

Installation Reference Card for the Linux System with the Hostess 550™ Series

Scope

Use this reference card to configure the Hostess 550 controller and the device driver available through your Linux operating system. This device driver supports up to four of the Control® Hostess 550 controllers (2, 4, 8, and 16 port).

Using the Hostess 550 controller with Linux does not require any kernel modifications or special compiling procedures.

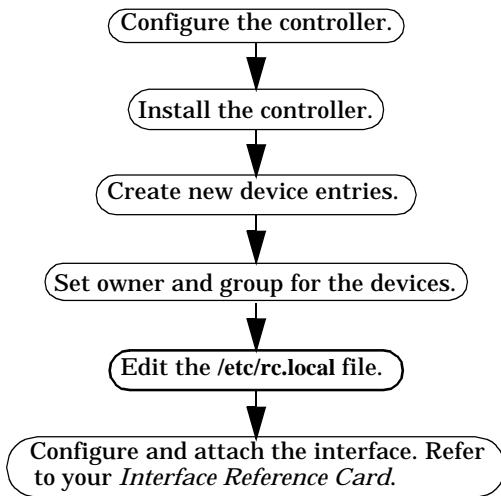
Prerequisites

The following are required to use the Hostess 550 controller with Linux:

- Linux operating system (level 1.0 and higher)
- Up to four Hostess 550 series controllers
- ISA-based machine

Installation Overview

The following flowchart shows the installation steps.



Note: For support or troubleshooting information, see the documentation that came with your controller.

Configuring 2-Port Controllers

Configure the Hostess 550 2-port controller by setting the following DIP switches for each board:

- Base address (labeled ADDRESS or SW1)
- Interrupt vector number (labeled INTERRUPT or SW2)

Make sure that you select an unused base address and interrupt vector number. Install the controller after you set the DIP switches. (See the discussion titled "Installing the Controller" for this information.)

The following tables show the settings for common base I/O addresses and available interrupts. For additional address settings, see the documentation that came with your controller.

Address Settings for 2-Port Controllers

Base I/O Address	MODE SELECT Switch	ADDRESS Switch
100h		
140h		
240h		
280h		
500h		

IRQ Settings for 2-Port Controllers

IRQ	INTERRUPT Switch	IRQ	INTERRUPT Switch
2		5	
3		7	

Continued

IRQ Settings for 2-Port Controllers (Continued)

IRQ	INTERRUPT Switch	IRQ	INTERRUPT Switch
4		10	
		11	

Configuring 4/8-Port Controllers With 100-Pin Connectors

Configure the Hostess 550 4 or 8-port controller by setting the following DIP switches for each board:

- Base address (labeled ADDRESS or SW1)
- Interrupt vector number (labeled INTERRUPT or SW2)

Make sure that you select an unused base address and interrupt vector number. Install the controller after you set the DIP switches. (See the discussion titled "Installing the Controller" for this information.)

The following tables show the settings for common base I/O addresses and available interrupts. For additional address settings, see the documentation that came with your controller.

Address Settings for 4/8-Port Controllers (100-Pin)

I/O Address	ADDRESS or SW1 Switch	I/O Address	ADDRESS or SW1 Switch
100h		240h	
140h		280h	
180h		500h	

* Switch 1 should be ON for 4-port controllers and OFF for 8-port controllers.

IRQ Settings for 4/8-Port Controllers (100-Pin)

IRQ	INTERRUPT or SW2 Switch	IRQ	INTERRUPT or SW2 Switch
2		5	
3		7**	
4		10	
		11	

* Switch 8 should be ON for 4-port controllers and OFF for 8-port controllers.

** You must also move the jumper on JP2 to pins 2 and 3 (see the Hardware Reference Card for pin locations). Interrupt 7 is only available on models whose switch is labeled INTERRUPT.

Configuring 4/8-Port Controllers With RJ Connectors

Configure 4 or 8-port controllers by setting the following DIP switches for each board:

- Base address (labeled S1 or ADDRESS SELECT)
- Interrupt vector number (labeled S2 or IRQ SELECT)

Make sure that you select an unused base address and interrupt vector number. Install the controller after you set the DIP switches. (See the discussion titled "Installing the Controller" for this information.)

The following tables show the settings for common base I/O addresses and available interrupts. For additional addresses, see the documentation that came with your controller.

