LASER™

[redacted]

Motherboard = VinC Lite 486

486CV Series

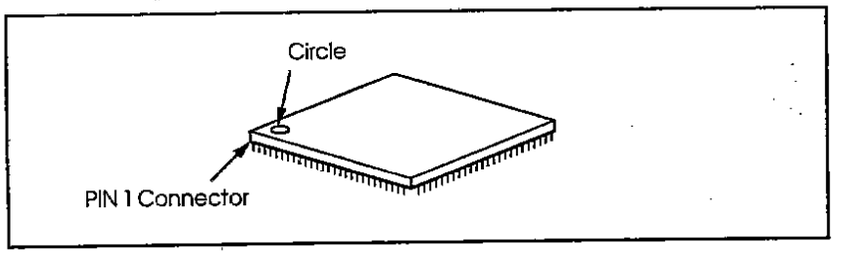
PERSONAL COMPUTER

Printed on Recycled Paper
Printed in China 91-2254-04

VTECH™

User's Manual

- Unpack the new microprocessor chip and identify the pin 1 corner of the chip.



CAUTION! **Identifying the pin 1 corner is critical for positioning the chip correctly.**

A small circle marked on the top of the chip designates the pin 1 corner. If a heat sink is attached and covers the top of the chip, identify the pin 1 corner by turning the chip over. Locate the small gold finger that extends from one corner of the large central square portion of the chip. The gold finger points towards pin 1, which is also uniquely identified by a square pad.

- Match pin 1 of the upgrade microprocessor chip with pin 1 of the ZIF socket. The pin 1 corner of the ZIF socket is designated by a small triangle printed on the system board.

CAUTION! **Positioning the microprocessor chip incorrectly in the socket can permanently damage the chip and the computer when you turn on the system.**

- Carefully align the processor with the socket on the motherboard.
- Carefully insert the processor into the socket, and move the metal arm downward to replace it in its original position. Change any jumper settings as detailed in the Hardware Configuration.
- Re-install the computer cover. Reconnect any peripheral cables. Connect the power cord. Turn on the computer and run the SETUP program.

Chapter 4
Motherboard Configuration

This part of the manual is specifically written to help the user configure the Motherboard hardware. The user may optimize the system performance by changing the default configuration preset by the factory.

Features :-

- Supports Intel™ 486SX/DX/DX2, 486SLE, Pentium™ OverDrive™ Processor, Intel DX4™, P24D (Dark Green support)
- Supports Cyrix™ 486SX/SX2, 486DX/DX2, 486DX2V, M9(M1sc)
- Supports AMD™ 486DX/DX2/DX4, Enhanced DX2/DX4 series
- Supports UMC™ 486 U5S-Super
- Supports SGS-Thomson 486DX2
- Supports CPU speed running at 25/33/40/50/63/66/75/80/83/100/120Mhz
- Supports 1MB, 2MB, 4MB, 8MB, 16MB, 32MB, and 64MB 72 PIN DRAM SIMMs
- Supports 128/256KB and 512KB write-through / write-back secondary Cache.
- Supports System Memory Management (SMM) and full SMI Interface support for Intel SL-Enhanced CPU (S-series)
- Four 16-bit ISA BUS expansion slots (one ISA shares with a PCI slot)
- Three 32-bit PCI BUS expansion slots (one PCI shares with a ISA slot)
- Peripheralson-board
  1. Dual channel PCI IDE. Supports PIO Mode 3 and 4.
  2. Optional UMC Super I/O provides 2 COM ports, 1 Parallel Port, and 1 Game Port.
- AWARD™system BIOS, System and Video BIOS Shadowing, Video BIOS Cacheable. Support Plug and Play on PCI and ISA cards.

Memory Expansion

There are a total of 4 SIMM slots on the Motherboard , they are labelled as SIMM1 , SIMM2 , SIMM3, and SIMM4. Each slot can accommodate one 1MB, 2MB, 4MB, 8MB, 16MB, 32MB, or 64MB 72 PIN SIMM module.

Configuration Rules

The motherboard supports many combinations of DRAM SIMM modules for its main memory, however, the following rules must be observed:

1. Slot SIMM1 must be occupied before SIMM2 can be used. Slot SIMM3 must be occupied before SIMM4 can be used.
2. Slots SIMM1 and SIMM2 must be greater than that of SIMM3 and SIMM4.
3. The total size of the DRAM in SIMM1 and SIMM2 must be greater than that of SIMM3 and SIMM4.
4. SIMMs must be 80ns, or faster, page mode DRAM of 1MB, 2MB, 4MB, 8MB, 16MB, 32MB, and 64MB size.
5. The size of the main memory must be between 2MB and 256MB.

The table below offer an example of some of the possible DRAM configurations:

DRAM Configuration Table

SIMM1	SIMM2	SIMM3	SIMM4	Total
1MB	1MB	X	X	2MB
1MB	1MB	1MB	1MB	4MB
4MB	X	X	X	4MB
4MB	X	1MB	1MB	6MB
4MB	4MB	X	X	8MB
8MB	X	X	X	8MB
4MB	4MB	1MB	1MB	10MB
8MB	X	1MB	1MB	10MB
4MB	4MB	4MB	X	12MB
8MB	X	4MB	X	12MB
4MB	4MB	4MB	4MB	16MB
8MB	X	4M	4MB	16MB
8MB	8MB	X	X	16MB
16MB	X	X	X	16MB
8MB	8MB	1MB	1MB	18MB
16MB	X	1MB	1MB	18MB
8MB	8MB	4MB	X	20MB
16MB	X	4MB	X	20MB
8MB	8MB	4MB	4MB	24MB
8MB	8MB	8MB	X	24MB
16MB	X	4MB	4MB	24MB
16MB	X	8MB	X	24MB
8MB	8MB	8MB	8MB	32MB
16MB	X	8MB	8MB	32MB
16MB	16MB	X	X	32MB
32MB	X	X	X	32MB
16MB	16MB	1MB	1MB	34MB
32MB	X	1MB	1MB	34MB
16MB	16MB	4MB	X	36MB
32MB	X	4MB	X	36MB
16MB	16MB	4MB	4MB	40MB
16MB	16MB	8MB	X	40MB
32MB	X	4M	4M	40MB
32MB	X	8MB	X	40MB
16MB	16MB	8MB	8MB	48MB

