

How to Use this Document

You can use the interactive [Table of Contents](#) to locate the information you need.

Driver Requirements

This document discusses installing and configuring the VS1000 and RocketPort Serial Hub device driver for the Windows 2000 operating system. The VS1000 or RocketPort Serial Hub requires at least one host server running Windows[®] 2000.

Note: *The driver for the **RocketPort Serial Hub Si** is different than the driver for the **RocketPort Serial Hub** and they are **NOT** interchangeable.*

For hardware specific information or the product overview, see the [Hardware Installation](#) documentation that is available on the Control media (diskette or CD) shipped with your product or download the current version from the ftp/web site.

[Driver updates](#) can be downloaded at no charge from the Control ftp/web site. Always check the web or ftp sites to make sure that you have the current driver and documentation. Software downloaded from the ftp/web site are self-extracting zipped files that you must extract before installing.

Driver Features

This driver has the following features:

- Can be installed on multiple servers.
- Supports up to 64 VS1000 or RocketPort Serial Hub devices per server.

Note: *The critical limit is the number of ports your server can support. In most applications, this is defined by the number of RAS port supported, which is typically 256 ports per primary server.*

- Allows you to inter-mix VS1000 and RocketPort Serial Hub devices.
- Supports back up server

Connectivity Requirements

An Ethernet connection (10 Mbps), either to an Ethernet hub or to a network interface card (NIC) in the host server. See the [Hardware Installation](#) documentation for information regarding hardware installation, including building crossover cables.

Note: *If connecting the RocketPort Serial Hub or VS1000 directly to the server NIC card, an **Ethernet crossover** cable is required.*

Upgrading from Windows 95/98 or Windows NT

If you are upgrading from another operating system, follow these steps:

Note: *Do **not** use the Update Driver feature in the Device Manager to upgrade the driver.*

1. Remove the driver from the Windows 95/98 or Windows NT operating system following the procedures outlined in that [software installation documentation](#).

2. Upgrade your system to Windows 2000.

Note: *If you need information about re-installing devices, see the [Hardware Installation](#) documentation.*

3. Use the [Installing the Driver](#) and [Removing or Disabling the Device in Windows 2000](#) subsections to set up the new driver.

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Removing or Disabling the Device in Windows 2000

Devices cannot be removed through the Main Setup window. Use the following procedure to remove devices:

1. On the Windows desktop, right-click on the My Computer icon and select **Manage**.
 2. Double-click on the **Device Manager**.
 3. Open the **Multi-port serial adapters** entry (click the [+] button to expand the list).
 4. Right-click on the device you want to disable or uninstall.
 5. Select one of the following:
 - **Disable** to disable the device in the current hardware profile but not remove it. To update the driver from the ftp/web site, you must first **Disable** the driver and then use the Device Manager to **Update** the driver.
 - **Uninstall** to completely remove the device.
 - **Properties** to display the Device Properties window.
- Note:** If you prefer, you can disable or enable the device by changing the Device Usage field on the Device Properties window, General tab.*
6. Exit the Device Manager window and resume normal operations.

Installing the Driver

Devices cannot be added through the Device Manager or Main Setup window.

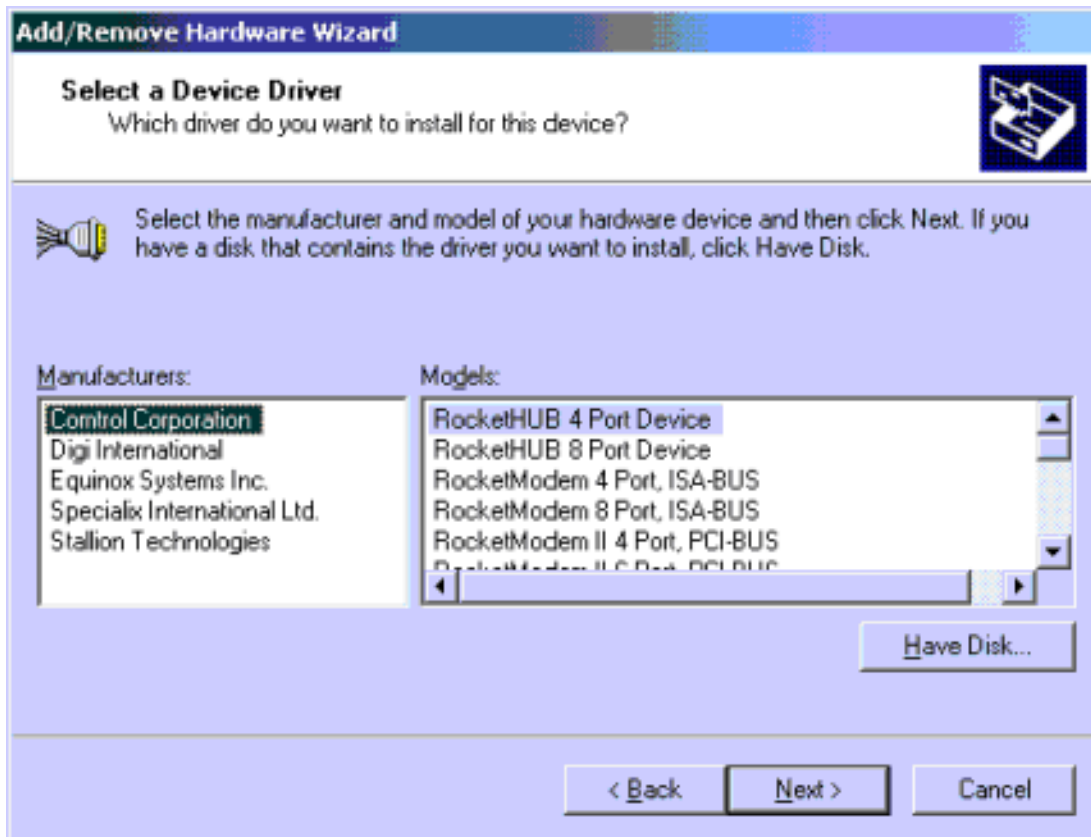
Before installing the driver, you should [install the hardware](#) and restart the system. To install the driver, use the **Add/Remove Hardware** wizard.

