

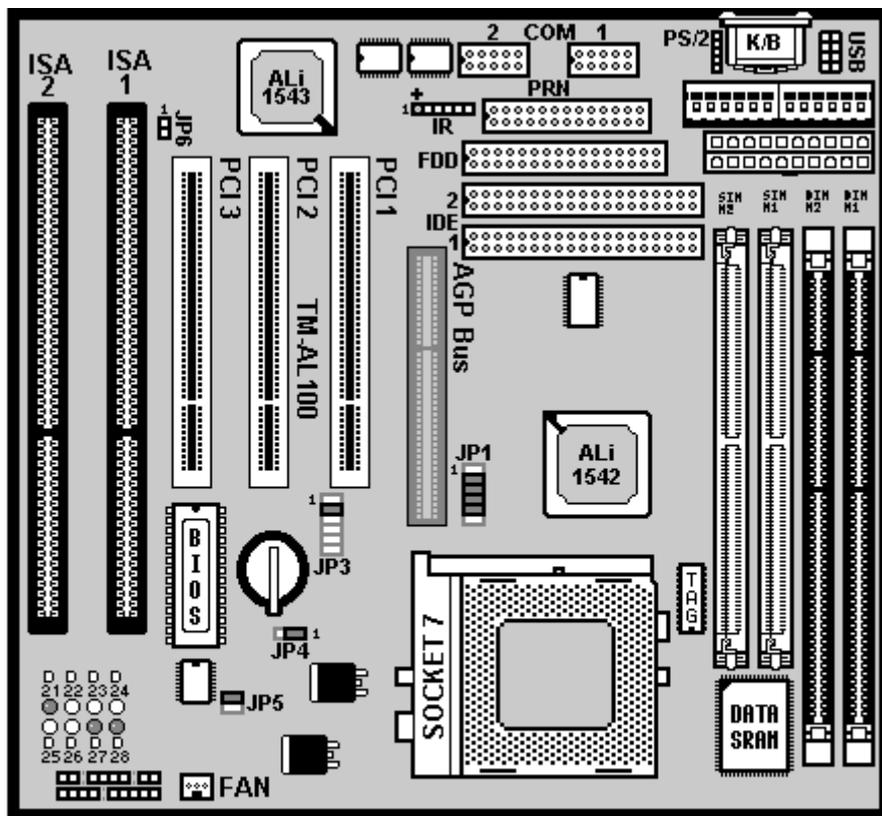
Introduction

A. Specifications

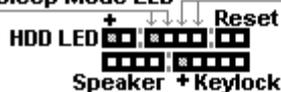
System Chipset	ALi ALADDIN-V chipset.
CPU	One 321-pin socket 7 for Intel Pentium (P55C), AMD (K6, K6-2), Cyrix (6x86 L, MX, M II) processors, support 120/133/150/166/200/233/266/300/350/366/380/400 MHz.
Memory	Expandable to 768MB (66MHz only) with two 72-pin SIMM sockets onboard (Support Fast Page Mode and EDO DRAM and two 168-pin DIMM socket (support Synchronous DRAM module).
Cache	64-bit 512KB L2 Pipeline Burst SRAM onboard.
I/O	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 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	One AGP slot, three PCI Master Slots and two 16-bit ISA Slots.
Dimension	4-layer PCB, baby size (220mm x 210mm).
Others	Support Ultra DMA/33, ACPI, SM Bus, GPID, USB Bus, ATX Power supply, IrDA, Debug sensor on board.