16MB	16MB	16MB	X	48MB
32MB	X	8MB	8MB	48MB
32MB	X	16MB	X	48MB
16MB	16MB	16MB	16MB	64MB
32MB	X	16MB	16MB	64MB
32MB	32MB	X	X	64MB
64MB	X	X	X	64MB
32MB	32MB	1MB	1MB	66MB
64MB	X	1MB	1MB	66MB
32MB	32MB	4MB	X	68MB
64MB	X	4MB	X	68MB
32MB	32MB	4MB	4MB	72MB
32MB	32MB	8MB	X	72MB
64MB	X	8MB	X	72MB
32MB	32MB	8MB	8MB	80MB
32MB	32MB	16MB	X	80MB
64MB	X	8MB	8MB	80MB
64MB	X	16MB	X	80MB
32MB	32MB	16MB	16MB	96MB
32MB	32MB	32MB	X	96MB
64MB	X	16MB	16MB	96MB
64MB	X	32MB	X	96MB
32MB	32MB	32MB	32MB	128MB
64MB	X	32MB	32MB	128MB
64MB	64MB	X	X	128MB
64MB	64MB	1MB	1MB	130MB
64MB	64MB	4MB	X	132MB
64MB	64MB	4MB	4MB	136MB
64MB	64MB	8MB	X	136MB
64MB	64MB	8MB	8MB	144MB
64MB	64MB	16MB	X	144MB
64MB	64MB	16MB	16MB	160MB
64MB	64MB	32MB	X	160MB
64MB	64MB	32MB	32MB	192MB
64MB	64MB	64MB	X	192MB
64MB	64MB	64MB	64MB	256MB

Remark: X - Not installed

Motherboard Configuration

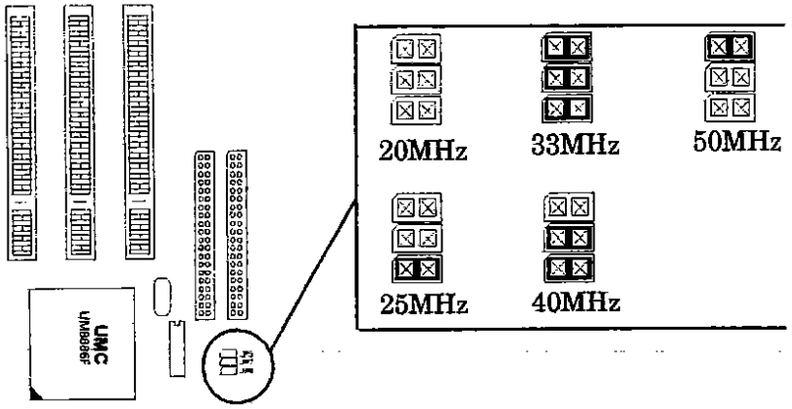
Under some circumstances you may wish to change the default configuration of the Motherboard. These changes are made through adapting jumper settings on the Motherboard. The following text will describe the function of every jumper and connector, and their corresponding location on the Motherboard can be found at the end of this chapter.

