

## System Board Specifications

<b>CPU</b>	Supports Intel P54C - 75 MHz/90 MHz/100 MHz/120 MHz/133 MHz/150 MHz/166 MHz
<b>Cache Memory</b>	Supports 256K pipelined SRAM
<b>Main Memory</b>	Supports four memory banks using four 72-pin SIMM modules with 4M, 8M, 16M, 32M, 64M  Up to 256 Mbytes on-board memory
<b>Slots</b>	Three 32-bit PCI Bus slots and four 16-bit ISA bus slots in maximum combinations of four 16-bit ISA and three PCI slots  Supports three Master/Slave PCI bus slots
<b>On-Board Peripherals</b>	AT keyboard, or PS/2 keyboard and mouse  On-board peripherals include two serial port, one parallel port, FDC controller, and PCI IDE controller
<b>Battery</b>	3V on-board Lithium battery
<b>Dimensions</b>	26 x 22 cm x 4 layer PCB
<b>Mounting</b>	7 mounting holes

## System Board Layout

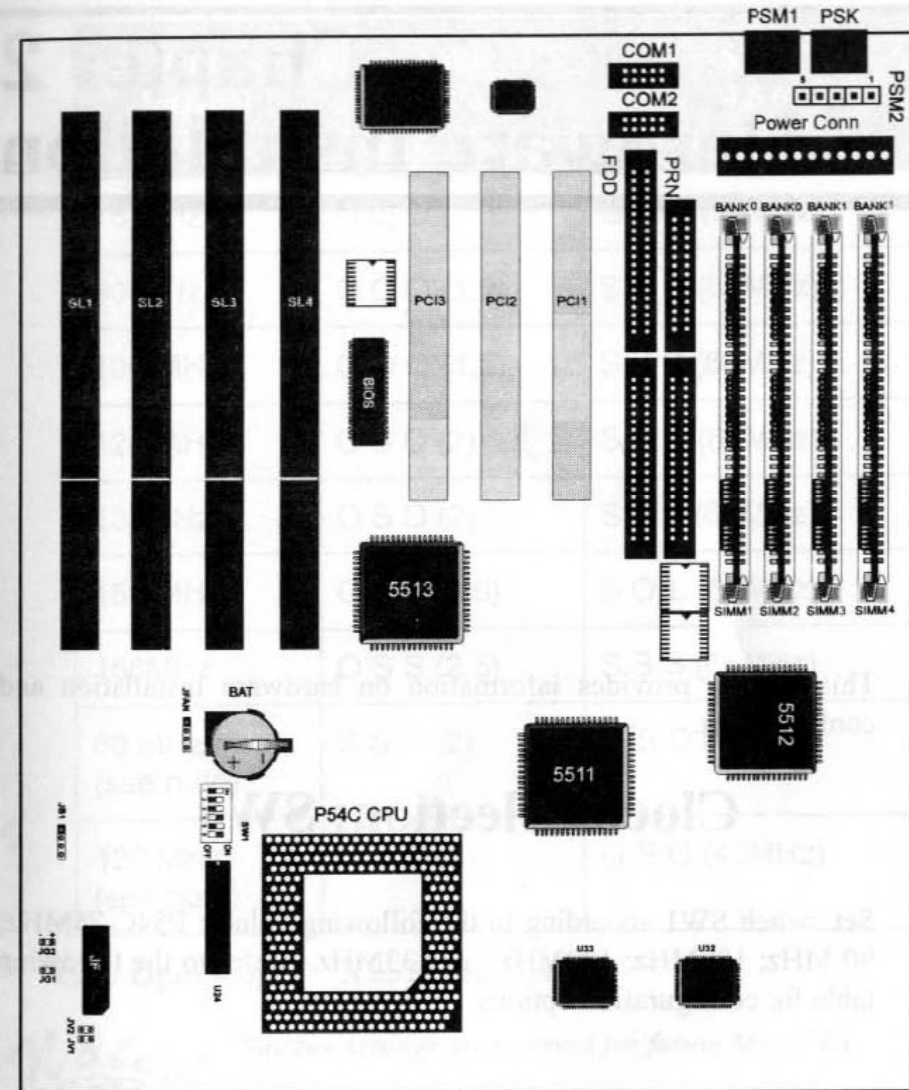


Figure 1-1: System Board Layout.

# Chapter 2

## Hardware Installation

This chapter provides information on hardware installation and configuration.


### Clock Selection: SW1

Set switch SW1 according to the following values: P54C-75MHz; 90 MHz; 100MHz; 120MHz ; or 133MHz. Refer to the following table for configuration options.

