

RocketPort® Series Device Driver (6512) for the QNX® 4.XX Operating System Installation Reference Card

Scope

Use this Reference Card to configure and install up to three Control® RocketPort series controllers and QNX 4.XX device driver.

Audience

This Reference Card assumes that you are familiar with the QNX 4.XX operating system.

Prerequisites

The following are required to use this device driver:

- QNX level 4.XX operating system
- ISA-based machine

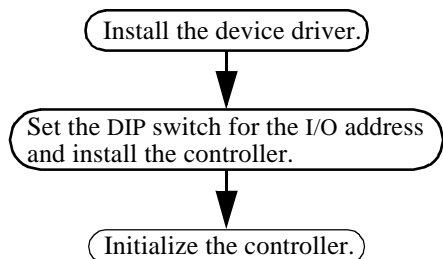
How to Use the On-Line Help

This device driver provides on-line help that shows how to initialize the device driver. To start the help system, enter the following:

```
use /rocket/Dev.rckt
```

Installing RocketPort Systems

Use the following procedure to install and configure RocketPort series systems with the QNX 4.XX device driver.



Installing the Device Driver

Before you install the device driver, you may need to increase the size of the `-n` option in the `DEV` statement in your `sysinit` file for the controllers you are adding.

Use the following procedure to install the device driver.

1. Mount the floppy drive as a file, for example:


```
mount /dev/fd0 /fd
```

 where `fd0` is the drive and you must use `/fd`.
2. Insert the diskette in the floppy drive.
3. Execute the installation routine by entering:


```
/fd/install
```
4. Select the directory option if you do not want to use the default `/rocket` directory.
 - a. Enter the name of the directory where you want to install the device driver.
 - b. Select OK to return to the main menu.
3. Select the I/O Address option if you do not want to

use the default address range of 180-1C3 or you are installing more than one controller.

- a. Press `<Enter>` for a menu of available I/O address ranges.
 - b. Select an unused I/O address and press `<Enter>`.
 - c. Repeat this procedure for each controller.
 - d. Select OK after choosing an I/O address range for each controller.
5. Select the **OK to Install** option. A screen appears that shows you how to set the I/O address switch.
 6. Select the **Quit** option.
 7. Verify that the following files are in the directory you selected during installation.
 - `Dev.rckt`
 - `Dev.rckt.use`
 - `install.log`
 - `version.dat`

Go to the following section and set the I/O DIP switch or switches. After the switch is set, install the controller or controllers.

Setting the DIP Switch

To prepare your controller for installation, you may need to set the I/O address DIP switch, unless you use the default I/O address range (180 through 1C3).

Note: If you do not remember the addresses you selected, you can view the `install.log` file.

RocketPort controllers use I/O address ranges at 400 hex intervals above the I/O address range. Each RocketPort controller uses up to three additional "alias" I/O address ranges located at 400h intervals above the address ranges. For example, if the first controller is addressed at 100, the I/O address ranges used by that controller are 100 - 143, 500 - 543, 900 - 943, and D00 - D43.

Most peripherals use I/O address ranges between 0 and 3FF hexadecimal. If you have peripherals installed above 400h, you may experience an I/O conflict.

Board#1 Address	DIP Switch Settings*		
	Board #1	Board #2	Board #3
100 - 143 hex			
140 - 183 hex			
180 - 1C3 hex (Default)			
200 - 243 hex			

* Controller #1 determines the other controller settings.

Board#1 Address	DIP Switch Settings*								
	Board #1			Board #2			Board #3		
280 - 2C3 hex									
300 - 343 hex	NO			NO			NO		

* Controller #1 determines the other controller settings.

Installing the Controller

After you set the I/O DIP switch, you are ready to install the controller. Use the following steps to install the controller:

1. Turn the power switch for the system unit to the OFF position.
2. Remove the system unit cover.
3. Select a slot to install the controller.
4. Remove the expansion slot cover.
5. Insert the controller in the expansion slot, make sure that it is properly seated.
6. Attach the controller to the chassis with the expansion slot screw. Repeat Steps 3 through 5 for each controller.
7. Replace the cover on the system unit.
8. If applicable, attach the male end of the RocketPort cable to the controller and the female end of the cable to the connector labeled *Host* on the interface box.

Note: If you have a RocketPort 32, the connector labeled *J1* corresponds to ports 0 through 15 on the interface box and the connector labeled *J2* (closest to the bus) corresponds to ports 16 through 31.

After installing and configuring the controller, you are ready to attach your peripherals. Refer to the *Hardware Reference Card* if you need information about the pinouts for the connectors.

