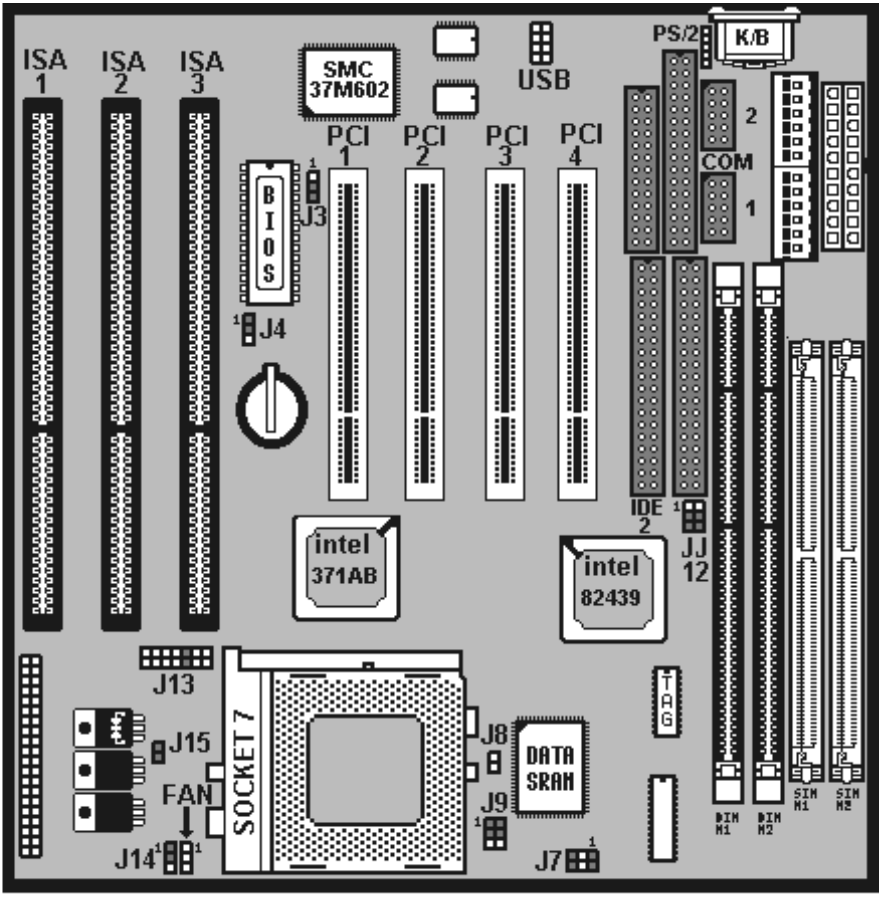
Introduction

A. Specifications

System Chipset	Intel 82430 TX chipset.
CPU	One 321-pin socket 7 for Intel Pentium (P54C/CQS/ CS, P55C), AMD 5k86, K5, K6, Cyrix 6x86 (L, MX), IDT C6 processors, support 75/90/100/110 120/133/150/166/180/200/225/233/266/300MHz.
Memory	Expandable to 256MB (2 banks) with two 72-pin SIMM sockets onboard (Support Fast Page Mode and EDO DRAM 5-2-2-2) and two 168-pin DIMM socket (support Syncchronous DRAM module 5-1-1-1).
Cache	64-bit 256/512KB L2 Pipeline Burst SRAM onboard.
I/O	SMC 37M602, two high speed 16550 compatible serial ports, one Multi-Mode. Parallel Port support SPP/EPP/ECP standard mode. Two onboard PCI IDE Ports (32 bit data transfer). Support two 360/720KB/1.2/1.44/2.88MB floppy disk devices. One PS/2 Mouse port.
BIOS	Award System BIOS installed in socket (Flash and PnP).
Expansion slots	Four PCI Master Slots and three 16-bit ISA Slots.
Dimension	4-layer PCB, baby size (220mm x 220mm).
Others	Support Ultra DMA/33, ACPI, SM Bus, GPID, USB Bus, Keyboard Power On/Off, Modem Ring On, ATX Power supply.

Setup Guide

A. Layout Diagram

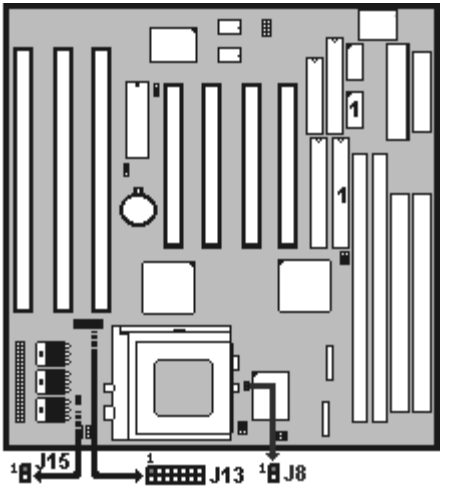


B. Switch Settings for CPUs

On = Short, Off = Open.