Legend

Jumper Nor Installed

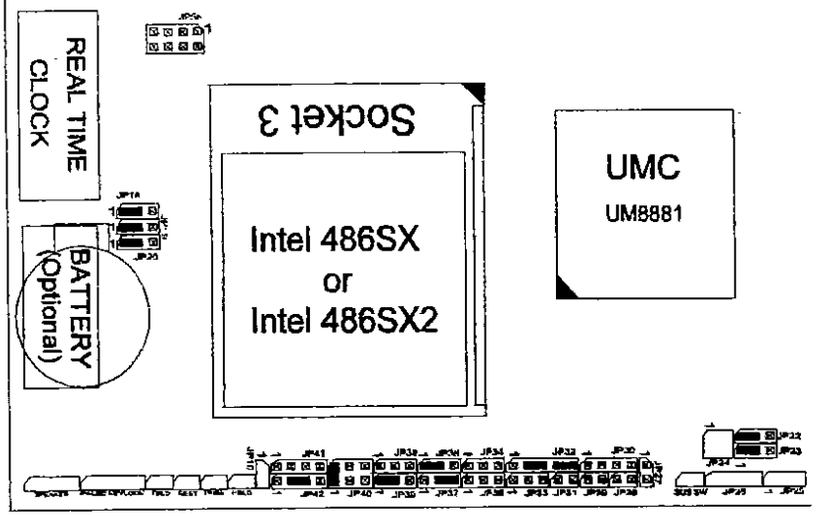
Jumper Installed

System Clock Speed Selection

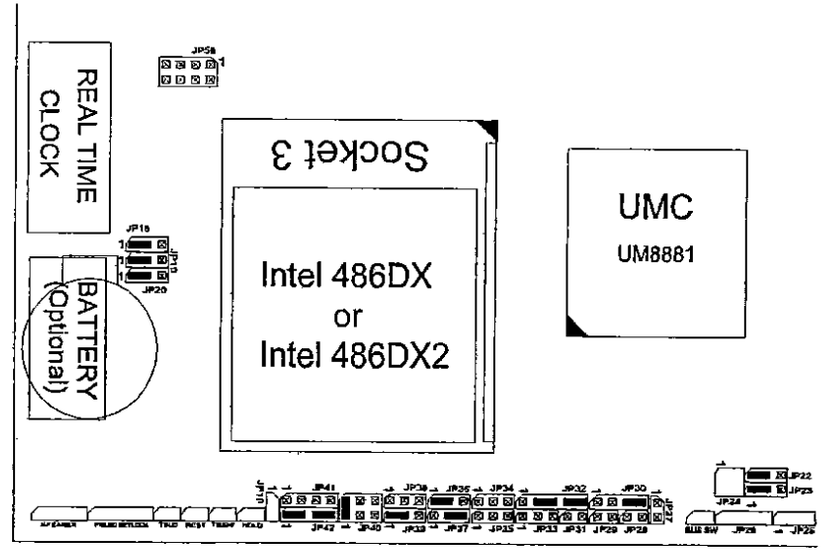


CPU Selection Jumpers

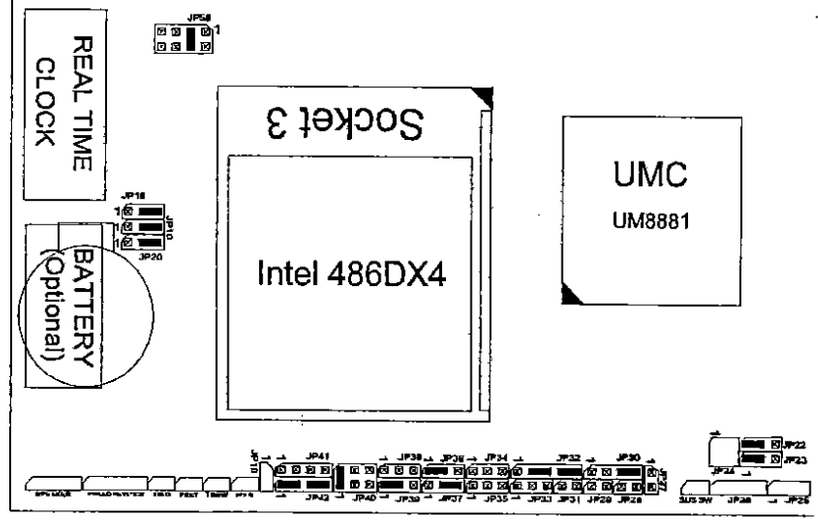
Intel™ 486SX and 486SX2



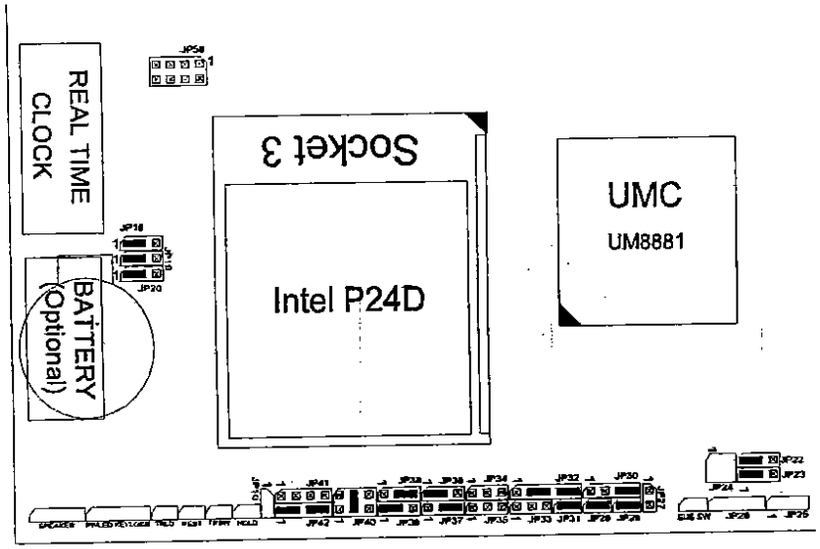
Intel™ 486DX and 486DX2



