

MAINBOARD LAYOUT

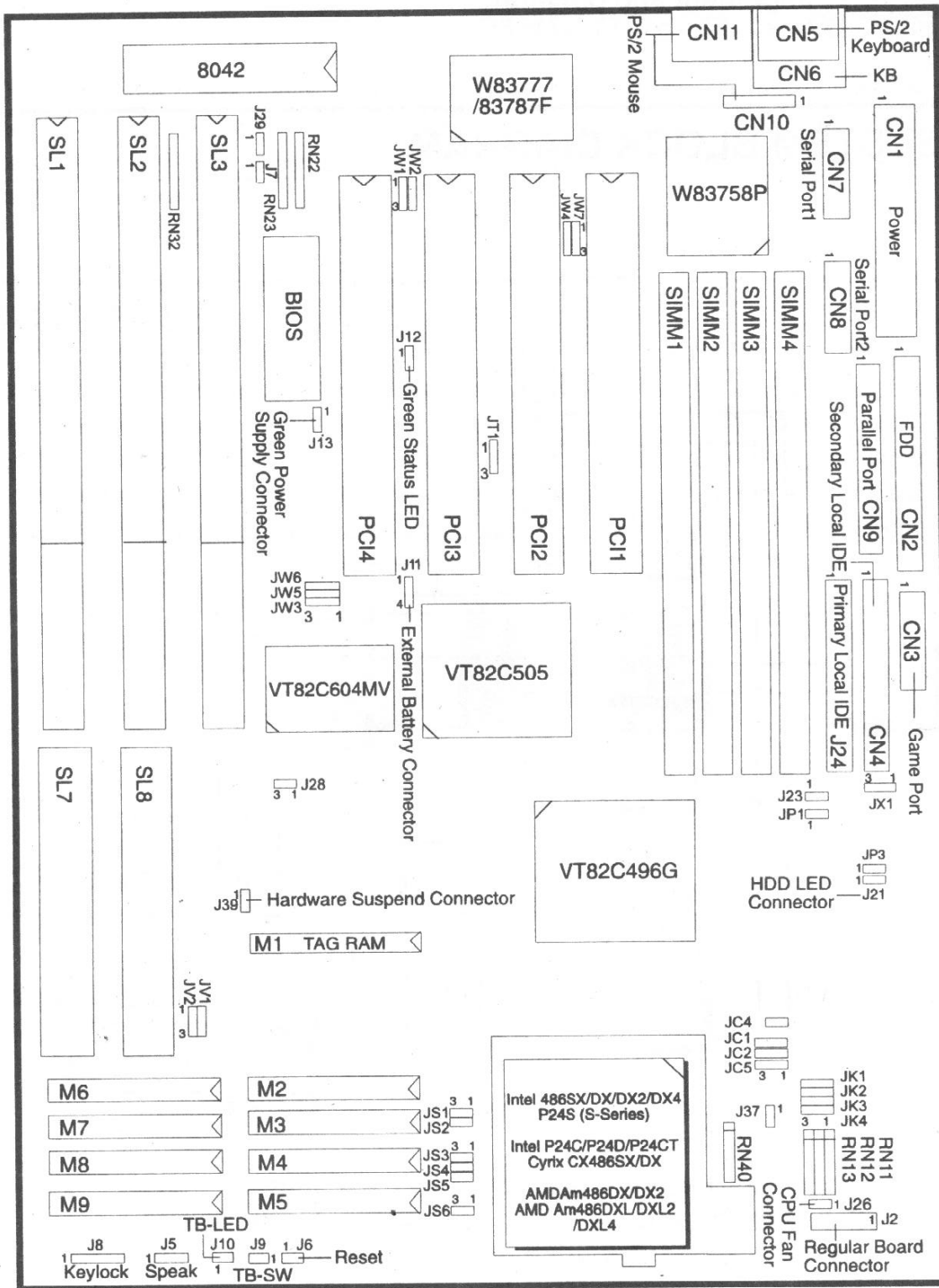


Figure 1-1. Mainboard Layout

Mainboard Settings

The 486-VIP-IO2 has several user-adjustable jumpers and connectors on the board that allow you to configure your system to suit your every need. This chapter contains information on the various jumper and connector settings you can make on your mainboard.

