**Main Board Layout**
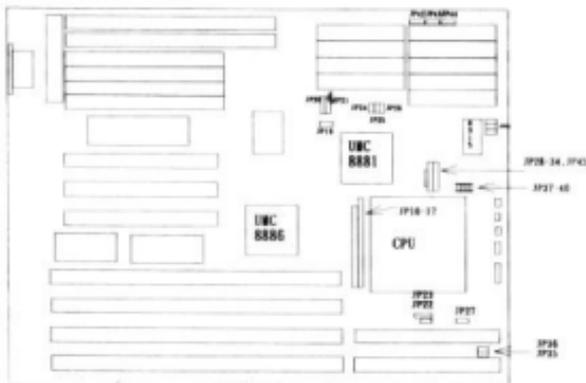
# Main Board Setup

If your main board has already been installed by the dealer, you will still want to refer to this chapter in case you plan to make any changes or upgrade your system.

## 2-1 CPU Type and System Clock Configuration

The main board can support all 486 serial microprocessors up to Pentium OverDrive, running at system clock speed up to 50Mhz. If you are installing or upgrading the CPU on this board, you must set the CPU type and configure the system clock generator jumper to match the speed rating of the Microprocessor.
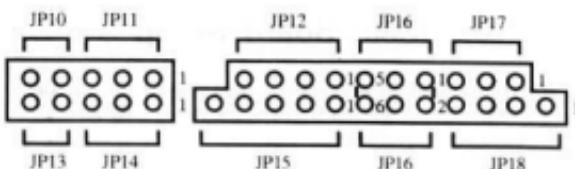
### CPU Type selection

| CPU TYPE | 486 DX/DX2 | 486 SX (PGA) | P24T | CX486S M6 | CX486DX M7 | C54860X | UMC U5-S | SL SX | SL DX/24 | AMD40n DXL/DXL 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| JP35 | OPEN | OPEN | 2-3, 4-5 | 1-2, 3-4 | 1-2, 3-4 | 2-3 | 2-3 | 2-3, 4-5 | 2-3, 4-5 | OPEN |
| JP31 | 1-2, 3-4 | 2-3 | 1-2, 3-4 | 2-3 | 1-2, 3-4 | 2-3 | 2-3 | OPEN | OPEN | OPEN |
| JP37 | OPEN | OPEN | 1-2 | 2-3 | 2-3 | OPEN | 1-2 | 1-2 | 1-2 | OPEN |
| JP23 | OPEN | OPEN | 2-3 | 1-2 | 1-2 | 3-4 | OPEN | OPEN | OPEN | 3-4 |
| JP22 | OPEN | OPEN | 1-2 | 1-2 | 1-2 | OPEN | OPEN | OPEN | OPEN | OPEN |
| JP21 | OPEN | OPEN | 2-3 | 1-2 | 1-2 | 1-2 | 1-2 | 1-2 | 1-2 | 2-3 |
| JP26 | OPEN | OPEN | 2-3 | 2-3 | 2-3 | 1-2 | OPEN | OPEN | OPEN | OPEN |
| JP18 | 3-4 | OPEN | 3-4 | OPEN | 1-2, 3-4 | 1-2, 3-4 | 1-2, 3-4 | OPEN | 3-4 | 1-2, 3-4 |
| JP8 | 1-2 | 1-2 | 3-4, 5-6 | 3-4 | 3-4 | 3-4 | 3-4 | 1-2 | 1-2 | 3-4 |

