

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, OverDrive™ CPU and Pentium™ OverDrive™ Processor.
- Support CPU speed running at 16/20/25/33/50/66MHz
- The memory configuration of DRAM memory is 1, 2, 4, 6, 8, 10, 12, 16, 20, 24, 32, 40, 48, 52, 64MB
- Support 256K, 512K, 1M and 4M DRAM SIMM
- Support 128K or 256K Write-back secondary cache
- Optional 32 bit Shadowing RAM for system and video BIOS
- Optional adapter BIOS shadowing in 32K Block

Section 1 Memory Expansion

There are a total of 16 SIMM sockets which divided into four banks labelled 'Bank 0', 'Bank 1', 'Bank 2' and 'Bank 3' on the System Board. The system board can support 256K x 9 SIMMs, 512K x 9, 1M x 9 SIMMs, 4M x 9 SIMMs or 16M 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 "Setup Menu" in Part B "BIOS Reference" for details on disabling parity.

The following are the supported DRAM configurations.

Bank 0	Bank 1	Bank 2	Bank 3	Total RAM
256KB	-	-	-	1MB
256KB	256KB	-	-	2MB
256KB	256KB	1MB	-	6MB
256KB	256KB	1MB	1MB	10MB
512KB	-	-	-	2MB
512KB	512KB	-	-	4MB
512KB	512KB	512KB	-	6MB
512KB	512KB	512KB	512KB	8MB
1MB	-	-	-	4MB
1MB	1MB	-	-	8MB
1MB	1MB	1MB	-	12MB
1MB	1MB	1MB	1MB	16MB
1MB	1MB	4MB	-	24MB
1MB	1MB	4MB	4MB	40MB
1MB	4MB	-	-	20MB
1MB	4MB	4MB	-	36MB
1MB	4MB	4MB	4MB	52MB
4MB	-	-	-	16MB
4MB	4MB	-	-	32MB
4MB	4MB	4MB	-	48MB
4MB	4MB	4MB	4MB	64MB

- (i) For location of banks on system board, refer to section 3
(ii) "-" = Not installed

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 connectors and their corresponding location on the system board will be shown in Section 3.

Jumper Functions

JP1



Upgrade Processor Select

UPGRADE PROCESSOR SOCKET VACANT

UPGRADE PROCESSOR SOCKET OCCUPIED WITH PROCESSOR BASED ON PENTIUM TECHNOLOGY

UPGRADE PROCESSOR SOCKET OCCUPIED WITH OTHER PROCESSOR TYPE

JP3, JP4 JP5, JP6



Cache SRAM Type

32K x 8 OR 128K X 8 INSTALLED (U36 - U38)

32K x 9 INSTALLED (U36 - U38)

JP8



Battery Select

ON-BOARD RECHARGEABLE BATTERY

EXTERNAL BATTERY

JP9



VL-Bus CPU Speed

CPU SPEED <= 33 MHz

CPU SPRED > 33 MHz

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JP10



VL-Bus WB Support

DEFAULT

VL BUS MASTER CARD WITH WBACK# SUPPORT

JP12



Keyboard Controller Select

INTERNAL KEYBOARD CONTROLLER (DEFAULT)

EXTERNAL KEYBOARD CONTROLLER

JP13



CPU Speed

25 MHz

33 MHz

JP14



MCLK Select

DEFAULT

RESERVED

JP15, JP16 JP17, JP18



Keyboard Select

INTERNAL KEYBOARD CONTROLLER (DEFAULT)

EXTERNAL KEYBOARD CONTROLLER

JP19



Monitor Type

CGA

MDA

(EITHER POSITION WORKS FOR EGA, VGA)

Technical Reference Booklet

JP20

1 2 3



1 2 3

BIOS Setup (Battery Backup)

NORMAL OPERATION

ERASE BIOS SETTINGS

JP21

1 2



1 2

PS/2 Mouse Interface

DISABLE

ENABLE

JP24

1 2 3



1 2 3

Cache Size Select 1

128K CACHE

RESERVED

JP25, JP26**JP27**

1 2 3



1 2 3

Cache Size Select 2

128K, 256K CACHE

RESERVED

JP28

1 2 3



1 2 3

Cache Component

32K x 932 x 8 INSTALLED (U36 - 19)

