

# RocketPort<sup>®</sup> OS/2<sup>®</sup> Device Driver

## Software Installation Card

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### Product Overview

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Use this *Installation Card* to install and configure the RocketPort device driver for the OS/2 operating system.

This *Installation Card* assumes that you have already installed the OS/2 operating system (level 2.0 or higher) on an ISA- or PCI-bus personal computer, and that you have a basic understanding of OS/2 operation.

The following notes and instructions were developed using OS/2 Warp, Version 4.

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### Known Limits

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This driver supports the RocketPort series of ISA- and PCI-bus serial port boards only. It does not support the RocketPort *Plus*, RocketPort 485, or RocketModem.

This driver does not support NDIS (LAN Distance Remote Access.)

The following Set Device Control Block IOCTL parameters are not available with this device driver:

- Input handshaking using DTR
- Output handshaking using DSR
- Output handshaking using DCD
- Input sensitivity using DSR

This device driver supports up to 128 ports using any combination of up to four RocketPort controller boards.

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### Installation Overview

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Follow these general steps to install your RocketPort board and device driver:

1. Install the RocketPort board, using the instructions given in the *Hardware Installation Card*.
2. Use the bootable diagnostics to verify that the RocketPort is installed and working correctly.
3. Reboot into OS/2.
4. Create a RocketPort driver directory on your hard disk. For example: C:\ROCKET

5. Copy the file RCKT.SYS from the distribution media to the directory you created in Step 4.
6. If you have installed only ISA-bus RocketPort boards, skip to Step 7.  
If you have installed one or more PCI-bus RocketPort boards, use the FINDRCKT.EXE program to determine board I/O addresses.
7. Edit the CONFIG.SYS file and add one driver load line, as described in "*Editing the CONFIG.SYS File*."
8. Reboot your system so that your changes take effect.

All hardware installation and diagnostic instructions are found on the *Hardware Installation Card*, which is packaged with your RocketPort controller board. If this card is missing, you can download the most recent version from the Control web or ftp site. Always use the most recent version of the driver and documentation.

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### Using FINDRCKT.EXE (PCI only)

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If you have installed one or more PCI-bus RocketPort boards, use the FINDRCKT.EXE program to determine the I/O address and IRQ assigned to each PCI board by the system BIOS.

If you have installed only ISA-bus RocketPort boards, continue with the "*Editing the CONFIG.SYS File*" discussion.

FINDRCKT.EXE must be run from the DOS command line, either from a DOS boot or from a DOS window within OS/2. The program can be run from either the hard drive or the installation diskette.

To run the program, log to the drive containing the program and enter FINDRCKT on the command line. The program returns the I/O address and IRQ for each PCI RocketPort installed in the system.

**Note:** *The RocketPort driver uses one interrupt. If you have more than one PCI board installed, use the IRQ assigned to the first board in the load line.*

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## Editing the CONFIG.SYS File

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After you copy the driver onto your hard disk, use a tool such as Notepad (on the WIN-OS/2 Groups/Accessories menu) to edit the CONFIG.SYS file and add one line to initialize your RocketPort board(s) during boot-up.

The load line follows this format:

```
DEVICE=<path> -A<I/O address> -I<IRQ> -P<number of ports>  
-C<number of RocketPort boards>
```

The above parameters and other optional parameters are defined as follows:

Parameter	Description
<i>path</i>	The path where the rckt.sys file is located, generally c:\rocket\rckt.sys.
-A[P]ioaddr	The hexadecimal I/O address of each RocketPort board in the system. ISA addresses are shown "as-is," while PCI addresses are prefixed with a "P." If you have multiple boards, addresses are separated by commas: for example, -A180,1C0. If you mix ISA and PCI boards, the ISA addresses must be listed before the PCI addresses. For more information, see the examples that follow this table.
-Iirq	The interrupt (IRQ) number you want the driver to use. This can be set manually for ISA boards, but is determined by the system for PCI boards. The RocketPort driver uses <i>one</i> interrupt for all boards in the system.
-Pnn	The total number of RocketPort serial ports installed in the system. This is the sum of all ports on all ISA and PCI boards installed.
-Cb	The total (1 - 4) number of RocketPort boards installed in the system.
-X	This is a switch. If included in the load line, the driver treats the CD line as though it is the DSR line. If DSR handshaking is enabled (by a SetDcb IOCTL), output handshaking is accomplished using the CD line. Changes in the state of CD will be seen by the application as changes in the state of DSR.
-Fc	The number (1 - 9) of the first port on the first RocketPort board. If you use this parameter, you must also use the -N parameter after it.
-Nname	This is used with the -F parameter and allows you to change the default port name from rkt to a name of your choice. For example, -F5 -NCOM sets the first port on the first board (as determined by the I/O address) to COM5, and the other ports follow in sequence. Most commercial applications require that port names begin with "COM."

