

Dual Serial I/O Card™

PC Card with two serial COM ports for connecting peripheral devices to:

- *Pocket PC 2000 or Pocket PC 2002*
- *Handheld PC Pro, HPC 2000 or pen tablet*
- *Windows 95/98/Me/2000/XP notebook*

User's Guide

Dual Serial I/O Card



***Ruggedized
Dual Serial I/O Card***

socket™
The Mobile Connection

Table of Contents

| | |
|--|-----------|
| CHAPTER 1 INTRODUCTION | 2 |
| CHAPTER 2 SETUP FOR WINDOWS CE | 4 |
| STEP 1: Install the Software | 5 |
| STEP 2: Attach Cables (Removable Cables only) | 7 |
| STEP 3: Insert the Card | 7 |
| OPTIONAL: Use Hi-Speed COM Tools | 8 |
| CHAPTER 3 SETUP FOR WINDOWS 95/98/ME/ 2000/XP | 15 |
| STEP 1: Insert the Installation CD | 15 |
| STEP 2: Attach Cables (Removable Cables only) | 16 |
| STEP 3: Insert the Card | 16 |
| STEP 4: Install the Software | 17 |
| OPTIONAL: Use Hi-Speed COM Tools | 20 |
| Removing the Card | 26 |
| APPENDIX A SPECIFICATIONS | 27 |
| APPENDIX B OS CONFIGURATION | 29 |
| APPENDIX C SUPPORT RESOURCES | 32 |
| Technical Support | 32 |
| Users' Forum | 33 |
| LIMITED WARRANTY | 34 |
| COPYRIGHT NOTICE | 35 |
| REGULATORY COMPLIANCE | 36 |

Chapter 1 Introduction

The Socket Dual Serial I/O Card (D-I/O) makes it easy to add two serial communications ports to your mobile computer. Each port works independently and can link to an external modem, printer, digital camera or other serial device.



The card adds two RS-232 COM ports to your mobile computer and features plug-and play and hot-swapping with most Windows-based mobile computers. Hot swapping is the ability to add and remove devices while a computer is running and have the system recognize the change.

The D-I/O is available in both a standard version, with removable cables, and a Ruggedized version, with non-removable cables.

The card works with the following mobile computers:

- Pocket PC 2000, Pocket PC 2002, HPC 2000 running Windows CE 3.0*
- Handheld PC Pro running Windows CE 2.11
- Notebook based on Windows 95/98/Me/2000/XP**



Socket's software features the Hi-Speed COM Tools, which enable you to use higher baud rates in applications that only let you choose a baud rate up to 115 kbps. There are different versions of the Hi-Speed COM Tools for Windows CE and Windows notebooks.

With Windows CE, 2000, and XP, the Hi-Speed COM Tools also let you quickly identify COM port assignments. Plus, if you are using Windows 2000 or XP, you can change the COM port numbers assigned to your Dual Serial I/O Card.

This *User's Guide* explains how to install the Dual Serial I/O Cards. Except where otherwise noted, "Dual Serial I/O Card" and "D-I/O" will refer to both Standard and Ruggedized versions of the card.

* With PC Card (PCMCIA) slot.

** Windows 95 v4.00.950B; Windows 98; Windows 98 Second Edition



Note: Socket does not recommend using the Dual Serial I/O Card with a mouse. If you have a mouse with a serial connector, plug your mouse into your notebook's built-in serial port.

For software updates, please visit: www.socketcom.com/product/serial.asp
Register the product online at: www.socketcom.com/prodreg

Package Contents

The Dual Serial I/O Card package includes:

- A Dual Serial I/O Card or Ruggedized Dual Serial I/O Card
- Two serial cables, either removable for the standard card or non-removable for the Ruggedized card
- The *Dual Serial I/O Installation CD*
- A software installation guide with warranty and copyright information



Standard D-I/O



Ruggedized D-I/O



Installation CD

Chapter 2 Setup for Windows CE

This chapter shows how to set up the software and hardware for the following types of mobile computers equipped with a PC Card slot:

- Pocket PC 2000, Pocket PC 2002 or HPC 2000 running Windows CE 3.0
- Handheld PC Pro or pen tablet running Windows CE 2.11



Note: Pocket PC screens are shown in this chapter. HPC screens will be functionally equivalent unless otherwise noted.

Installation Steps Summary

STEP 1: Install the software

STEP 2: Attach cables (removable cables only)

STEP 3: Insert the card

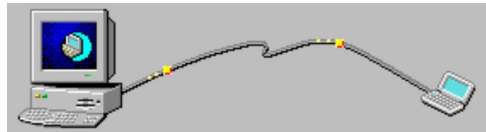
OPTIONAL: Use Hi-Speed COM Tools

- View COM port assignment
- Map baud rates
- Use advanced options

STEP 1: Install the Software

Follow these steps for software installation BEFORE inserting the card:

1. Make an active connection between your mobile device and a host PC.



An active connection exists if data can move between the device and the host PC via the device's serial/Ethernet/USB connection cable or cradle.

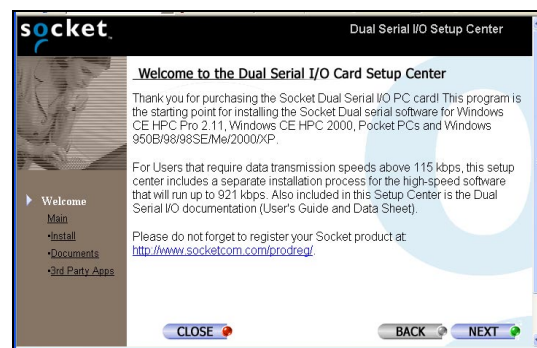
2. Insert the *Dual Serial I/O Installation CD* into the host PC.