JUMPERS

Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins with each pin representing a different function. To “set” a jumper, a black cap containing metal contacts is placed over the jumper pin/s according to the required configuration. A jumper is said to be “shorted” when the black cap has been placed on one or two of its pins, as shown in the figure below:

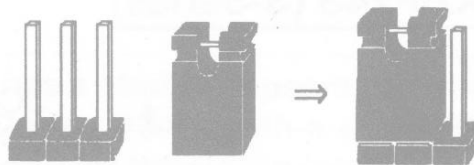


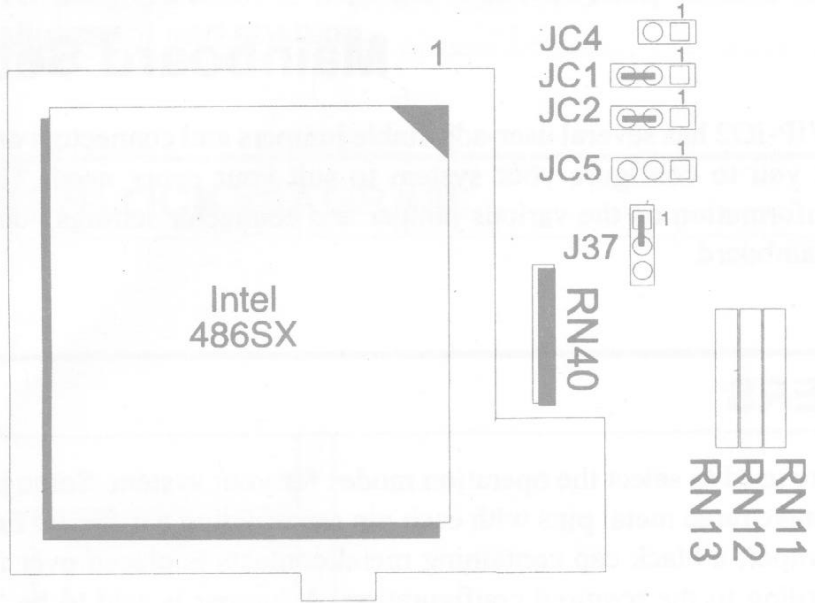
Figure 2-1. Jumper with Pins Shorted

CPU Selector Jumpers

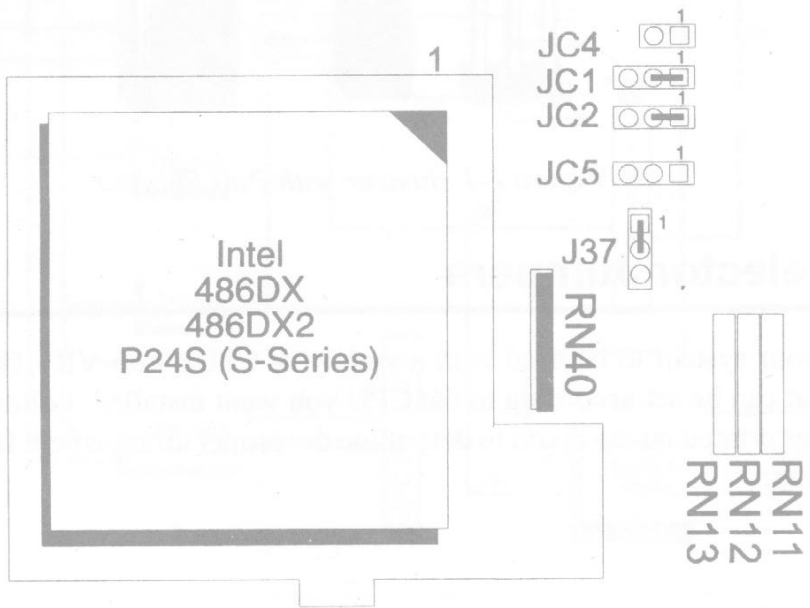
To allow your system to be used with a variety of CPUs, 486-VIP-IO2 provides jumpers that can be set according to the CPU you want installed. Follow the CPU jumper chart printed on the board to determine the proper arrangement for the CPU you are using.

