HOSTESS

Hardware Installation Guide

Hostess *186*™ 4/8-Port
Hostess *186*™ RJ45/RJ11

COMTROL
Powerful Choices

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For Comtrol Corporation Product Number: 6230
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Hardware Installation Guide

Scope

This installation guide discusses the identification, configuration, and installation of the Hostess *186* 4-port, 8-port, RJ45 4-port, and RJ11 8-port controllers. In addition, the following topics are covered:

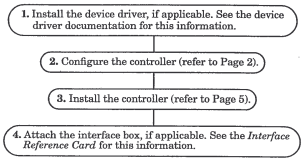
- Memory addresses (Page 3)
- Connector information (Pages 7-10)
- Warranty (Page 12)
- Specifications (Pages 5 & 6)
- Troubleshooting and technical support (Page 11)

Before installing the controller, make sure that your system meets these requirements:

- ISA or EISA-based system
- 3.5" diskette drive
- 512K bytes of RAM

The remainder of this installation guide does not mention specific controller names, unless a fundamental difference exists between the controllers.

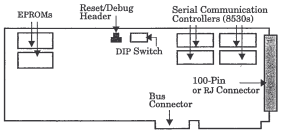
The following flowchart provides an installation overview.



Note: *If you plan to write your own device driver, refer to the programming guide that was sent with the controller.*

Identifying the Controller

The following figure shows the location of various parts on the controller (an 8-port controller is shown).



Notes: *The reset/debug header is only available on 8-port controllers set up for development.*

The controller has 128K of dual-ported RAM.

Configuring the Controller

If you have a Comtrol device driver, install it before configuring the controller (see the documentation that came with the driver).

Configure the controller by setting the base I/O address on the DIP switch. Table 1 displays the available settings.

Table 1. Address Settings

I/O Address	DIP Switch	I/O Address	DIP Switch
218h (Default)		318h	
21Ch		31Ch	
238h		338h	
23Ch		33Ch	

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.

Tables 2 and 3 show the system memory and system I/O addresses (up to 3FF) and their known uses. The controller can use base memory address ranges from 218 to 33C.

Table 2. System Memory Map

Address	Used By	Comments
0000-9FFFF	640K on system board	May be 64K to 640K, 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™ and PS/2®.
F0000-FFFFF	System ROM	May be a duplicate of ROM in higher memory.
100000-FDFFFF	Memory expansion	AT and PS/2 only.
FE0000-FEFFFF	Reserved	AT and PS/2 only.
FF0000-FFFFFF	64K ROM BIOS	AT and PS/2 only.

Table 3. 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

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, refer to the *Interface Reference Card* to attach the interface (if applicable). Then, use your system documentation to enable ports, if required.

Controller Specifications

Tables 4 and 5 list specifications for the controller.

Table 4. 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: 4-Port (RJ also) 8-Port (RJ also)	 35.5 BTU/HR 46.4 BTU/HR

Table 5. Controller Specifications

Function	Specification	
I/O ports/expansion slot	4 or 8 ports	
Interface: RJ45/RJ11 Non-RJs	 RS-232 RS-232, RS-232/422, RS-422/485, and Current Loop	
Base memory address	Software selectable	
Base I/O address	DIP Switch selectable	
Processor	8 MHz 80186	
Serial Communication Controller	8530	
Hardware interrupt	Software selectable (IRQs 3, 4, 5, 9, 10, 11, 12, and 15)	
Control (by device driver software): Baud rate Data bits Stop bits	 50 through 38.4K bit/sec. 5, 6, 7, or 8 1, 1.5, or 2	
Modem control: Non-RJs (4/8-port) RJ45 RJ11	 RTS, CTS, DCD, DSR, and RI RTS, CTS, DCD, DTR, and DSR CTS, DCD, and DTR (RTS is supported through the software)	
Current consumption: (+ or -10%): +5 VDC +12 VDC -12 VDC	4-Port (RJ45 also) 1.700A 0.060A 0.100A	8-Port (RJ11 also) 2.000A 0.110A 0.190A

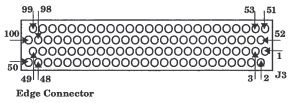
(Continued)