***Note:** Windows 2000 does not recognize devices connected to external Ethernet hubs.*

1. On the Windows desktop, right-click the My Computer icon.
2. Click **Properties**.
3. Select the **Hardware** tab.
4. Select the **Hardware Wizard** button.
5. Select the **Next** button when the *Add/Remove Hardware* wizard appears.
6. Select the **Add/Troubleshoot a device** option and the **Next** button.
7. Select the **Add a new device** option and the **Next** button.
8. Select the **No, I want to select the hardware from a list** option and the **Next** button.
9. Highlight **Multi-port serial adapters** when asked to choose the type of hardware to install and the **Next** button.

***Note:** All Control products are considered multi-port serial adapters.*

10. Select **Control Corporation** as the manufacturer, the **appropriate Control product** you wish to install, and the **Next** button.



Note: Select *RocketHUB 4 or 8 Port Device* for the *RocketPort Serial Hub*.

11. Select the **Next** button at the **Start Hardware Installation** screen.

Note: It may take up to several minutes for *Windows 2000* to load the driver.

12. Select the **Finish** button to complete the driver installation process.

After you complete driver installation, additional steps may be necessary to configure the ports through the [Main Setup tab](#).

Upgrading the Driver

Use this procedure if you want to upgrade the driver in the Windows 2000 operating system. An upgraded driver may be available from the following:

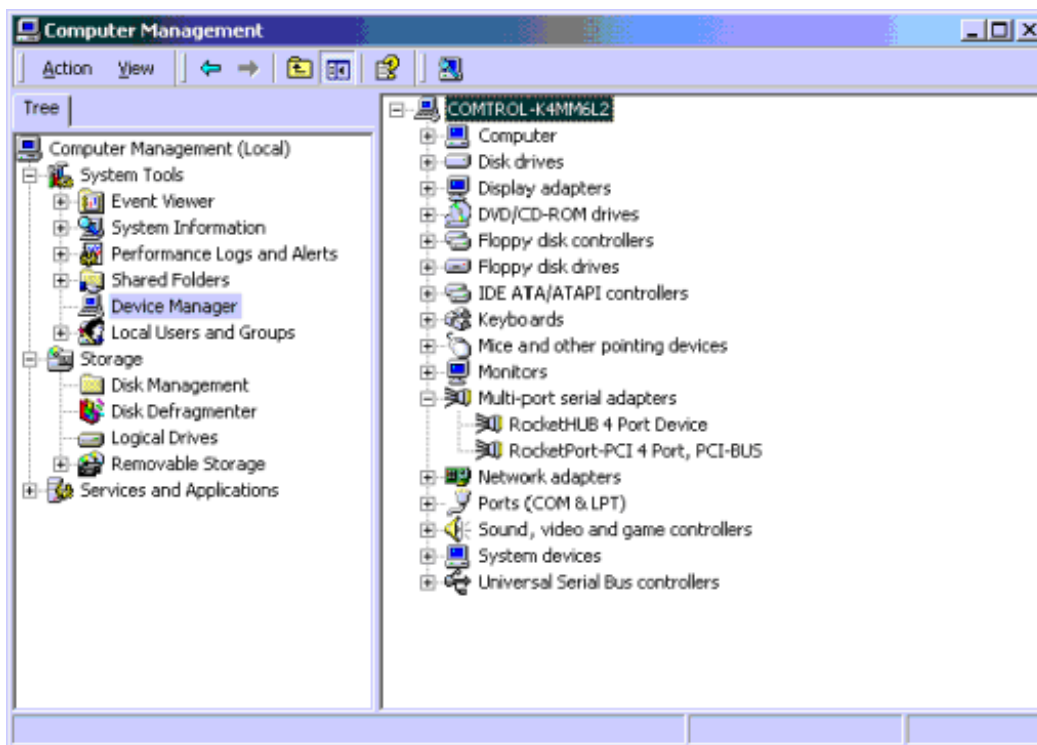
- Downloaded from the Control ftp/web site.
- Contained on Control media shipped with the product.

Before you can install a more current version of the driver, first remove the existing driver and the device.

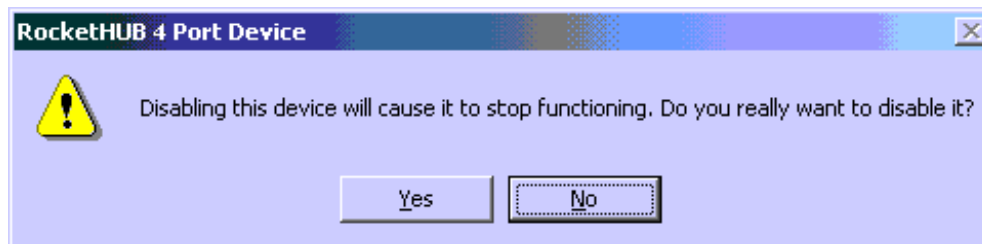
Use the following procedure to install a new driver:

1. Unzip the file into a new subdirectory, for example: \Control.
2. On the Windows desktop, right-click on the My Computer icon and select **Manage**.
3. Double-click on the **Device Manager**.
4. Open the **Multi-port serial adapters** item.
5. Highlight the device for which you want to update the driver, right-click, and select **Disable**.

Note: All Control products are considered multi-port serial adapters.