→ **NOTE :** When the onboard low-voltage regulator is not present, the low-voltage daughter board should be installed. If not, please refer to page 2-7.

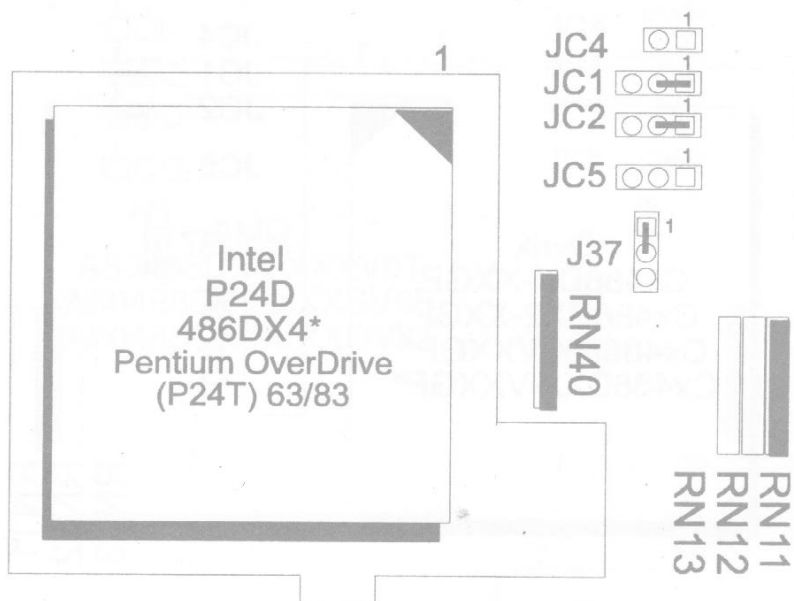
Intel 486SX



Intel 486DX/DX2/P24S (S-Series)



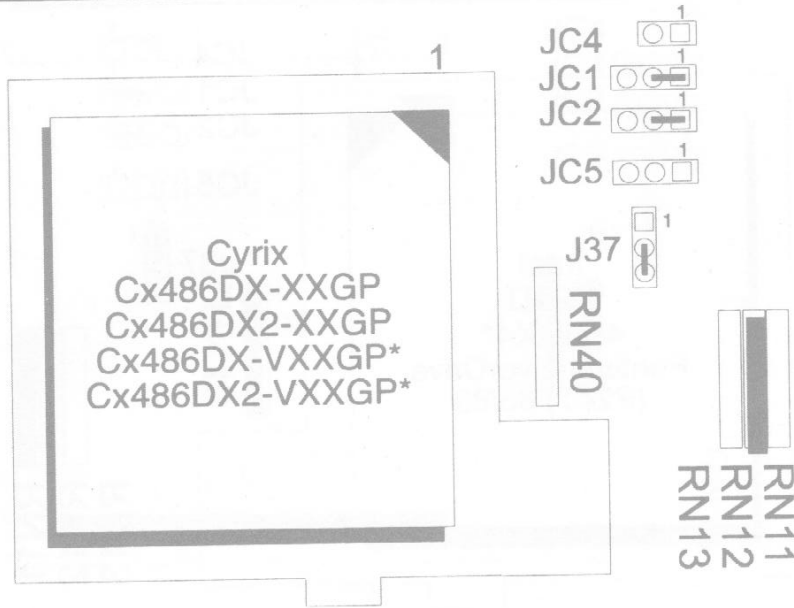
Intel P24D/486DX4/DX4 ODP (PENTIUM OVERDRIVE)



* A regulator board may be needed when using these CPUs. Please refer to page 2-7 for its installation.