The green function of Am486DXL/DXL2 CPU will be available in Oct. 1994

2-1 CPU TYPE & SY. CPU

---

# CPU jumpers (JP10-JP18):



JP10  JP11  JP12  JP16  JP17

JP13  JP14  JP15  JP16  JP18

**486 DX/DX2**

CPU

**AM486DX4V(3.3V)**

CPU

**P24D** /SV8B/5x86

CPU

**486SX(P5A)**

CPU

**P24T**

CPU

**AM486DX2V(3.3V)**

CPU

**CX486DX(M?)**

CPU

**UMC486S**

CPU

**AM486DXLT**

CPU

**SL SX**

CPU

**SL DX/2/4**

CPU
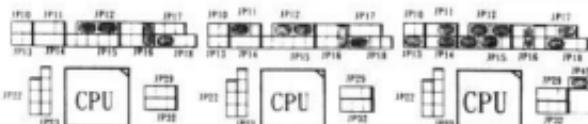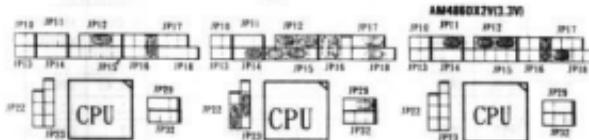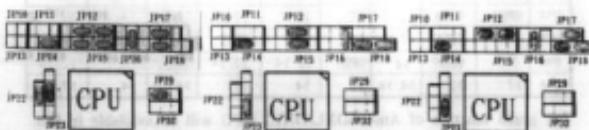
NOTE: AMD 486DX2/DX4 3.3V CPU SELECT:

JP11  1-2  AMD 486DX2-80
      2-3  AMD 486DX4-100

OTHER JUMPER SETTINGS SEE PAGE 5 OF
CPU TYPE SELECTION OF 486DX/DX2.

JP11 1-2  AMD SV8B/5x86 L1 WT
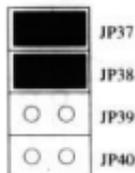     2-3  AMD SV8B/5x86 L1 WB

## CPU Brand Selection

| CPU Brand | JP20 | JP21 |
|-----------|------|------|
| INTEL     | 1-2  | 1-2  |
| CYRIX     | 1-2  | 1-2  |
| AMD/UMC   | 2-3  | 1-2  |



JX1
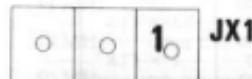
JX1 1-2 FOR INTEL,AMD 3.45V CPU
    2-3 FOR CYRIX 4V CPU

## CPU Power voltage Selection

JP37
JP38
JP39
JP40

JP37, JP38 SHORT: +5V CPU
POWER VOLTAGE

JP37
JP38
JP39
JP40
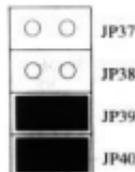
JP39, JP40 SHORT: +3.3V CPU
POWER VOLTAGE
such as Intel 486DX(P24C),
.. Etc is used

## CPU Core Frequency Setting
## JP27

If 486DX4 CPU (P24C) is used, you must set JP27 for internal CPU
speed

| JP27 | CPU Clock |
|------|-----------|
| 1-2 | 2.5 × CLK |
| 2-3 | 2 × CLK |
| OPEN | 3 × CLK |

4x Am5x86

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## Keyboard Control:

| | JP9 | JP8 | JP7 | JP1 | JP2 | JP3 |
|---|---|---|---|---|---|---|
| External keyboard ctrl | 2-3 | 2-3 | 1-2 | 2-3 | 2-3 | 1-3  4-5  5-7  6-8 |
| Internal keyboard ctrl | 1-2 | 1-2 | 2-3 | 1-2 | 1-2 | 7-9  8-10 |

**System clock setting configuration**
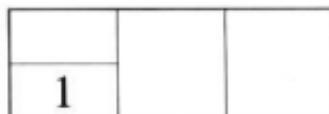
```
┌──────┬──────┬──────┐
│      │      │      │
│  1   │      │      │
└──────┴──────┴──────┘
     JP41
```

### CPU Clock settings:

| JP41 | 5-6 | 3-4 | 1-2 |
|------|-----|-----|-----|
| CLK | | | |
| 25 MHz | open | open | on |
| 33 MHz | on | on | on |
| 40 MHz | open | open | on |
| 50 MHz | open | on | on |
| 20 MHz | open | open | open |
| 60 MHz | open | on | open |

| System Clock | CPU Type |
|---|---|
| 25MHZ | 486SX-25<br>487SX-25<br>486DX-25<br>486DX2-25<br>486DX4-75@<br>OverDrive-25<br>U5S-25 |
| 33MHZ | 486SX-33<br>487SX-33<br>486DX-33<br>486DX2-66<br>486DX4-100@<br>OverDrive-33<br>U5S-33 |
| 40MHZ | 486SX-40<br>486DX-40<br>U5S-40 |
| 50MHZ | 486DX-50<br>483DX2-50<br>486DX2-100@ |

@ Intel 486DX4(P24C) is double/Tripple CPU Clock design

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# Memory Installation

This 486 main board can operate from 4MB up to 128MB system memory installed on-board. There is also an external cache memory on the system board that may be installed as either 128KB or 256KB inn size.