Table 5. Controller Specifications (Continued)

Function	Specification	
Power requirements:	4-Port (RJ45 also)	8-Port (RJ11 also)
+5 VDC	08.50W	10.00W
+12 VDC	00.72W	01.32W
-12 VDC	01.20W	02.28W
Total	10.42W	13.60W
Mean Time Between Failure:		
4-Port (non-RJs)	17.4 Years	
8-Port (non-RJs)	14.5 Years	
RJ45	20.2 Years	
RJ11	18.0 Years	
RAM	128K dual-ported	
EPROM	64K	
Bus interface	ISA or compatible 16-bit data, 24-bit address.	
FCC Certification	Yes - Class A	
UL Recognition	Yes - Recognized component	
Dimensions:		
4/8-Port (non-RJs)	13.4" x 3.9" x .4"	
RJ45	13.4" x 3.9" x .4"	
RJ11	13.4" x 4.4" x .4"	

100-Pin Connector

This section illustrates and lists signals for the 100-pin connector.



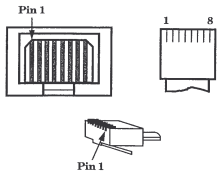
100-Pin Connector

Table 6. Signals for the 100-Pin Connector

Pin	Signals	Pin	Signals	Pin	Signals
1	CD1	34	DTR4	67	NC
2	CD2	35	CTS3	68	NC
3	RX1	36	CTS4	69	NC
4	RX2	37	RTS3	70	NC
5	TX1	38	RTS4	71	NC
6	TX2	39	DTR7	72	NC
7	DTR1	40	DTR8	73	NC
8	DTR2	41	TX7	74	NC
9	CTS1	42	TX8	75	NC
10	CTS2	43	RX7	76	NC
11	RTS1	44	RX8	77	NC
12	RTS2	45	CD7	78	NC
13	GND	46	CD8	79	NC
14	GND	47	RTS7	80	NC
15	DTR5	48	RTS8	81	NC
16	DTR6	49	CTS7	82	NC
17	TX5	50	CTS8	83	NC
18	TX6	51	NC	84	NC
19	RX5	52	NC	85	NC
20	RX6	53	NC	86	NC
21	CD5	54	NC	87	NC
22	CD6	55	NC	88	NC
23	RTS5	56	NC	89	NC
24	RTS6	57	NC	90	NC
25	CTS5	58	NC	91	NC
26	CTS6	59	NC	92	NC
27	CD3	60	NC	93	NC
28	CD4	61	NC	94	NC
29	RX3	62	NC	95	NC
30	RX4	63	NC	96	NC
31	TX3	64	NC	97	NC
32	TX4	65	NC	98	NC
33	DTR3	66	NC	99	NC
				100	NC

RJ Connectors

This section illustrates and lists signals for the RJ45 4-port and RJ11 8-port connectors.
The following figure and table shows information for the RJ45 connector.



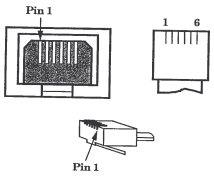
RJ45 (Modular) Jack and Plug

Table 7. Signals for the RJ45 Connector

Pin	RS-232 Signal
1	RTS
2	DTR
3	GND
4	TxD
5	RxD
6	DCD
7	DSR
8	CTS

Note: *RI is not supported.*

The following figure and table shows information for the RJ11 connector.



RJ11 (Modular) Jack and Plug

Table 8. Signals for the RJ11 Connector

Pin	RS-232 Signal
1	DTR
2	GND
3	TxD
4	RxD
5	DCD
6	CTS

Note: *RI and DSR are not supported. RTS is supported through the software.*

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 the signals between your peripherals and the interface box (if applicable) to verify that they match.
- 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 device driver and controller.

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 Table 9 to gather information before calling Comtrol's technical support (refer to Page 14 for a listing of Comtrol's email, FAX, and phone numbers).

Table 9. Support Call Information

Item	Your System Information
Controller type	
Interface type (if applicable)	
Base I/O address	
Operating system type and release	
Device driver release number (if applicable)	
PC make, model, and speed	
List of other devices in the PC and their addresses	

Warranty

Comtrol Corporation provides:

- A 30-day money-back guarantee
- A limited five (5) year warranty* (US and Canada)
- Support for your Comtrol controller for five years from the purchase date.

