Quick Reference

Quick Jumpers Setup:

Note:

P54C: Pentium Processor

P55C: Pentium Processor with MMX Technology

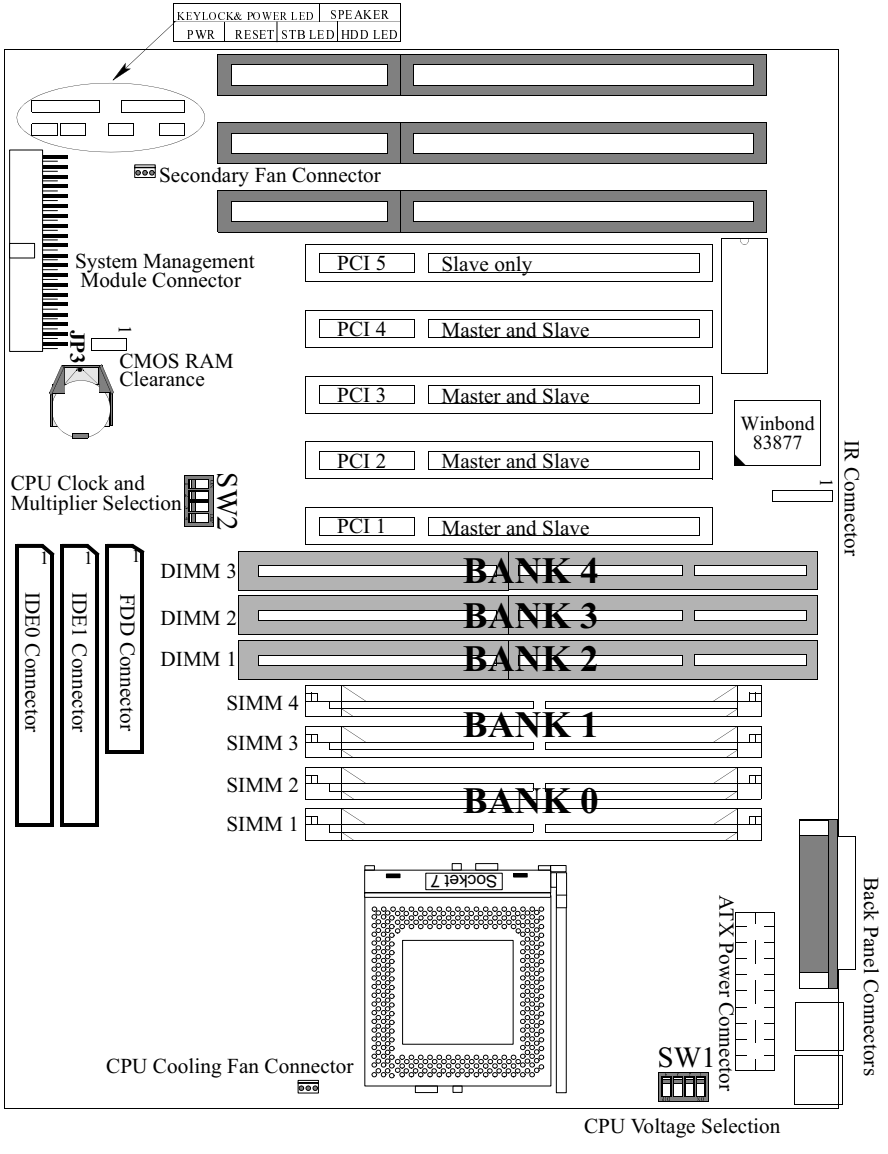
CPU Type/Speed	DIP Switch 1				DIP Switch 2			
	P1	P2	P3	P4	P1	P2	P3	P4
P54C 120MHz	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
P54C 133MHz	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
P54C 150MHz	OFF	ON	OFF	OFF	ON	ON	ON	OFF
P54C 166MHz	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
P54C 200MHz	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
P55C 166MHz 2.8V	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
P55C 200MHz 2.8V	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
P55C 233MHz 2.8V	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF

The P5F78 only supports 6x86L and 6x86MX dual power plane CPU

CPU Type/Speed	DIP Switch 1				DIP Switch 2			
	P1	P2	P3	P4	P1	P2	P3	P4
6x86L - P133+	OFF	ON	OFF	OFF	ON	OFF	ON	ON
6x86L - P150+	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
6x86L - P166+	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
6x86MX PR166 2.9V	OFF	OFF	ON	OFF	ON	ON	ON	OFF
6x86MX PR200 2.9V	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
6x86MX PR233 2.9V	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF

CPU Type/Speed	DIP Switch 1				DIP Switch 2			
	P1	P2	P3	P4	P1	P2	P3	P4
AMD-K5-PR120	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
AMD-K5-PR133	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
AMD-K5-PR150	OFF	ON	OFF	OFF	ON	ON	ON	OFF
AMD-K5-PR166	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
AMD-K6/166 2.9V	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
AMD-K6/200 2.9V	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
AMD-K6/233 3.2V	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF

P5F78 Mainboard DIP Switch and Jumper Location



Note: The PCI card with bus mastering capability such as SCSI or LAN will not work on PCI Slot 5

2.2.1 Setting DIP Switches

This section provides the DIP Switches settings for the P5F78 mainboard.

