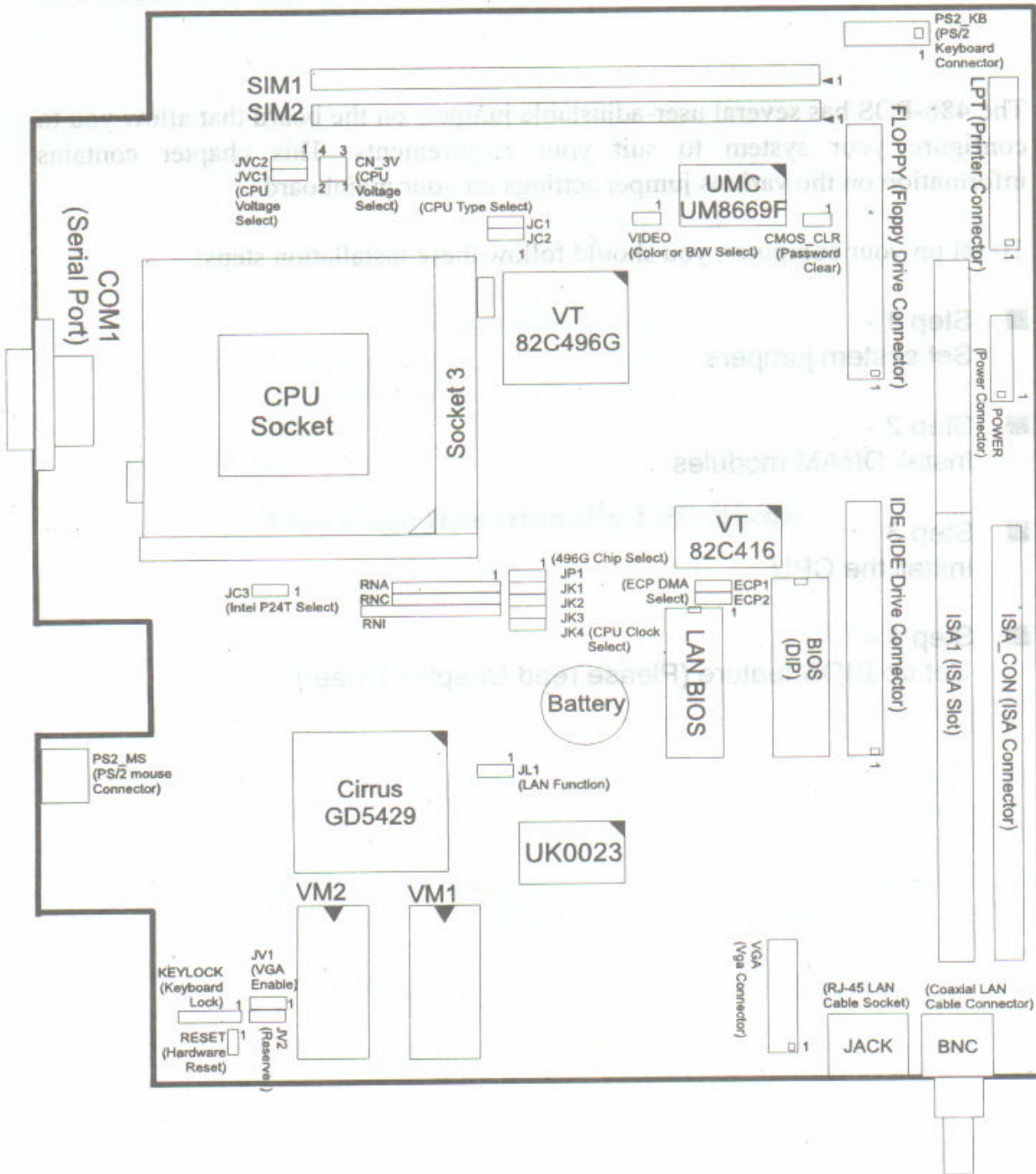


# Mainboard Layout







## 1). Set System Jumpers

**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.

### ***ECP DMA Selection: ECP 1, ECP2***

These two jumpers allow you to select the ECP DMA channel.

	ECP1	ECP2
DMA1 (Default)	 1	 1
DMA3	 1	 1

### ***LAN Function Enable: JL1***

This jumper allows you to disable the onboard LAN function.

 Enable (Default)

 Disable

### ***VT82C496G Chip Version Selection: JP1***


When the CG version is onboard, this jumper is set at the pin pair 2-3; if other version is installed, set at 1-2.

 CG Version

 Others

### ***Clear Password: CMOS\_CLR***

The password clear jumper lets you set the password configuration to "Enabled" or "Disabled". You may need to enable password clear if forget your password.

