

Introduction

The Purpose of this Manual

This manual is specifically written to help the user to configure the 486 System Board. The user can optimize the system performance by changing the default configuration of the system board.

Features of System Board

- Support 80486SX, 80487SX, 80486DX/DX2 and OverDrive™ CPU
- Support CPU speed running at 16/20/25/33/50/66MHz
- The memory configuration of DRAM memory is 1,2,4,8,16,32 MB
- Support 256K, 1M and 4M DRAM SIMM
- Support 128K Write-through/Write-back secondary cache
- Optional 32 bit Shadowing RAM for system and video BIOS
- Optional adapter BIOS shadowing in 32K Block
- Two RS232C serial communication interfaces
- One parallel printer interface
- One joystick interface
- IDE Hard disk controller interface
- Floppy disk controller interface

Section 1 Memory Expansion

There are a total of 8 SIMM sockets which divided into two banks labelled 'Bank 0' and 'Bank 1' on the System Board. Both banks must be populated with the same type of DRAM. The system board can support 256K x 9 SIMMs, 1M x 9 SIMMs or 4M x 9 SIMMs. The DRAM speed should be 80ns or faster.

The system board can also support 'x8' SIMMs provided the parity is disabled, refer to section 2 'System Board Configuration' for details on disabling parity.

The following are the supported DRAM configurations.

Bank 0	Bank 1	Total Memory
256K	none	1MB
256K	256K	2MB
1M	none	4MB
1M	1M	8MB
4M	none	16MB
4M	4M	32MB

For location of banks on system board, refer to Section 3.


Section 2 System Board Configuration


Under some circumstances you may want to change the default configuration of the system board. These changes are made through jumper setting on the system board. The following section will describe the function of jumpers and their corresponding location on the system board will be shown in Section 3.


Jumper Functions

JP1 - Processor select

This jumper is used to select the type of processor installed in the upgrade processor socket.

 80487SX or OverDrive™ Processor.

 80486SX

 80486DX/DX2

JP3 - Address Select

 Reserved

 Default short pin 2-3



JP4 - Monitor type select

 CGA

 MDA



Note : either position is valid for a VGA or EGA type monitor.

JP5 - Battery select



-  On-Board rechargeable battery
-  External battery pack, connected to J3

JP6 - Upgrade Processor socket select



This jumper selects the usage of the upgrade processor socket.

-  Vacant
-  Occupied



JP7 - IDE fixed disk interface enable

-  Disable
-  Enable



JP8 - IDE fixed disk interface address

-  3F6, 3F7, 1F0-1F7
-  376, 377, 170-177

JP9 - Floppy drive interface enable



-  Disable
-  Enable

JP10 - Floppy drive interface address



-  3F0-3F7
-  370-377

JP11 - Floppy drive select



This jumper allows you to swap the designation of the drives in your system. When swap A/B is selected drive A will now be B and drive B will now be A.

-  Swap A / B
-  Normal operation









JP12 - Printer port interrupt

-  IRQ5
-  IRQ7

JP13, JP14 - Serial port interrupt

-  Serial port 1 IRQ4, Serial port 2 IRQ3
-  Serial port 1 IRQ3, Serial port 2 IRQ4

JP15, JP16 - Serial port 1 configuration

- JP15 JP16**
-   Disable
-   COM1, address 3F8H
-   COM3, address 3E8H
-   COM4, address 2E8H

JP17, JP18 - Serial port 2 configuration

JP17 JP18

 Disable COM2, address 2F8H COM3, address 3E8H COM4, address 2E8H**JP19, JP20 - Parallel port configuration**

JP19 JP20

 Disable LPT1, address 378H LPT2, address 278H**JP22 - Game port select (on selected models only)** Disable Enable**JP25 - Parity Check Select** Disable Check DRAM Check DRAM and CACHE

Note: See description on JP26, 27, 28, 29

**JP26, JP27, JP28, JP29 - External CACHE
SRAM type select
(U101 - U104)**

32K x 8

32K x 9

DRAM	SRAM	JP25	WB/WT	Remark
x8	x8/x9	Not Installed	WB/WT	No parity check; prefer set to WB for higher performance.
x9	x9	Short 2-3	WB/WT	Parity check; prefer set to WB for higher performance.
x9	Not Installed	Short 1-2	Not Applicable	External Cache Mode should set to 'Disabled'.
x9	x8	Not Installed	WB/WT	Parity NOT check; prefer set to WB for higher performance.
x9	x8	Short 1-2	WT	Parity checked; Must be in WT. Lower performance but better data checking.

Note: All other combinations are not recommended.

x8 DRAM = SIMM Modules with no parity bit

x9 DRAM = SIMM Modules with parity bit

x8 SRAM = 32k x 8 SRAM

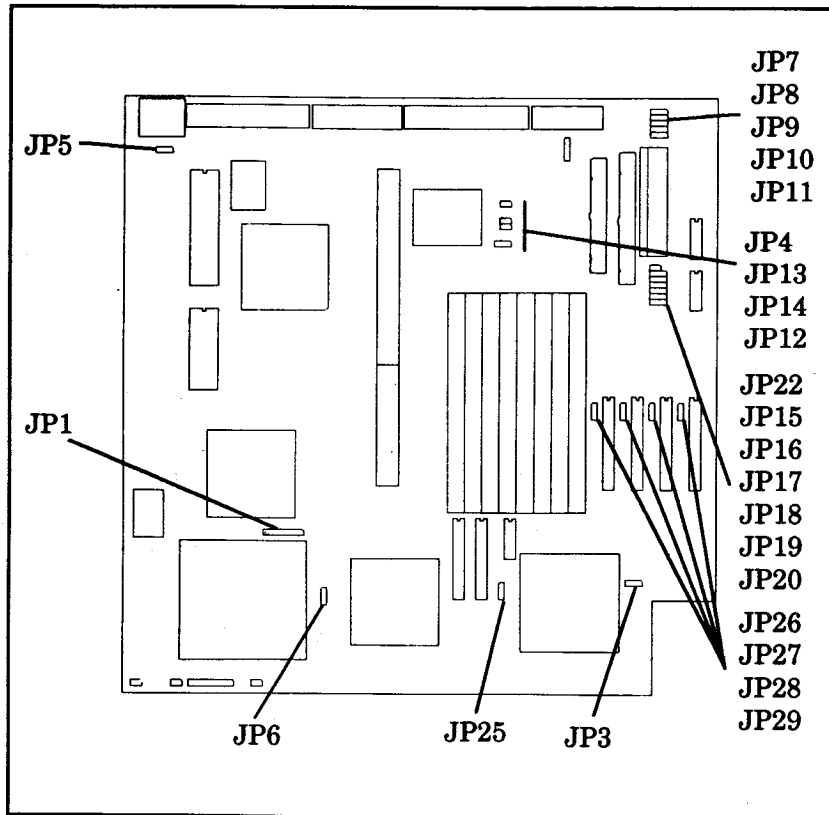
x9 SRAM = 32k x 9 SRAM

WB/WT = Write-Back/Write-Through Selection on Advanced CMOS Setup.

Section 3 System Board Layout

The following diagrams show the relative positions of the jumpers, connectors, major components and IO ports on the system board.

Jumpers



Memory Banks and Major Components Location

