Hardware Reference Card

Hostess *i/S 2*
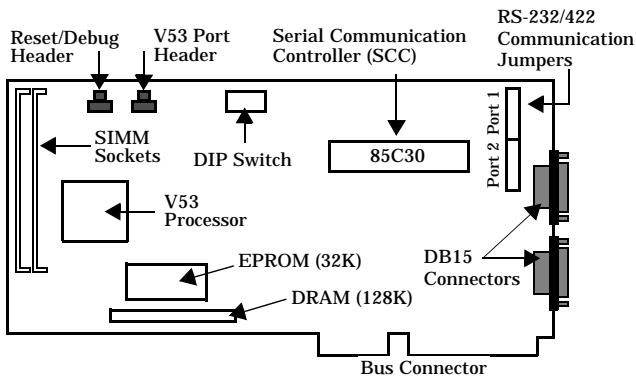
Scope

This reference card discusses the following topics for the Hostess *i/S 2* controller:

- Identification
- Installation
- DB15 connector
- Troubleshooting and technical support
- Configuration
- Specifications
- Memory addresses

Note: *You must write your own device driver, as Comtrol does not supply one for this controller.*

Identifying the Controller

The following figure illustrates the Hostess *i/S 2* controller.

Reset/Debug Header — V53 Port Header — Serial Communication Controller (SCC) — RS-232/422 Communication Jumpers — SIMM Sockets — DIP Switch — 85C30 — Port 2 Port 1 — V53 Processor — EPROM (32K) — DB15 Connectors — DRAM (128K) — Bus Connector

Notes: *The reset/debug header and the V53 port header are only available on controllers set up for development by special request. See the* Developer's Toolkit *for information on these headers.*
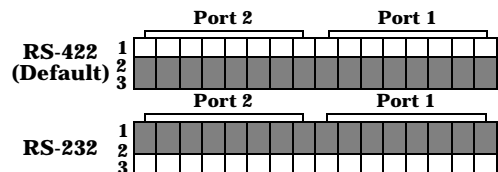
Configuring the Controller

Use the following table to configure the controller by setting the base I/O address on the DIP switch.

Address Settings

I/O Address	DIP Switch	I/O Address	DIP Switch
218h (Default)	ON 1 2 3 4	618h	ON 1 2 3 4
21Ch	ON 1 2 3 4	61Ch	ON 1 2 3 4

Address Settings (Continued)

I/O Address	DIP Switch	I/O Address	DIP Switch
238h	ON 1 2 3 4	638h	ON 1 2 3 4
23Ch	ON 1 2 3 4	63Ch	ON 1 2 3 4
318h	ON 1 2 3 4	718h	ON 1 2 3 4
31Ch	ON 1 2 3 4	71Ch	ON 1 2 3 4
338h	ON 1 2 3 4	738h	ON 1 2 3 4
33Ch	ON 1 2 3 4	73Ch	ON 1 2 3 4

In addition to setting the base I/O address, you also need to set the communications mode. By default, the controller is set for RS-422 mode. If you want to use RS-232 mode, use the following figure to set the communication jumpers.

RS-422 (Default) — Port 2 — Port 1 — 1 2 3
RS-232 — Port 2 — Port 1 — 1 2 3

Note: *The shaded area represents jumpered pins.*

If you want to install SIMM memory, do so before installing the controller. The controller supports the following upgrades:

- 512K (2-256K by 8 or 9)

  This is in addition to the standard 128K of DRAM (totalling 640K).

- 2MB (2-1MB by 8 or 9)

  128K of DRAM is unavailable.

- 8MB (2-4MB by 8 or 9)

  128K of DRAM is unavailable.

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.

Once the controller or controllers are installed, attach any peripherals.

Controller Specifications

The following tables list controller specifications.

Conditions Specifications

| Condition	Values
Air temperature: System on System off	0 to 70 degrees C -65 to 150 degrees C
Humidity: System on System off	8% to 80% 20% to 80%
Altitude	0 to 10,000 feet 0 to 3,048 meters
Heat output	28.7 BTU/Hr

Controller Specifications

Function	Specification
I/O ports/expansion slot	2 ports
Interface	EIA-232-D and EIA-422-D
Base memory address	Software selectable
Base I/O address	DIP Switch selectable
Processor	12 MHz V53
Serial Communication Controller	85C30
Hardware interrupt	Software selectable (IRQs 3-5, 9-12, and 15)
Modem control	RTS, CTS, DCD, DTR, and DSR (RI in RS-232 only)
Synchronous communication	DTE or DCE
Current consumption (± 10%): +5 VDC +12 VDC -12 VDC	 1.500A 0.029A 0.047A