Setup Guide

A. Layout Diagram



Sleep Mode LED Power On/Off



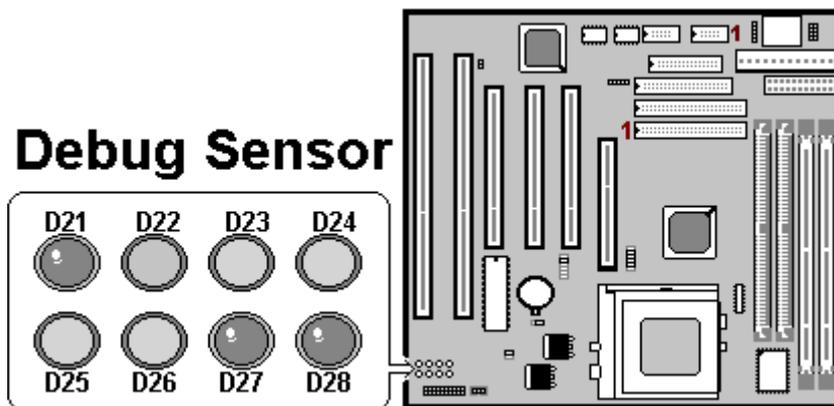
B. Switch Settings For CPUs

On = Short; Off = Open

Intel/ AMD/ Cyrix	JP1							
	1-2	3-4	5-6	CLK	7-8	9-10	11-12	RATE
Pentium (MMX) 166 MHz	OFF	ON	ON	66	ON	ON	OFF	2.5
Pentium (MMX) 200 MHz	OFF	ON	ON	66	OFF	ON	OFF	3
Pentium (MMX) 233 MHz	OFF	ON	ON	66	OFF	OFF	OFF	3.5
Pentium (MMX) 266 MHz	OFF	ON	ON	66	ON	OFF	ON	4
AMD-K6(MMX)-166MHz	OFF	ON	ON	66	ON	ON	OFF	2.5
AMD-K6(MMX)-200MHz	OFF	ON	ON	66	OFF	ON	OFF	3
AMD-K6(MMX)-233MHz	OFF	ON	ON	66	OFF	OFF	OFF	3.5
AMD-K6(MMX)-266MHz	OFF	ON	ON	66	ON	OFF	ON	4
AMD-K6(MMX)-300MHz	OFF	ON	ON	66	ON	ON	ON	4.5
AMD-K6-2/ 300MHz	OFF	OFF	OFF	100	OFF	ON	OFF	3
AMD-K6-2/ 333MHz	ON	OFF	OFF	95	OFF	OFF	OFF	3.5
AMD-K6-2/ 350MHz	OFF	OFF	OFF	100	OFF	OFF	OFF	3.5
AMD-K6-2/ 366MHz	OFF	ON	ON	66	OFF	OFF	ON	5.5
AMD-K6-2/ 380MHz	ON	OFF	OFF	95	ON	OFF	ON	4
AMD-K6-2/ 400MHz	OFF	OFF	OFF	100	ON	OFF	ON	4
Cyrix 6x86L-120MHz-P150+	ON	ON	ON	60	ON	OFF	OFF	2
Cyrix 6x86L-133MHz-P166+	OFF	ON	ON	66	ON	OFF	OFF	2
Cyrix 6x86L-150MHz-P200+	ON	ON	OFF	75	ON	OFF	OFF	2
Cyrix MX-150MHz-PR166	ON	ON	ON	60	ON	ON	OFF	2.5
Cyrix MX-166MHz-PR200	OFF	ON	ON	66	ON	ON	OFF	2.5
Cyrix MX-200MHz-PR233	OFF	ON	ON	66	OFF	ON	OFF	3
Cyrix MX-233MHz-PR266	OFF	ON	ON	66	OFF	OFF	OFF	3.5
Cyrix M II-225MHz-300GP	ON	ON	OFF	75	OFF	ON	OFF	3
Cyrix M II-233MHz-300GP	OFF	ON	ON	66	OFF	OFF	OFF	3.5
Cyrix M II-250MHz-333GP	OFF	OFF	OFF	100	ON	ON	OFF	2.5
Cyrix M II-300MHz-350GP	OFF	OFF	OFF	100	OFF	ON	OFF	3.0

C. Smart Debug On Board

When the CPU, DRAM, Cache RAM, FDD or VGA card have not been properly installed, user can isolate those basic problems through the Debug Sensor LED and instructions from the manual. To Professional system engineers or maintenance engineers, the Debug Sensor can work as an 80 Port Debug Sensor Card.