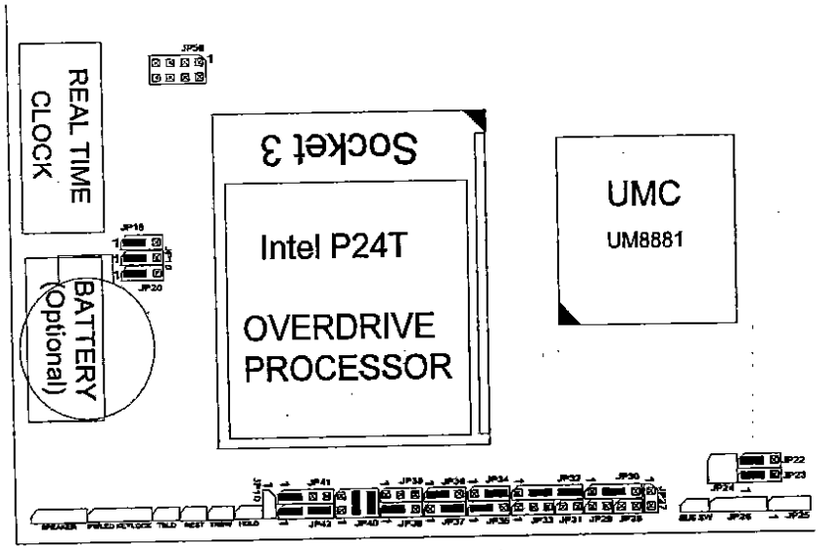
Intel™ 486DX4



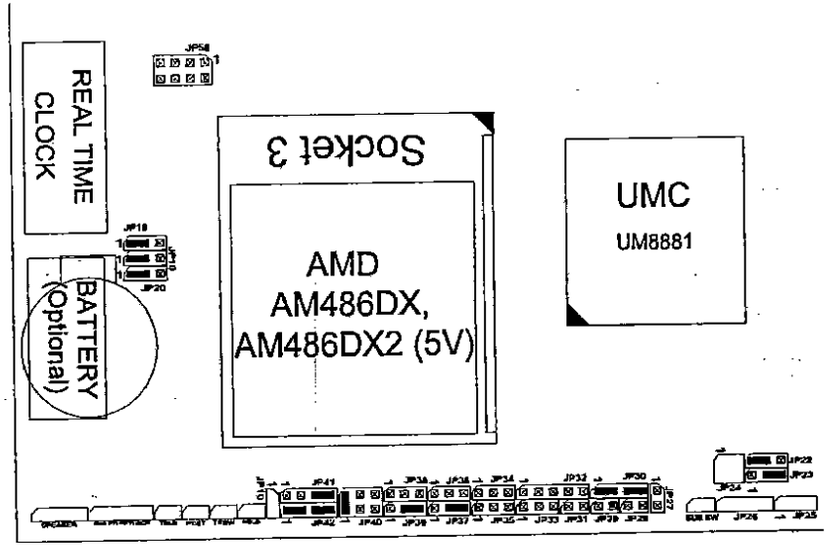
Intel™ P24D



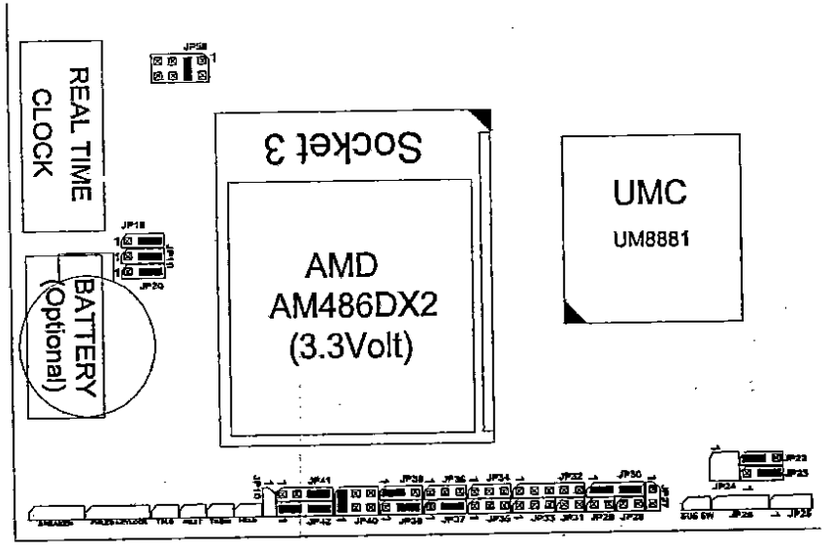
Intel™ 486P24T PENTIUM™ OVERDRIVE™



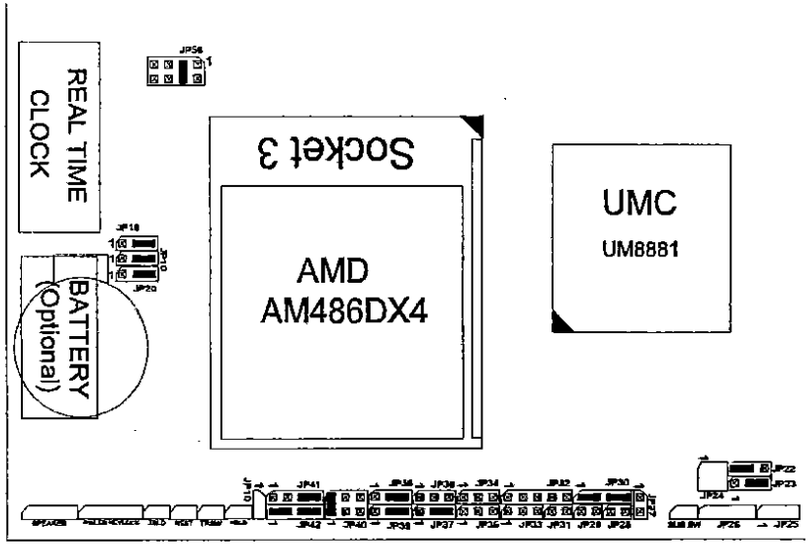
AMD™ Am486DX, DX2 (5 volt)



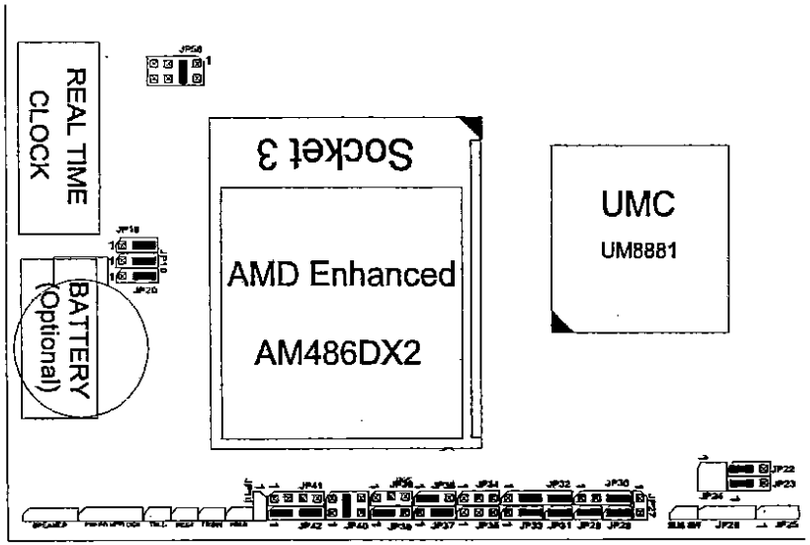
AMD™ Am486DX2 (3 volt)



