

# Hostess™ i 8/16 Hardware Installation Card

## Introduction

This *Hardware Installation Card* discusses the Hostess *i* line of 8- and 16-port serial controllers.

The Hostess *i* serial card fits into the ISA or EISA slot of a personal computer, and supports either asynchronous or synchronous serial communications in both RS-232 and RS-422 modes. You can install up to four Hostess *i* cards in a single computer, for a maximum of 64 serial ports per system (depending on card configuration).

Hostess *i* 8-port cards can be upgraded to 16-ports with a simple plug-in module. You can also add up to 8 MB of memory to each card using standard 30-pin SIMMs.

## Interface Boxes

Each Hostess *i* card requires an external interface:

Ports	Interface Type	Part Number	Reference Card
8	RS-232/422 DB25 female	INHI0810A	6221
16	RS-232/422 DB25 female	INHI1610A	6220

For information about an external interface, including interface jumper configuration and serial port pinouts, see the *Interface Reference Card* listed above.

## Driver Software

For driver software installation instructions, see the Hostess *i* device driver *Installation Guide* for your operating system.

## Before Installing the Hardware

Before you install the Hostess *i* card, you must do the following:

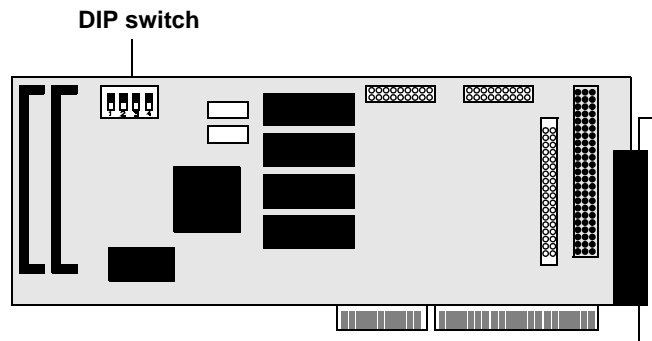
1. Set the hardware I/O address.
2. Configure ports for RS-232 or RS-422 operation.
3. Install and configure the 16-port upgrade, if required.
4. Install memory upgrades, if required.

The following sections discuss these procedures.

## Setting the Hardware I/O Address


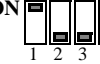



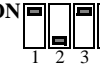










The I/O (input/output) base address is the start of a reserved range of address space for each controller in the system. Each Hostess *i* controller you install must use a different I/O base address.

The base I/O address is set using a DIP switch in the upper left corner of the circuit board:



The factory default I/O address range is 218 - 21B (hex). One of the other addresses listed below may be used if needed to meet the requirements of your operating system or hardware. See your computer and OS reference manuals for more information.

The following table shows possible I/O addresses and the corresponding DIP switch settings:

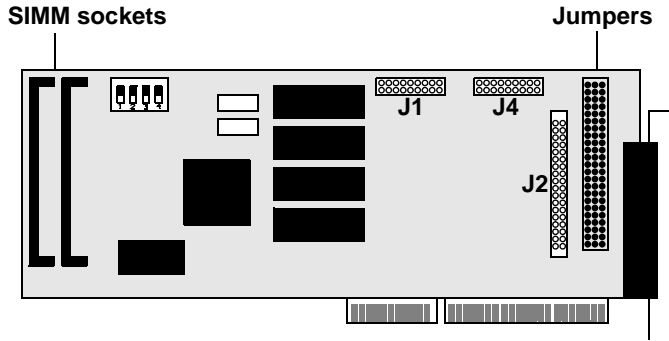
I/O Address DIP Switch Settings			
218 hex ON 	21C hex ON 	238 hex ON 	23C hex ON 
318 hex ON 	31C hex ON 	338 hex ON 	33C hex ON 
618 hex ON 	61C hex ON 	638 hex ON 	63C hex ON 
718 hex ON 	71C hex ON 	738 hex ON 	73C hex ON 

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## Configuring RS-232/422 Operation

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Each port is jumper-selectable for RS-232 or RS-422 operation. The jumper blocks for Ports 1 through 8 are at the far right end of the card, near the mounting bracket:



If you have a 16-port card, the jumper blocks for Ports 9 through 16 are located on the upgrade module.

**Note:** *If you have a 16-port card, you may find it more convenient to configure Ports 1 through 8 before installing the upgrade module.*

Each jumper has three pins. To configure a port for RS-232 operation, jumper the *center* and *left* pins for all jumpers in the port group. (The factory default configuration is asynchronous RS-232 mode.)