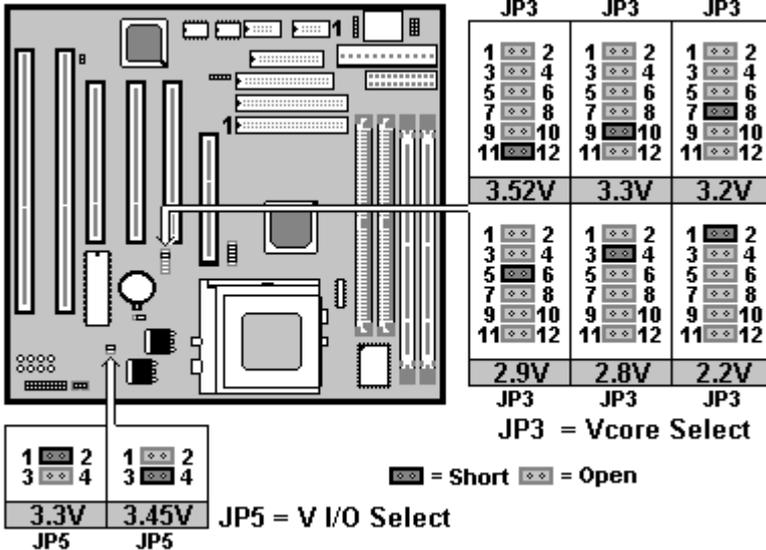


Error code	Display	Message	Solution	
D21 ● ○ ○ ○ D24 D25 ○ ○ ○ ● D28	C1	None	Can't detect DRAM	1. Reinstall or replace the SDRAM. 2. Reinstall or replace the BIOS.
D21 ○ ● ● ○ D24 D25 ○ ○ ● ● D28	C6	None	Can't detect DRAM	1. Reinstall or replace the SDRAM. 2. Reinstall or replace the BIOS.
D21 ○ ● ● ● D24 D25 ○ ○ ○ ○ D28	OD	None	Can't detect VGA card	1. Reinstall or replace the VGA card. 2. Replace the BIOS.
D21 ○ ● ● ● D24 D25 ○ ○ ○ ● D28	4E	Yes	Can't detect Floppy disk	1. Replace the BIOS. (if no screen) 2. Enter the BIOS Setup menu to reset. 3. Check that the FDD cable and the power connector are properly connected. 4. Reconnect the FDD cable or replace the FDD.
D21 ○ ● ○ ○ D24 D25 ○ ● ● ● D28	61	Yes	L2 cache problem	1. Enter BIOS Setup to disable the external cache.

D. Note To Installing The Mainboard

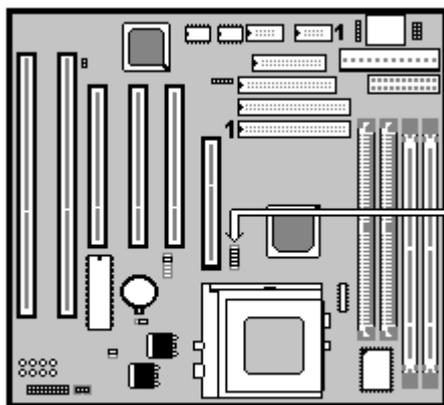
Touch the non-coated area on the computer case or use a grounded wire to release static electricity before you open the anti-static electricity bag and take out the mainboard. It's likely to damage the mainboard components while taking out the board without first releasing static electricity. During installation, avoid touching the components on the mainboard.

E. CPU Voltage Settings



- VI/O default setting : 3.30V Vcore default setting : 2.80V
- 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.
- Remember to make sure CPU voltage set up is 100% correct. 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.

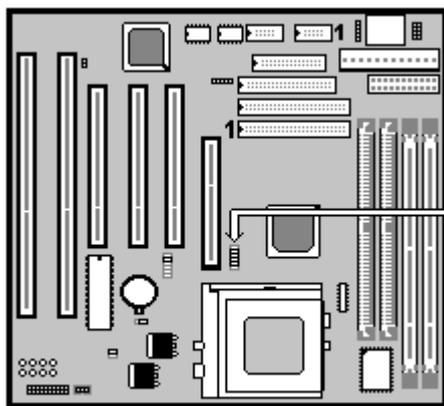
F. CPU Ex. Clock And Ratio Select



JP1		JP1		JP1	
1	2	1	2	1	2
3	4	3	4	3	4
5	6	5	6	5	6
7	8	7	8	7	8
9	10	9	10	9	10
11	12	11	12	11	12
60MHz		66MHz		75MHz	
1	2	1	2	1	2
3	4	3	4	3	4
5	6	5	6	5	6
7	8	7	8	7	8
9	10	9	10	9	10
11	12	11	12	11	12
83MHz		95MHz		100MHz	
JP1		JP1		JP1	

JP1 (1-2/ 3-4/ 5-6) = CPU Ex. Clock Select = Short = Open

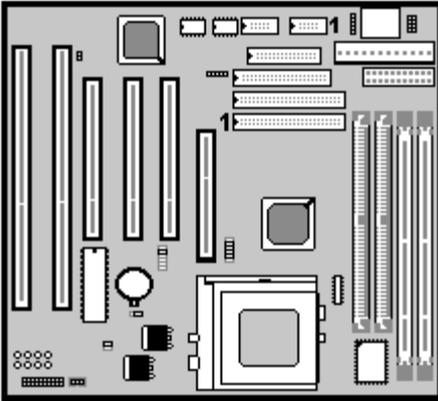
- The CPU type default setting is Intel Pentium 166MHz=66 MHz * 2.5.
- When you short **JP6**, the PCI Bus CLK output becomes 37MHz. Under this circumstance, some VGA cards may not fit well. Then the system becomes unsteady, tends to hang up easily or even results in boot failure. Use another VGA card instead when any of the above-mentioned conditions happens.