6. Select **Yes** when this pop screen appears:

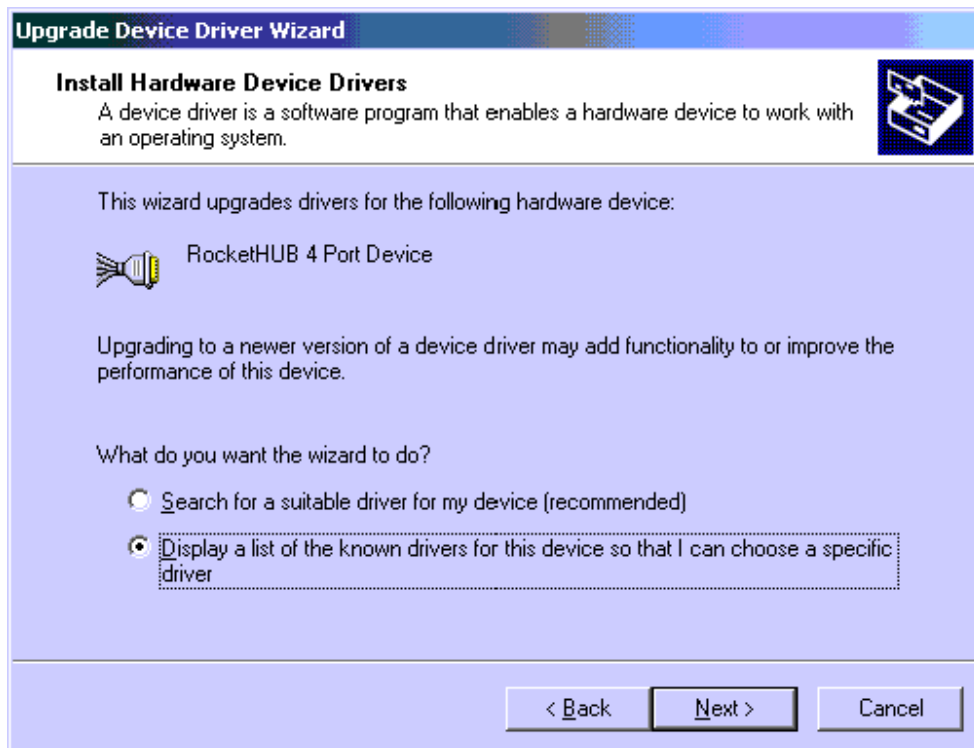


7. Double-click on the disabled device and select the **Driver** tab.
8. Select the **Update Driver** button.

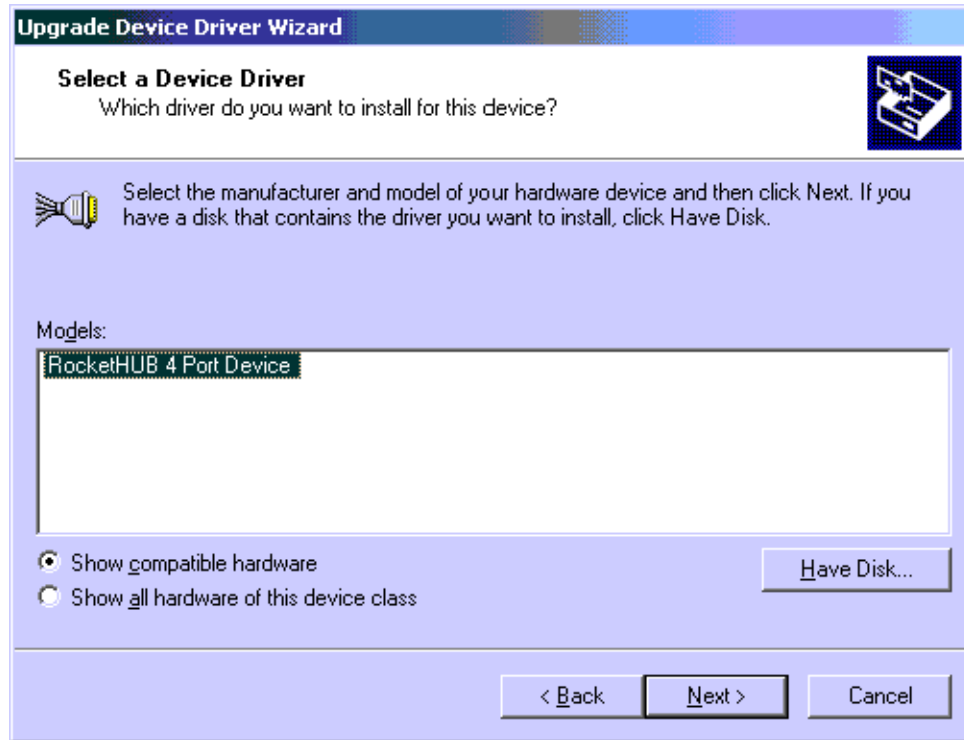
9. Select the Next button to start the Upgrade Driver wizard.



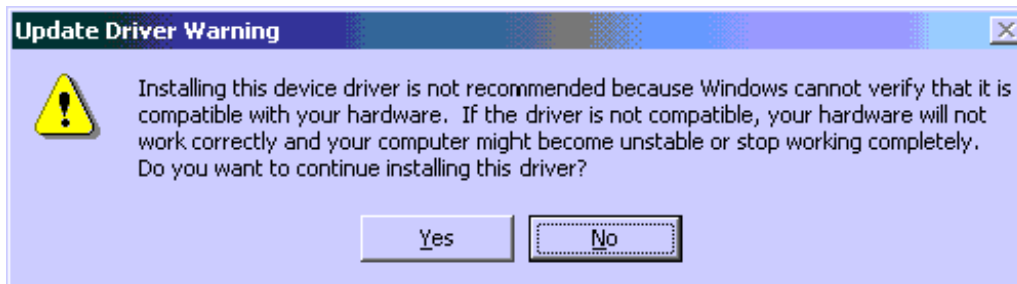
10. Select the **Display a list of the known drivers for this device so that I can choose a specific button and the Next button.**



11. Select the **Have Disk** button, browse to the location of the driver file that you extracted, and then select the **Ok** button.