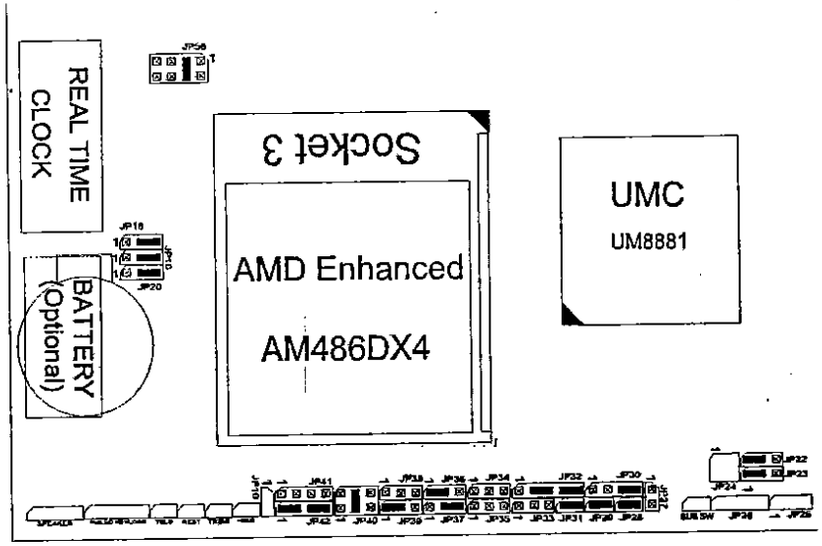
AMD™ Am486DX4



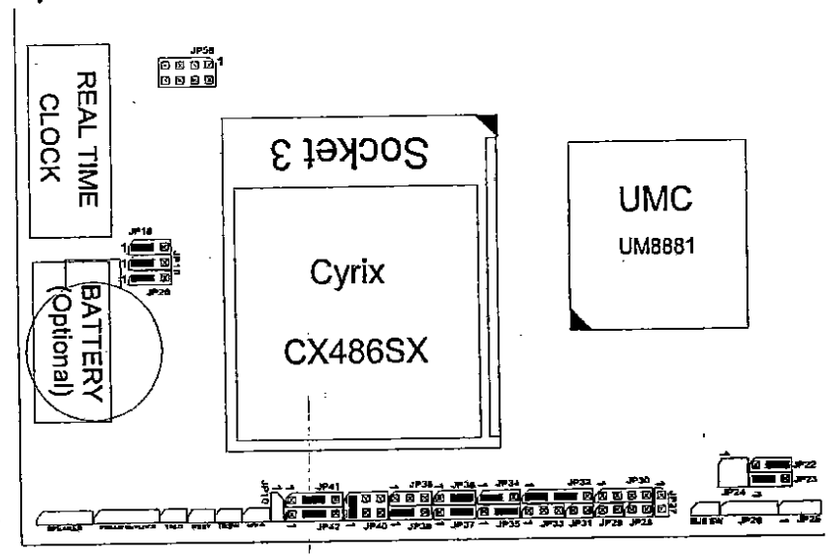
AMD™ Enhanced Am486-DX2



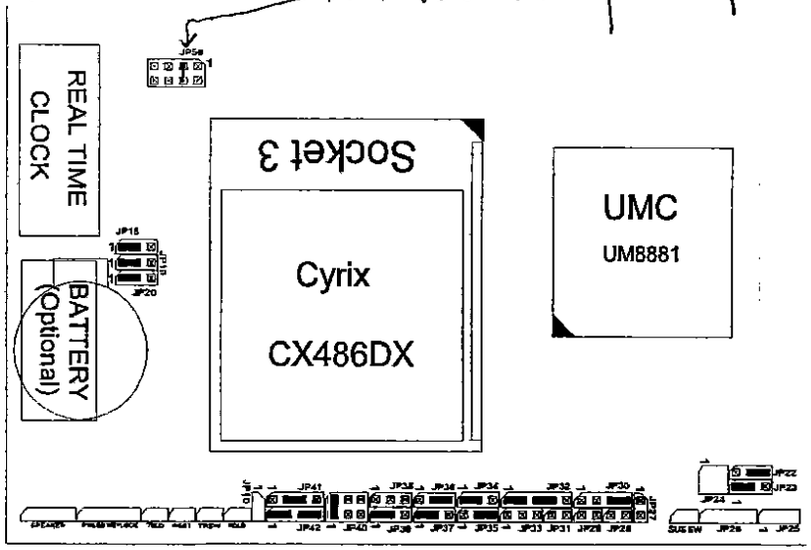
AMD™ Enhanced Am486-DX4 AMD 5x86 133



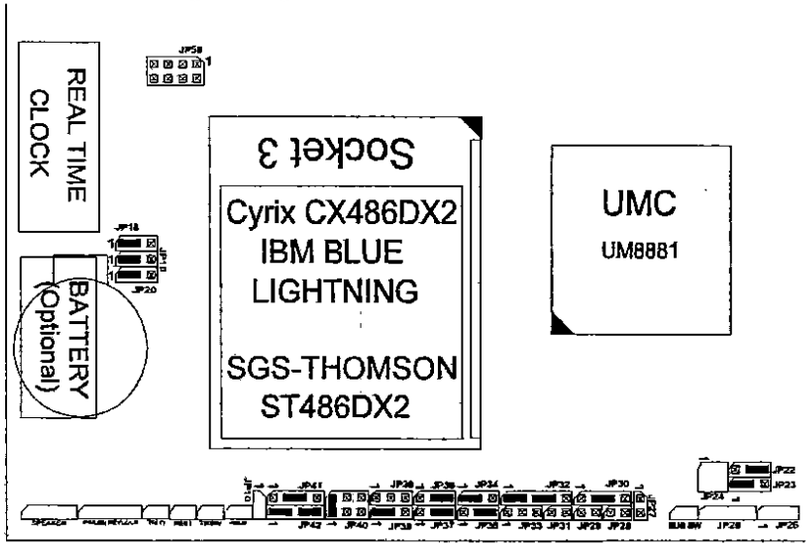
Cyrix Cx486SX