*Check with your distributor for guarantee conditions in countries other than the U.S.A. and Canada.

Limited Warranty

Comtrol Corporation, Inc. ("the Company") and its affiliate (Comtrol Europe, Ltd.) make no representations or warranties, expressed or implied including warranties of merchantability, noninfringement, and fitness for a particular purpose except as provided below.

Hardware

Comtrol warrants to the original purchaser that its controller is free of defect in design, materials and workmanship for five years from the date of delivery of a new controller. Comtrol (or its authorized repair center), at its option, will repair or replace, at the business location of Comtrol each part of the controller which is proven to the satisfaction of Comtrol to have been defective in design, material or workmanship.

This warranty shall not apply to any part of the controller which, in the judgment of Comtrol, has been subjected to misuse, negligence, alteration, accident, improper maintenance, or damage by excessive physical or electrical stress. Adjustment of the controller, where warning labels and operation manuals warn against such adjustments, will void this warranty.

This warranty is void if the serial number of the Comtrol controller has been defaced, altered or removed. This warranty does not apply to expendable components such as fuses or bulbs. Repair and replacement parts will be furnished on an exchange basis and may be either reconditioned or new. All replaced parts or controllers become the property of Comtrol.

The sole remedy for breach of warranty shall be repair, replacement, or refund, at the option of Comtrol, of the defective product provided as follows.

Return Procedures

To qualify for the previously discussed warranty, the original purchaser must follow the procedure outlined below:

1. Comtrol must be notified in writing within thirty (30) days of the date that the defect is discovered. Comtrol will then issue a Return Material Authorization (RMA) Number which the purchaser must include with all correspondence and display on the outside of the shipping container when returning the controller.
2. All Comtrol controllers must be shipped freight and insurance prepaid, in the original shipping container, or in a container providing equal or better protection, with the Return Material Authorization (RMA) Number displayed on the outside of the container in a prominent manner.
3. A written description of the defect together with a copy of your receipt or other proof of purchase, and the name of the dealer which sold you the Comtrol product, must be shipped with the controller. All defects must be reproducible at Comtrol's location to qualify for this limited warranty.

   Ship the controller to:

   Comtrol Corporation
   2675 Patton Road, Dock D
   Saint Paul, Minnesota 55113

Comtrol will return a controller which qualifies under this warranty freight and insurance prepaid. Comtrol will repair or replace the controllers that do not qualify under the terms of this warranty at the option of the purchaser, in which case the purchaser will pay the cost of repair or replacement, and return freight and insurance.

This limited warranty is in lieu of all other warranties and conditions expressed, implied or statutory including merchantability, fitness for purpose, non-infringement, course of dealing, trade or performance and all other liabilities of Comtrol all of which are hereby disclaimed.

In no event will Comtrol be liable for damages, including lost profits, lost savings or other special, punitive, incidental, or consequential damages arising out of the use of or inability to use the Comtrol controller, even if Comtrol or an authorized dealer has been advised of the possibility of such damages, or for any claim by any other party. This warranty gives you specific legal rights and you may also have other rights that vary from state to state (U.S.) or in your home country.

Limited Liability

Independent of the warranty or any other agreement between you and Comtrol, regardless of the basis for any claim, neither Comtrol nor anyone else who has been involved in the creation, production, or delivery of this software or hardware shall be liable for any direct, indirect, consequential, or incidental damages; Comtrol's maximum liability shall be limited to refund of the purchase price. Some consumer laws may not allow the limitation or exclusion of incidental or consequential damages for consumer products, so the above limitations or exclusions may not apply to you. The price of the materials and programs reflects this allocation of risk.

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

email: **support@Comtrol.com**
FAX: (612) 631-8117 (US) or (44) 869-323-211 (UK)
Toll free: (800) 926-6876 (US)
Phone: (612) 631-7654 (US) or (44) 869-323-220 (UK)

For software updates, contact the Comtrol BBS at (612) 631-8310 (US).

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