
SECTION 2.

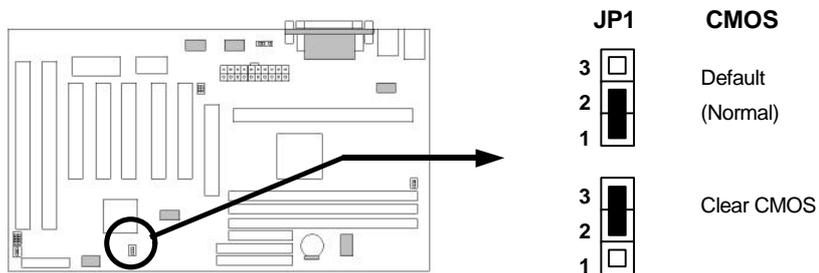
HARDWARE INSTALLATION

This section gives you a step-by-step procedure on how to install your system. Follow each section accordingly.

2-1 Jumper Settings

Please refer the following figures for the locations of the jumpers on the mainboard.

2-1.1 CMOS Clear Setting



To clear CMOS, please follow the steps below:

1. Power off the system and unplug the chassis AC power cord.
2. Short JP1 at pin 2-3 for few seconds.
3. Set JP1 back to its Normal position at pin 1-2.
4. Plug the AC power cord to the chassis.
5. Power on the system and load the BIOS setup default.

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2-1.2 CPU Type Setting

This mainboard supports jumperless CPU type setting, no jumper or switch is needed. Select your Intel Pentium II CPU under "CHIPSET FEATURES SETUP" in BIOS(CMOS) Setup Menu.

The Intel Pentium II CPU currently available in the market are listed as below:

CPU Type	CPU Clock Ratio	CPU Clock Frequency
Intel Pentium II 233	3.5x	66MHz
Intel Pentium II 266	4x	66MHz
Intel Pentium II 300	4.5x	66MHz
Intel Pentium II 333	5x	66MHz
Intel Pentium II 350	3.5x	100MHz
Intel Pentium II 400	4x	100MHz
Intel Pentium II 450	4.5x	100MHz

This mainboard also supports CPU over-clocking by adjusting the CPU Clock Frequency and CPU Clock Ratio under BIOS Setup.

$$\text{System Frequency} = \text{CPU Clock Ratio} * \text{CPU Clock Frequency}$$

The available settings are:

- CPU Clock Frequency

66 / 68.5 / 75.0 / 83.3 / 100 / 103 / 112 / 124 / 133MHz

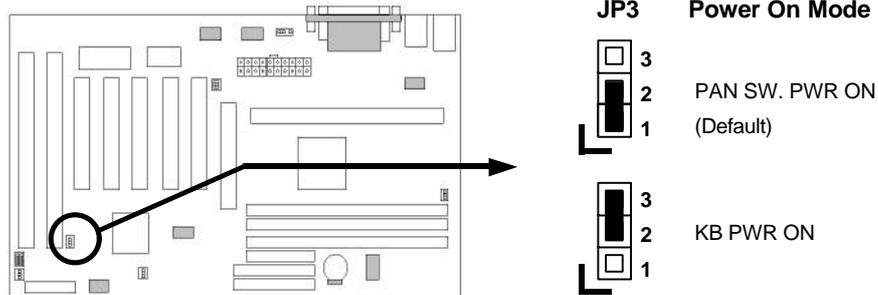
- CPU Clock Ratio

5x / 2x / 2.5x / 3x / 3.5x / 4x / 4.5x / 5x / 5.5x / 6x / 6.5x / 7x / 7.5x / 8x

Warning: Normally, Intel Pentium II CPU supports 66/100MHz, the other CPU Clock Frequency 75.0/83.3//103/112/124/133MHz are available only for internal test or end-user over-clocking testing, which may cause your system unstable or serious damage.