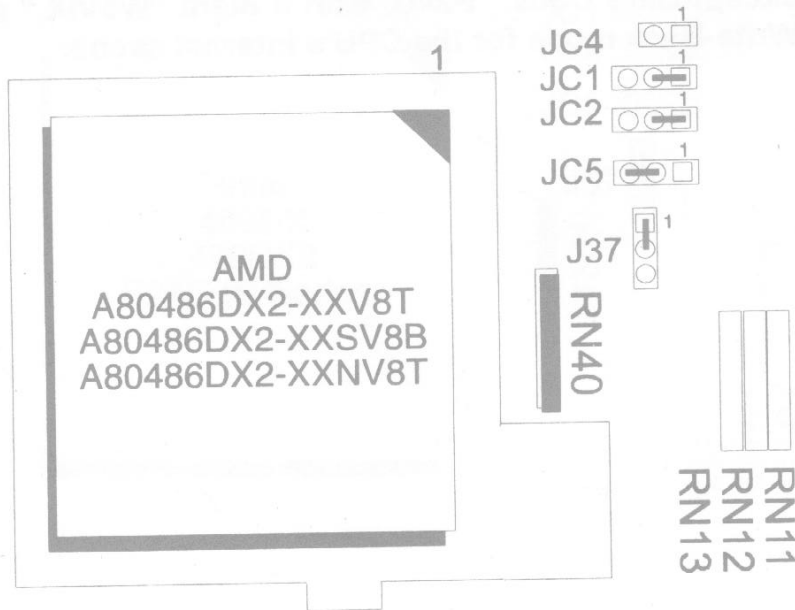
→ **NOTE : P24D has a similar appearance with A80486DX2-66, except Date Code. P24D, with a mark "W5VIX," supports Write-Back mode for the CPU's internal cache.**

Cyrix Cx486DX/DX2



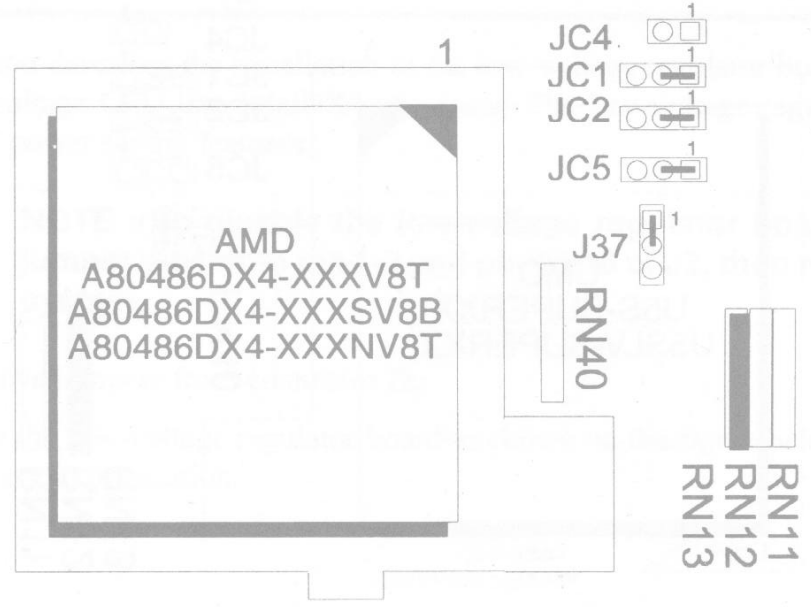
* A regulator board may be needed when using these CPUs. Please refer to page 2-7 for its installation.

AMD A80486DX2



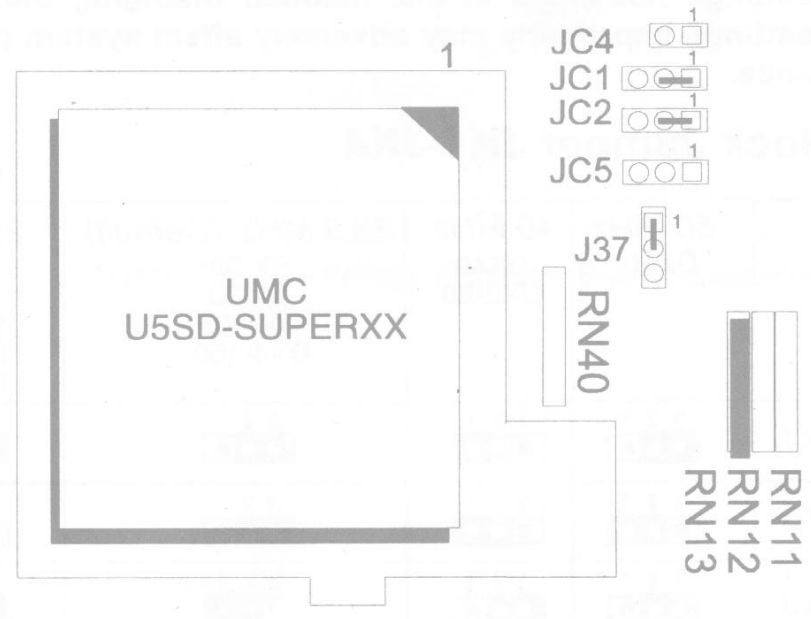
A regulator board may be needed when using these CPUs. Please refer to page 2-7 for its installation.