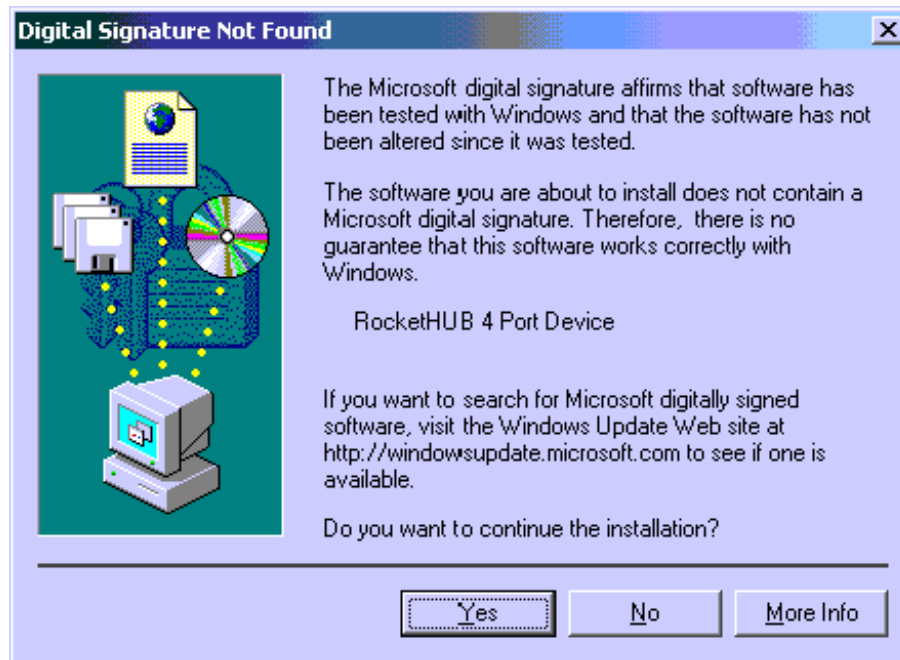


12. Highlight the device and select the **Next** button to install the driver with the default settings.
13. Select **Yes** to the **Update Driver Warning** popup window.



14. Select the **Next** button at the **Install Device Driver** screen.

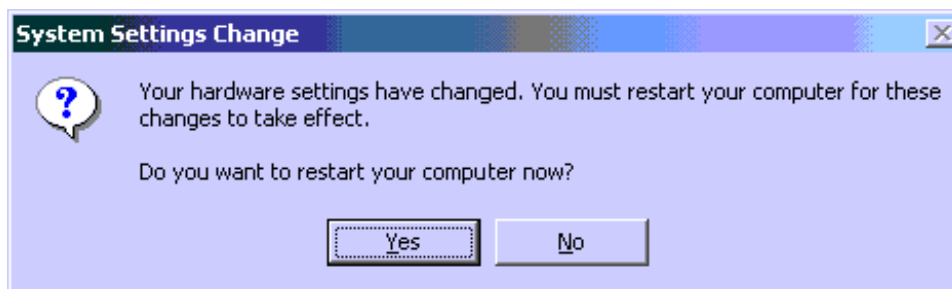
15. Select Yes at the “Digital Signature Not Found” popup screen.



16. Select the **Finish** button to complete the driver installation process.

17. Select the **Close** button when you return to the Properties screen.

18. Select Yes to this popup screen to restart your system.



After you complete driver installation, additional steps may be necessary to configure the ports through the [Main Setup tab](#).

Accessing the Main Setup Tab

1. On the Windows desktop, right-click the **My Computer** icon and select **Manage**.
2. Double-click on the **Device Manager**.
3. Click the **[+]** button for the device under **Multi-port serial adapters** to expand the view.
4. Highlight the device that you want to access.
5. Select **Action --> Properties**.
6. Select the **Main Setup** tab.



Note: For information on using port options, use the context-sensitive help in the **Main Setup** or **Options** screens.

Changing Device Properties or Setting Up Backup Servers

You can change the following device properties:

- Device name
- Starting COM port number.

In addition, you can configure primary and back up servers and establish a time out period.

To change device properties or set up a backup server, follow this procedure to access the Device Setup tab:

1. [Access the Main Setup screen.](#)
2. Highlight the device name and select Properties.
3. After making your changes, select the Ok button and follow any other driver prompts.

Note: Use the Help button if you need detailed information about procedures or use context-sensitive help for any field.



Configuring Device Properties

You can optionally configure the following Device Properties:

- Verbose event log for diagnostic purposes.
- Scan rate to adjust latency for timing-critical applications.
- Enable RS-485 mode.

Use the following procedure:

1. [Access the Main Setup screen.](#)
2. Select the **Options** tab.
3. Enable the features you want to use.
4. If you enable the RS-485 feature, an RS485 tab appears behind the COM Port Properties tab that you may need to configure.

Note: Use the Help button if you need detailed information about procedures or use context-sensitive help for any field.



Configuring Port Properties

You can also configure specific port properties for this device:

- Override and lock baud rate
- Timeout on transmit data
- Map CD to DSR
- Map 2 stop bits to 1
- Wait on physical transmission
- Emulate modem hardware RING signal
- Clone all Control ports for this server
- [Device Advisor](#)

Use the following procedure to access the Port Properties tab:

1. [Access the Main Setup screen.](#)
2. Highlight the port you want to configure and select the **Properties** button.
3. Enable the features you want to use and select the **OK** button. To configure all ports on the device with the same features, select **Clone**.

Note: Use the Help button if you need detailed information about procedures or use context-sensitive help for any field.



Adding Additional Devices

Install the device and use the [Hardware](#) wizard to install additional devices. If necessary, configure the ports.

Troubleshooting

If you are having trouble with a VS1000 or RocketPort Serial Hub, 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.
2. Verify that the unit is powered on.
 - If the unit has a power switch, turn the unit's power switch off and on, while watching the LED diagnostics. If it is a 4/8-port unit, see the [Hardware Installation](#) documentation for information about .
 - If the unit does not have a power switch, disconnect and reconnect the power cord.
3. Verify that the port polarity is correct, see the [Hardware Installation](#) documentation.
4. Enable the Verbose Event Log feature under the Setup Options tab and then reboot the server.
5. If you are using a 10/100mb NIC card, try locking the card to 10mb/s.
6. Verify that the Ethernet hub and any other network devices between the server and unit are powered up and operating.

Note: To isolate the unit from the network, use a crossover Ethernet cable to connect the unit directly to the server.
7. If you are operating in a multiple-server environment, make sure that you are controlling the device from its primary server, that there is only one primary server assigned to this device, and that no backup server has pre-empted the primary server.