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## Sample CONFIG.SYS Load Lines

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The following examples discuss possible CONFIG.SYS load line entries.

### ISA RocketPort boards Only

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For example, if you installed one ISA RocketPort 8 using the default I/O address of 180(hex) and Interrupt 15, you would add this line to CONFIG.SYS:

```
DEVICE=C:\ROCKET\RCKT.SYS -A180 -I15 -P8 -C1
```

If you installed two ISA RocketPort 8 boards using the default I/O address for the first board and the recommended DIP switch setting for the second board, you would add this line instead:

```
DEVICE=C:\ROCKET\RCKT.SYS -A180,1C0 -I15 -P16 -C2
```

You add a *single* load line for *all* RocketPort boards together. Do not attempt to add a separate load line for each board individually, as the driver will not work.

### PCI RocketPort boards Only

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If you installed one PCI RocketPort 16, you would use the I/O address and IRQ returned by FINDRCKT.EXE in the load line. For example:

```
DEVICE=C:\ROCKET\RCKT.SYS -AP7C80 -I11 -P16 -C1
```

**Note:** Each PCI board I/O address must be preceded by the letter "P."

If you installed two or more PCI boards, use the IRQ assigned to the *first* PCI board. Do not attempt to enter multiple load lines or multiple IRQ selections within a single load line, as the driver will not work.

Remember, PCI I/O addresses are *slot-specific*. If you move a PCI RocketPort board to another slot, you must rerun FINDRCKT.EXE to determine the new address and IRQ, and change the load line accordingly.

### Mixing ISA and PCI RocketPort boards

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If you installed a mix of ISA- and PCI-bus RocketPort boards, the I/O addresses for all ISA-bus boards must come before the I/O addresses for any PCI-boards. For example:

```
DEVICE=C:\ROCKET\RCKT.SYS -A180,P7C80 -I11 -P24 -C2
```

Note that you must use the IRQ assigned by the system BIOS to the first *PCI* board, as determined by FINDRCKT.EXE.

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## Sample Programs

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The following sample programs are included on the RocketPort OS/2 Device Driver diskette and in the downloadable ZIP file.

**Note:** *C source code is included for all of the following. These examples were compiled using the Microsoft 6.0 C Compiler and may require modification before they can be compiled with a different compiler. In particular, the number and order of DosDevOCtl call parameters will be different with a newer version of the compiler.*

SETBAUD.EXE	A simple program to change the baud rate on a port. USAGE: SETBAUD <i>portname</i> <i>baudrate</i> <CR>
GETBAUD.EXE	A simple program to check the current baud rate on a port. USAGE: GETBAUD <i>portname</i> <i>baudrate</i> <CR>
SETLINE.EXE	A simple program to set the line parameters on a port. USAGE: SETLINE <i>portname</i> <CR>
OS2TERM.EXE	A simple terminal emulation program. This program sets baud=9600, line=8N1, flow control=disabled. USAGE: OS2TERM <i>portname</i> <CR>
TERM.EXE	Another terminal emulation program. This one uses the ports current settings and does not change any parameters. USAGE: TERM <i>portname</i> <CR>
OS2MODE.EXE	A program that behaves like the system "mode" command. See the help for "mode" for more information. USAGE: OS2MODE <i>portname</i> <CR>
SETDFLT.EXE	This routine resets the port to the default values. USAGE: SETDFLT <i>portname</i> <CR>
SETHFLO.EXE	This routine sets the DCB to use RTS/CTS handshaking. USAGE: SETHFLO <i>portname</i> <CR>
SETSWFLO.EXE	This routine sets the DCB to use XON/XOFF handshaking. USAGE: SETSWFLO <i>portname</i> <CR>

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## Device Driver Files

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The following files are included on the RocketPort OS/2 Device Driver diskette and in the downloadable ZIP file:

RCKT.SYS	The actual driver file itself.
FINDRCKT.EXE	The utility you use to find the I/O addresses and IRQs assigned to PCI-bus RocketPort boards.
INSTALL.EXE	A "configurator" program that you can use to help determine the load line parameters for ISA-only installations. This generates a recommended load line which is stored in the <i>install.log</i> file, and which you must manually add to the <i>config.sys</i> file.

INSTALL.EXE does *not* edit the *config.sys* file directly, and it does not work if you have PCI-bus RocketPort boards installed.

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## Technical Support

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

### Corporate Headquarters:

- email: [support@comtrol.com](mailto:support@comtrol.com)
- FAX: (651) 631-8117
- Phone: (651) 631-7654
- FTP Site: <ftp://ftp.comtrol.com>
- Web Site: <http://www.comtrol.com>

### Control Europe:

- email: [support@comtrol.co.uk](mailto:support@comtrol.co.uk)
- FAX: +44 (0) 1 869-323-211
- Phone: +44 (0) 1 869-323-220
- Web Site: <http://www.comtrol.co.uk>

Control has a staff of technical support specialists available to help you.

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