3. Use **My Computer** or **Windows Explorer** to access your CD-ROM drive. Double-click on **SETUP . EXE**.



4. The Dual Serial I/O Setup Center will run in Internet Explorer. Follow the instructions to install the software for Windows CE.



*Note: On the left side of the screen, you can click on **Documents** to access the User's Guide or **3rd Party Apps** to access Third Party applications.*

5. The **Setup Program for Dual I/O** will launch. Follow the instructions on the host PC and mobile computer screens until installation is complete.

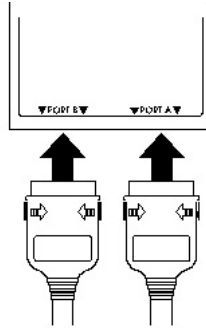


6. Disconnect the device from the connection cable/cradle.
7. Soft reset the mobile computer by pressing the reset button.

Important! If you do not soft reset the mobile computer, then the Hi-Speed COM Tools icon will not appear.

STEP 2: Attach Cables (Removable Cables only)

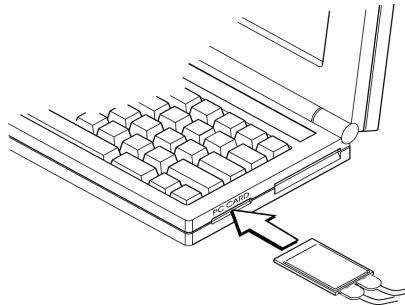
If using removable cables, attach the cables to the card. Press the side latches, then insert.



Warning! To remove a cable, press on the side latches before pulling the cable out! Otherwise, you can damage the connector and card!

STEP 3: Insert the Card

Insert the card into your mobile computer's PC Card slot right-side up, with the brown label on top.



In most cases, your D-I/O is now ready to use with your serial device/application.

If an **OS Configuration** screen appears, please refer to Appendix B for instructions on how to configure your D-I/O for use with Windows CE.

Warning!

- **Do not insert the card upside-down and do not shove it in forcefully, or damage may occur.**
- **To remove the card, use your computer's card eject button! Do not pull on the cables, or you can damage the cables and card!**

OPTIONAL: Use Hi-Speed COM Tools

Socket's Hi-Speed COM Tools for Windows CE has two main screens: Ports and Advanced. The Ports screen allows you to identify the COM port number assigned to your Dual Serial I/O Card. Advanced users can use the Advanced screens to program a device to work at a baud rate (up to 921 kbps, depending on your card version) not normally available in Windows.

This section covers the following:

- View COM port assignment
- Map baud rates
- Use advanced options

View COM Port Assignments

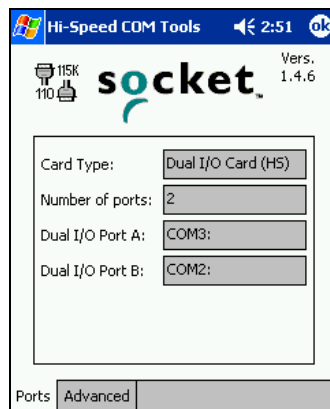
1. Pocket PCs: Go to **Start | Settings | Connections | Hi-Speed COM Tools**.

HPCs: Go to **Start | Settings | Control Panel | Hi-Speed COM Tools**.



Note: If the Hi-Speed COM Tools icon does not appear, soft reset your mobile computer by pressing the reset button.

2. Use the **Ports** screen to view the COM port assignment.



Map Baud Rates (ADVANCED USERS ONLY!)

What is baud rate mapping?

Most Windows applications offer baud rate settings only up to 115 kbps, because this is the maximum speed of typical serial ports. What if you need or want to transfer data faster than 115 kbps? The latest versions of Socket's Dual Serial I/O Cards and software were designed to handle much higher speeds, up to 921 kbps. Many Windows applications can handle speeds higher than 115 kbps, although they do not list baud rates higher than 115 kbps.

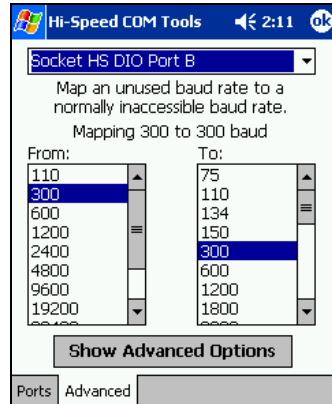
Socket has created the Hi-Speed COM Tools to enable you to use your COM port at higher baud rates in applications that only let you choose a baud rate up to 115 kbps. The program essentially lets you use one of the available baud rate values as a placeholder for a new baud rate of your choice. This is known as "mapping" a new baud rate to an available baud rate option.

For example, if you need your device to work at a baud rate of 230,400 bps, most Windows applications will not list 230,400 bps as a baud rate option. Hi-Speed COM Tools cannot change which options are listed, but it does let you program one of the options to work at 230,400 bps (e.g., You can change the "300" bps option to actually work at 230,400 bps).

Note:

- *Some applications (e.g., those for Windows 95, 98, and Me) may have timing issues when you set them to baud rates that are higher than they were designed for.*
- *After mapping a baud rate to a new speed, you can re-map it back to its original speed.*

1. Make sure that no serial ports are already open on your device.
2. Tap on the **Advanced** tab.
3. In the drop-down menu at the top of the screen, select the **Socket DIO Port** or **Socket HS DIO Port** that you wish to map baud rates for.