You need to configure DIP Switch to set the
1) CPU core to bus clock multiplier
2) CPU bus clock
3) CPU core and I/O voltage

CPU Core to Bus Clock Multiplier: The CPU internal core clock is equal to the "CPU Bus Clock" times the "CPU Core to Bus Clock Multiplier". For example, if the CPU Bus Clock is 66.6MHz and the CPU Core to Bus Multiplier is 3, the actual CPU core clock will be 66.6 x 3 = 200MHz.

CPU Bus Clock: The CPU Bus Clock is defined as the CPU input clock. For example: the CPU Bus Clock for Intel Pentium 100, 133 and 166 MHz are 66.6 MHz.

CPU Core and I/O Voltages: Two voltages V_{CORE} and $V_{I/O}$ are required for Pentium class CPUs. The V_{CORE} is used for CPU internal operation and the $V_{I/O}$ is used to supply the voltage for external interface.

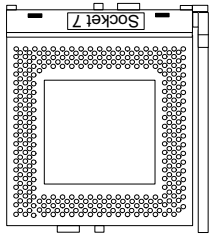
DIP Switch 2 (SW2) selects CPU clock and multiplier

Bus Clock	SW2-P3	SW2-P4
55MHz	ON	ON
60MHz	ON	OFF
66MHz	OFF	OFF

DIP Switch 1 (SW1) selects CPU operating voltage

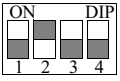
Voltage	SW1-P1	SW1-P2	SW1-P3	SW1-P4
3.3V/3.5V	X	X	X	X
3.2V	OFF	OFF	OFF	ON
2.9V	OFF	OFF	ON	OFF
2.8V	OFF	ON	OFF	OFF
2.5V	ON	OFF	OFF	OFF

X: Don't Care

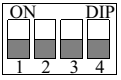


The P5F78 mainboard uses switching regulator design instead of a linear one to improve power efficiency. The Switching regulator can automatically switch to single voltage (V_{core} equal to $V_{I/O}$) supply or dual voltage (V_{core} not equal to $V_{I/O}$) supply depending on which type of CPU (single power plane or dual power plane) is installed on the mainboard. when a single power plane CPU is installed on the mainboard, the switching regulator will always supply 3.52 Volts for V_{core} and $V_{I/O}$ no matter how the DIP switch SW1 is set. The default SW1 is set to 2.8 V, this allows most CPUs be installed without changing the SW1 setting.

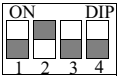
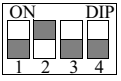
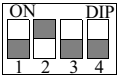
intel® Pentium CPU Clock/Voltage DIP Switch Setting

CPU Speed	SW1	SW2
Pentium -90 60MHz x1.5		
Pentium -100 66MHz x 1.5		
Pentium - 120 60MHz x 2		
Pentium -133 66MHz x 2		
Pentium - 150 60MHx x 2.5		
Pentium -166 66MHz x 2.5		
Pentium - 200 66MHz x 3		
MMX Pentium - 166 66MHz x 2.5		
MMX Pentium - 200 66MHz x 3		
MMX Pentium - 233 66MHz x 3.5		

AMD® CPU Clock/Voltage DIP Switch Setting

CPU Speed	SW1	SW2
AMD-K5-PR90 60MHz x 1.5		
AMD-K5-PR100 66MHz x 1.5		
AMD-K5-PR120 60MHz x 1.5		
AMD-K5-PR133 66MHz x 1.5		
AMD-K5-PR150 60MHz x 1.75		
AMD-K5-PR166 66MHz x 1.75		
AMD-K6/166 66MHz x 2.5		
AMD-K6/200 66MHz x 3		
AMD-K6/233 66MHz x 3.5		

Cyrix® IBM® 6x86L/6x86MX CPU clock/voltage DIP switch setting

CPU Speed	SW1	SW2
Cyrix/IBM 6x86L -P133+ 55MHz x 2		
Cyrix/IBM 6x86L -P150+ 60MHz x 2		
Cyrix/IBM 6x86L -P166+ 66MHz x 2		
Cyrix/IBM 6x86MX-PR166 60MHz x 2.5		
Cyrix/IBM 6x86MX -PR200 66MHz x 2.5		
Cyrix/IBM 6x86MX -PR233 66MHz x 3		

The P5F78 mainboard does not support Cyrix/IBM 6x86 (single power plane) CPU, only 6x86L and 6x86MX (dual power plane) CPUs are supported.