AMD A80486DX4

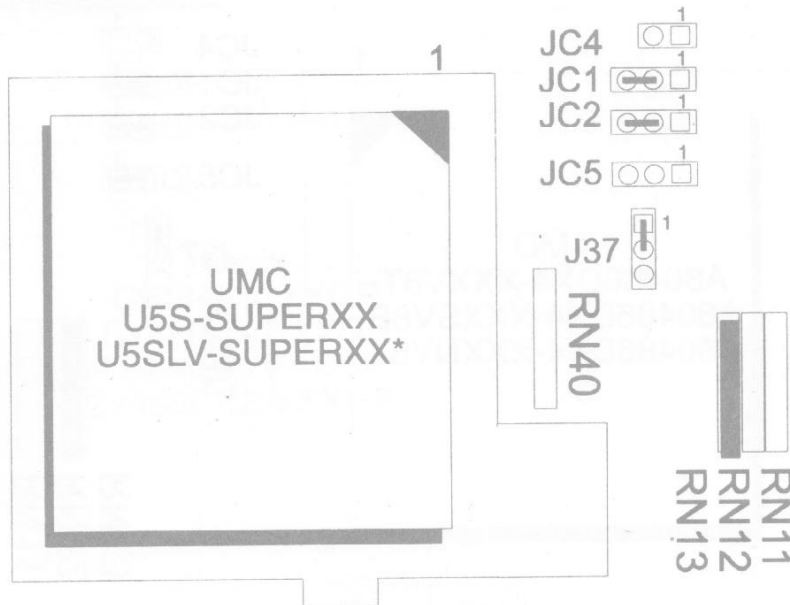


A regulator board may be needed when using these CPUs. Please refer to page 2-7 for its installation.

UMC U5SD



UMC U5S/U5SLV



* A regulator board may be needed when using these CPUs. Please refer to page 2-7 for its installation.

→ **NOTE :** Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

CPU Clock Jumper JK1-JK4

	50 MHz DX50	40 MHz DX40 DX2-80	33.3 MHz (Default) SX 33 DX 33 DX2-66 DX4-100	25 MHz SX 25 DX 25 SX2-50 DX2-50 DX4-75
JK1				
JK2				
JK3				
JK4				

Low-Voltage Regulator Board Installation

This section describes the installation of the low-voltage regulator board used for the low-voltage CPU like IntelDX4 processor. The low-voltage regulator offers advanced power saving features.

→ **NOTE :** To disable the low-voltage regulator board, insert jumper pins onto pin 1-2 and pin 15-16 of J2, then reboot the system.

- Remove jumpers from connector J2.
- Place the low-voltage regulator board as shown on the figure below with the correct pin orientation.