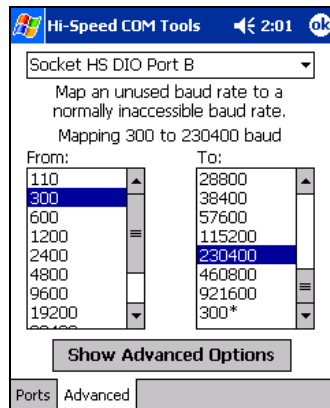


4. The screen has a **From:** field and a **To:** field.
 - The **From:** field lists baud rate options available in typical applications. The number that you select in the **From:** field will be the baud rate option that you change to function at a new speed.
 - The **To:** field lists the baud rates you can choose from for your new speed. Included in the **To:** list are baud rates (e.g., 921,600 bps) that are not available as options in typical applications.

*Note: The **To:** field includes a number with an asterisk (*) that represents a custom baud rate. The number changes whenever you create a new custom baud rate.*

Most serial applications use standard baud rates. If you are not sure which baud rate to choose, do not use a custom baud rate.

5. Use the **From:** and **To:** fields to scroll and select the appropriate baud rates, then tap **ok**.



*Example: Select “300” in the **From:** field and “230400” in the **To:** field and tap **ok**. Now, whenever you select a baud rate of 300 bps in a Windows application, your COM port will communicate at 230,400 bps instead.*

Notes:

- After mapping a baud rate option to communicate at a new speed, the original speed will no longer be available unless you map baud rates again.
- The new baud rate will not apply until you tap **ok** and exit the Hi-Speed COM Tools.

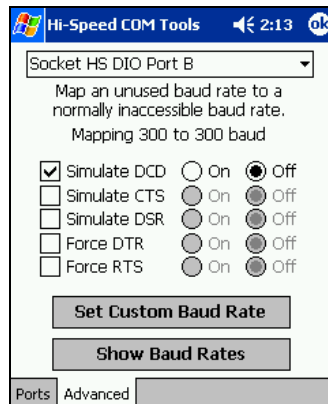
Use Advanced Options

The advanced options of the Hi-Speed COM Tools allow you to adjust flow control properties and/or set a custom baud rate.

WARNING! In most communication settings, these options will not need to be altered. Do not modify these options if you do not understand their function, or you may cause functionality problems with existing communication settings.

Modify Flow Control Properties

1. From the initial Advanced screen, tap on **Show Advanced Options**. The next screen will let you modify flow control options.
2. In the drop-down menu at the top of the screen, select the **Socket HS DIO Port** that you wish to modify flow control properties for.



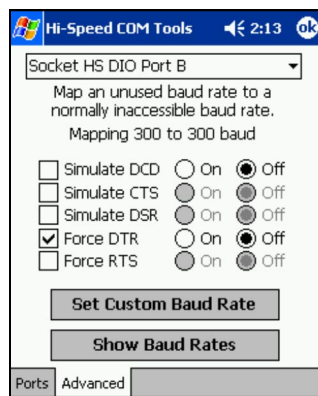
3. Use the check boxes and bullets as appropriate.

If your application expects certain signals not supported by your Data Communication Equipment (DCE) hardware, you may want to use a “simulate” option. Examples of DCE include modems, printers, etc.

- **Simulate DCD** (Data Carrier Detect) — The DCE is receiving a carrier signal from the other end of the telephone circuit.
- **Simulate CTS** (Clear to Send) — The DCE is clear to send.
- **Simulate DSR** (Data Set Ready) — The DCE is ready to send data from the terminal.

If your DCE expects certain signals not supported by your application, you may want to use a “force” option.

- **Force DTR** (Data Terminal Ready) — Can be used for hardware control. A Control signal sent from the DTE to the DCE indicating that the DTE is powered on and ready to communicate.
- **Force RTS** (Request to Send) — One of the control signals on a standard RS-232 connector. It places the modem in the originate mode so it can begin to send.



4. After modifying your flow control settings, tap **ok** to apply the changes and exit the Hi-Speed COM Tools.

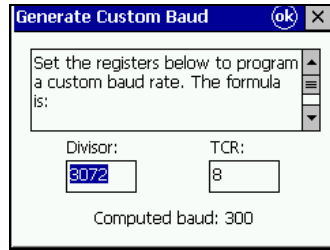
Alternatively, to return to the previous screen, tap **Show Baud Rates**.

To create a new baud rate not listed in the previous screen, tap **Set Custom Baud Rate**.

*Important! Your changes will not apply until you tap **ok** and exit the Hi-Speed COM Tools!*

Set a Custom Baud Rate

1. From the initial Advanced screen, tap on **Show Advanced Options**. In the next screen, tap on **Set Custom Baud Rate**.
2. Use the **Generate Custom Baud** screen to create a new baud rate not listed in the **To:** field in the first Advanced screen. Enter the **Divisor** and **TCR** and tap **ok**.



3. Tap **Show Baud Rates** to return to the initial baud mapping screen. Your new custom baud rate should be listed in the **To:** field with an asterisk (*).
4. If you are done modifying your COM port settings, tap **ok** to exit the Hi-Speed COM Tools.

*Important! Your changes will not apply until you tap **ok** and exit the Hi-Speed COM Tools!*

Chapter 3 Setup for Windows 95/98/Me/2000/XP

This chapter shows how to set up the software and hardware for notebook computers running Windows 95/98/Me/2000/XP.*



Installation Steps Summary

STEP 1: Insert the installation CD into your computer.

STEP 2: D-I/O with removable cable only: Attach the cables to the card.