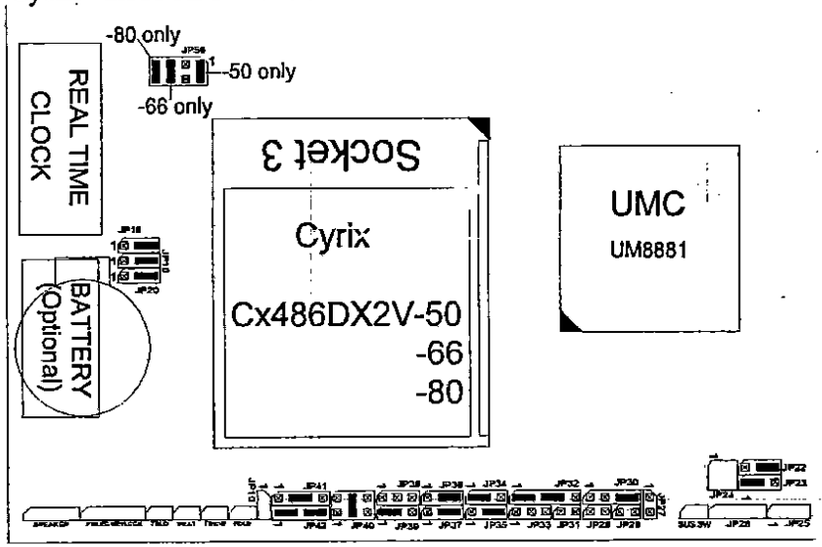
Cyrix Cx486DX



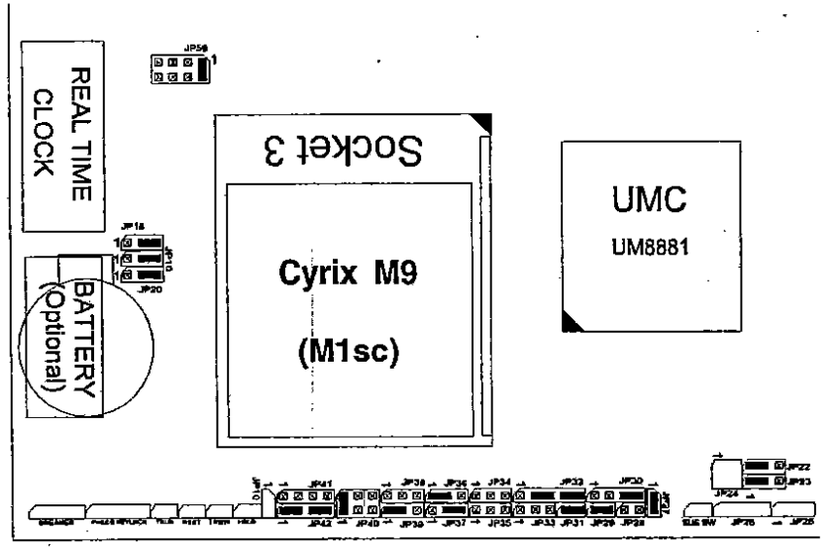
Cyrix Cx486DX2
IBM Blue Lightning and SGS-Thomson ST486DX2



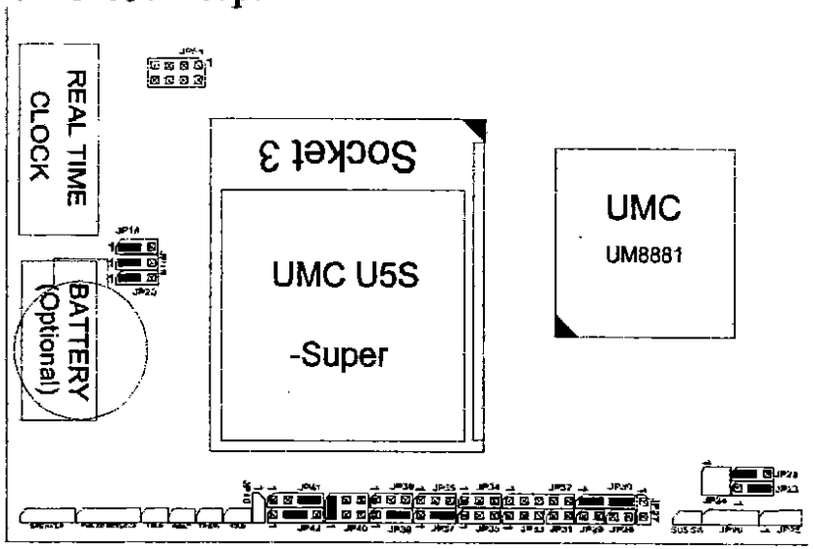
Cyrix Cx486DX2V-50
Cyrix Cx486DX2V-66
Cyrix Cx486DX2V-80



Cyrix M9 (M1sc)