### SW1 setting

CPU Internal Clock	SW1 1 2 3 (Int/Ext Ratio)	SW1 4 5 6 (External Clock)
75 MHz	O O O (1.5)	O O S (50MHz)
90 MHz	O O O (1.5)	S O S (60MHz)
100 MHz	O O O (1.5)	S S S (66MHz)
120 MHz	O S O (2)	S O S (60MHz)
133MHz	O S O (2)	S S S (66MHz)
150 MHz	O S S (2.5)	S O S (60MHz)
166MHz	O S S (2.5)	S S S (66MHz)
80 MHz (see note)	S S O (2)	O S O (40MHz)
120 MHz (see note)	S O O (3)	O S O (40MHz)

O ⇒ Open = off      S ⇒ Short = on

*Note!*  The two settings are reserved for future M1 CPUs.

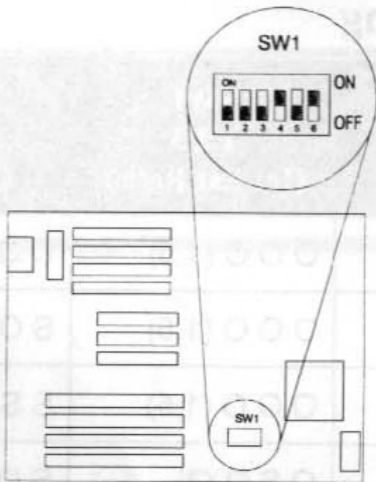


Figure 2-1 : SW1 Settings.

### CPU Voltage Selector: JV1

For jumper JV1 select either a 3.38 or 3.52 volt power source for the P54C.

CPU Voltage	JV1
3.38V	S
3.52V	O

O ⇒ Open

S ⇒ Short

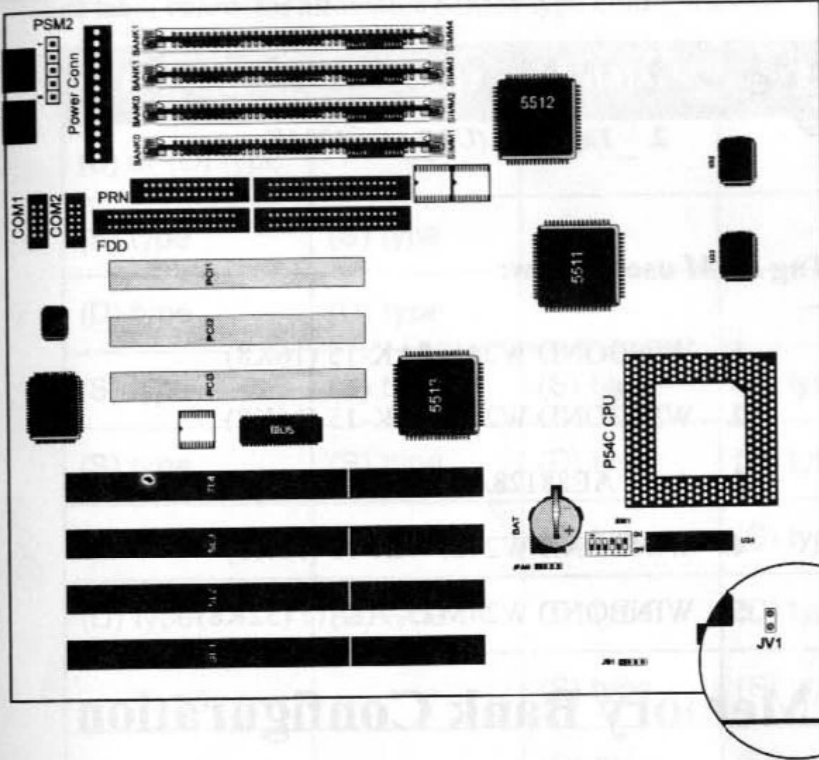


Figure 2-2 : CPU Voltage Selector JV1

**Note!**

1. Tag RAM (U24) uses 128AK.
2. Tag RAM (U24) uses 129AK.

**Tag RAM used below:**

1. WINBOND W24128AK-15 (16K8)
2. WINBOND W24129AK-15 (16K8)
3. Aster AE88128AK-15 (16K8)
4. WINBOND W24257AK-15 (32K8)
5. WINBOND W24M257AK-15 (32K8)

## Memory Bank Configuration

The system board supports four memory banks and provides four PIN, single in-line on-board memory module (SIMM) sockets, numbered ESIMM1 — ESIMM4.

Each socket accepts single density or double density (D)SIMM in the following sizes: 4M(S), 8M(D), 8M(S), 16M(S), 32M(D), 64M(S), and 128M(D).

You can use one 72 PIN SIMM (32 bits DRAM) in ESIMM1.

See table below for allowable SIMM type configurations.