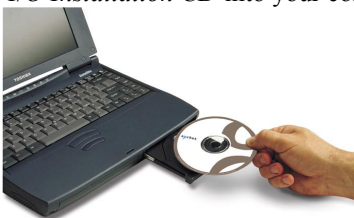
STEP 3: Insert the card into your mobile computer.

STEP 4: Install the software.

OPTIONAL: Use Hi-Speed COM Port Tools.

STEP 1: Insert the Installation CD

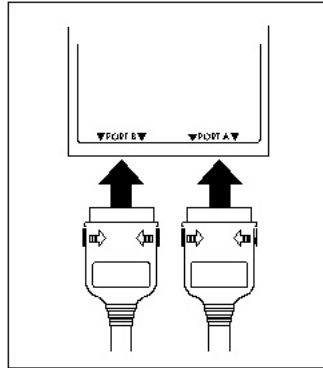
Insert the *Dual Serial I/O Installation CD* into your computer.



* Windows 95 v4.00.950B; Windows 98; Windows 98 Second Edition

STEP 2: Attach Cables (Removable Cables only)

If using removable cables, attach the cables to the card. Press the side latches, then insert.



The card and cables should join snugly and remain attached after you release the side latches. To remove a cable, press the side latches and pull gently.

Warning! To remove a cable, always press on the side latches before pulling the cable out! Otherwise, you can damage the connector and card!

STEP 3: Insert the Card

Insert the card into your mobile computer's PC Card slot right-side up, with the brown label on top. Do not insert the card upside-down or shove it in forcefully, or damage may occur.



Warning! To remove the card, always use your computer's card eject button! Do not pull on the cables, or you can damage the cables and card!

Note: After you insert the card, a PC Card icon should appear in the task tray.



Windows 95/98



Windows Me/2000/XP

STEP 4: Install the Software

Important!

You will need to complete the installation wizard three times, because your computer needs three files to properly operate the D-I/O, and the wizard installs only one file at a time. The wizard will automatically repeat until all the necessary files are installed. Make the same selections each time.

1. The first time you insert the card into your computer, a “new hardware” or “device driver” wizard will appear, asking you to install a specific file.
2. Follow the wizard to install the requested file by making the appropriate selections for your Windows version, as detailed below:

Important! The installation CD must still be inside your computer!

a. Windows 95 —

- In the first screen, click **Next>**.



- Windows should automatically search for the drivers on the CD. Follow the remaining screens until installation is complete.
- Complete the wizard again each time it launches until all the necessary files are installed.

b. Windows 98 —

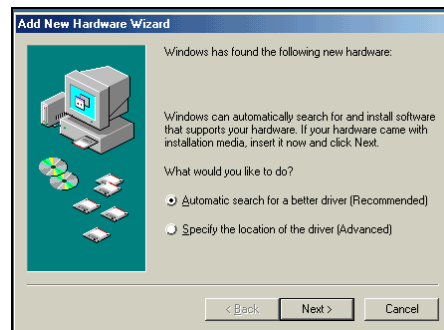
- In the first screen, click **Next>**.
- Select **Search for the best driver for your device (Recommended)**.



- In the next screen, check **CD-ROM drive**. Click **Next>**.
- Follow the remaining screens until installation is complete.
- Complete the wizard again each time it launches until all the necessary files are installed.

c. Windows Me —

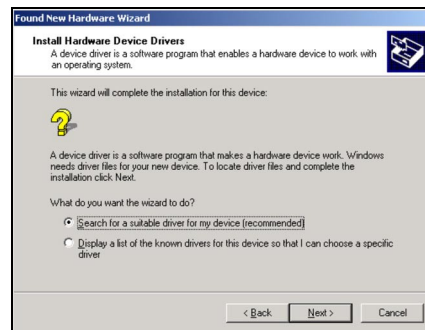
- In the first screen, click **Next>**.
- Select **Automatic search for a better driver (Recommended)**. Click **Next>**.



- In the next screen, check **CD-ROM drive** and click **Next>**.
- Follow the remaining screens until installation is complete.
- Complete the wizard again each time it launches until all the necessary files are installed.

d. Windows 2000 —

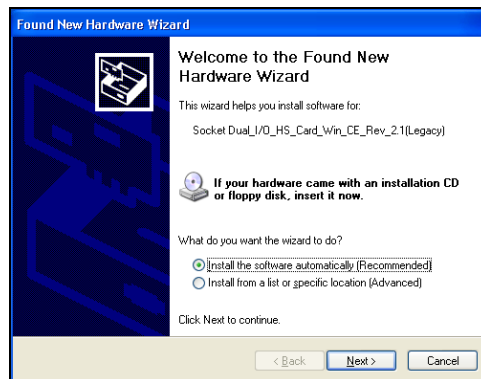
- In the first screen, click **Next>**.
- Select **Search for a suitable driver for my device (recommended)**. Click **Next>**.



- In the next screen, check **CD-ROM drive**. Click **Next>**.
- Follow the remaining screens until installation is complete.
- Complete the wizard again each time it launches until all the necessary files are installed.

e. Windows XP —

- Make sure the option **Install the software automatically (Recommended)** is selected. Click **Next>**.



- If a screen warns you that the software has not passed Windows Logo testing, click **Continue Anyway**.
- Follow the remaining instructions until installation is complete.
- Complete the wizard again each time it launches until all the necessary files are installed.

OPTIONAL: Use Hi-Speed COM Tools

Socket's Hi-Speed COM Tools have two main sections: Card Status and Baud Rate Mapping. The Card Status section works only with Windows 2000/XP and allows you to identify and/or modify the COM port(s) assigned to any Socket card installed on your computer. You can use the Baud Rate Mapping section to program your computer to work at a baud rate (up to 921 kbps, depending on your card version) not normally available in Windows applications.