Controller Specifications (Continued)

Function	Specification
Power requirements: +5 VDC +12 VDC -12 VDC Total	 7.500W 0.348W 0.564W 8.412W
Mean Time Between Failure	15.5 Years
RAM	128K dual-ported memory expandable to 512K, 2MB, or 8MB, using 80ns or faster SIMMs
EPROM	32K
Bus interface	ISA or compatible 16-bit data, 24-bit address.
FCC Certification	Yes - Class A
UL Recognition	Yes - Recognized Component
Dimensions	10.5" x 4.4" x .4"

DB15 Connector

This section shows an illustration of the female, high-density DB15 connector and a listing of its signals.
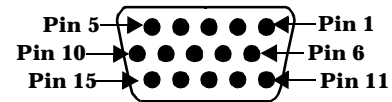
DB15 Female Connector

DB15 Signals

Pin	RS-422	RS-232
1	RXCLK-	RXCLK
2	RXD-	RXD
3	TXD-	TXD
4	RTS	RTS
5	DTR	DTR
6	RXCLK+	Not Used
7	RXD+	Not Used
8	TXD+	RI
9	CD	CD
10	TXCLK+	TXCLK In
11	Not Used	Not Used
12	CTS	CTS
13	TXCLK-	TXCLK Out
14	GND	GND
15	DSR	DSR

Memory Addresses

The controller contains 128K of memory. The controller uses this memory to store data that moves between the peripheral device and the computer system. To use this memory, the controller's device driver communicates to the operating system, telling it where the memory resides. The following tables show the system memory and system I/O addresses (up to 3FF) and their known uses. The controller can use base I/O address ranges from 218 to 33C.

System Memory Map

Address	Used By	Comments
0000-9FFFF	640K on system board	May be 64K to 640KB, depending on the model.
A0000-BFFFF	Display adapter reserved	EGA and VGA™ use all of this, CGA and MDA use a portion of it.
C0000-DFFFF	Reserved for ROM expansion	Used for I/O channel BIOS, as in the disk controller. • C0000 through C7FFF (EGA/VGA BIOS) • C8000 through CBFFF (Hard disk BIOS) • D0000 through DFFFF (Cluster/network adapter BIOS)
E0000-EFFFF	Expansion of system ROM	For the AT™.
F0000-FFFFF	System ROM	May be duplicate of ROM in higher memory.
100000-FDFFFF	Memory expansion	For the AT.
FE0000-FEFFFF	Reserved	For the AT.
FF0000-FFFFFF	64K ROM BIOS	For the AT.

System I/O Addresses – Up to 3FF

Address Block	Addresses Used	Description
000 – 03F		Reserved for Motherboard
040 – 07F		Reserved for Motherboard
080 – 0BF		Reserved for Motherboard
0C0 – 0FF		Reserved for Motherboard
100 – 13F		
140 – 17F		
180 – 1BF		
1C0 – 1FF	1F0 – 1F8	Fixed Disk
200 – 23F		
240 – 27F	278 – 27F	LPT2, IDE controllers, and multifunction boards (game ports)
280 – 2BF		
2C0 – 2FF	2E8 – 2EF 2F8 – 2FF	COM4 COM2
300 – 33F		
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

Troubleshooting and Technical Support

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

• Check to make sure the cables are connected properly.
• Make sure that the expansion slot screw was replaced after inserting the controller.
• Check modem signal settings if the modem cannot send or receive data.
• Verify that the DIP switch setting is correct.
• Reinstall the controller, making sure that any SIMMs are seated properly.

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 follow the instructions provided by the diagnostic diskette.

Use the following table to gather information before calling Comtrol's technical support.

Support Call Information

Item	Your System Information
Controller type	2-port
Base I/O address	
Operating system type and release	
PC make, model, and speed	
List of other devices in the PC and their addresses	

Contacting Comtrol

Use any of the following methods to contact Comtrol:

Corporate Headquarters:

- email: support@comtrol.com
- URI: **www.comtrol.com**
- FAX: (612) 631-8117
- Phone: (612) 631-765
- FTP Site: **ftp://ftp.comtrol.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.

Comtrol Europe:

- email: support@comtrol.co.uk
- URI: **www.comtrol.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.

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

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