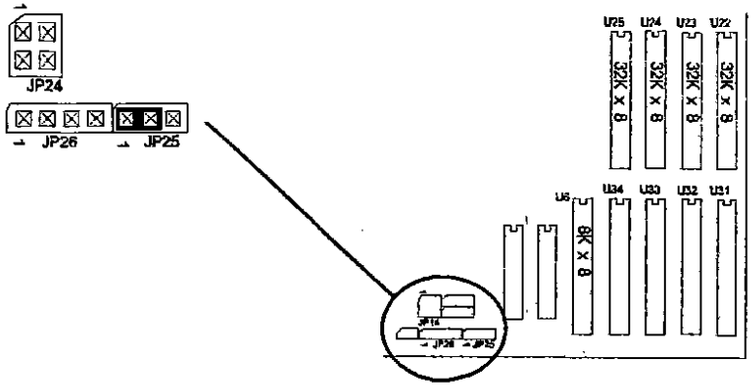


UMC U5S - Super

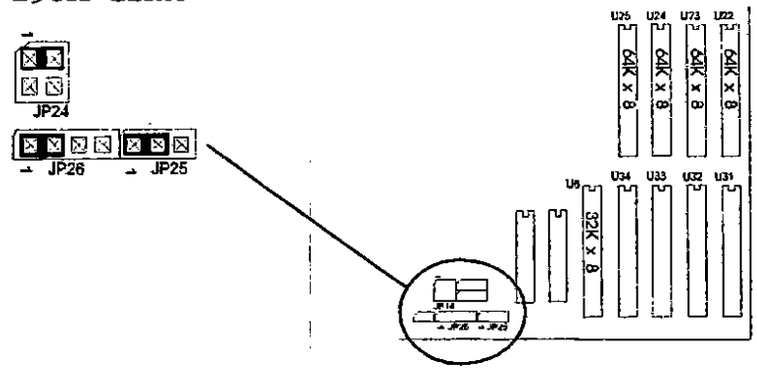


External Cache Selection Jumpers

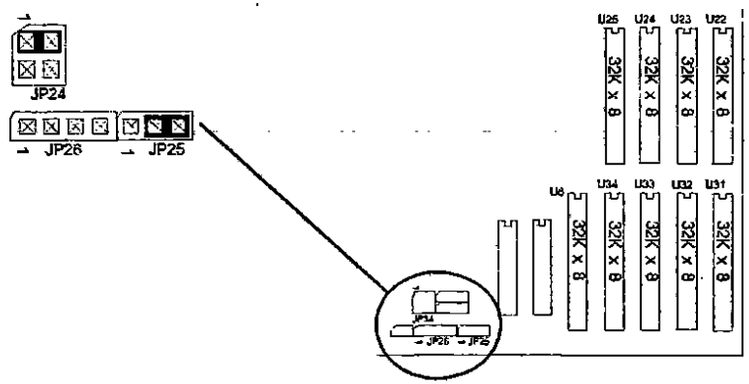
128K Cache



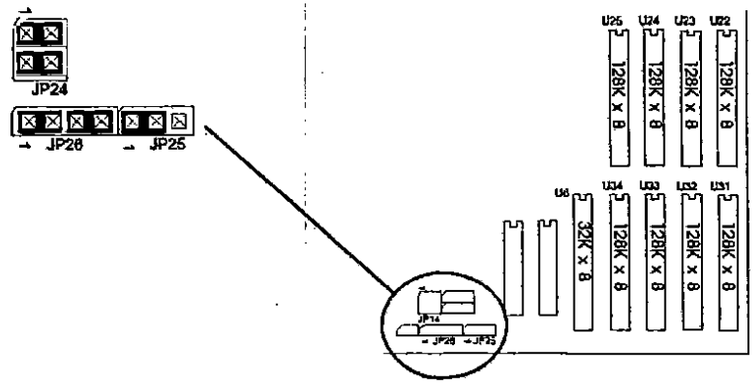
256K Cache



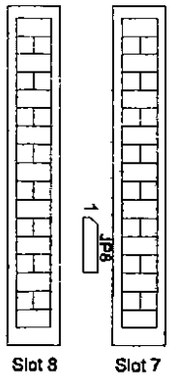
256K Cache



512K Cache



CMOS Data Discharge Jumper - JP6



Normal Operation

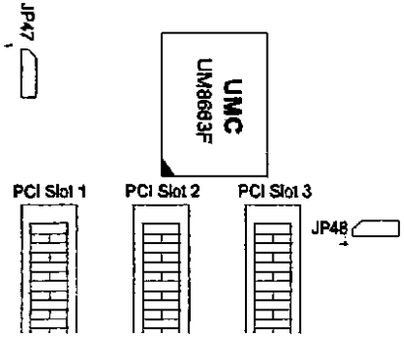
Clear Motorola Real Time Clock

Clear Dallas / Benchmarq Real Time Clock

The "Clear" option is a temporary setting and must be returned to the "Normal Operation" mode for the computer to function.

ECP Mode Parallel Port DMA Channel Selection

(Only available with Multi I/O Option.)



ECP DMA Channel

DMA 1

DMA 3

Factory Adjusted Jumper Functions

The following jumpers located on the motherboard are set at the factory level and are not available to users. These jumpers are as follows:

Chipset Selection

IDSEL Group	JP57	JP58	JP59
UM8881F	1-2	1-2	1-2
UM8881F/E	2-3	2-3	2-3

Onboard EPROM Programming Selection

Programming	JP3
12 Volt	1-2
5 Volt	2-3
No programming	open

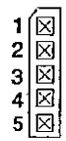
Real Time Clock Selection

RTC Type	JP11	JP60
Dallas/Benchmarq	1-2	1-2
Motorola	2-3	2-3

RTC Type	JP53
DS12885, BQ3285	2-3
Others	1-2

Connectors

JP1 - Keyboard Lock

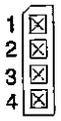


1. +5V
2. N.C.
3. Ground
4. Keyboard Lock
5. Ground

REST - Reset Switch

1. Reset Signal
2. Ground

SPEAKER - Speaker Connector



1. Speaker Data
2. N.C.
3. Ground
4. +5V

TBSW - Turbo Switch

1. Turbo Signal
2. Ground

TBLD - Turbo LED

1. Turbo Data
2. Ground

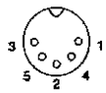
SUS SW - Suspend Switch

1. +5V
2. Suspend Signal

CN11 - Hard Drive LED

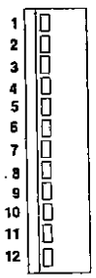
1. +5V
2. HDD Signal

JP1 - Keyboard Connector



1. Keyboard Clock
2. Keyboard Data
3. N.C.
4. Ground
5. +5V

JP2 - Power Connector

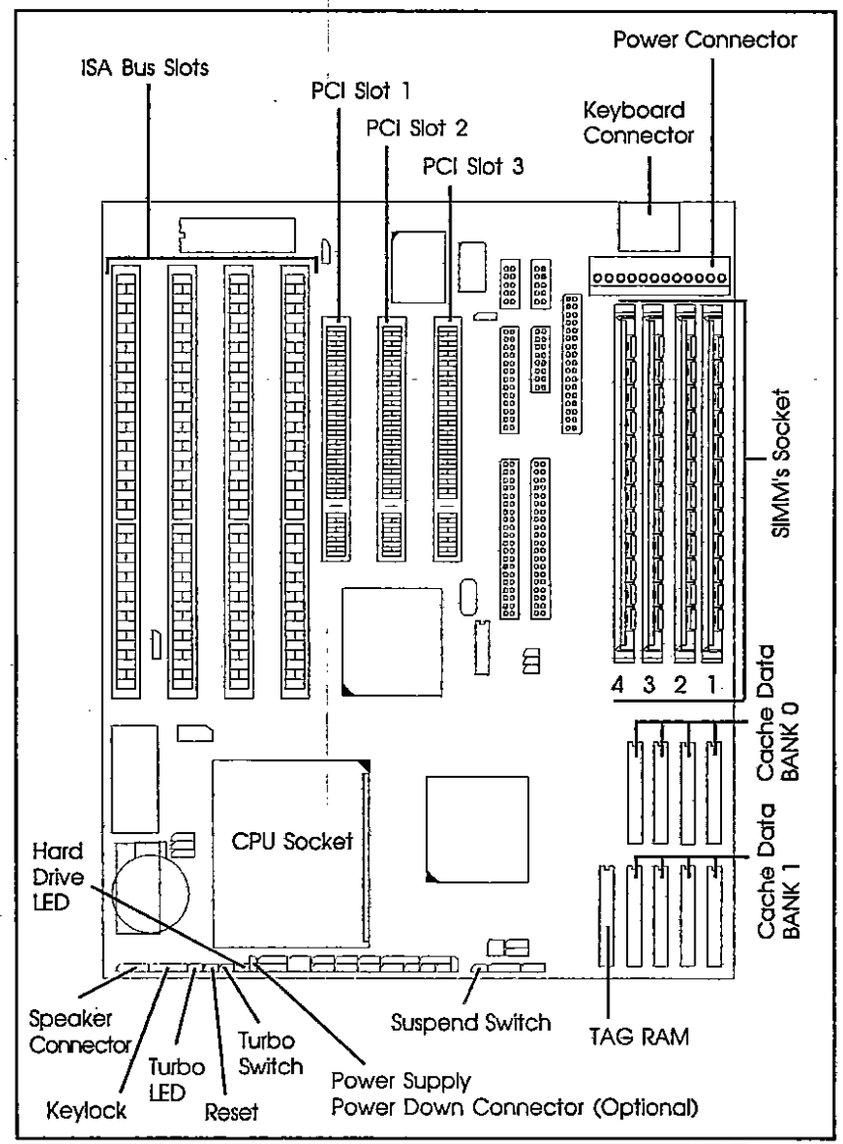


1. Power Good
2. +5V
3. +12V
4. -12V
5. Ground
6. Ground
7. Ground
8. Ground
9. -5V
10. +5V
11. +5V
12. +5V

Motherboard Layout

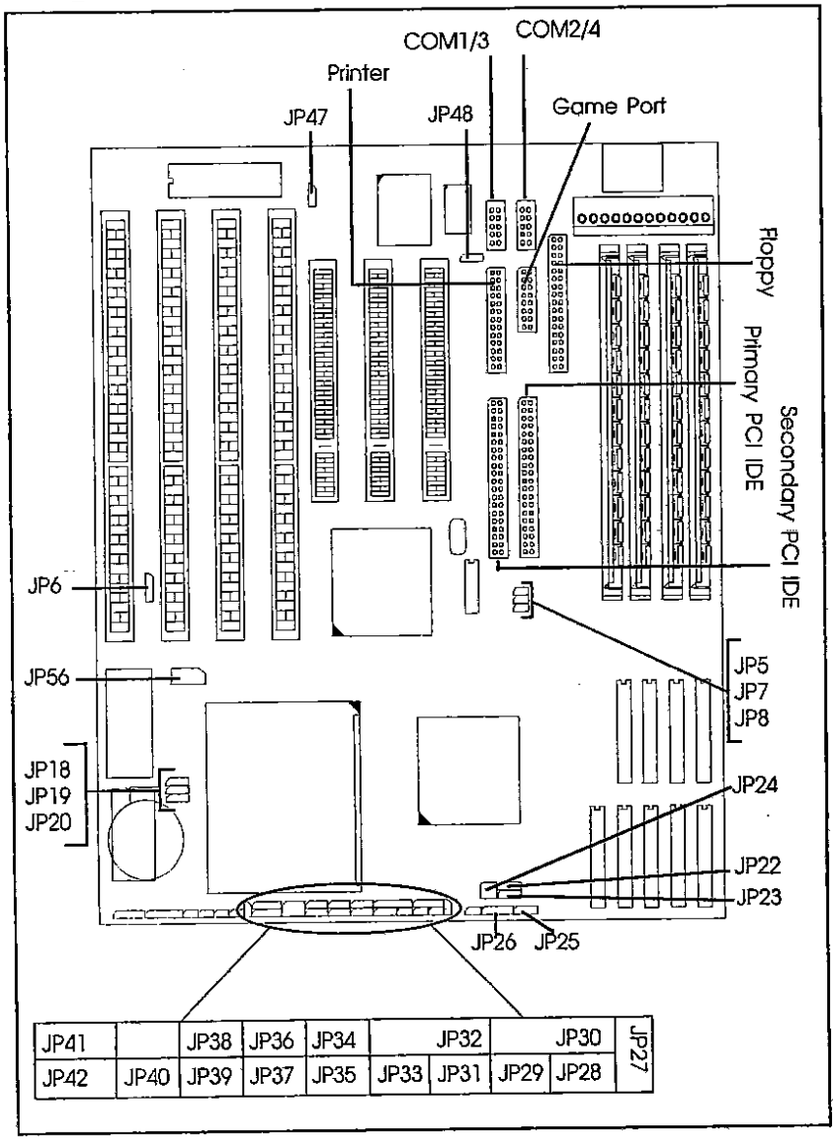
The following diagrams show the relative positions of the jumpers, connectors, major components and memory banks on the Motherboard with optional Multi-I/O.

Major Component Locations



Motherboard Configuration

Jumper Locations and I/O Headers



Chapter 5
BIOS Setup

After you have configured the Motherboard, and have assembled the components, you can turn on the completed system. At this point, run the software setup to ensure that the system information is correct.

The software setup of the Motherboard is achieved through Basic Input-Output System (BIOS) programming. You use the BIOS setup program to tell the operating system what type of devices (such as disk drives) are connected to your Motherboard.

The system setup is also called CMOS setup. Normally, you will only need to run the system setup again if you have changed the hardware configuration (for example, a processor upgrade).

The BIOS installed on this Motherboard is written by Award Software International Inc. Depending on the version of the BIOS, your BIOS setup screens may differ to those illustrated in this section.

Entering Setup

Power on the computer and press <Del> immediately will allow you to enter Setup. The other way to enter Setup is to power on the computer, when the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press <Del> key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

TO ENTER SETUP BEFORE BOOT PRESS CTRL-ALT-ESC OR DEL KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP

Control Keys

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand