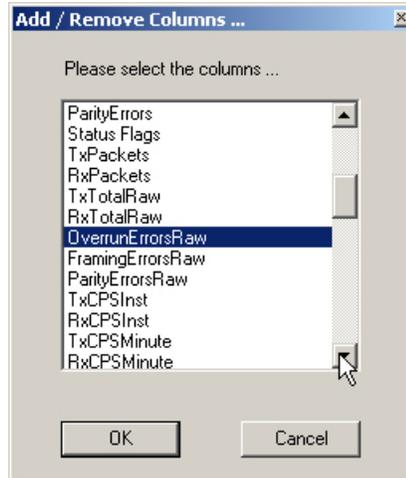
If the errors are:

- **Overrun Errors** represent receive buffer overflow errors. If this is the case, you will have to configure either software or hardware handshaking to control the flow of data. The most common errors are Overrun errors.
- **Framing Errors** indicate that there is an synchronization error between the beginning of a data frame and the end of the data frame. A frame usually consists of a start bit, 8 data bits, and a stop bit or two. The framing error occurs if the stop bit is not detected or it occurs in the wrong time frame. Most causes for framing errors are electrical noise on the data lines, or differences in the data clocks of the RocketPort EXPRESS SMPTE and the connected device.
- **Parity Errors** occur when parity is used and the parity bit is not what is expected. This can also be caused by noise on the data lines.

- You can view additional statistics to Port Monitor by adding columns. Click **Tools** and **Add Columns**.

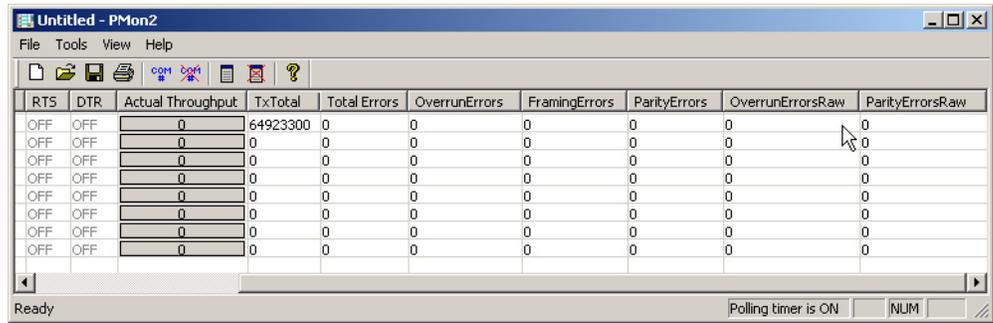


- Highlight or shift-click to add multiple statistics and click **Ok**.



Note: See the Port Monitor help system if you need an explanation of a column.

6. Scroll to the right to view the new columns.



7. If you want to capture this session, you can save a current session as a report. To do this, select one of the following save options:

- **File > Save As**
- **File > Save** - if the report already exists in an older format
- **Save Active Session**  button

Reports can be opened, viewed and re-used when needed. To open and view a report:

- a. **Select File > Open** or the **Open Existing Session**  button. The *Open Session* dialog appears.
- b. Locate the session (table), you want to open and click the **Open** button.

Optionally, if you want to continue monitoring for an existing session, you need to activate the *Polling Interval*.

- **Select Tools > Settings** to access the *PMon2 Settings* dialog
- Change the **Polling Interval** field to a value other than zero (0)

8. Leave Port Monitor open so that you can review events when using *Test Terminal* to test a port or ports.

Using Test Terminal to Test a Port

Test Terminal (WCom2) allows you to open a port, send characters and commands to the port, and toggle the control signals. This application can be used to troubleshoot communications on a port-by-port basis.

The **Send and Receive Test Data** option 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. A failure in this test will essentially prevent the port from working in any manner.

The **Loopback Test** option tests all of the modem control signals such as RTS, DTR, CTS, DSR, DCD, and RI along with the Tx and Rx signals.

Note: *This test will fail 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.*

The following procedure shows how to use **Test Terminal** to send and receive test data to the serial ports and run a loopback test. If necessary, install the Control Utility package using [Control Utility](#) on Page 17.

1. Stop all applications that may be accessing the ports such as 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** will be unable to open the port and an error message will be shown.

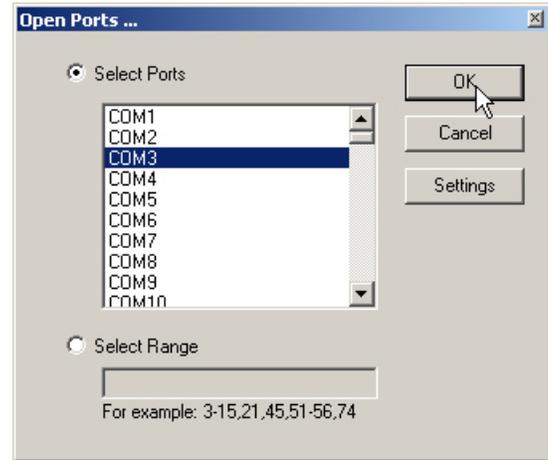
- From the **Start** menu, select **Programs > Control > Utilities > Test Terminal (WCom2)**.