This section covers the following:

- Start the program
- View/modify COM port assignments (**Windows 2000/XP only**)
- Map baud rates
- Access help information
- Exit the program

Start the Program

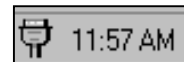
1. Windows 95/98/Me/2000:

Go to **Start | Settings | Control Panel | Hi-Speed COM Tools**.

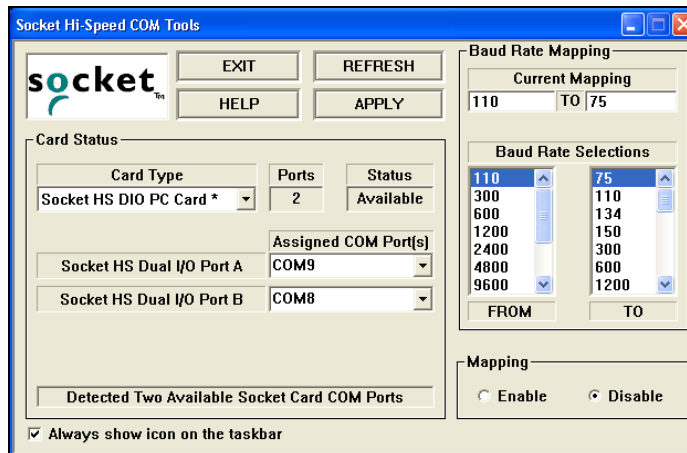
Windows XP: Go to **Start | Control Panel | Hi-Speed COM Tools**.



Alternatively, you can access the tools via a task tray icon:



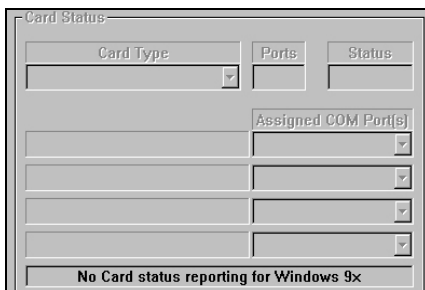
2. The **Socket Hi-Speed COM Tools** screen will appear.



3. If desired, check **Always show icon on the taskbar** at the bottom of the screen. This will place an icon on the task tray so the program can be accessed later.

View/Modify COM Port Assignments (Windows 2000/XP only)

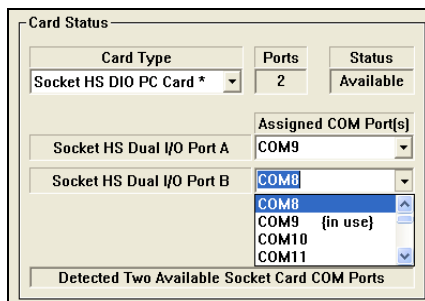
Note: The Card Status section does not work with Windows 95, 98, Me. The whole section will be gray and nonfunctional.



Card Status for Windows 98

For Windows 2000 and XP, the **Card Status** section provides COM port information.

- **Card Type:** Make sure the correct Socket card is selected. Any high-speed Socket cards previously installed on your computer will appear in the drop-down menu.



- **Ports:** Reports the number of ports detected for the selected card.
- **Status:** Reports the availability status of the port(s)
- **Assigned COM Port(s):** Shows the COM port(s) assigned to the selected card. To change the port assignment, use the drop-down menu to select another port. Ports already in use will be labeled as {in use}.

Warning: Do not select a COM port that is already in use!

- Card detection status: The field at the bottom reports how many available Socket COM ports your computer detects. If no card is inserted, a **No Socket Card Detected** message will appear.

| Card Type | Ports | Status |
|-------------------------|-------|--------|
| Socket HS DIO PC Card * | 2 | |

| Assigned COM Port(s) | |
|---------------------------|------|
| Socket HS Dual I/O Port A | COM9 |
| Socket HS Dual I/O Port B | COM8 |

No Socket Card Detected

To update the Card Status report, click **REFRESH**.
After making any changes, click **APPLY**.

*Note: If you modify any settings, the changes will only take effect after you click **APPLY**.*

If you modify settings when you have a connection with a serial I/O port open, then the settings will not take effect until you close and re-open the port.

Map Baud Rates

What is baud rate mapping?

Most Windows applications offer baud rate settings only up to 115 kbps, because this is the maximum speed of typical serial ports. What if you need or want to transfer data faster than 115 kbps? The latest versions of Socket's Dual Serial I/O Cards and software were designed to handle much higher speeds, up to 921 kbps. Many Windows applications can handle speeds higher than 115 kbps, although they do not list baud rates higher than 115 kbps.

Socket has created the Hi-Speed COM Tools to enable you to use your COM port at higher baud rates in applications that only let you choose a baud rate up to 115 kbps. The program essentially lets you use one of the available baud rate values as a placeholder for a new baud rate of your choice. This is known as "mapping" a new baud rate to an available baud rate option.

For example, if you need your device to work at a baud rate of 230,400 bps, most Windows applications will not list 230,400 bps as a baud rate option. Hi-Speed COM Tools cannot change which options are listed, but it does let you program one of the options to work at 230,400 bps (e.g., You can change the "300" bps option to actually work at 230,400 bps).

Note:

- *Some applications (e.g., those for Windows 95, 98, and Me) may have timing issues when you set them to baud rates that are higher than they were designed for.*
- *After mapping a baud rate to a new speed, you can re-map it back to its original speed by changing or disabling the mapping.*

1. Make sure the serial port is not already open on your computer.
2. In the Card Status section, make sure the correct **Card Type** is chosen and the correct card is listed.