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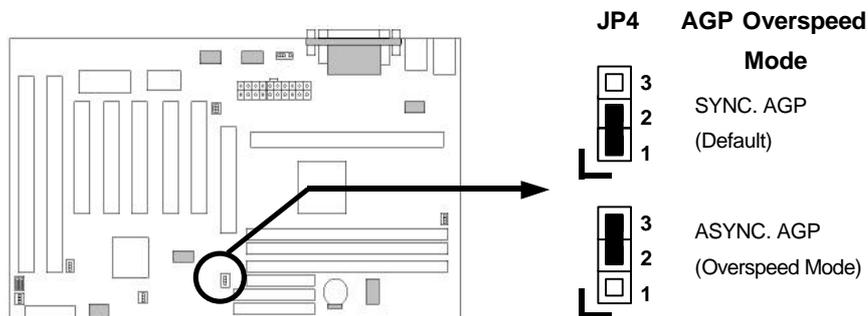
2-1.3 Power On Mode (Optional)



The mainboard supports two kinds of system power on mode, panel switch power on (**PAN SW. PWR ON**) mode and keyboard power on (**KB PWR ON**) mode. Set JP3 at pin 1-2 to use power switch/button to power on your system.

If you want to use the “Keyboard Power On” function, make sure you have a 300mA/+5VSB or above ATX power supply and the supporting mainboard BIOS. Set JP3 at pin 2-3 to enable the keyboard power on mode.

2-1.4 AGP Overspeed Mode (Optional)



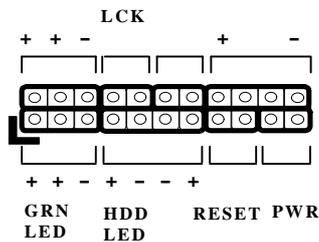
The mainboard supports AGP Overspeed Mode. Set JP3 at pin 2-3, **ASYN. AGP (Overspeed Mode)**, for better AGP performance if your system is running overclocking. Set JP3 at pin 1-2 for default AGP operation.

Note: The maximum clock of the AGP specification is 66MHz. If the system bus clock is larger than 66MHz, you can set this jumper to pin 2-3 to force AGP clock synchronize with bus clock. However, doing so may probably cause your system unstable or serious damage

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2-2 Connectors

2-2.1 Panel Connector



- **PWR LED** ATX Power LED Connector (3 pins)
- **KBLCK** Keyboard Lock Switch Connector (2 pins)
- **SLP** Suspend Switch Connector (2 pins)
- **SPEAKER** Chassis Speaker Connector (4 pins)
- **GRN LED** Green Status LED Connector (3 pins)
- **HDD LED** HDD LED Connector (4 pins)
- **RESET** Reset Switch Connector (2 pins)
- *** PWR ON** ATX Power Switch Connector and Suspend Switch Connector (2 pins)

* PWR ON: ATX Power Switch and Suspend Switch Connector

Attach the ATX power button or suspend switch cable to this connector.

In the ATX power system, this connector will be not only an ATX power button, but a suspend switch as well. Details are describes as below:

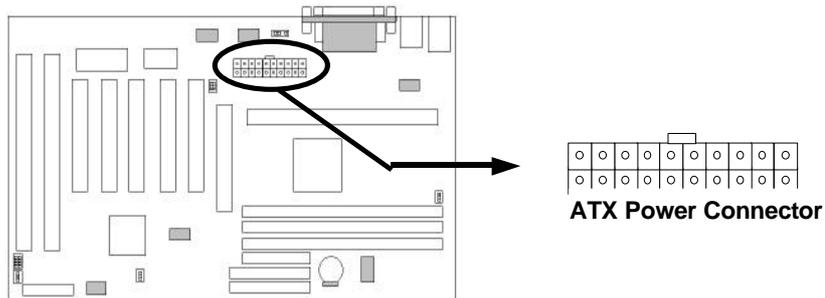
When the system is off, push the power button to turn the system on. When the system is on, push the power button rapidly within 4 seconds to switch the system to the suspend mode, and, by pushing and holding the button for more than 4 seconds, it will turn the system completely off. When the system is in the suspend mode, push the power button rapidly to turn the system on.

When the system is in suspend mode, the **GRN LED** will flash. And when the system is in normal working mode, the **GRN LED** will not work.

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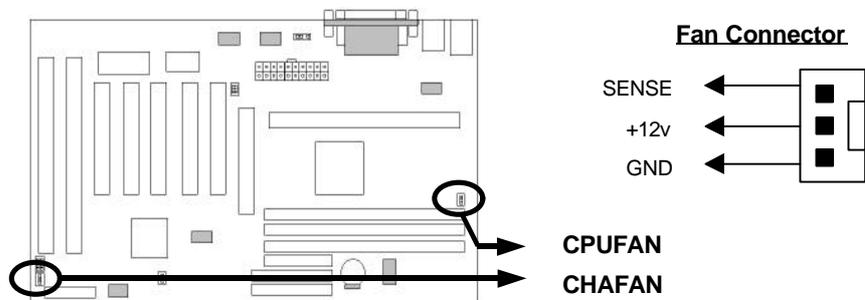
2-2.2 Power Connector

Connect the 20-pin ATX power supply cable to this power connector. Make sure the right plug-in direction and the power supply is off before connecting or disconnecting the power cable.



2-2.3 Fan Connectors

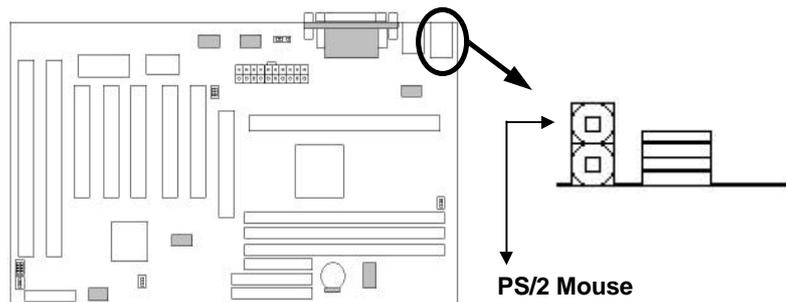
Connect the CPU and Chassis Fan cables to the fan connectors shown below. The fan connectors are marked as: **CPUFAN** and **CHAFAN** on the motherboard.



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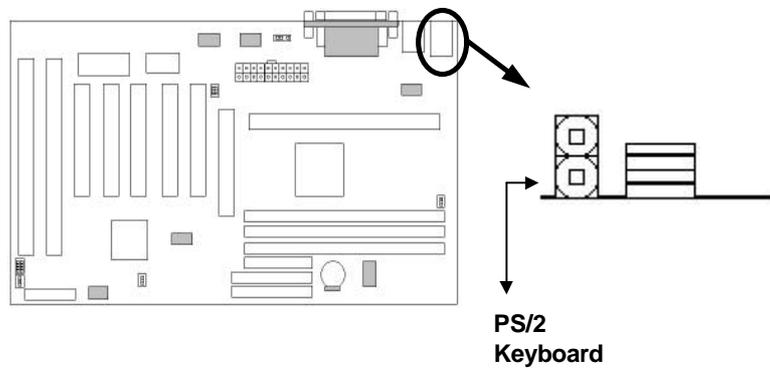
2-2.4 PS/2 Mouse Connector

Connect the PS/2 mouse to the onboard 6-pin Mini-Din connector marked as **MOUSE**.



2-2.5 Keyboard Connector

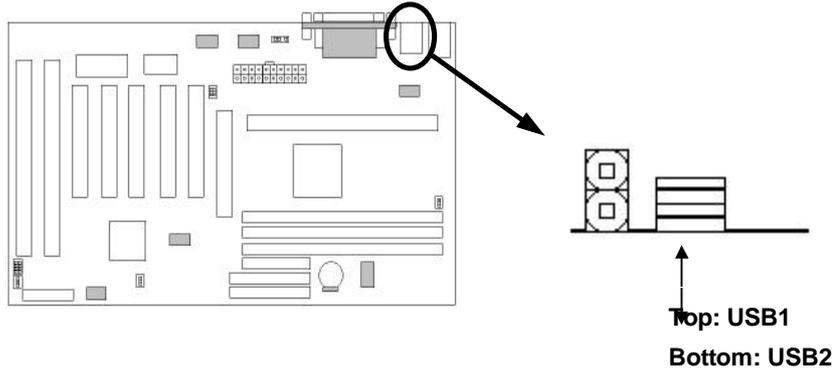
Connect the PS/2 keyboard to the onboard 6-pin Mini-Din connector marked as **KB**.



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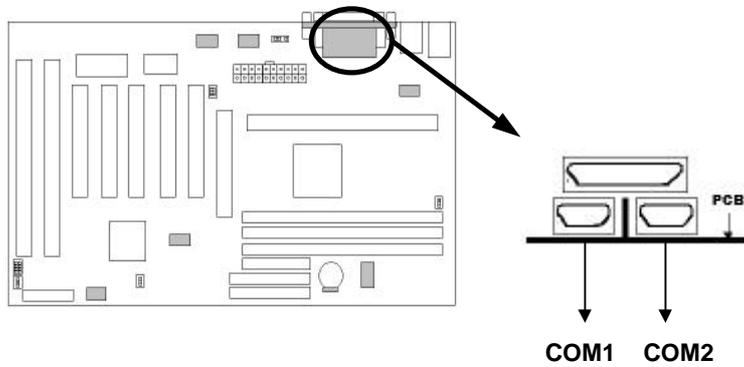
2-2.6 USB Device Connector

Connect your USB device(s) to the onboard USB connector marked as **USB**.



2-2.7 Serial Device(COM1/COM2) Connectors

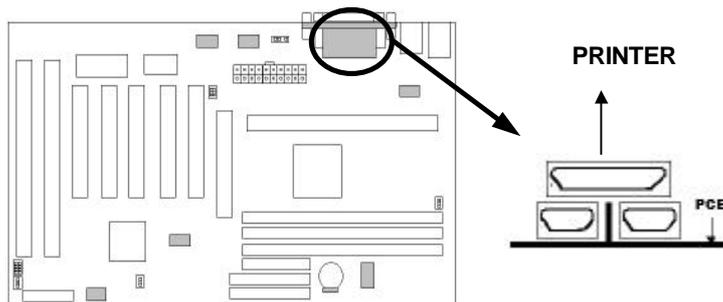
Connect your serial device(s) to the onboard 9-pin serial connectors marked as **COM1** and **COM2**.



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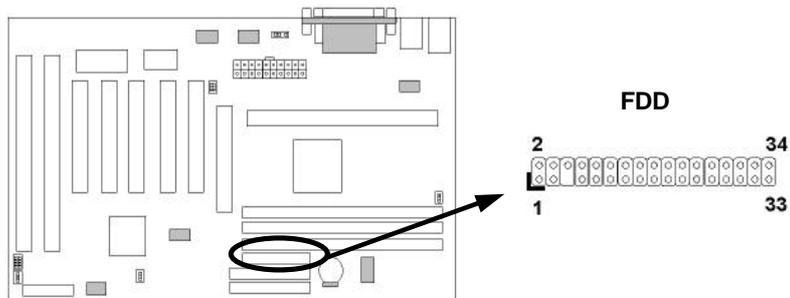
2-2.8 Printer Connector

Connect your local printer to the onboard 25-pin printer connector marked as **PRINTER**.



2-2.9 Floppy Drive Connector

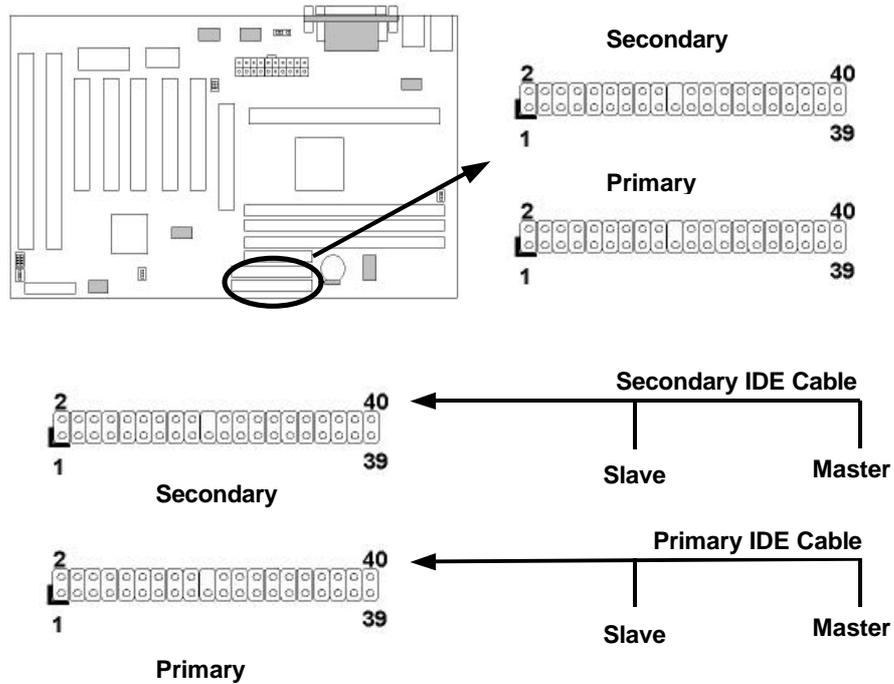
Connect the floppy drive cable to the onboard 34-pin floppy drive connector marked as **FDD**.



2-2.10 IDE Hard Disk and CD-ROM Connector

Connect your IDE devices to the onboard 40-pin IDE connectors marked as **Primary** and **Secondary**.

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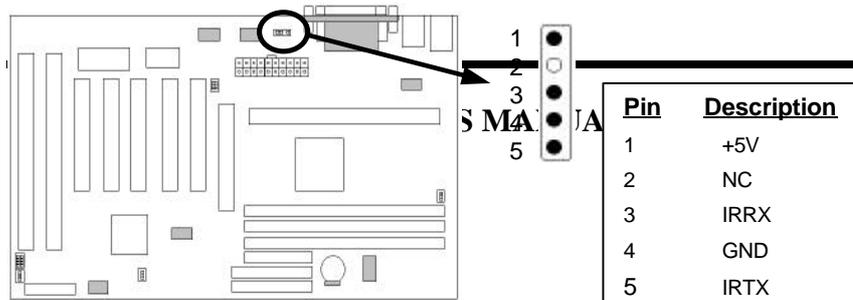


It is suggested that you connect the IDE devices to your IDE cables as the figure shown above. Each IDE channel, either Primary or Secondary, supports two IDE devices which must be set differently to master mode and slave mode.

(Refer to your hard disk and CD-ROM user s manual for detailed settings of IDE master and slave mode.)

2-2.11 IrDA Connector

Connect your IR device to the onboard IrDA connector marked as **IR**.

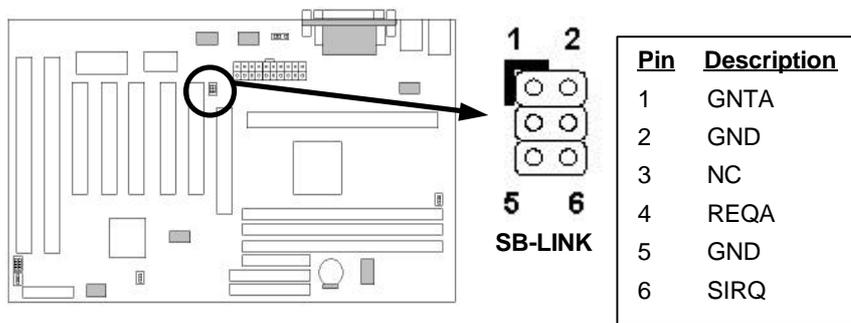


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IR

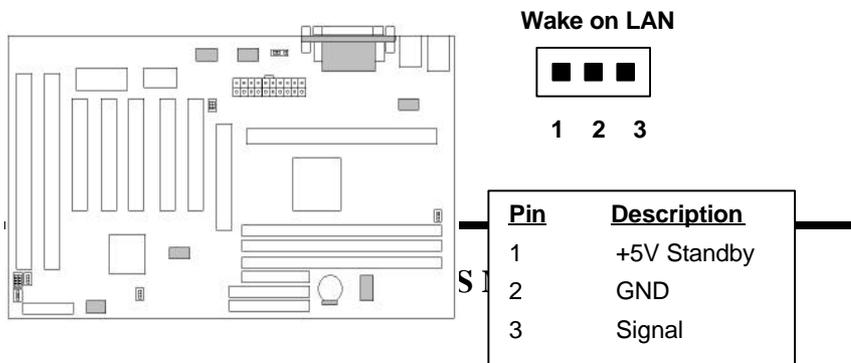
2-2.12 SB-LINK Connector (Optional)

If you have a Creative PCI sound card installed in your system, connect the sound card to this SB-LINK connector for compatibility issue under DOS environment.

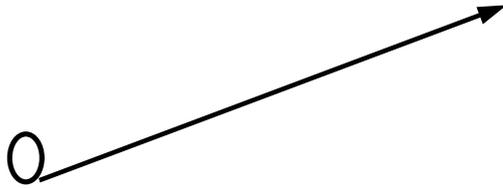


2-2.13 Wake on LAN Connector

This mainboard supports wake up on LAN function. To use this function, you need a Wake on LAN supported network card and software.

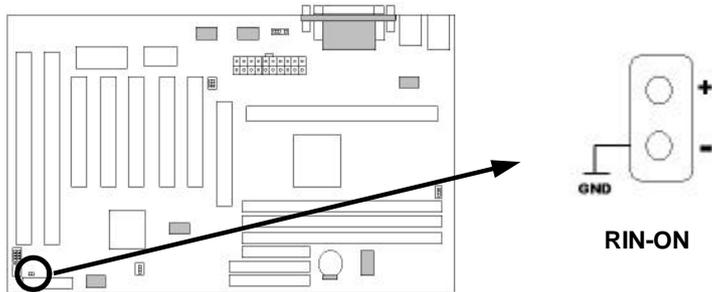


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2-2.14 Ring-On Connector

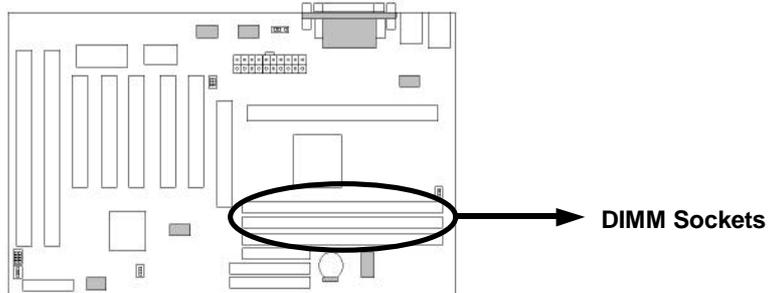
Connect the internal modem to this onboard RIN-ON connector to support the modem ring-on function. To use this function, you need a ring-on supported modem card.



2-3 System Memory Installation

There are 3 pcs 168-pin **DIMM** (Dual Inline Memory Module) sockets on the mainboard which support Synchronous DRAM and Registered SDRAM, and allow you install system memory maximum up to 768MB.

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2-3.1 Type

This mainboard supports Synchronous DRAM and Registered SDRAM. However, mixing SDRAM and Registered SDRAM is not allowed. Install one type only in your system for better compatibility.

2-3.2 Speed

The memory speed normally marked as: -15, -12, -10, -7, -8, PC-100.

The meaning is,

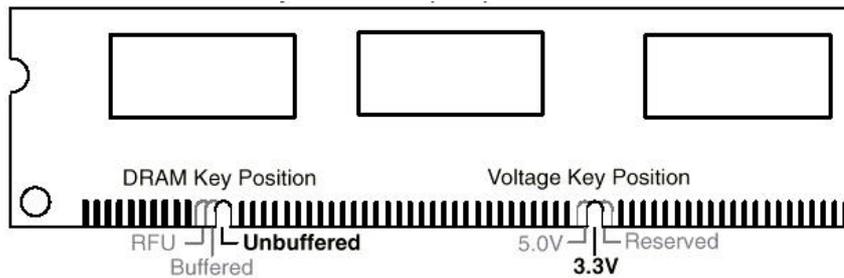
- 15 = 15ns, and the maximum clock is 66MHz
- 12 = 12ns, and the maximum clock is 83MHz
- 10 = 10ns, and the maximum clock is 100MHz
- 8 = 7ns, and the maximum clock is 125MHz
- 7 = 8ns, and the maximum clock is 142MHz
- PC-100 = New Intel specification for high memory speed
with 100MHz or above CPU Bus Clock.

This motherboard supports all the above memory speed. For better system performance and reliability, we suggest that you use PC-100 SDRAM if 100MHz or above CPU Bus Clock is used in your system.

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2-3.3 Buffered and Non-buffered

Only the non-buffered DIMM can be used in this mainboard.



The difference between buffered and non-buffered DIMM can be identified by the notch position shown above.

2-3.4 2-clock and 4-clock signal

Both 2-clock and 4-clock SDRAM DIMM supported by this mainboard.

2-3.5 Parity and Non-parity

This mainboard supports standard 64 bit (Non-parity) and 72 bit (Parity) DIMM modules.

2-3.6 Memory Auto detection by BIOS

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This mainboard BIOS can automatically detect the DIMM memory size and type, so you do not need to adjust any hardware or software settings. The maximum memory size supported up to 768MB.

2-3.7 Suggested SDRAM combination

This mainboard supports the following SDRAM combination.

DIMM Location	DIMM Size	Max. Memory Size
DIMM 1	SDRAM 8, 16, 32, 64 128, 256MB	256MB
DIMM 2	SDRAM 8, 16, 32, 64 128, 256MB	256MB
DIMM 3	SDRAM 8, 16, 32, 64 128, 256MB	256MB
	Total System Memory	768MB

Total Memory Size = DIMM1 + DIMM2 + DIMM3