 **Enable**  
1

 **Disable (Default)**  
1



## Onboard VGA Feature

### ***Onboard VGA Feature Enable: JV1***

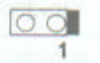
This jumper allows you to disable the onboard VGA feature (if you want install your another VGA add-on card). The jumper JV2 is reserved for the manufacturing use.

 Enable (Default)

 Disable

### ***Display Mode Selection: VIDEO***

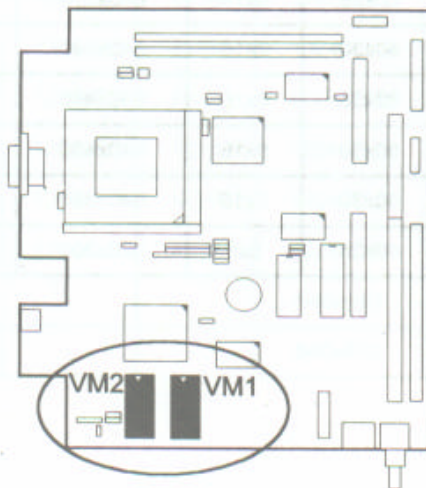
This jumper allows you to select the video display mode: Mono or Color.

 Mono/EGA/VGA  
(Default)

 Color

## VGA Upgrade

The mainboard has built-in VGA controller that supports up to 1280x1024 resolutions. To upgrade the onboard VGA DRAM to 1MB, insert one 256Kx16BIT-5 (SOJ-type) DRAM at location VM1.



## Reference Tables

**NOTE : Please refer to the READ.ME file in the driver disk for the installation instructions and the news of more recent updates.**

The following two tables are listed for your reference.

### Standard VGA Modes

Mode No.	VESA Mode No.	No. of Color	Char. X Row	Char. Cell	Screen Format	Display Mode	Horiz. Freq. kHz	Vert. Freq. Hz
00/01	-	16/256	40x25	8x8	320x200	Text	31.5	70
00*/01*	-	16/256	40x25	8x14	320x350	Text	31.5	70
00+/01+	-	16/256	40x25	9x16	360x400	Text	31.5	70
02/03	-	16/256	80x25	8x8	640x200	Text	31.5	70
02*/03*	-	16/256	80x25	8x14	640x350	Text	31.5	70
02+/03+	-	16/256	80x25	9x16	720x400	Text	31.5	70
04/05	-	4/256	40x25	8x8	320x200	Graphics	31.5	70
6	-	2/256	80x25	8x8	640x200	Graphics	31.5	70
07*	-	Mono	80x25	9x14	720x350	Text	31.5	70
07+	-	Mono	80x25	9x16	720x400	Text	31.5	70
0D	-	16/256	40x25	8x8	320x200	Graphics	31.5	70
0E	-	16/256	80x25	8x8	640x200	Graphics	31.5	70
0F	-	Mono	80x25	8x14	640x350	Graphics	31.5	70
10	-	16/256	80x25	8x14	640x350	Graphics	31.5	70
11	-	2/256	80x30	8x16	640x480	Graphics	31.5	60
11+	-	2/256	80x30	8x16	640x480	Graphics	37.9	72
12	-	16/256	80x30	8x16	640x480	Graphics	31.5	60
12+	-	16/256	80x30	8x16	640x480	Graphics	37.9	72
13	-	256/256	40x25	8x8	320x200	Graphics	31.5	70