Intel, AMD, Cyrix	J 9				J 7			
	1-2	3-4	5-6	RATE	1-2	3-4	5-6	CLK
Pentium 75 MHz	Off	Off	Off	1.5	On	On	On	50
Pentium 90 MHz	Off	Off	Off	1.5	Off	On	On	60
Pentium 100 MHz	Off	Off	Off	1.5	On	Off	On	66
Pentium 120 MHz	On	Off	Off	2	Off	On	On	60
Pentium 133 MHz	On	Off	Off	2	On	Off	On	66
Pentium 150 MHz	On	On	Off	2.5	Off	On	On	60
Pentium (MMX) 166 MHz	On	On	Off	2.5	On	Off	On	66
Pentium (MMX) 200 MHz	Off	On	Off	3	On	Off	On	66
Pentium (MMX) 233 MHz	Off	Off	Off	3.5	On	Off	On	66
Pentium (MMX) 266 MHz	On	Off	On	4	On	Off	On	66
AMD-5k86-P75-75MHz	Off	Off	Off	1.5	On	On	On	50
AMD-5k86-P90-90MHz	Off	Off	Off	1.5	Off	On	On	60
AMD-K5-75MHz -PR75	Off	Off	Off	1.5	On	On	On	50
AMD-K5-90MHz -PR90	Off	Off	Off	1.5	Off	On	On	60
AMD-K5-100MHz-PR100	Off	Off	Off	1.5	On	Off	On	66
AMD-K5-90MHz-PR120	Off	Off	Off	1.5	Off	On	On	60
AMD-K5-100MHz-PR133	Off	Off	Off	1.5	On	Off	On	66
AMD-K5-133MHz-PR166	On	On	Off	1.75	On	Off	On	66
AMD-K6(MMX)-166MHz	On	On	Off	2.5	On	Off	On	66
AMD-K6(MMX)-200MHz	Off	On	Off	3	On	Off	On	66
AMD-K6(MMX)-233MHz	Off	Off	Off	3.5	On	Off	On	66
AMD-K6(MMX)-266MHz	On	Off	On	4	On	Off	On	66
AMD-K6(MMX)-300MHz	On	On	On	4.5	On	Off	On	66
Cyrix 6x86-100MHz-P120+	On	Off	Off	2	On	On	On	50
Cyrix 6x86-110MHz-P133+	On	Off	Off	2	On	On	Off	55
Cyrix 6x86-120MHz-P150+	On	Off	Off	2	Off	On	On	60
Cyrix 6x86-133MHz-P166+	On	Off	Off	2	On	Off	On	66
Cyrix 6x86-150MHz-P200+	On	Off	Off	2	Off	On	Off	75
Cyrix MX-150MHz-PR166	On	On	Off	2.5	Off	On	On	60
Cyrix MX-166MHz-PR200	On	On	Off	2.5	On	Off	On	66
Cyrix MX-200MHz-PR233	Off	On	Off	3	On	Off	On	66
Cyrix MX-233MHz-PR266	Off	Off	Off	3.5	On	Off	On	66
Cyrix MII-233MHz-300GP	Off	Off	Off	3.5	On	Off	On	66

C. CPU Voltage Settings



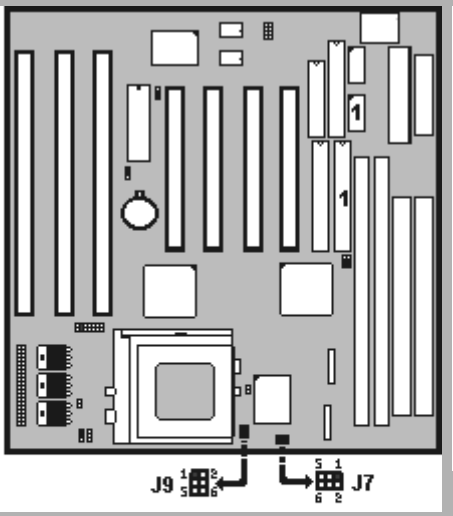
- VI/O default setting : 3.30V
  Vcore default setting : 2.80V
  J8=Open, J15=Short.
- Switch voltage is applied, making the temperature lower and voltage steadier.
- All the voltage specifications adopted here are the averages of the working voltage suggested by the CPU makers, to make any CPU applied work with the best performance.
- In Single voltage CPU VI/O=Vcore.