To configure a port for RS-422 operation, jumper the *center* and *right* pins.



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### Notes

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1. Ports 1 through 4 have *four* jumpers in the port group. All other ports have *three* jumpers in the port group.
2. The fourth jumper (on Ports 1 - 4) is a selectable line terminator. It is disabled in RS-232 mode and may be required when using RS-422 mode at speeds above 38.4 Kbps, or when specified by an application.
3. Synchronous mode is configured using jumpers inside the 8- and 16-port DB25 interface boxes. For more information about using synchronous mode, see your *Interface Reference Card*.

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## Installing Memory Upgrades

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The Hostess *i* card features 128KB of DRAM memory. This can be expanded up to 8 MB using standard 30-pin SIMMs (80 ns or faster, parity or non-parity).

The SIMM sockets are located at the left end of the card. SIMMs must be installed in matched pairs. (For example, install two 4MB SIMM modules. See the *Specifications* table for a list of valid SIMM types.)

SIMMs have alignment notches and pegs, and cannot be reversed. To install a SIMM, lay the connector edge in first, then gently press the SIMM down until the spring latches snap into place. **DO NOT FORCE THE SIMM INTO THE SOCKET.**

To remove an installed SIMM, gently spread the spring latches on the sides, then pop the SIMM up. Again, do not force or pry a SIMM out of its socket. Doing so may damage the SIMM, the socket, the Hostess *i* card, or all three.

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## Installing the Hostess *i*

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**CAUTION:** *Always shut off the power before adding or removing cards or changing DIP switch or jumper settings.*

1. Turn your computer off.
2. Remove the system cover.
3. Select an ISA or EISA expansion slot.
4. Remove the slot cover.
5. Write down the model number and serial number of the card. You can enter this in the *Technical Support* table of this *Installation Card*.
6. Insert the card into the slot, seating securely.
7. Reinstall the expansion slot retaining screw.
8. Replace the system cover.
9. If needed, open the back of the interface box and set the interface configuration jumpers as described in the interface *Hardware Reference Card*. When you are finished, close the back of the interface box.
10. Attach the interface box cable to the connector on the Hostess *i* card mounting bracket.
11. Tighten the retaining screws.
12. Use the *Diagnostic* diskette included with your card to verify hardware operation, as described in the next section.

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## Using the Diagnostics

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A *Diagnostic* DOS bootable disk is shipped with the purchase of a Hostess *i* card. The driver is not required to run the diagnostic.

**Note:** You must execute the diagnostic by booting from the diskette. It will not work properly in Windows MS-DOS(R) windows.

Follow these steps to run the diagnostic:

1. Power up your computer.
2. Insert the *Diagnostic* diskette.
3. Reboot the machine. The diagnostic starts automatically.
4. Follow the instructions that appear on-screen.
5. After the card passes diagnostics, connect your peripherals and install the driver.  
If the diagnostics fail, review the following troubleshooting tips.

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## Resolving Diagnostic Failures

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If the diagnostics failed, try the following:

- Make sure the I/O base address you enter in the diagnostic program matches the hardware I/O address you set using the DIP switch on the card.
- To resolve an I/O address conflict, select a different unused I/O address (also change the DIP switch to the new selection).
- Reseat the card in the slot.
- Check for proper cable connections.
- Check for proper installation of the loopback plug.

Try re-running the diagnostics. If they fail again, you may have a bad port. Call Technical Support using the information on the back flap of this *Card*.

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## Installing the 16-Port Upgrade

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To upgrade the Hostess *i* 8-port card to 16 ports, follow these steps.

**Note:** Circuit boards are extremely sensitive to static electricity and can be damaged by static discharge. Always wear a grounding strap and observe anti-static precautions when handling the Hostess *i* card and 16-port upgrade board.

1. Purchase the Hostess *i* 16-port upgrade and 16-port interface.
2. Shut down your computer and remove the Hostess *i* card.
3. Place the Hostess *i* card on a flat, clean, static-free surface.
4. Align the upgrade module's **P1** connector to the **J1** socket on the Hostess *i* card, and the **P2** connector to the **J2** socket. (J4 is not used.)
5. Press down, putting pressure directly over the **P1** and **P2** connectors. The module will snap into place.
6. Use the jumpers as needed to configure RS-232/422 operation on Ports 9 - 16.
7. Reinstall the Hostess *i* card in your computer.
8. Run the *Diagnostic* to verify that the card is working correctly, then follow the instructions for your operating system to reinstall the driver and reconfigure it for 16-port operation. For more information, see your device driver software installation instructions.