**Extended VGA Modes**

Mode No.	VESA Mode No.	No. of Color	Char. X Row	Char. Cell	Screen Format	Display Mode	Horiz. Freq. kHz	Vert. Freq. Hz	Memory
14	-	16/256K	132x25	8x16	1056x400	Text	31.5	70	512K
54	10A	16/256K	132x43	8x8	1056x350	Text	31.5	70	512K
55	109	16/256K	132x25	8x14	1056x350	Text	31.5	70	512K
58, 6A	102	16/256K	132x37	8x16	800x600	Graphics	35.2	56	256K
58, 6A	102	16/256K	132x37	8x16	800x600	Graphics	37.8	60	256K
58, 6A	102	16/256K	132x37	8x16	800x600	Graphics	48.1	72	256K
58, 6A	102	16/256K	132x37	8x16	800x600	Graphics	46.9	75	256K
5C	103	256/256K	132x37	8x16	800x600	Graphics	35.2	56	512K
5C	103	256/256K	132x37	8x16	800x600	Graphics	37.9	60	512K
5C	103	256/256K	132x37	8x16	800x600	Graphics	48.1	72	512K
5C	103	256/256K	132x37	8x16	800x600	Graphics	46.9	75	512K
5D*	104	16/256K	128x48	8x16	1024x768	Graphics	35.5	87*	512K
5D	104	16/256K	128x48	8x16	1024x768	Graphics	48.3	60	512K
5D	104	16/256K	128x48	8x16	1024x768	Graphics	56	70	512K
5D	104	16/256K	128x48	8x16	1024x768	Graphics	58	72	512K
5D	104	16/256K	128x48	8x16	1024x768	Graphics	60	75	512K
5E	100	256/256K	80x25	8x16	640x480	Graphics	31.5	70	512K
5F	101	256/256K	80x30	8x16	640x480	Graphics	31.5	60	512K
5F	101	256/256K	80x30	8x16	640x480	Graphics	37.9	72	512K
60*	105	256/256K	128x48	8x16	1024x768	Graphics	35.5	87*	1024K
60	105	256/256K	128x48	8x16	1024x768	Graphics	48.3	60	1024K
60	105	256/256K	128x48	8x16	1024x768	Graphics	56	70	1024K
60	105	256/256K	128x48	8x16	1024x768	Graphics	58	72	1024K
60	105	256/256K	128x48	8x16	1024x768	Graphics	60	75	1024K
64	111	64K	-	-	640x480	Graphics	31.5	60	1024K
64	111	64K	-	-	640x480	Graphics	37.9	72	1024K

(continued)

*Extended VGA Modes*

Mode No.	VESA Mode No.	No. of Color	Char. X Row	Char. Cell	Screen Format	Display Mode	Horiz. Freq. kHz	Vert. Freq. Hz	Memory
65	114	64K	-	-	800x600	Graphics	35.2	56	1024K
65	114	64K	-	-	800x600	Graphics	37.8	60	1024K
65	114	64K	-	-	800x600	Graphics	48.1	72	1024K
66	110	32K**	-	-	640x480	Graphics	31.5	60	1024K
66	110	32K**	-	-	640x480	Graphics	37.9	72	1024K
67	113	32K**	-	-	800x600	Graphics	35.2	56	1024K
67	113	32K**	-	-	800x600	Graphics	37.8	60	1024K
67	113	32K**	-	-	800x600	Graphics	48.1	72	1024K
68	116	32K**	-	-	1024x768	Graphics	35.5	87*	-
6C	106	16/256K	160x64	8x16	1280x1024	Graphics	48	87*	1024K
6D	107	256/256K	160x64	8x16	1280x1024	Graphics	48	87*	2048K
71	112	16M	-	-	640x480	Graphics	31.5	60	1024K
74	117	64K	-	-	1024x768	Graphics	35.5	87*	2048K

**NOTE :**

1. Some modes are not supported by all CL-GD542X controllers. Refer to the CL-GD542X data book and software release kit for the list of video modes supported by the CL-GD542X BIOS.
2. Not all monitors support all modes. The fastest vertical refresh rate for the monitor type selected will be used automatically.
3. \*\* indicates 32K Direct-Color/256-color Mixed modes.
4. \* indicates interlaced mode.



## 2). Install DRAM Modules

The 486-POS supports standard fast page mode DRAM; accommodates onboard memory up to 64MB totally using SIMMs. The mainboard has two memory banks - Bank 0 and Bank 1 that can use different types of SIMMs. However, you must populate each memory bandwidth the same type of SIMM.

### DRAM Configuration

DRAM modules can be installed in a variety of configurations as shown below:  
(Unit: MB)

TOTAL MEMORY	SIMM1 (72-PIN X 1)	SIMM 2 (72-PIN X 1)
4	4	0
8	4	4
	8	0
12	4	8
16	8	8
	16	0
20	4	16
24	8	16
32	16	16
36	4	32
40	8	32
48	16	32
64	32	32

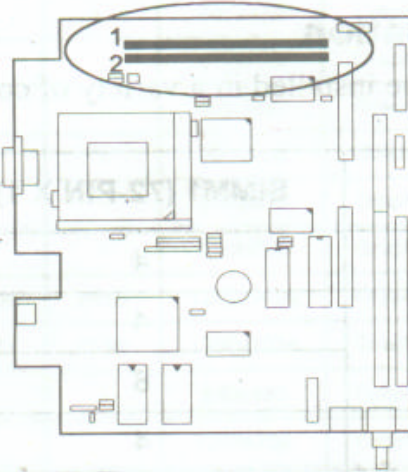
**NOTE : Only standard fast page mode DRAM module are supported.**