J13 = Single voltage CPU (Intel P54C, Cyrix 6x86, AMD 5k86/K5)						**J8**	**J15**
3.52V		3.38V				On	Off

- In **Dual voltage CPU**, you only need to set up **Vcore**. Just **"Open" JP8** and **"Short" JP15**, VI/O will supply 3.3V automatically.
- Remember to make sure CPU voltage set up is 100% correct by referring to Page 11 and Page 12. Any voltage error setup happened in Dual Voltage CPU will cause system unstable or doesn't work, or even worse is that it will burn out your CPU.

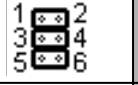
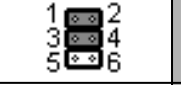
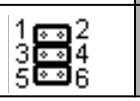
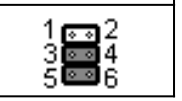
J13 = Dual voltage CPU(Intel P55C, Cryrix 6x86L, MX-6x86, AMD-K6)						**J8**	**J15**
Vcore 3.20V		Vcore 2.90V		Vcore 2.80V		Off	On
Vcore 2.20V							

D. CPU Frequencies



- The CPU type default setting is Intel Pentium 166MHz=66 MHz * 2.5.
- When a CPU with 75MHz is applied, the PCI Bus CLK output becomes 37MHz. Under this circumstance, some VGA cards may not fit well. Then the system becomes unsteady, tends to hang up easily or even results in boot failure. Use another VGA card instead when any of the above-mentioned conditions happens.

J 9 = Multipliper Factor for **Intel / AMD / Cyrix CPU**

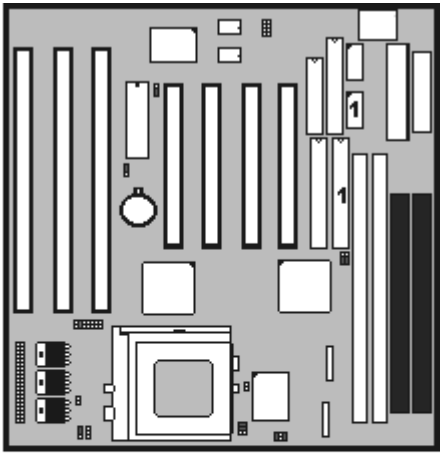
1.5		**2**		**2.5**		**3**	
3.5		**4**		**4.5**		**5**	

Intel P54C/P55C	**X1.5/X3.5**	**X2**	**X2.5**	**X3**
Cyrix 6x86(L)/MX	None/**X3.5**	**X2**	**X2.5**	**X3**
AMD-5k86/K5/K6	**X1.5/X3.5**	None	**X1.75/X2.5**	**X3**

J 7 = CPU **Ex. Clock** Select

50 MHz		**55** MHz		**60** MHz		**66** MHz		**75** MHz	
PCI Bus Clk **25**MHz		PCI Bus Clk **27**MHz		PCI Bus Clk **30** MHz		PCI Bus Clk **33** MHz		PCI Bus Clk **37** MHz	

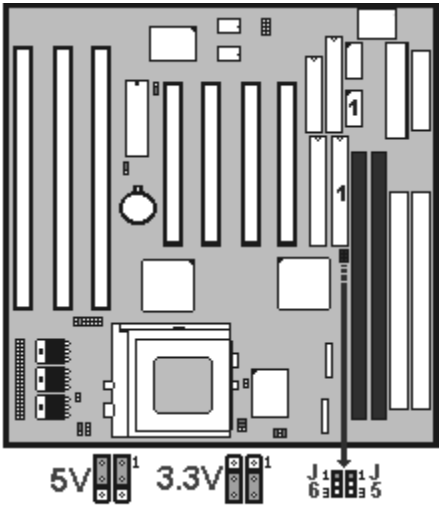
E. DRAM, EDO RAM Installation Procedures:



- SIMM Socket output voltage is 5V, expandable to 256MB.
- Support 5V Fast Page Mode/ Extended Data Out RAM.
- The BIOS DRAM default setting is 70 ns. Change the BIOS "Chipset Feature Setup" default setting to 60ns for better performance, if the chipset is marked 60ns.

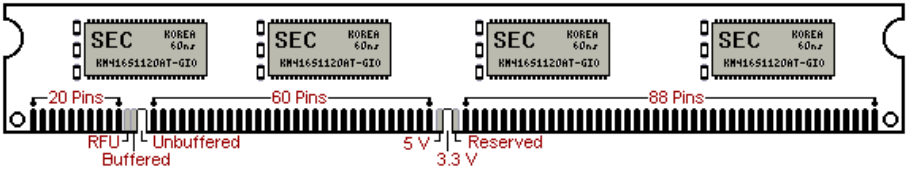
- Change nothing if EDO RAM is used. BIOS automatically detects the RAM type.
- With 586 CPUs, two FPM/EDO RAM Modules are required on SIMM sockets to compose a bank for the system to start.
- MEMO for Installing System:
  ⊕ Concerning memory setup, you can find how to from **"Chipset Feature Setup"** under BIOS setup. However, to avoid system unstable or system hang, user without engineering background is not suggested to change BIOS set up.
  ⊕ If system boot failure, please clean SIMM socket **(with clean oil)** or polish **Gold-Finger** of DRAM with **soft eraser**, and try again.