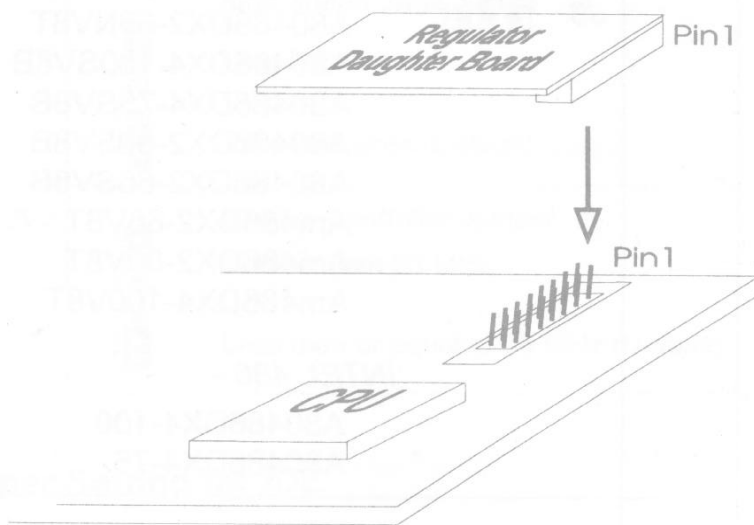









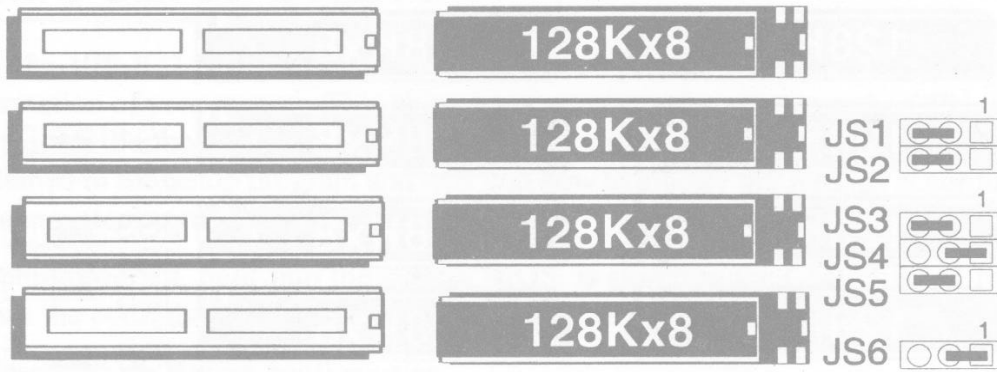
Figure 2-2. Low-Voltage Regulator Board Installation

Jumper Setting on Regulator Board for Low-Voltage CPUs

<p>3.3V</p>	<p style="text-align: right;"><i>UMC -</i></p> <p>J2  U5SLV-SUPER25 U5SLV-SUEPR33</p> <p>J3 </p>
<p>3.45V</p>	<p style="text-align: right;"><i>AMD -</i></p> <p>J2  A80486DX4-100NV8T A80486DX2-80NV8T A80486DX2-66NV8T A80486DX4-100SV8B A80486DX4-75SV8B A80486DX2-80SV8B A80486DX2-66SV8B Am486DX2-66V8T Am486DX2-80V8T Am486DX4-100V8T</p> <p style="text-align: right;"><i>INTEL 486 -</i></p> <p>A80486DX4-100 A80486DX4-75</p>
<p>3.6V</p>	<p style="text-align: right;"><i>Cyrix -</i></p> <p>J2  Cx486DX-V33GP Cx486DX-V40GP Cx486DX-V50GP Cx486DX-V66GP</p> <p>J3 </p>
<p>4.0V</p>	<p style="text-align: right;"><i>Cyrix -</i></p> <p>J2  Cx486DX2-V80GP</p> <p>J3 </p>

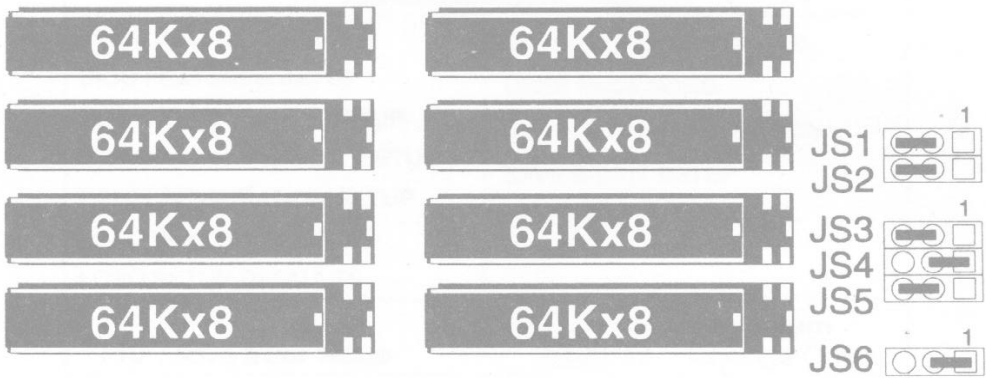
512K Cache SRAM

32Kx8 (TAG)