This chapter describes the types of memory devices that should be used with the main board and explains how to install the memory.

## 3-1 External Cache Memory Configuration

When you first install the cache memory on your system board or each time you upgrade or modify it, you need to adjust the cache memory size setting for the system.

| Cache memory Size | JP24 | JP25 | JP26 | JP44 | JP43 | JP42 | TAGRAM | DATARAM |
|---|---|---|---|---|---|---|---|---|
| 128K | OFF | OFF | OFF | 2-3 | 1-2 | OFF | 8K8(U21) | 32K8*4<br>U17 - 20 |
| 256K | ON | OFF | OFF | OFF | 1-2 | 2-3 | OFF | 32K8(U21) | 32K8*8<br>U17~20<br>U22 - 25 |
| 512K | ON | ON | OFF | 1-2 | 2-3 | 1-2 | 32K8(U21) | 128K8*4<br>U17~20 |
| 512K | ON | ON | ON | 1-2 | 2-3 | 1-2 | 64K8(U21) | 64K8*8<br>U17~20<br>U22 - 25 |
| 1M | ON | ON | ON | 1-2 | 2-3 | 1-2 | 128K8(U21) | 128K8*8<br>U17~20<br>U22 - 25 |

## 3-2 Main Memory Configuration

This board will support any combination fo 30-pin and 72-pin SIMMs up to 128KB. The DRAM SIMM installd into any SIMM socket and with any combinations.

All possible memory configuration are listed below for your selection.

| | |
|---|---|
| ı | SIMM6 |
| ı | SIMM5 |
| ı | SIMM4 |
| ı | SIMM3 |
| ı | SIMM2 |
| ı | SIMM1 |

| No | Memory Size | SIMM TYPE SELECTION | | |
|---|---|---|---|---|
| | | SIMM1-4 | SIMM5 | SIMM6 |
| 1 | 4MB | 1MB*4 | ------- | ------- |
| 2 | 4MB | ------- | 4MB*1 | ------- |
| 3 | 8MB | 1MB*4 | 4MB*1 | ------- |
| 4 | 8MB | 2MB*4 | ------- | ------- |
| 5 | 8MB | ------- | 8MB*1 | ------- |
| 6 | 8MB | ------- | 4MB*1 | 4MB*1 |
| 7 | 12MB | 1MB*4 | 4MB*1 | 4MB*1 |
| 8 | 12MB | ------- | 4MB*1 | 8MB*1 |
| 9 | 16MB | 4MB*4 | ------- | ------- |
| 10 | 16MB | ------- | 16MB*1 | ------- |
| 11 | 16MB | ------- | 8MB*1 | 8MB*1 |
| 12 | 20MB | 4MB*4 | 4MB*1 | ------- |
| 13 | 20MB | ------- | 4MB*1 | 16MB*1 |
| 14 | 24MB | 4MB*4 | 8MB*1 | ------- |
| 15 | 24MB | ------- | 8MB*1 | 16MB*1 |
| 16 | 32MB | 4MB*4 | 16MB*1 | ------- |
| 17 | 32MB | ------- | 16MB*1 | 16MB*1 |
| 18 | 32MB | ------- | 32MB*1 | ------- |
| 19 | 36MB | 4MB*4 | 4MB*1 | 32MB*1 |
| 20 | 36MB | ------- | 4MB*1 | 32MB*1 |
| 21 | 40MB | 4MB*4 | 8MB*1 | 16MB*1 |
| 22 | 40MB | ------- | 8MB*1 | 32MB*1 |
| 23 | 48MB | 4MB*1 | 16MB*1 | 16MB*1 |
| 24 | 48MB | ------- | 16MB*1 | 32MB*1 |
| 25 | 64MB | 16MB*4 | ------- | ------- |
| 26 | 64MB | ------- | 32MB*1 | 32MB*1 |
| 27 | 128MB | 16MB*4 | 32MB*1 | 32MB*1 |