F. SDRAM, Cache Memory Installation Procedures:



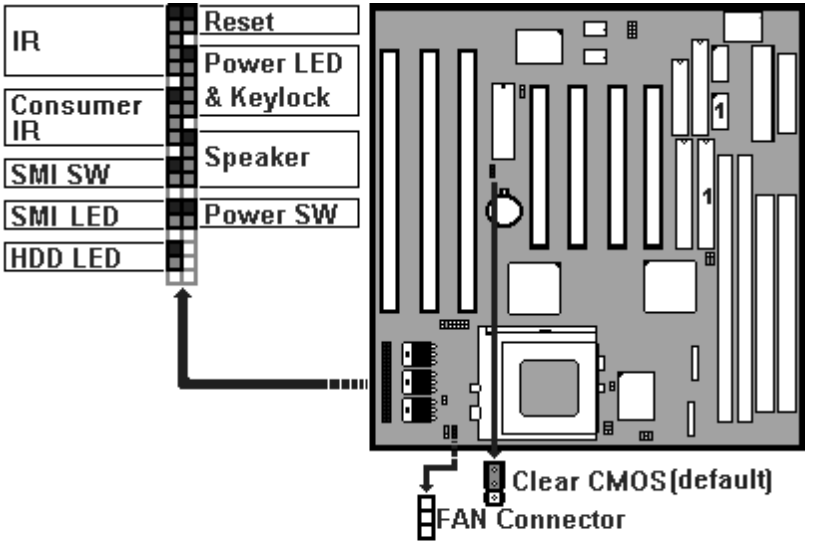
- A 168-pin DIMM can support up to 128MB EDO/SDRAM.
- Default setting: 3.3V.
- First, verify the working voltage of the EDO/SDRAM module in either DIMM socket (DIMM1 or DIMM2-table free).
- You can set up the BIOS "Chipset Feature Setup" to the best working condition basing on the type of EDO/SDRAM you are using.

- The Dual Inline Memory Module (DIMM) must be 3.3 Volt and Unbuffered Synchronus DRAM (SDRAM) 8MB, 16MB, 32MB or 64MB. The following illustration shows the type of DIMM Module.



168-PIN SDRAM DIMM Notch Key Definitions

G. Other Jumper Settings



- **Speaker:**
  Connect to the system's speaker for beeping.
- **Keylock:**
  Keyboard lock switch and Power LED connector.
- **Reset:**
  Short to restart system.
- **HDD LED:**
  LED ON when on board PCI IDE hard disk activates.
- **SMI LED:**
  LED ON when system is in any Saving mode.
- **Keyboard Power On/Off Function (Patent Is Under Application!!!)**
  1.Turn on the system by pressing the "Ctrl-***" keys simultaneously (Strike the "*" key 3 times while holding the "Ctrl" key.)
  2. Press "Ctrl-***" again to turn off the system. This function becomes invalid during POST (Power-On-Self-Test).
  3. CPU Fan Auto Turn Off: The CPU fan automatically turns off when the
  system enters the Suspend state. Remember to connect the CPU fan to its connector on the mainboard to enable this function.

- **SMI SW:**
  Short to enter sleep mode. A keystroke or mouse movement (mouse driver exits) will instantly "wake up" the system.

- **POWER SW (FOR ATX POWER SUPPLY):**
  The button should be a momentary switch that is normally open. Pushing the ATX Power Switch will immediately change the system status. Before or during "POST", you need to hold the button for four seconds in order to turn off the system.

- **J4: Clear CMOS**
  Turn off the system and short pins 2-3 (J3) to clear CMOS. Then short pins 1-2 before turning it on. You may damage the chipset if you power on the system by shorting pins 2-3.

J4	
1-2	Normal operation(Default).
2-3	for clearing CMOS Data.

- **CPU Cooler Fan connector**
  This is the connector for CPU cooler. Never use the jumper to short the connector. Serious damages caused this way will not be warrantied.

- **Modem Ring On Function Operation: (Only available by using ATX Power Supply)**
  1. Enter BIOS setup.
  2. Select Power Management Setup.
  3. Resume by Ring: Enable.
  4. Save BIOS setup and Reboot.
  5. Booting from DOS, Windows, or Windows 95.
  6. Turn off the system by:

  a. ATX-Power Switch
  b. Keyboard Power On/Off
  c. Windows 95 Software Power Off

  7. System Waiting for Modem Ring On
  When Modem Ringing Signal Active, System will wake-up.