OR









64Kx8 (TAG)







Jumper Setting for I/O

<p><i>JW1</i></p>	<p><i>I/O Port Controller Select</i></p>  <p>Winbond W757AF/767F</p>  <p>Winbond W777F/787F (Default)</p>
<p><i>JW2</i></p>	<p>Same as JW1</p>
<p><i>J7</i></p>	<p><i>Password Clear Select</i> (Default)</p>  <p>Clear password</p> 
<p><i>J29</i></p>	<p><i>Display Type Select</i></p>  <p>Mono/EGA/VGA (Default)</p>  <p>CGA</p>
<p><i>JW7</i></p>	<p>Disable game port</p>  <p>Enable game port (Default)</p> 
<p><i>JX1</i></p>	<p><i>Internal/External Keyboard Select</i></p>  <p>Internal keyboard controller with PS/2 mouse (Default)</p>  <p>External keyboard controller</p>
<p></p>	<p><i>Internal/External Keyboard Select</i></p>  <p>Internal keyboard controller with PS/2 mouse (Default)</p>  <p>External keyboard controller</p>

Winbond 83777/787F Printer Mode Selection

	<i>Print (Default)</i>	<i>EPP/SPP</i>	<i>EPP/ECP</i>	<i>EXT2FDD</i>
<i>JW3</i>	3 2 1 	3 2 1 	3 2 1 	3 2 1 
<i>JW4</i>	1 2 3 	1 2 3 	1 2 3 	1 2 3 

Winbond 83777/787F ECP Mode DMA Channel Selection

	<i>DMA 1 (Default)</i>	<i>DMA 3</i>
<i>JW5</i>	3 2 1 	3 2 1 
<i>JW6</i>	3 2 1 	3 2 1 

Memory Subsystem

The 486-VIP-IO2 is equipped with the memory necessary for running all your applications. Memory comes in the form of DRAM (SIMMs) and cache SRAM. This chapter describes these two kinds of memory and gives instructions on how to install each kind on the mainboard.

MEMORY LOCATIONS

The board layout below shows the locations of the DRAM memory banks and the cache SRAM:

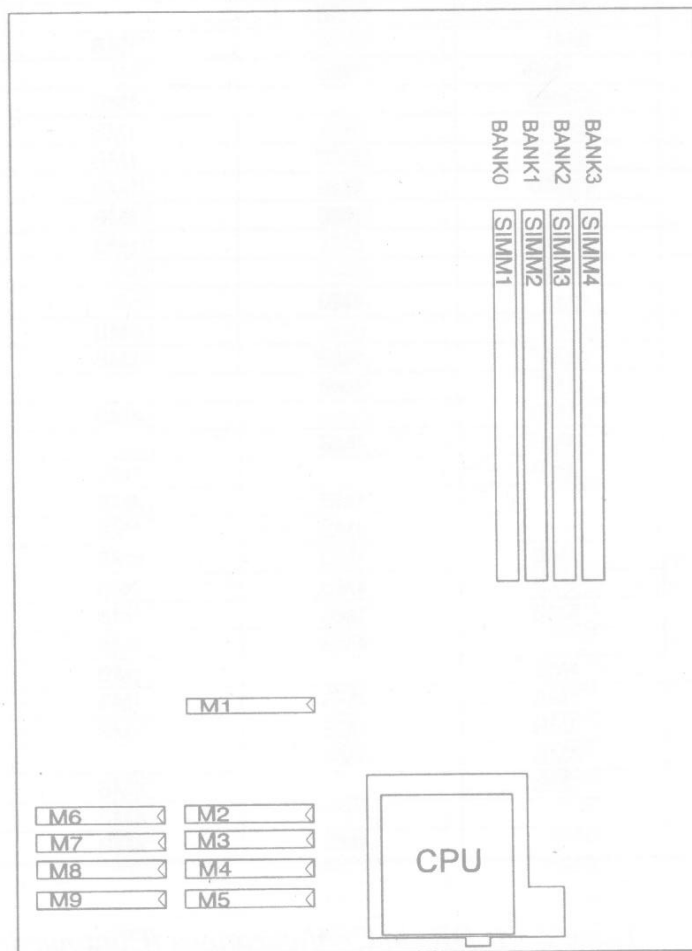


Figure 3-1. Cache and Memory Locations

INSTALLING DRAM

SIMM Banks

The 486-VIP-IO2 can accommodate on-board memory from 1 to 128MB using SIMMs (Single-In-Line Memory Modules). The mainboard has four memory banks — Bank 0, 1, 2, 3. Bank 0, 1, 2 and 3 can accept either a 1MB, 4MB, 16MB or 32MB SIMM each socket.

DRAM Configuration

Memory can be installed in a variety of configurations, as shown in the next table:

TOTAL MEMORY	BANK 0 (72-PIN)	BANK 1 (72-PIN)	BANK 2 (72-PIN)	BANK 3 (72-PIN)
1MB	1MB			
		1MB		
			1MB	
2MB	1MB	1MB		
	1MB		1MB	
		1MB	1MB	1MB
			1MB	
3MB	1MB	1MB	1MB	
	1MB		1MB	1MB
	1MB		1MB	1MB
4MB	4MB			
		4MB		
			4MB	
	1MB	1MB	1MB	1MB
5MB	1MB	4MB		
	1MB		4MB	
	4MB	1MB		
	4MB		1MB	
		1MB	4MB	
		4MB	1MB	
6MB	1MB	1MB	4MB	
	1MB	4MB	1MB	
	4MB	1MB	1MB	
		4MB	1MB	1MB
	4MB		1MB	1MB
7MB	1MB	4MB	1MB	1MB
	4MB	1MB	1MB	1MB
	4MB	4MB		
8MB	4MB		4MB	
	4MB		4MB	4MB
		4MB	4MB	

Table 3 - 1. DRAM Configurations (Continued)

9MB	1MB	4MB	4MB	
	4MB	1MB	4MB	
	4MB	4MB	1MB	
		1MB	4MB	4MB
10MB	1MB	1MB	4MB	4MB
	4MB	4MB	1MB	1MB
12MB	4MB	4MB	4MB	
	4MB	4MB	4MB	4MB
13MB	1MB	4MB	4MB	4MB
	4MB	1MB	4MB	4MB
16MB		16MB		
	4MB	4MB	16MB	4MB
17MB	1MB	16MB		
	1MB		16MB	
		1MB	16MB	
18MB	1MB	1MB	16MB	
	1MB	16MB	1MB	
19MB		16MB	1MB	1MB
	1MB	16MB	1MB	1MB
20MB	4MB	16MB		
	4MB		16MB	
		4MB	16MB	
21MB	1MB	4MB	16MB	
	1MB	16MB	4MB	
	4MB	1MB	16MB	
	4MB	16MB	1MB	
22MB	4MB	16MB	1MB	1MB
24MB	4MB	4MB	16MB	
	4MB	16MB	4MB	
25MB		16MB	4MB	4MB
	1MB	16MB	4MB	4MB
28MB	4MB	16MB	4MB	4MB
32MB			16MB	16MB
	32MB			
		32MB		
33MB	1MB	16MB	16MB	
		1MB	16MB	16MB
34MB	1MB	1MB	16MB	16MB
			16MB	16MB
36MB	4MB	16MB	16MB	
		4MB	16MB	16MB
37MB	1MB	4MB	16MB	16MB
	4MB	1MB	16MB	16MB
40MB	4MB	4MB	16MB	16MB
48MB		16MB	16MB	16MB
49MB	1MB	16MB	16MB	16MB

Table 3 - 1. DRAM Configurations (Continued)