ESIMM1	ESIMM2	ESIMM3	ESIMM4
(S) or (D) type	—	—	—
(S) type	(S) type	—	—
(D) type	(D) type	—	—
(S) type	(S) type	(S) type	(S) type
(S) type	(S) type	(D) type	(D) type
(D) type	(D) type	(S) type	(S) type
(D) type	(D) type	(D) type	(D) type
—	—	(S) type	(S) type
—	—	(D) type	(D) type

**Note!**

You must install two of the same type of EDO or FP in the SIMM sockets ESIMM1/ESIMM2 or ESIMM3/ESIMM4 when you mix the EDO and fast page DRAM. For example:

ESIMM1	ESIMM2	ESIMM3	ESIMM4
EDO	EDO	FP	FP
FP	FP	EDO	EDO

## Keyboard Connector ATK

The system board provides a standard five pin female DIN connector, ATK, for attaching a keyboard. You can plug a keyboard cable directly into this connector. See *Figure 1-1* for connector locations.

## PS/2 keyboard connector: PSK

PSK is a standard six-pin female mini-DIN Connector. You can plug a PS/2 keyboard cable directly into this connector.

## PS/2 mouse connector: PSM1, PSM2

You can attach a PS/2 mouse with a six-pin mini-DIN connector directly to the system board with this connector - PS2/M2. Alternatively, PS2/M is a five-pin male PIN connector. It connects with an extended Mouse cable for PIN to mini-DIN connections.



*Note!*

If a PS/2 mouse is used, the Jumper JP5 should be shorted on the system board to assign IRQ12 to the PS/2 mouse. Otherwise, the Interrupt Request IRQ12 will be available for other adapters.

## Case Connector Block: JF

The Turbo LED, Turbo Switch, Hardware Reset, Keylock, Power LED, Power Saving LED, Sleep Switch, Speaker and HDD LED all connect to the JF Connector Block as shown below. See figure 1-1 for JF's location.

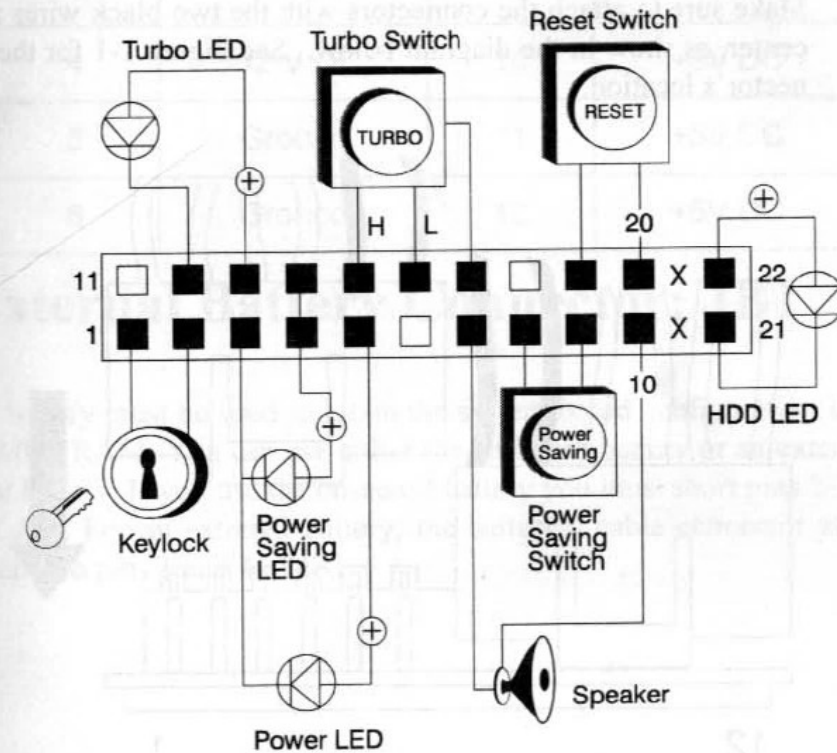


Figure 2-4: Case Connector Block - JF.

## Power Supply Connector: J 1

The power supply connector is a twelve-pin male connector. Dual connectors from the power supply can fit in only one direction. Make sure to attach the connectors with the two black wires at the center, as show in the diagram below. See Figure 1-1 for the connector's location.