The screenshot shows a window titled "Card Status" with the following configuration:

| Card Type | Ports | Status |
|-------------------------|-------|-----------|
| Socket HS DIO PC Card * | 2 | Available |

| | Assigned COM Port(s) |
|---------------------------|----------------------|
| Socket HS Dual I/O Port A | COM9 |
| Socket HS Dual I/O Port B | COM8 |

Detected Two Available Socket Card COM Ports

3. The Baud Rate Mapping section has a **FROM** field and a **TO** field.
 - The **FROM** field lists baud rate options available in typical applications. The number that you select in the **FROM** field will be the baud rate option that you change to function at a new speed.
 - The **TO** field lists the baud rates you can choose from for your new speed. Included in the **TO** list are baud rates (e.g., 921,600 bps) that are not available as options in typical applications.

Use the **FROM** and **TO** fields to scroll and select the appropriate baud rates. Select **Enable** and click **APPLY**.

The screenshot shows a 'Baud Rate Mapping' dialog box. It has three main sections. The top section, 'Current Mapping', has two input fields: 'FROM' with the value '110' and 'TO' with the value '75'. The middle section, 'Baud Rate Selections', contains two vertical lists. The left list, labeled 'FROM' at the bottom, has values 110, 300, 600, 1200, and 2400. The right list, labeled 'TO' at the bottom, has values 57600, 115200, 230400, 460800, and 921600. The bottom section, 'Mapping', has two radio buttons: 'Enable' (which is selected) and 'Disable'.

*Example: Select “110” in the **FROM** field and “921600” in the **TO** field. Select **Enable** and click **APPLY**. Now, whenever you select a baud rate of 110 bps in a Windows application, your COM port will communicate at 921,600 bps instead.*

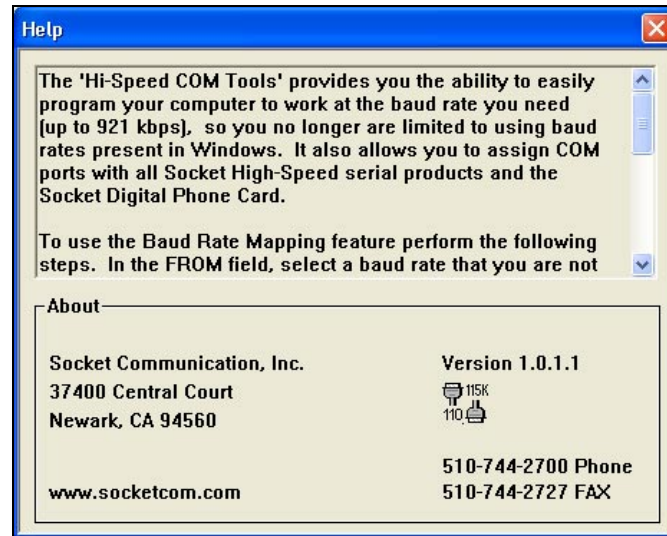
Notes:

- After mapping a baud rate option to communicate at a new speed, the original speed will no longer be available unless you map baud rates again.
 - The new baud rate will not apply until you select **Enable** and click **APPLY**.
 - *If you modify settings when a connection with a serial I/O port is open, then the settings will not take effect until you disconnect and reconnect from the port.*
4. To revert a Windows baud rate that you mapped back to the original speed, select **Disable**, then click **APPLY**.

Alternatively, you can select the original baud rate in both the **FROM** and **TO** fields, select **Enable**, then click **APPLY**.

Access Help Information

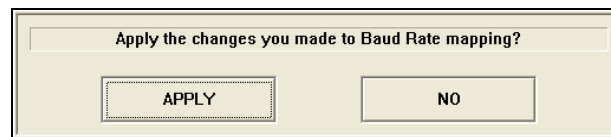
For help with the Hi-Speed COM Tools or information about the software, click on **Help**.



Exit the Program

When done with the tools, click **EXIT**.

*Note: If you forgot to click **APPLY** after changing settings in the Hi-Speed COM Tools, then when you click **EXIT**, a screen will appear asking if you want to apply the changes. Click **APPLY** to have the changes take effect.*



Removing the Card

1. Close any applications using the Dual Serial I/O Card.
2. Double-click on the **PC Card icon** on the task bar at the bottom of your screen.

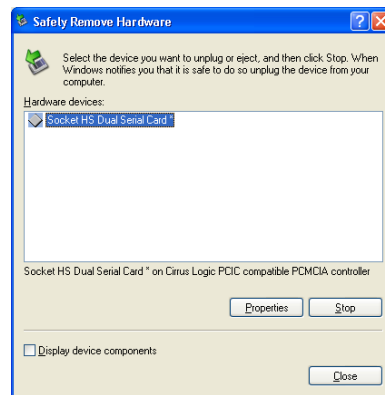


Windows 95/98 icon



Windows Me/XP icon

3. In the screen that appears, select the D-I/O and click **Stop**. The card may be listed as **Socket HS Dual Serial Card** or something similar.



4. When Windows reports that it is safe to do so, remove the card by pressing your computer's card eject button.

Warning! Always remove the D-I/O by pressing your computer's card eject button! Do not pull on the cables, or you can damage the cables and card!