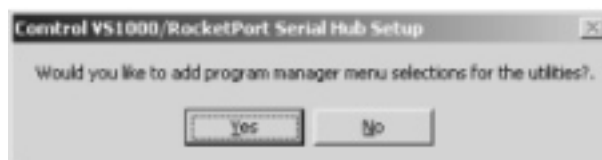
Note: Backup-to-primary switching is not automatic. Once a backup server takes over control of a device, you must restore the primary server to operation, then cycle the power on the device in order to force the device to reattach itself to the primary server.
8. Verify which servers are having problems controlling the device.
9. Verify that the network (MAC) address in the driver matches the address on the device.
10. 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.
11. Use the [Test Terminal](#) program (wcom32.exe) to troubleshoot communications on a port-by-port basis.
12. Use the [Port Monitor](#) program (portmon.exe) to check for errors, modem control, and status signals. In addition, it provides you with raw byte input and output counts.
13. Use the [Peer Tracer](#) program (peer.exe) to trace driver events.
14. Use the [Device Advisor](#) to help identify the problem.
15. If you have a spare device, try "hot-swapping" devices. If this corrects the problem, the device you have removed from service may be in need of repair.
16. [Remove](#) and reinstall the latest released driver from the [ftp site](#).

Adding a Program Group Under the Start Button

Perform the following procedure if you want to add a program group under your Start button.

1. [Access the Main Setup screen](#), highlight the device, and select the **Properties** button.
2. Change the name of the device or change a parameter and select the **Ok** button.

Note: Changing the device name in the Main Setup screen does not change the device's name in the Device Manager. If necessary, reset the parameter back to its original value after completing [Step 4](#).
3. Select **Yes** when this popup screen appears:



4. Close the Program group. Now it will appear under the Start ---> Programs button.

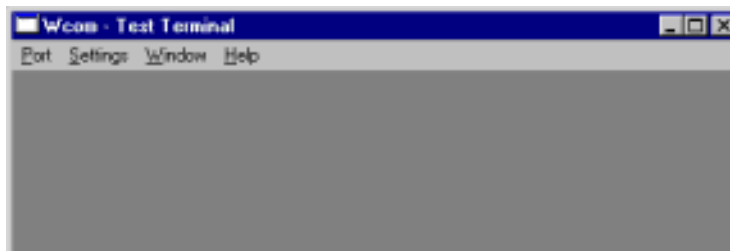


Using Test Terminal

WCOM32 is a terminal program that enables you to open a port, send characters and commands to the port, and toggle the control signals.

Note: WCOM32 will *not* work on ports used by RAS if **Remote Access Service is running** or any other application is using the port. If you are using RAS, you must stop the service before starting WCOM32 to test RAS COM ports. To test ports that are not used by RAS, you do not need to stop RAS.

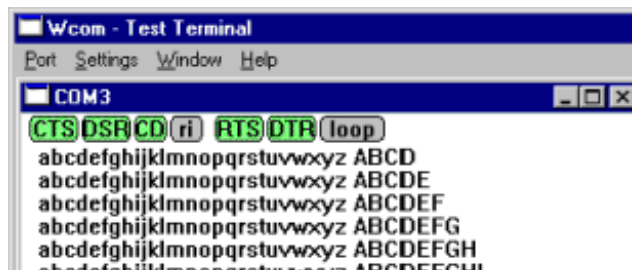
1. To start WCOM32, select Test Terminal from the [Control program group](#). The program window displays:



2. Select **Open Port** from the Port menu. A list of possible COM port numbers displays.
3. Select the COM port you want to test.

If the COM port does not exist or if it is currently being used by another program, a *Create File Error* message displays.

If the COM port is available, a terminal window pops up:



Note: Notice the <loop> button in the terminal window. If this option is activated, it is green and uppercase (**LOOP**), the COM port internal loopback feature is activated, and the data is returned by the COM port hardware. If this option is deactivated, it is gray and lowercase (**loop**), the internal loopback is deactivated, and the data is sent out the COM port.

Testing a VS1000 or RocketPort Serial Hub

Use the following procedure to test a port.

1. Place a loopback plug on the COM port you are testing. Make sure all connectors are seated firmly and that the loop button is off.
2. From the Port menu, select **Send Test Data**. The program sends out a repeating data stream.

Note: To stop the data stream, select **Send Test Data** again.

- If the loopback plug is in place and the port is working correctly, the test data should be echoed back to the screen.
- If the loopback plug is **not** in place or the port is not working correctly, no data or garbled data is echoed back to the screen.

Note: If no characters appear, try putting the loopback plug on an adjacent port. It may be that you have the ports mixed up.

3. If further testing is required, select **Loopback Test** from the Port menu. If the loopback plug is in place and the port is working correctly, the system should return the message “Passed.”



If the loopback plug is not in place or the port is not working correctly, the system will return the message “Failed.”

4. Repeat Steps 2 and 3. If the port now passes the tests, the fault may lie in the interface box or fan-out cable. Contact Control technical support for more assistance.

Modem Control Signals

The terminal window displays the modem control signals as gray or green lights at the top of the window. The first four are inputs:

cts dsr cd ri

The lights are green if they are turned on, or gray if off. The text on the light also changes from uppercase (CTS), which is on, to lowercase (cts), which is off.

The next two lights are outputs: RTS DTR

Note: If you have a loopback plug connected and you click on one of the outputs, the corresponding signal is sent to the input and the input lights should toggle accordingly.

The rightmost light is the loop indicator: loop

If this is on, the COM port internal loopback feature is activated and any information or code entered in the terminal window loops back through the COM port circuitry. If this is off, the COM port internal loopback is deactivated, and any information or code entered in the terminal window is sent out of the port.

Using Port Monitor

The Port Monitor program (**portmon.exe**) offers a summary of all VS1000 or RocketPort Serial Hub statistics in one spreadsheet view. It also enables you to verify operation of all VS1000 or RocketPort Serial Hub ports from a single window.

The Port Monitor display follows the familiar spreadsheet model: each COM port is a horizontal row, and each vertical column displays a variable or value for the respective COM port. For definitions of the abbreviations used, see the [Port Monitor Variable List](#).

Port Monitor can also produce statistics and reports that can help you verify the operation of the COM ports and connected peripherals.

Some immediate feedback includes:

- The state of the modem control and status signals
- Open ports
- Raw byte input and output counts obtained from the driver
- Port errors

The available statistics include:

- Instantaneous characters per second (CPS) calculations
- Minute, hour, and day CPS averages and peaks
- Carrier detect (CD) signal runtime and transition count

Reports can be automatically generated on an hourly and/or daily basis, and can cover all ports collectively or a separate report for each port. You can also set how often the values are recalculated, fine-tuning thoroughness against system efficiency, and automatically run external batch files to perform additional processing and analysis.