Initializing the Device Driver

This device driver uses the following syntax statement for initialization. The following table illustrates the options available for the device driver.

```
/rocket/Dev.rckt [options]* port [port] [port] &
```

Where *rocket* is the directory where the device driver is installed *port* is an I/O address (hex) of the controller

If the device driver installation was successful, you receive a message that indicates that the controller or controllers were found at the specified addresses.

Note: You may receive Error 23 File Table Overflow message if the *Dev* statement does not have a large enough value for the *-n* option in the *sysinit* file.

The following example initializes one RocketPort Series controller with a base I/O address of 180h:

```
/rocket/Dev.rckt 180 &
```

The next example initializes two RocketPort series controllers; controller#1 with a base I/O address at 180h, default parameters, and controller#2 with base I/O address at 100h, baud rate=1200:

```
/rocket/Dev.rckt 180 -b 1200 100 &
```

Options	Description
-b number	Defines initial baud rate (default 9,600).
-C number	Size of canonical input buffer (default 256).
-d	Sets DSR on initially (default).
-D	Sets DSR off initially.
-e	Sets options to edit mode.
-E	Sets options to raw mode (default).
-f	Enables and locks hardware flow control (default).
-F	Disables hardware flow control.
-h number	Defines high-water mark for system input buffer flow control (default 3/4 point of input buffer).
-I number	Size of raw system input buffer (default 2,048).
-l number	Defines low-water mark for system input buffer flow control (default 1/4 point of input buffer).
-m	Disables modem carrier processing (HUP).
-M	Enables modem processing (HUP) (default).
-N name	Prefixes to register (default rckt).
-O number	Size of system output buffer (default 2,048).
-r	Sets RTS on initially (default).
-R	Sets RTS off initially.
-s	Enables ohflow split, CTS-only required (default).
-S	Disables ohflow split; CTS and DSR required.
-x	Enables and locks software flow control.
-X	Disables software flow control (default).

Note: Modem and line controls default to the same conditions as the *Dev.ser* serial driver.

Resolving Installation Problems

If installation fails or you are trying to resolve a problem, you should try the following before calling the Control technical support line:

- Check the signals between your peripherals and the interface box to verify that they match (if applicable). See the appropriate *Hardware Reference Card* for information.
- Check to make sure the cables are connected properly.
- Reseat the controller in the slot.
- Make sure that the expansion slot screw was replaced after inserting the controller.
- Check for possible I/O address conflicts using the following table.

If you have not been able to get the controller operating:

1. Turn off your PC and insert the diagnostic diskette.
2. Boot the PC and following the instructions provided by the diagnostic diskette.

Technical Support

If you have questions about your controller or need assistance, contact Control using one of the following methods:

Corporate Headquarters:

- email: support@control.com
- URI: www.control.com
- FAX: (612) 631-8117
- Phone: (612) 631-7654
- FTP Site: <ftp://ftp.control.com>
- BBS (for device driver updates): (612) 631-8310

Note: The BBS supports modem speeds up to 28.8 Kbps with 8 bits and no parity.

Control Europe:

- email: support@control.co.uk
- FAX: +44 (0) 1 869-323-211
- Phone: +44 (0) 1 869-323-220
- BBS: +44 (0) 1 869-243-687

Note: The BBS supports modem speeds up to 28.8 Kbps with 8 bits and no parity.

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Address Block	Addresses Used	Description
000 - 03F 040 - 07F 080 - 0BF 0C0 - 0FF		Reserved for Motherboard
100 - 13F 140 - 17F 180 - 1BF		
1C0 - 1FF	1F0 - 1F8	Fixed Disk
200 - 23F	218 - 21B	Other Control I/O Registers
240 - 27F	278 - 27F	LPT2, IDE controllers, multifunction boards (game ports)
280 - 2BF		
2C0 - 2FF	2E8 - 2EF 2F8 - 2FF	COM4 COM2
300 - 33F	318 - 31B	Other Control I/O Registers
340 - 37F	378 - 37F	LPT1
380 - 3BF	3B0 - 3BF	Monochrome Display and LPT3
3C0 - 3FF	3D0 - 3DF 3E8 - 3EF 3F0 - 3F7 3F8 - 3FF	Graphics Monitor Adapter COM3 Floppy Disk Controller COM1

Placing a Support Call

Before you place a technical support call to Control, please make sure that you have the following information.

Item	Your System Information
Controller type	4-, 8-, 16-, or 32-port model
Connector type	DB25, RJ45, or RJ11
Mark your I/O address selections	<p>Board #1 NO Board #2 NO</p> <p>Board #3 NO</p>
Operating system type and release	
Device driver release number (to verify, enter sin ver)	
PC make, model, and speed	
List of other devices in the PC and their addresses	

After you have gathered this information, contact Control using one of the methods discussed in the Technical Support discussion.