Appendix A Specifications

Physical Characteristics:

I/O PC Card

| | |
|--------------------|--|
| Dimensions: | 3.37 in x 2.13 in x 0.197 in (85.6 mm x 54.0 mm x 5.0 mm) |
| Weight: | 1 oz (28.4 g) |

Interconnect Cables

| | |
|--------------------------------|----------------------|
| Length: | |
| Standard Card: | 12 in (305 mm) |
| Ruggedized Card: | 17 in (432mm) fixed |
| Removable Cable Weight: | 1.1 oz (31.2 g) each |
| Serial Connector: | 9-Pin D Shell Male |

Environmental Conditions:

| | |
|-------------------------------|---------------------------|
| Operating Temperature: | 0°C to +55°C |
| Storage Temperature: | -20°C to +65°C |
| Relative Humidity: | 10% to 90% non-condensing |

Power Consumption (supplied by host):

| | |
|--------------------|----------------|
| Minimum: | 5 mA (25 mW) |
| Typical: | |
| One port: | 13 mA (65 mW) |
| Both ports: | 21 mA (105 mW) |

Interface Standards:

| | |
|-------------------------------|---|
| I/O PC Card Interface: | PCMCIA Release 2.0, Type II, JEIDA 4.1 Compliant |
| Serial Communications: | Asynchronous RS-232 |

Software Included:

| | |
|---|-------------------------------------|
| Windows 95 (v4.00.950B)/ 98 (Second Edition)/Me: | INF file |
| Windows 2000/XP: | Setup program |
| Windows CE: | Setup program, Control Panel applet |
| Media: | CD ROM |

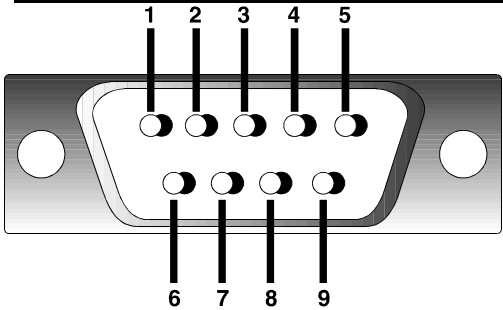
OS Support: Windows 95 (v4.00.950B)
Windows 98 and Windows 98SE
Windows Me/2000/XP
Windows CE HPC Pro 2.11
Windows CE HPC 2000, Pocket PC 2000, Pocket PC 2002

Compatibility:
Port A: COM 1, 2, 3, 4 or any I/O address
Port B: COM 2 (2F8), COM 3 (3E8) or COM 4 (2E8)

Programmable Characteristics:
Character length: 5-, 6-, 7- or 8-bit
Parity: Even, odd or none
Baud rate generation: Up to 921 kbps for hi-speed cards
UART Type: 16C550

Pin Assignments for both DB-9 Connectors:

| Pin Number | Function |
|------------|---------------------|
| 1 | Data Carrier Detect |
| 2 | Receive Data |
| 3 | Transmit Data |
| 4 | Data Transmit Ready |
| 5 | Ground |
| 6 | Data Set Ready |
| 7 | Request to Send |
| 8 | Clear to Send |
| 9 | Ring Indicator |



Appendix B OS Configuration

ADVANCED USERS ONLY!

Hi-Speed COM Tools for Windows CE has an OS Configuration tab that appears only for revisions of the D-I/O listed below.

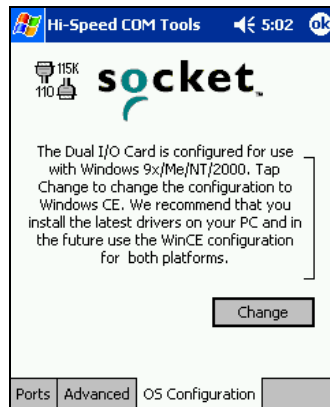
Revision “C” – “E” of the Ruggedized D-I/O (with fixed cables)

Revision “H” – “J” of the Standard D-I/O (with removable cables)

The original drivers that came with these D-I/O versions required that the card be configured in either of two modes – Desktop Windows mode (for Windows 9x/Me/2000/XP) or Windows CE mode – depending on the Windows version being used. The OS Configuration screen allows you to configure the D-I/O between these two modes. Straight from the package, these cards come in Desktop Windows mode and must be configured to Windows CE mode before you can use it with a Windows CE device.

Please note that the new drivers included in this release do not require different OS configurations. The D-I/O automatically works with Windows CE, 95, 98, Me, 2000, and XP as long as the new drivers are installed.

1. Insert the D-I/O into your Windows CE-based mobile computer.
 - If the **OS Configuration** screen automatically appears, then the card is currently in Windows 9x/Me/2000/XP mode. You must change it to Windows CE mode to use it with your Windows CE-based device.



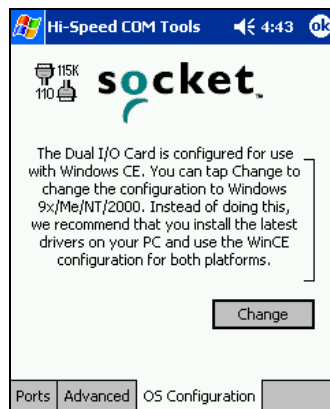
- If the **OS Configuration** screen does not automatically appear, then your D-I/O is configured for use with Windows CE. To change modes, access the **OS Configuration** screen by tapping the following:

Pocket PCs:

Start | Settings | Connections | Hi-Speed COM Tools | OS Configuration.

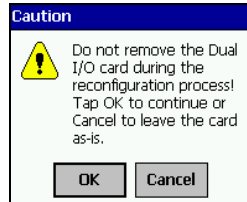
HPCs:

Start | Settings | Control Panel | Hi-Speed COM Tools | OS Configuration.



Note: If the OS Configuration tab does not appear under Hi-Speed COM Tools, then your version of the D-I/O cannot be configured.