## Installation Instructions

**NOTE :** Always observe static electricity precautions. See "Handling Precautions" at the start of this manual.

1. Locate the SIMM on the mainboard.



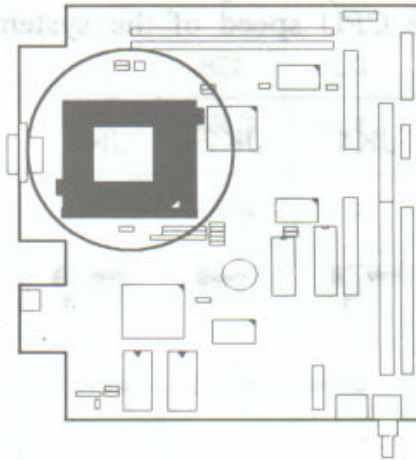
2. Carefully fit a SIMM at a 45 degree angle into each of the empty sockets to be populated. All the SIMMs should be facing the same direction.
3. Swing each SIMM into its upright, locked position. When locking a SIMM in place, push on each end of the SIMM - do not push in the middle.

### Remove SIMMs

To remove the SIMMs, pull the retaining latch on both ends of the socket and reverse the procedure above.

### 3). Install the CPUs

The 486-POS provides an onboard Socket 3 socket for processors.

**CAUTION :**

1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions.
3. Inserting the CPU chip incorrectly may damage the chip.

To install the CPU, do the following:

















1. Lift the lever on the side of the CPU socket.
2. Handle the chip by its edges and try not to touch any of the pins.
3. Place the CPU in the socket. The chip has a notch to correctly orientate the chip. Align the notch with pin one of the socket. Pin one is located in the triangular blank area. Do not force the chip. The CPU should slide easily into the socket.
4. Swing the lever to the down position to lock the CPU in place.
5. See the following section for information on the CPU jumper settings.

To remove the CPU, simply reverse the procedures introduced above.



**CPU External Clock (Bus) Frequency: JK1, JK2, JK3, JK4**

The table below shows the jumper settings for the different CPU speed configurations. Set the corresponding External Clock and CPU Clock Rate jumpers according to the CPU speed of the system by following the tables below.

	JK1	JK2	JK3	JK4
<b>25 MHz</b> SX-25 DX-25 SX2-50 DX2-50 DX4-75				
<b>33 MHz (Default)</b> SX-33 DX-33 SX2-66 DX4-100 X5-133				
<b>40 MHz</b> DX2-80 DX4-120				
<b>50 MHz</b> DX-50				

Intel / TI / Cyrix M1sc CPUs




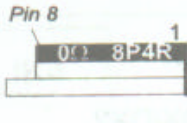






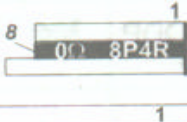



	JC1	JC2	JC3	RNA, RNC, RNI
486SX				
486DX/DX2 P24S				
DX4 ODP P24D				
DX4 (Triple-Speed)				
P24T				
TI Tx486DX4-G66-GA				
Cyrix M1sc-100 M1sc-120				

AMD CPUs







	JC1	JC2	JC3	RNA, RNC, RNI
486DX2				
486DX4				
Enhanced 486DX4				
Enhanced 486DX2-80				<p><i>Install a 0Ω resistor on the pin hole 2 of RNI and the pin hole 5 of RNC.</i></p>
AMD-X5				



UMC / Cyrix CPUs

	JC1	JC2	JC3	RNA, RNC, RNI
U5SD	 1	 1	 1	 Pin 8 1 0 8P4R RNA RNC RNI
U5S U5SLV	 1	 1	 1	
Cx486DX Cx486DX2	 1	 1	 1	 Pin 8 1 0 8P4R RNA RNC RNI
Cx486DX4 5x85	 1	 1	 1	

## Low-Voltage CPU Jumper Settings

CPU Voltage Type	Jumper Setting	CPU Model
3.3V		<p>UMC - AMD - U5SLV-SUPERXX AMD-X5</p> <p>AMD - A80486DX4-100NV8T A80486DX2-XXSV8B A80486DX2-XXNV8T Am486DX2-XXV8T A80486DX4-XXSV8B Am486DX4-100V8T Am486DX4-XXV16BXX</p>
3.45V		<p>Intel 486 - A80486DX4-75 A80486DX4-100</p> <p>Cyrix - 5x86-100 5x86-120 M1sc-100 M1sc-120</p> <p>TI - DX2-80 DX4-100</p>
3.59V		<p>Cyrix - Cx486DX-VXXGP Cx486DX2-VXXGP</p>
4.0V		<p>Cyrix - Cx486DX2-V80GP</p>
CN_3V	  	<p>For 3.3V, 3.46V, 3.59V and 4.0V CPUs</p> <p>For 5.0V CPUs (Default)</p>