

CoreModule™/4GN QuickStart

Utility Connector, J5

J5 Pin	Signal	Function
1	Speaker +	PC Audio Signal Output
2	BATV-	- Terminal of Ext Battery
3	Reset	Manual Reset Button
4	EXSMI	No Connection
5	Kbd Data	Keyboard Serial Data
6	Kbd Clock	Keyboard Clock
7	Ground	Keyboard Ground
8	Kbd Power	Keyboard Power
9	BATV+	External Battery + Terminal
10	SRBTN	Suspend/Resume Button

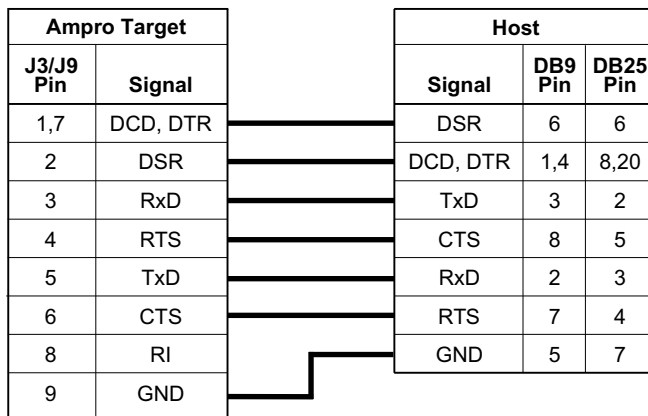
J5 Mating Connector	
Discrete	MOLEX Housing 22-55-2101 Pin 16-02-0103
Ribbon	3M 3473-7010

Power Connector, J7

J7 Pin	Connection
1, 7, 9	Ground
2, 8, 10	+5 VDC
4	+12 VDC
5	-5 VDC
6	-12 VDC

J7 Mating Connector	
Discrete	MOLEX Housing 22-55-2101 Pin 16-02-0103

Null Modem Cable for a Serial Console Connection



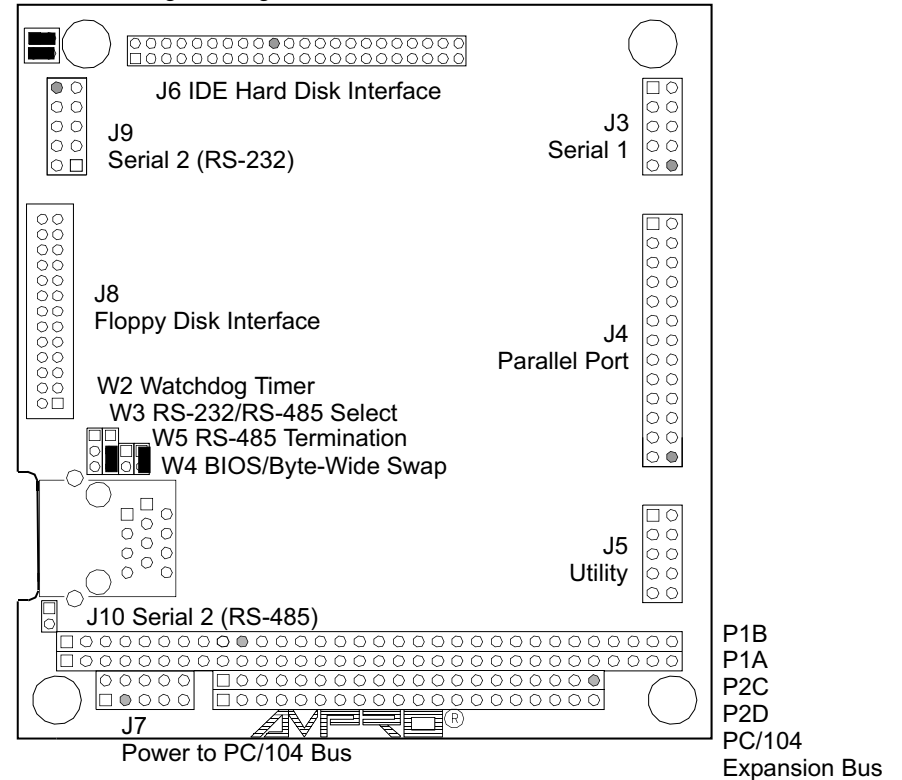
***Shorting the RTS and RI lines (Pin 4 and Pin 8) on the CM/4GN's primary serial port (J3) places the system in "automatic remote mode", enabling **Serial Console** and **Serial Boot Loader** functions (independent of the current SETUP settings).



5215 Hellyer Avenue, San Jose, CA 95138-1007
 Technical Support: 800 966-5200 FAX: 408 360-0222
 Email: techsupport@ampro.com Web Site: http://www.ampro.com

Ampro P/N 5001665, Rev. A ©2002 Ampro Computers, Incorporated. All rights reserved.