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## Further Reading

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For more information about installing and configuring the Hostess *i* card, see the following:

Topics	Document/Location
8-port Interface DB25 pinouts, RS-232/422 jumper settings, synchronous mode configuration	<i>Interface Reference Card</i> (6221)
16-port Interface DB25 pinouts, RS-232/422 jumper settings, synchronous mode configuration	<i>Interface Reference Card</i> (6220)
100-pin connector pinouts	Control web site (Hardware Tech Tips)
building RS-232 cables, RS-422 cables, and loopback test plugs	Control web site (Hardware Tech Tips)
software drivers and sample code	<a href="ftp://ftp.control.com/Host_i/">ftp://ftp.control.com/Host_i/</a>

## Specifications

The following tables illustrate Hostess *i* conditions and specifications.

Environmental Condition	Value
Air temperature: System on System off	0 to 40°C -20 to 85°C
Humidity (non-condensing): System on System off	8% to 80% 20% to 80%
Altitude	0 to 10,000 feet

Electromagnetic Compliance	Status
Emission: FCC Class A for Section 15, Subpart J, conducted and radiated types of interference Rounded shielded cable EIA-232-D Canadian Class B	Yes
UL Recognized	Yes

Hostess <i>i</i> Card	Specification
Base I/O address	switch selectable
Baud rate	50 to 38.4K bps
Bus interface	ISA or EISA 16-bit data, 24-bit address
Control by device driver: Data bits Stop bits	5, 6, 7, or 8 1, 1.5, or 2
Current consumption: 8-Port 16-Port	$\begin{matrix} +5V & +12V & -12V \\ 1.74 \text{ A} & 35.0 \text{ mA} & 66.0 \text{ mA} \\ 2.54 \text{ A} & 50.0 \text{ mA} & 220.0 \text{ mA} \end{matrix}$
Dimensions	13.25" by 4.75" (AT height, full-length)
Heat output: 8-Port 16-Port	32.5 BTU/Hr 52.4 BTU/Hr
I/O ports/expansion slot	From 8 to 16
Interface	EIA-232-D, EIA-422-A jumper selectable
Interrupt	none, 3, 4, 5, 9, 10, 11, 12, 15 software selectable
Mode	DTE
Modem control	RTS, CTS, DCD, DTR

Hostess <i>i</i> Card	Specification
RAM	128K, upgradable to 640K, 2MB, or 8MB using SIMMs
SIMM	Dual-port, 30-pin, 80ns (or faster), parity or non-parity. SIMM modules must be installed in matched pairs. Use two each: 256K x 8 or 256K x 9 1M x 8 or 1M x 9 4M x 8 or 4M x 9
Synchronous communication	Available on Ports 1 and 2 only.

## FCC Notices

### Radio Frequency Interference (RFI) (FCC 15.105)

This equipment has been tested and found to comply with the limits for Class A digital devices pursuant to Part 15 of the FCC Rules.

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. However, there is no guarantee that interference will not occur in a particular installation. 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 is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### Labeling Requirements (FCC 15.19)

This equipment complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

### Modifications (FCC 15.21)

Changes or modifications to this equipment not expressly approved by Control Corporation may void the user's authority to operate this equipment.

### Serial Cables (FCC 15.27)

This equipment is certified for Class A operation when used with EIA-232-D rounded shielded cables.

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## Technical Support

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Comtrol has a staff of support technicians available to help you. Before you call, please have the following information available:

Item	Your System Information
Model number	
Serial number	
Interface type	
I/O address and IRQ	
Operating system and release number	
Device driver version	
PC make, model, and speed	
List other devices in the PC and their addresses	

Control	Headquarters	Europe
Phone	(651) 631-7654	+44 (0)1869 323220
FAX	(651) 631-8117	+44 (0)1869 323211
Email	<a href="mailto:support@comtrol.com">support@comtrol.com</a>	<a href="mailto:support@comtrol.co.uk">support@comtrol.co.uk</a>
web site	<a href="http://www.comtrol.com">www.comtrol.com</a>	<a href="http://www.comtrol.co.uk">www.comtrol.co.uk</a>
ftp site	<a href="ftp://ftp.comtrol.com">ftp.comtrol.com</a>	

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