RESERVED

JP29, JP31

1 2 3



1 2 3

Cache Size Select 3

< 612K CACHE

RESERVED

JP32

1 2 3



1 2 3

CPU Type

236 PIN PROCESSOR BASED ON PENTIUM TECHNOLOGY

ALL OTHER CPU TYPES

JP33

1 2 3



1 2 3

CPUHRQ Select

>33MHz 1-2

<=33MHz 2-3

JP34

1 2



1 2

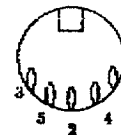
CPUHLDA

DEFAULT

RESERVED

Connector Pinout**J1****Front Panel Connector**

1. N.C.
2. GND
3. GND
4. GND
5. +5 VDC
6. +5 VDC
7. SYSTEM RESET
8. GND
9. KEYBOARD INHIBIT
10. GND

J2**Keyboard Connector**

1. KEYBOARD CLOCK
2. KEYBOARD DATA
3. NOT USED
4. GROUND
5. VCC (+5V)

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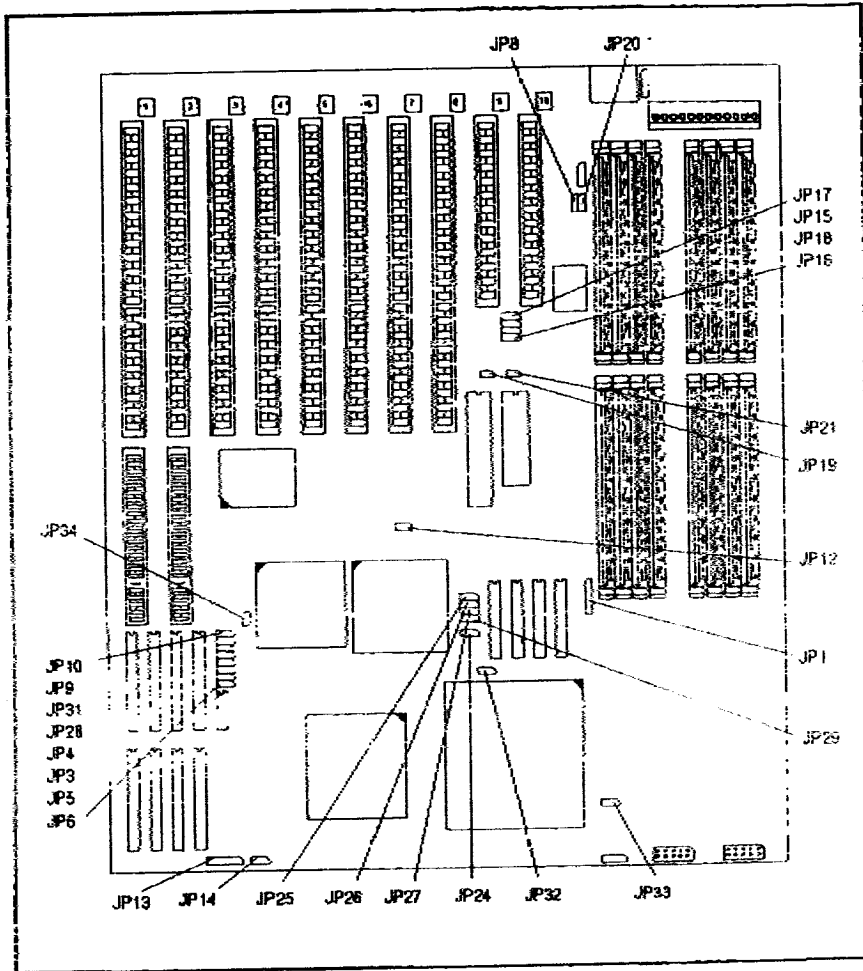
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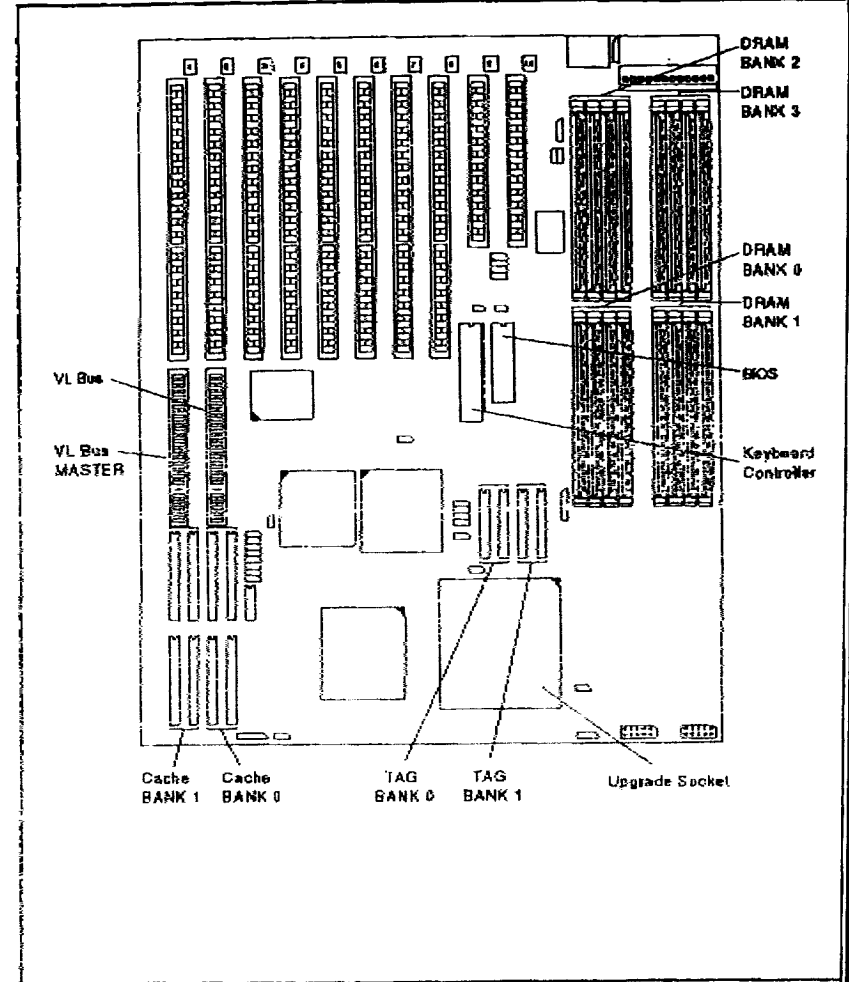
Section 3 System Board Layout

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 Component Location



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Memory Banks and Major Component Location

I/O Connectors Location

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