- Select **File > Open Port**, the appropriate port (or ports) from the *Open Ports* drop list and **Ok**.

Note: If you left *Port Monitor* open from the previous subsection, you should show that the port is open.

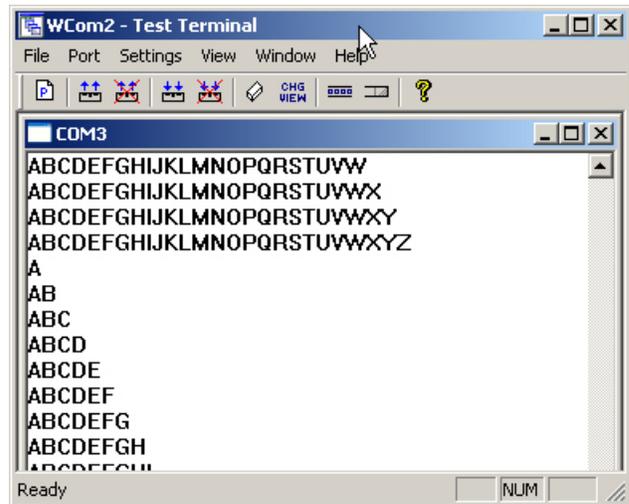
- Install the loopback plug ([DB9 Loopback Plugs](#) on Page 11) onto the port (or ports) that you want to test.
- Select **Port > Send and Receive Test Data**.



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

Note: If you left *Port Monitor* running, it should show data sent and received and show the average data throughput on the port.

- Select **Port > Send and Receive Test Data** to stop the scrolling data.
- Close **Test Terminal**.



If this test successfully completed, then the port is operational as expected.

Note: Do NOT forget to restart the communications application.

Troubleshooting Linux Systems

You can use the following subsections to test the serial ports.

lcom(1)

Control has available **lcom(1)**, which is a multiport serial I/O test program. You can use **lcom** in test mode to send test data to any serial port.

lcom is available on the *Software and Documentation CD* or you can [download](#) the latest version.

Note: For assistance using *lcom*, use the manual page, *lcom(1)* that accompanies the program.

File Transfer

You can transfer a file using the following information. The default settings are 9600, 8, n, 1, and no parity. To send a file you can redirect output to a device; for example:

```
cat /etc/inittab > /dev/ttyRP0
```

Sends the contents of the */etc/inittab* file to the **ttyRP0** device at 9600 baud, 8, n, 1, and no parity.

Changing Serial Port Settings (stty)

Use the following information if you need assistance changing or viewing the baud rate settings.

To change the baud rate, use the following example, which changes the baud rate to 19200:

```
stty 19200 </dev/ttyRP0
```

To view the current serial port settings for **ttyRP0**, enter:

```
stty -a </dev/ttyRP0
```

Note: Settings changes via *stty* are only valid during current log in session. For permanent setting changes, use the */etc/inittab* file.

Setting Up Terminals and Modems (mgetty, getty)

Add the appropriate line or lines to the */etc/inittab* file then restart.

Terminal Example:

```
T0:23:respawn:/sbin/agetty -L ttyRP0 57600 vt100
```

Modem Example:

```
T1:23:respawn:+/sbin/mgetty -m '"" AT&F OK' -D -x9 -s 115200 ttyRP0
```

Note: If necessary, see the manual pages for more information on *mgetty*.

Testing with minicom

You can also use **minicom**, which shipped with most Linux distributions, to test the serial ports. A Control document is available for using [minicom](#).

Technical Support

Control has a staff of support technicians available to help you. You should review [Before Calling Technical Support](#) on Page 15 before calling Technical Support. If you call for Technical Support, please have the following information available:

- Model number
- Serial number
- Interface type
- Operating system type, release, and service package, and if Linux, the kernel version
- Device driver version
- Computer make, model, speed, and single or dual processor
- List other devices in the computer and their addresses

Control	Corporate Headquarters
Support	http://www.control.com/pub/en/Support
Device drivers	ftp://ftp.control.com/html/rp_express_smpte_drivers.htm
Diagnostic and Utilities	ftp://ftp.control.com/html/rp_express_smpte_diag.htm
Web site	http://www.control.com
Phone	763.494.4100
Downloads	ftp://ftp.control.com/html/default.htm

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