JP1		JP1		JP1		JP1	
1	2	1	2	1	2	1	2
3	4	3	4	3	4	3	4
5	6	5	6	5	6	5	6
7	8	7	8	7	8	7	8
9	10	9	10	9	10	9	10
11	12	11	12	11	12	11	12
X 2		X 2.5		X 3		X 3.5	
1	2	1	2	1	2	1	2
3	4	3	4	3	4	3	4
5	6	5	6	5	6	5	6
7	8	7	8	7	8	7	8
9	10	9	10	9	10	9	10
11	12	11	12	11	12	11	12
X 4		X 4.5		X 5		X 5.5	
JP1		JP1		JP1		JP1	

JP1 (7-8/ 9-10/ 11-12) = Multiplier Factor for Intel/ AMD/ Cyrix

G. Memory Installation Procedures:

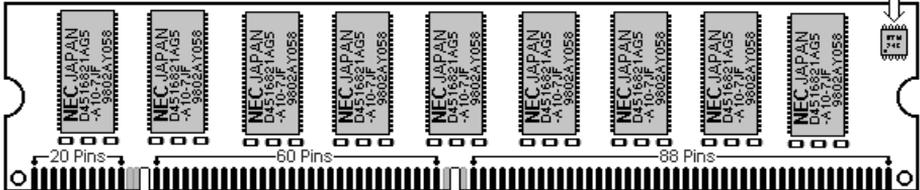
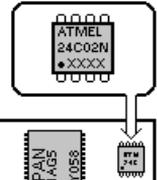


- SIMM Socket output voltage is 5V, expandable to 256MB.
- A SDRAM can support up to 512MB EDO (66MHz) / SDRAM (66MHz/ 100MHz).
- AL100 only supports 3.3V EDO/ SDRAM module. The following illustration shows you the difference between 3.3V and 5V to ensure your correct selection of 3.3V DIMM module for using.

- First, verify the working voltage of the EDO/ SDRAM module in either DIMM socket.
- Change nothing if EDO RAM is used. BIOS automatically detect the RAM type.
- You are recommended to use SDRAMs. With SPD that are compliant with PC-100. This will enable BIOS to detect the SDRAM speed, thereby fully bring into play the efficiency of the SDRAM.

S. P. D (Serial Presence Detect)

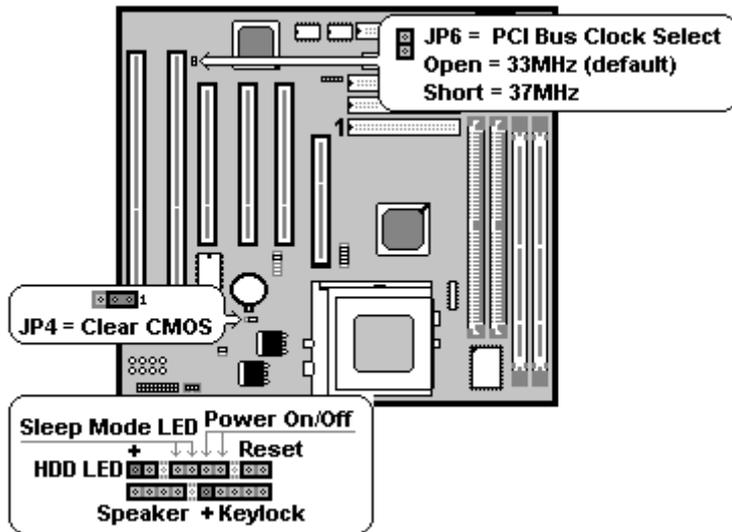
The SPD is an 8-pin EEPROM which records the SDRAM module size, speed, working voltage and the number of rows and columns so as to enable BIOS' automatic detection, thereby optimizing SDRAM timing.



- To avoid compatibility and reliability problems, you are recommended to test the 168-pin SDRAMs before buying them since the PCB specifications differ.

- 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 BIOS DRAM default setting is 60 ns. Change the BIOS “Chipset Feature Setup” default setting to 50ns for better performance, if the chipset is marked 50ns.
- 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 DIMM socket (**with clean oil**) or polish **Gold-Finger** of DRAM with **soft eraser**, and try again.

H. 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.

- **Sleep Mode LED:** LED ON when system is in sleep mode.
- **POWER On/ Off 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

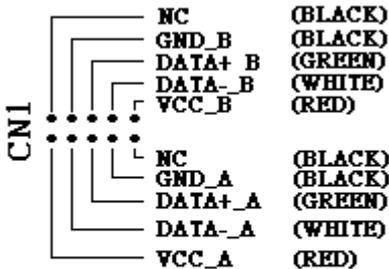
or during "POST", you need to hold the button for four seconds in order to turn off the system.

- **JP4: Clear CMOS**

Turn off the system and short pins 2-3 (JP4) to clear CMOS. Then short pins 1-2 before turning it on.

JP4	
1-2	Normal operation(Default).
2-3	for clearing CMOS Data.

- **CN1: USB Connector**



TM-AL100 USB