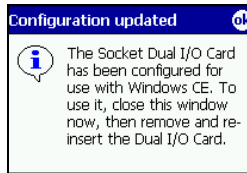
2. Tap on the **Change** button.
3. The **Caution** screen will warn you to keep the D-I/O in your mobile computer during the reconfiguration process. Tap **OK**.



4. The reconfiguration process will begin. Leave the card inside the slot. The process will take several seconds.

Warning! Do not remove the card until the reconfiguration process is complete, or the card can become unusable! If you accidentally disable your card, contact Socket technical support for assistance.

5. After reconfiguration is complete, the **Configuration updated** screen will appear. Tap **ok**.



6. Remove the card.
 - If you configured the card for Windows 9x/Me/2000/XP, now the card is ready for use in your notebook computer.
 - If you configured the card for Windows CE, re-insert the card into your Windows CE-based mobile computer.

Appendix C Support Resources

Technical Support

If you have trouble installing or using the Dual Serial I/O Card, contact Socket's technical support department.

IMPORTANT! To obtain technical support for your product, you must first register your product online at www.socketcom.com/prodreg.

Once you have registered your product, you can contact Socket's technical support department by doing either of the following:

- Submit an email inquiry through the online support system. After you register your product, you will be presented with an option to 'submit a problem'. Click on this option to follow the online process to submit an email request for technical support.

This is the fastest way to obtain technical support and has the quickest turnaround time. Registered customers who submit a question online will receive priority service. If we are unable to resolve your support inquiry via email, we can arrange for a technical support representative to call you at a specific time.

- Call our technical support line at 510-744-2720 to leave a message for a technical support representative to return your call at a specific time and number. When you call, please leave your email address that you registered under, a phone number and time that you can be reached at, and a detailed description of your problem.

After you register your product, you can use the product registration webpage to submit an email inquiry directly to a technical support specialist for priority service, view product information, register additional products, view a complete database of FAQs and view a history of technical support activity for previous support issues.

Users' Forum

If you would like to discuss the Socket Dual Serial I/O Card with other users, visit Socket's users' forum at: www.socketforum.com

Note: Socket may, but is not obligated to, monitor or review any areas on the Site where users transmit or post Communications or communicate solely with each other, including but not limited to the user forum, and the content of any such Communications. Socket, however, will have no liability related to the content of any such Communications, whether or not arising under the laws of copyright, libel, privacy, obscenity, or otherwise. Socket retains the right to remove messages that include any material Socket deems abusive, defamatory, obscene or otherwise unacceptable.

Please refrain from disassembling the card. Disassembly of this device will void the product warranty.

Limited Warranty

Socket Communications Incorporated (Socket) warrants this product against defects in material and workmanship, under normal use and service, for the following periods from the date of purchase:

PC Card and fixed cables: Lifetime (Three years if not registered)

Removable cables: 90 days

Incompatibility is not a defect covered by Socket's warranty. During the warranty period, Socket will, at its option, repair or replace the defective product at no charge when furnished with proof of retail purchase, provided that you deliver the product to Socket or to an authorized Socket Service Center.

The returned product must be accompanied by a return material authorization (RMA) number issued by Socket or by an authorized Socket Service Center. If you ship the product, you must use the original container or equivalent and you must pay the shipping charges to Socket. Socket will pay shipping charges back to any location in the contiguous United States. This warranty applies only to the original retail purchaser and is not transferable.

Socket may, at its option, replace or repair the product with new or reconditioned parts. Socket warrants the repaired or replaced products to be free from defects in material or workmanship for ninety (90) days after the return shipping date, or for the duration of the original warranty period, whichever is greater.

This warranty does not cover the replacement of products damaged by abuse, accident, misuse or misapplication, nor as a result of service or modification other than by Socket.

SOCKET IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING DAMAGE TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitation of implied warranties, or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This product may contain fully tested, recycled parts, warranted as if new. For warranty information, phone (510) 744-2700.

Copyright Notice

Copyright © 2003 Socket Communications, Inc. All rights reserved.

Socket Communications, the Socket Communications logo, Socket, Mobility Friendly, Socket Dual Serial I/O Card and Socket Ruggedized Dual Serial I/O Card are registered trademarks or trademarks of Socket Communications, Inc. All other brand and product names are trademarks of their respective holders.

The Socket Dual Serial I/O Card and Socket Ruggedized Dual Serial I/O Card include technology licensed under United States Patent Nos. 4,543,450, 4,603,320, 4,686,506, and 4,972,470.

Reproduction of the contents of this manual without the permission of Socket Communications is expressly prohibited. Please be aware that the products described in this manual may change without notice.

Feel free to contact SOCKET COMMUNICATIONS at:

Socket Communications, Inc.

37400 Central Court
Newark, CA 94560

Phone: (510) 744-2700

Fax: (510) 744-2727

Technical support: (510) 744-2720 (English only)

Other than the above, Socket Communications can assume no responsibility for anything resulting from the application of information contained in this manual.

Socket Communications requests that you refrain from any applications of the Socket Dual Serial I/O Card that are not described in this manual.

Please refrain from disassembling the PC Card. Disassembly of this device will void the product warranty.

For new product information, software updates and technical bulletins, please visit: www.socketcom.com.

Regulatory Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. This equipment is also CE EN55024:1998 and C-TICK compliant. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user may try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the radio or television.
- Increase the distance separating the equipment and the receiver.
- Connect the equipment to an outlet on a different branch circuit than that of the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet helpful:

How to Identify and Resolve Radio-TV Interference Problems

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402.



6410-00032 K

Printed in U.S.A.