Starting Port Monitor

To run Port Monitor, select **Port Monitor** from the [Control program group](#).

The monitor window displays:

Note: To change the appearance of the screen, see the following discussion.

Once the monitor window displays, Port Monitor is active and collecting data. If any cumulative data has been saved from previous sessions, it is automatically brought in and used.

Port Monitor continues to run and collect data until you terminate it, at which point all accumulated data is automatically saved for use in the next session.

Device	Oper	CTS	DS	ICD	RTS	DTI	TxTotal	RxTotal	TxCPSInst	RxCPS
COM3	Off	Off	Off	Off	Off	Off	0	0	0	0
COM4	Off	Off	Off	Off	Off	Off	0	0	0	0
COM5	Off	Off	Off	Off	Off	Off	0	0	0	0
COM6	Off	Off	Off	Off	Off	Off	0	0	0	0
COM7	Off	Off	Off	Off	Off	Off	0	0	0	0
COM8	Off	Off	Off	Off	Off	Off	0	0	0	0
COM9	Off	Off	Off	Off	Off	Off	0	0	0	0

Changing Screen Appearance

While Port Monitor is running, there are a number of commands and controls that change the appearance of the screen.

Port Monitor Screen Commands

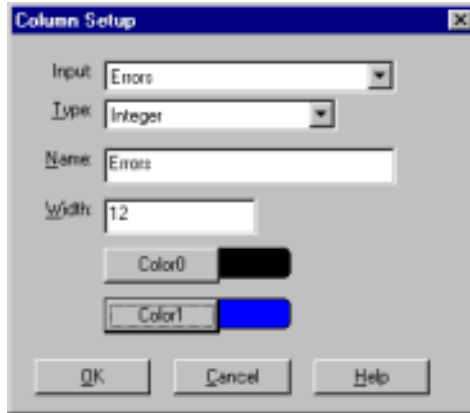
Desired Change	Procedure
Change the monitor window font.	Select Font from the Edit menu.
Change width of a single column.	Left-click on the column separator (vertical) line and drag it to the desired width.
Change column placement.	Left-click in the middle of the column you want to move and drag it to the desired location.
Remove a column.	Right-click on the column you want to remove and select Remove from the pop-up menu.
Clear all fields and reset them to null values.	Right-click on the upper left cell in the table and select Reset from the pop-up menu.*
Clear any single field <i>except</i> the upper left cell.	Right-click on the field to be cleared and select Reset from the pop-up menu.*
Add a column.	Right-click on the column now occupying the desired location and select Add from the pop-up menu. You are prompted to name the variable you want to display, as well as other information. (See <i>Column Setup</i> , below.) After you click OK , the column is inserted in the selected location and the existing column is moved to the right.
Change other properties of a column.	Right-click on the column and select Properties from the pop-up menu. (See <i>Column Setup</i> , below.)

* The *Reset* command does not clear raw data from the *calcs.dat* file. It simply resets the selected display fields

to their null values. For more information regarding *calcs.dat* see [page 17](#).

Column Setup

When you select **Add** or **Properties** from the column pop-up menu, the Column Setup window displays:



- Use the **Input** droplist to select the variable displayed in the column.
- Use the **Type** droplist to select the way in which the value displays: either as an integer, as an on/off state, as an integer with a kilo, mega, or giga suffix, or as an hh:mm:ss time stamp. This defaults to the appropriate type for the selected Input variable.
- Use the **Name** variable to change the column heading name.
- Use the **Width** variable to specify the column width in characters.
- Use **Color0** to set the column character color when the value is zero.
- Use **Color1** to set the column character color when the value is not zero.
- When done, click **OK** to save your changes and return to Port Monitor.

Report Configuration

To configure reports, select **Config** from the Edit menu.

The **Single** report options cover all ports and are overwritten each time the reports are generated. The **Multiple** report options generate a separate report for each port, and each report file is appended each time the report is generated.

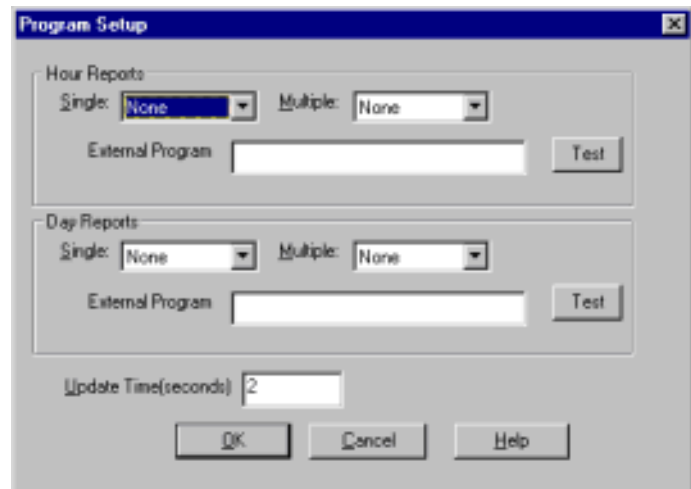
For **Hour** reports, use the **Single** and **Multiple** droplists to select whether you are generating single or multiple reports, or both. For each report type, select from the following types of data to include:

- **None**: no report is generated.
- **Hour Data**: only variables with “Hour” in the name are included.
- **All Data**: all variables are included.
- **View Data**: only variables that appear on-screen are included.

The **External Program** field is used to enter a command line to run another program after the hourly reports have been generated. For example, you can use this to run a batch file that performs custom report processing. The **Test** button causes the command line to be executed immediately.

For **Day** reports, the single and multiple droplists behave the same, but your choices are:

- **None**: no report is generated.
- **Day Data**: only variables with the words “Day” or “Raw” in the names are included.



- All Data: all variables are included.
- View Data: only the variables that appear in the Port Monitor window are included.

Likewise, the External Program field is used to enter a command line to be executed after the daily reports have been generated.

The Update Time option allows you to set the rate at which the port information is obtained and the calculations performed. There is a trade-off between Port Monitor efficiency and response time. If you are using Port Monitor to view the port activity on the screen, you may want to set the update time to 1 or 2 seconds, so that the screen is updated frequently. If you are concerned about the monitor program using CPU resources, set this to a higher value, (6 to 20 seconds) in order to decrease the time required by the program to perform the calculations and update the screen.