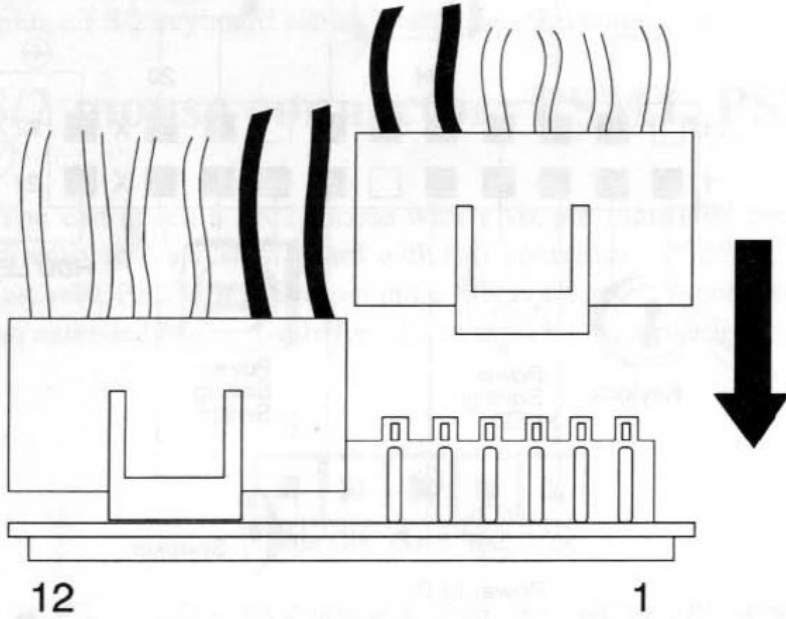


Figure 2-5: Attaching Power Supply Connectors.

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

## External Battery Connector: JB1

A battery must be used to retain the system board configuration in CMOS RAM. You can use either the on-board battery or an external battery. If you use the on-board battery you must short pins 2-3 of JB1. For an external battery, the battery's cable connector attaches to pins 1 and 4 of JB1.

You can also clear the system CMOS by shorting pins 3-4 for a brief moment and then placing the jumper cap back on pins 2-3. See Figure 1-1 for the connector's location.

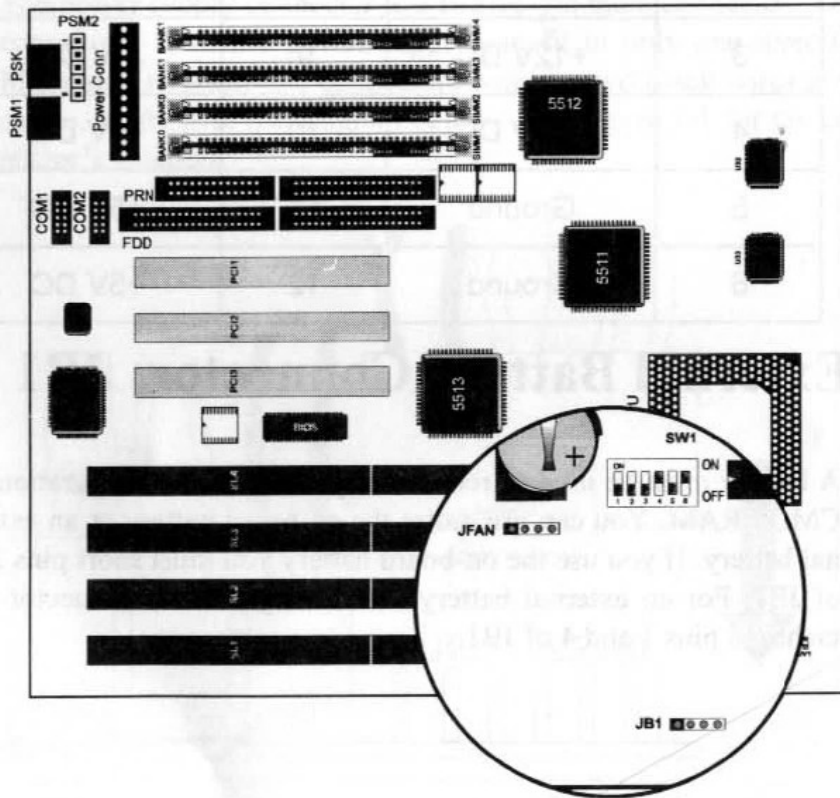


Figure 2-6: Setting the External Battery Connector - JB1.

## CPU Fan Connector: JFAN

This 4-pin connector connects a power source of +12V to your CPU's cooling fan. Please refer to *Figure 2-6*. Check the voltage range and polarity of your cooling fan before you connect it.

## Power Saving LED Connector: JG2

Attach an LED to this connector. When the system is not in power saving mode, this LED is off. When the system goes into power saving mode, this LED lights.



*You should enable the Power Management Mode to use this function.*

## Power Saving Switch Connector: JG1

Attach a power saving switch to this connector. When the switch is pressed, the system goes immediately into standby mode. Press any key and the system wakes up.



*You should enable the Power Management Mode to use this function.*