Address Settings for 4/8-Port (RJ)

I/O Address	SW1 Switch 4-Port	I/O Address	ADDRESS SELECT Switch 8-Port
100h		100h	
140h		140h	
180h		180h	

Address Settings for 4/8-Port (RJ) (Continued)

I/O Address	SW1 Switch 4-Port	I/O Address	ADDRESS SELECT Switch 8-Port
240h		240h	
280h		280h	
500h		500h	

IRQ Settings for 4/8-Port (RJ)

4-Port IRQ	S2 Switch	8-Port IRQ	IRQ SELECT Switch
2		2	
3		3	
4		4	
5		5	
10		7	
11		10	
12		11	

Configuring 16-Port Controllers

Configure 16-port controllers by setting the following DIP switches for each board:

- Base address (labeled S1)
- Interrupt vector number (labeled S2)

Make sure that you select an unused base address and interrupt vector number. Install the controller after you set the DIP switches. (See the discussion titled "Installing the Controller" for this information.)

The following tables show the settings for common base I/O addresses and available interrupts. For additional addresses, see the documentation that came with your

controller.

Address Settings for 16-Port Controllers

I/O Address	S1 Switch	I/O Address	S1 Switch
100h		300h	
200h		500h	
280h		580h	

IRQ Settings for 16-Port Controllers

IRQ	S2 Switch	IRQ	S2 Switch
2		5	
3		10	
4		11	

Installing the Controller

Use the following steps to install the controller.

Warning: Static electricity may damage the controller. When touching the controller, wear a grounding strap. Hold the controller only by its edges or the mounting bracket.

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, making 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.

After you install the controller, you can attach your peripheral devices. If you need signal information, see the documentation that came with your controller. If you need to configure your interface, refer to your *Interface Reference Card*.

Creating New Device Entries

You must create entries in the `/dev` directory for the new ports you are adding. Use the `mknod` command to create the device entries, make sure that you create a `ttySnn` and `cuann` entry for each port.

Note: Each device has a corresponding major and minor number that associates it with the proper device driver in the kernel. As of kernel 1.1.2, the `ttySnn` devices were on major 4 and the `cuann` devices were on major 5.

Use the following format to create a device entry for each tty and for each calling-unit associated with the port on the controller:

```
mknod /dev/ttyS{#} c 4 {64+ttyS#}
mknod /dev/cua{#} c 5 {64+cua#}
```

The following example shows you how to create a new device entry for each tty on an 8-port controller. The first `ttyS#` is 16.

```
mknod /dev/ttyS16 c 4 80
mknod /dev/ttyS17 c 4 81
mknod /dev/ttyS18 c 4 82
mknod /dev/ttyS19 c 4 83
mknod /dev/ttyS20 c 4 84
mknod /dev/ttyS21 c 4 85
mknod /dev/ttyS22 c 4 86
mknod /dev/ttyS23 c 4 87
```

The following example shows you how to create device entries for the calling-units associated with the ports for an 8-port controller:

```
mknod /dev/cua16 c 5 80
mknod /dev/cua17 c 5 81
mknod /dev/cua18 c 5 82
mknod /dev/cua19 c 5 83
mknod /dev/cua20 c 5 84
mknod /dev/cua21 c 5 85
mknod /dev/cua22 c 5 86
mknod /dev/cua23 c 5 87
```

Setting the Owner and Group

The following example shows you how to set the owner and group for the devices:

```
chown root.tty /dev/ttyS1[6789] /dev/ttyS2[0123]
chown root.uucp /dev/cua1[6789] /dev/cau2[0123]
```

Editing the `/etc/rc.d/rc.local` File

Edit the `/etc/rc.d/rc.local` file by adding `setserial` statements for each new port you want to configure by using the following format:

```
/sbin/setserial /dev/ttyS{#} port {I/O-ADDR} irq {IRQ}
uart 16550a
```

The following example uses `ttyS16` as the first `tty{S#}`, `100h` as the I/O address, and `2` as the IRQ for an 8-port controller:

```
/sbin/setserial /dev/ttyS16 port 0x100 irq 2 uart 16550a
/sbin/setserial /dev/ttyS17 port 0x108 irq 2 uart 16550a
/sbin/setserial /dev/ttyS18 port 0x110 irq 2 uart 16550a
/sbin/setserial /dev/ttyS19 port 0x118 irq 2 uart 16550a
/sbin/setserial /dev/ttyS20 port 0x120 irq 2 uart 16550a
/sbin/setserial /dev/ttyS21 port 0x128 irq 2 uart 16550a
```

```
/sbin/setserial /dev/ttyS22 port 0x130 irq 2 uart 16550a
/sbin/setserial /dev/ttyS23 port 0x138 irq 2 uart 16550a
```

Reboot the system at this time. Your new ports are available for communications after the system reboot.

Technical Support

If you have questions about your controller, contact Control by email, FAX, BBS, or phone.

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.

Control has a staff of hardware and software engineers, and technicians available to help you.

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