If Port Monitor is left active to generate reports, minimizing or reducing the display area of the program will help reduce the CPU overhead of updating the screen.

Port Monitor Files

Port Monitor creates and uses the following files:

- portmon.vew
- calcs.dat

The default column layout is saved in portmon.vew. If you have been experimenting with the appearance of the monitor screen, you can use the File menu Save option to save your customized layout in another.vew file. You can retrieve this file later by using the File menu Open option, or you can use the Edit menu View Default option to retrieve portmon.vew and restore the default view.

All Port Monitor calculations are saved at program exit and on the hour in a binary file named calcs.dat. This enables you to halt Port Monitor execution without losing accumulated data.

Port Monitor also creates a \REPORTS directory. All hourly and daily reports are saved in this directory, under the following names:

- hall.txt — hourly single report
- dall.txt — daily single report
- hcomx.txt — hourly multiple reports, where x is the port number
- dcomx.txt — daily multiple reports, where x is the port number

Caution: Since multiple reports append new data each time they are written, the multiple report files grow in size. It is up to you to delete them periodically.

Some safeguards are built into the program to avoid filling up a hard disk drive due to growing report files. The monitoring program stops writing additional data to the multiple reports if they reach a size of 2 MB. Also, the program will not write out data files to the disk drive if the spare room on the drive is less than 2 MB in size.

To view or edit an hourly or daily report, use the Edit Report option on the File menu, or use a system tool such as NOTEPAD.

For more information, see the Port Monitor Help file.

Port Monitor Variables

The following table lists Port Monitor variables.

Port Monitor Variable List

Variable	Description
Cd	Input CD (carrier detect) pin status.
CDDayRuns	Carrier detect turn-on count in the last day.
CDDayRunsWrk	Carrier detect turn-on count in the current day.
CDDayRunTime	Time in seconds carrier detect has been on in the last day.
CDDayRunTimeWrk	Time in seconds carrier detect has been on this day.
CDHourRunTime	Time in seconds carrier detect has been on in the last hour.

Port Monitor Variable List (Continued)

Variable	Description
CDHourRunTimeWrk	Time in seconds carrier detect has been on this hour.
CDRuns	Carrier detect turn-on count.
CDRunTime	Time in seconds carrier detect has been on.
Cts	Input CTS pin status.
Dsr	Input DSR pin status.
Dtr	Output DTR pin status.
Errors	Total hardware receive errors (parity, framing, and overruns.)
FramingErrors	Total count of receive framing errors.
FramingErrorsRaw	Total count of receive framing errors, from the driver.
Open	Open status, on if open, off if closed.
OverrunErrors	Total count of receive overrun errors.
OverrunErrorsRaw	Total count of receive overrun errors, from the driver.
ParityErrors	Total count of receive parity errors.
ParityErrorsRaw	Total count of receive parity errors, from the driver.
Rts	Output RTS pin status.
RxCPSDayAvMax	Peak RxMinCPS for the last day.
RxCPSDayAvMaxWrk	Peak RxHourCPS for the current day.
RxCPSHourAvMax	Peak RxMinCPS for the last hour.
RxCPSHourAvMaxWrk	Peak RxMinCPS for the current hour.
RxCPSInst	Instantaneous average of receive characters per second.
RxCPSMinAvMax	Peak RxCPSInst for the last minute.
RxCPSMinAvMaxWrk	Peak RxCPSInst for the current minute.
RxDayCnt	Receive bytes count sent in the last day.
RxDayCntWrk	Receive bytes count sent in this day.
RxHourCnt	Receive bytes count sent in the last hour.
RxHourCntWrk	Receive bytes count sent in this hour.
RxMinCnt	Receive bytes count sent in the last minute.
RxMinCntWrk	Receive bytes count sent in this minute.
RxMinCPS	Last minute average of receive characters per second.
RxPkts	Raw count of total receive packets sent.
RxTotal	Total bytes received.
RxTotalRaw	Total number of receive bytes raw data from the driver.
StatusFlags	Bit flags, Open, CTS, DSR, CD, RTS, DTR
TxCPSDayAvMax	Peak TxMinCPS for the last day.
TxCPSDayAvMaxWrk	Peak TxHourCPS for the current day.
TxCPSHourAvMax	Peak TxMinCPS for the last hour.
TxCPSHourAvMaxWrk	Peak TxMinCPS for the current hour.
TxCPSInst	Instantaneous average of transmit characters per second.

Port Monitor Variable List (Continued)

Variable	Description
TxCPSMinAvMax	Peak TxCPSInst for the last minute.
TxCPSMinAvMaxWrk	Peak TxCPSInst for the current minute.
TxDayCnt	Transmit bytes count sent in the last day.
TxDayCntWrk	Transmit bytes count sent in this day.
TxHourCnt	Transmit bytes count sent in the last hour.
TxHourCntWrk	Transmit bytes count sent in this hour.
TxMinCnt	Count of transmit bytes sent in last minute.
TxMinCntWrk	Transmit bytes count sent in this minute.
TxMinCPS	Last minute average of transmit characters per second.
TxPkts	Raw count of total transmit packets sent.
TxTotal	Total bytes transmitted.
TxTotalRaw	Total number of transmit bytes raw data from the driver.

Using Peer Tracer

The Peer Tracer program (`peer.exe`) is specifically designed to view the internal operations of the driver for the purpose of troubleshooting communications on Windows 2000 systems. Peer enables you to see:

- Receive and transmit data
- Internal driver event traces
- Advanced configuration and status information

Like Test Terminal, Peer acts as a simple terminal session, and is used to send and receive text information to and from the driver. To use Peer, you type in commands, and status and information are sent back. Unlike Test Terminal, Peer enables you to keep a continuous log of the commands sent and the results received in a file named `peer.log`.

Control Technical Support may ask you to run Peer in order to help diagnose reported problems.