W1 BIOS Programming Enable



Red-colored jumpers are factory default settings.
 Shaded pins on connectors are key pins.

Configuration Jumper Summary

Jumper	Function	Default
W1	S0 Device Select	1/2, 3/4 = FLASH EPROM 1/3, 2/4 = 128K SRAM
W2	Watchdog Timer Output Selection	Off
W3	RS-232/RS-485 Select	2/3 (232)
W4	BIOS/Byte-Wide Address Swap	On
W5	RS-485 Termination	Off

PREPARING A DISKONCHIP® (VERSION 3.03 OR LATER)
OR DISKONCHIP 2000 IN BYTEWIDE SOCKET S0

(Assumes no physical hard drives are connected to the system.)

1. For a DiskOnChip 2000, set jumper socket S0 for a generic 5V flash device. For DiskOnChip models ED1102 and ED1202, set the jumpers for a 64KB EPROM. Install the DiskOnChip in socket S0.
2. In SETUP, enable S0 for **64K @ D0000**, and set the **1st DOS Hard Disk** to **AT Bus HDC, Disk 1**. Set the AT hard disk parameters for disk 1 (on SETUP page 1) to **None**.
3. Boot from floppy and run **SYS C:** to transfer the DOS system to the DiskOnChip.
4. Copy all required application files to the C: drive.
5. Set the **Default Boot Device** parameter in SETUP to **Hard Drive** and reboot the system.

ENTERING SETUP

The BIOS SETUP feature allows the user to alter configuration options on the Ampro CPU product. Configuration information for options and devices is stored in a serial EEPROM. You can edit this information by accessing the BIOS SETUP.

There are four ways to access SETUP to change the module's configuration:

1. Press the **CTRL-ALT-ESC** keys during the Power On Self Test (POST), when prompted on the screen. (Hint: Do not try to press all three keys at once. Instead, hold down CTRL and ALT simultaneously, then press ESC.)
2. Run **SETUP.COM** from the DOS prompt. If the **Extended BIOS** is disabled (a SETUP option), enter: **SETUP /O** (capital "O", not zero).
3. If you are using a Serial Console, enter +++ following POST when prompted on the screen.
4. In a production environment, you can load a custom SETUP configuration from a file. First, configure a system the way you want it and then reboot. Next, save these SETUP values with the following command from the DOS prompt: **SETUP W<filename>**. In production, you can load the contents of <filename> into each system using the command: **SETUP @<filename>**.

Byte-Wide Socket Jumper Settings for Common Devices

Device, Size	Example	Jumper Settings
All 5V FLASH DiskOn Chip 2000	29F010	W1: 1/2, 3 /4
128K SRAM 128K NOVRAM	628128 Dallas DS1245Y Benchmark BQ4013Y	W1: 1/3, 2/4

IF YOU CANNOT INVOKE SETUP AFTER CONFIGURING YOUR SYSTEM

There is a certain element of risk when configuring a system, as it is possible to enter values that can block access to SETUP. For instance, if the **Console I/O** option is set to **NONE** and all disk drives are disabled, there is no way to invoke SETUP.

In the event of a SETUP lockout, install a jumper between pins 7 & 8 (DTR & RI) on the CM/4DXN's primary serial port connector, J3. The BIOS detects the short between these pins at power-up, and ignores the current SETUP configuration. Instead, it enables normal console I/O (video & keyboard), enables the floppy interface, and enables the SETUP hot-key combination (CTL-ALT-ESC). This allows you to enter SETUP and correct the problem. The effect of the jumper is only temporary. The jumper itself does not change the contents of the configuration memory.

SERIAL CONSOLE

Field upgrades to writable devices installed in a byte-wide socket (NOVRAM, or Flash EPROM), to SETUP parameters can be completed quickly and without opening the enclosure by utilizing a **Serial Console**. You only need to provide access to a serial port and the ability to reset or restart the CoreModule system.

To use the Serial Console feature, follow this procedure:

1. When setting up the CoreModule, enable the Serial Console option (in SETUP), or use the automatic remote mode jumper*** (see back page).
2. With power off, connect a null modem cable between a host PC and the Ampro system's primary serial port (see back page).
3. On the host system, enter the following DOS command:
TVTERM COM1 b9600 s1 d8 pN (TVTERM is found on the Common Utilities disk.)
4. Activate the terminal window on the host PC by pressing **CTRL-RIGHT SHIFT-P**.
5. Reset or cycle the power on the target CoreModule. The system will boot, displaying the CoreModule's Power-On-Self-Test (POST) in the host's terminal window.

Entering SETUP

If you want to change SETUP parameters in the target machine from a serial console, enter three plus keys (+++) rapidly in sequence when prompted during POST.

Consult the Ampro Common Utilities Manual for information about other remote operations.