Starting Peer

Peer Tracer does not appear in the Control program group. To use it, you must open Windows Explorer, access the `C:\WINDOWS\system32\` directory, and double-click on `peer.exe`. The Peer Tracer window displays:



Log Functions

All logging functions are found under the File menu. To start keeping a log, select **Log to Disk** from the File menu. The other options on this menu are View Disk Log, Clear Disk Log, Clear Screen, and Exit.

Using Peer

To use peer, simply type in commands at the `:` prompt. (It may be necessary to press **Enter** to make the `:` prompt appear.) For example, to examine COM5, type:

```
PORT COM5 <Enter>
```

To gather some information about the port, type:

```
STAT <Enter>
```

This should return details about the port.

To turn on monitoring of any calls into driver (events), type:

MON EV <Enter>

To send strings and commands to attached peripherals—for example, to send “ATH0” to a modem—type:

SEND ATH0 <Enter>

A return and linefeed are always appended to each string sent.

Other Commands

Enter commands at the : prompt and follow each command with Enter.

Peer Tracer Commands

Command	Effect
MON TX	Monitor data being transmitted through the selected port.
MON RX	Monitor data being received through the selected port.
M	Turn off all monitoring.
?	Display Peer Tracer command summary.
PORT COMxx	Change port being examined to COMxx.

Keep in mind that all commands are processed in the driver, and that Peer simply acts as a conduit for this information. For more information, see the Peer.hlp help file.

Using the Device Advisor

You can use the Device Advisor to determine the following information:

- Summary of the device status
- The MAC address of the network interface card (NIC)
- The Adapter ID string
- The RocketPort Serial HubVS1000 MAC address
- Detailed state of the RocketPort Serial HubVS1000
- Total number of successful load attempts
- Total number of devices on the network
- Transmit statistics, such as the number of:
 - Frames out
 - Packets to device
 - Retransmitted frames
- Receive statistics, such as the number of:
 - Frames accepted
 - Frames passed on
 - Packets from device
 - Out of sequence frames



Note: Use the *Help* button if you need detailed information about any field.

Use the following procedure to access the Device Advisor:

1. [Access the Main Setup screen](#), highlight the device name, and select **Properties**
2. Select the **Device Advisor** tab.

Device Advisor Driver Messages

The following tables provide information about device driver summary messages and reported state messages.

Driver Summary Messages

Message	Description
Uninitialized	RocketPort Serial Hub has not been installed correctly.
Unable to contact the RPSH NT driver	The RocketPort Serial Hub NT driver is not installed or is not responding to Device Advisor requests.
Unable to contact a Network Interface Controller (NIC)	The server NIC card may not be installed, may be malfunctioning, or may not be bound to RocketPort Serial Hub.
Cannot detect network	No inbound traffic of any sort is detected. The RocketPort Serial Hub device may be inoperative or you may have a network cabling problem.
Cannot detect any RPSH.	Network traffic is being received, but not from a RocketPort Serial Hub device. Check the network connections and verify that the RocketPort Serial Hub device is powered up.
Cannot detect RPSH with specified MAC address.	Network traffic is being received from a RocketPort Serial Hub device, but not the one specified in Device Setup. Check the device to make sure that you are using the correct MAC address in Device Setup, and check the Main Setup window to verify that you are working with the correct device.
RPSH device with specified MAC address was detected, but is not configured for this server.	Either the RocketPort Serial Hub device in question is not assigned to this server, or it is not assigned to <i>any</i> server, or it has been configured for this server but the configuration has not been saved. If the latter, return to the Setup window, save and exit, and restart the server
RPSH device detected and configured for this server, but is not yet assigned to this server.	Either the RocketPort Serial Hub device is currently being controlled by another server or the device power has been cycled and the device is waiting for a server to acquire it.
RPSH detected, initializing.	The server has acquired the RocketPort Serial Hub device and is downloading the control program. The device will be available shortly.
RPSH responsive, but no data traffic exchange since last inquiry.	The RocketPort Serial Hub device appears to be installed correctly and active, but no data traffic has been sent or received since the last time you clicked the Refresh button. If there should have been traffic, check the RocketPort Serial Hub port configuration and external cabling.
RPSH responsive; data traffic received, but nothing sent since last inquiry.	Similar to above, except the RocketPort Serial Hub device has received data successfully.
RPSH responsive; data traffic sent, but nothing received since last inquiry.	Similar to above, except the RocketPort Serial Hub device has sent data successfully.
RPSH active.	Normal state: the RocketPort Serial Hub device is installed correctly and active with data traffic.
Poor connection to RPSH.	This message displays if retransmissions occur, frames arrive out of sequence, or more than 2% of the total packets arrive out of sequence. This generally indicates a cable, connector, or LAN termination problem.
Counts reset.	This message displays immediately after you click the Reset button.

Driver Reported State Messages

Message	Description
Invalid	An illegal RocketPort Serial Hub state has been detected. Reset the RocketPort Serial Hub device.
Init	This is the normal state for undetected and inactive RocketPort Serial Hub devices.
InitOwn	The server has acquired the RocketPort Serial Hub device but has not downloaded the control software.
SendCode	The server has acquired the RocketPort Serial Hub device and is in the process of downloading the control software.
Connect	The server has completed the download and is completing initialization.
Active	The normal state for a RocketPort Serial Hub device that is attached to an NT server and is ready for data traffic.
Not found	The specified MAC address is not configured on this NT server.
Undefined	No RocketPort Serial Hub devices are configured on this NT server.

Technical Support

Control has a staff of support technicians available to help you.

You should review [Troubleshooting](#) and run through the diagnostics before calling Technical Support. In addition, the web site has [On-Line Technical Support](#) available. If you call for Technical Support, please have the following information available.

Item	Information
Hardware Type	
Hardware Serial Number*	
MAC Address* (if using MAC addressing)	00 C0 ____ ____ ____ ____
Operating system type	
Driver part number and revision level of VSlinka.sys	
Server computer make, model, and speed	
Other network devices and network (MAC) addresses	
Devices connected to the device	

* *The hardware serial number and MAC address can be found on printed tags on the back or bottom of the unit.*

Control supplies a self-adhesive label with each unit, which you can use to record the serial number and network address. If the unit is not in a readily accessible location, check to see if this label has been filled out and posted elsewhere (for example, near the server console).

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First Edition, October 26, 2000

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