P5MVP4 MAIN BOARD

User's Guide

Rev： 1.1

Date：August, 1999

Contents

Chapter 1 Introduction

1-1 Features

CPU

• Intel Pentium Processor, Pentium Processor with MMX technology, AMD K5/K6/K6-II/K6-III, Cyrix 6x86L/MII, & IDE C6 operating at 120~500MHz with 321 ZIF socket 7 or Super 7 provides scalability to accept faster Processors in the future.

Chipsets

• VIA Apollo MVP4 used is a socket-7 system logic. The North Bridge (VT82C501) with an integrated 2D/3D Graphics accelerator and advanced ECC Memory controller supporting PC100 SDRAM. The “Super South” South Bridge (VT82C686A) is a high integration and PC98 Compliant PCI-to-ISA Bridge with integrated Sound Blaster/DirectSound AC97 Audio, Super I/O,UltraDMA-33/66 Master Mode PCI-EIDE controller, USB controller, Keyboard controller and hardware monitoring.

Main Memory

- Provide 3 DIMM sockets to support 4MB/8MB/16MB/32MB/64MB/128MB/256MB SDRAM/EDO memory modules up to 768MB.
- ECC or EC for DRAM integrity.
- PC100 Compliant SDRAM interface.

Cache Memory

- On board 512k L2 Cache (Pipelined Burst SRAM) support.

VGA

- On board VGA header support. Used VIA Apollo MVP4 integrated AGP 2D/3D Graphics accelerator and share system memory (UMA) technology for VGA frame buffer.
- Windows 95 OSR-2 vxd and integrated Windows 98/NT driver support.

Audio

- On board Sound Blaster Pro Hardware and Direct Sound Ready AC97 Digital Audio Controller support. (VIA chipset integrated)
- Three phone jacks (Line in, Line out, Mic in) and CD-IN header support.
- Direct game port and MIDI port interface.
- Complete software driver for Windows-95m Windows-98 and Windows NT.

I/O Function

- PS/2 mouse header and AT keyboard connector; Universal Serial Bus (USB) interface with two USB connector.
- Support two serial ports with 16550 fast UART compatible, one parallel with EPP and ECP capabilities and one floppy disk driver interface.

IDE

- Dual channel master mode PCI supporting four Enhanced IDE devices.
- Transfer rate up to 33MB/sec to cover PIO mode and UltraDMA-33 interface.
- Increased reliability using UltraDMA-66 transfer protocols.

- Support ATAPI compliant devices including DVD devices.
- Complete software driver support.

BIOS

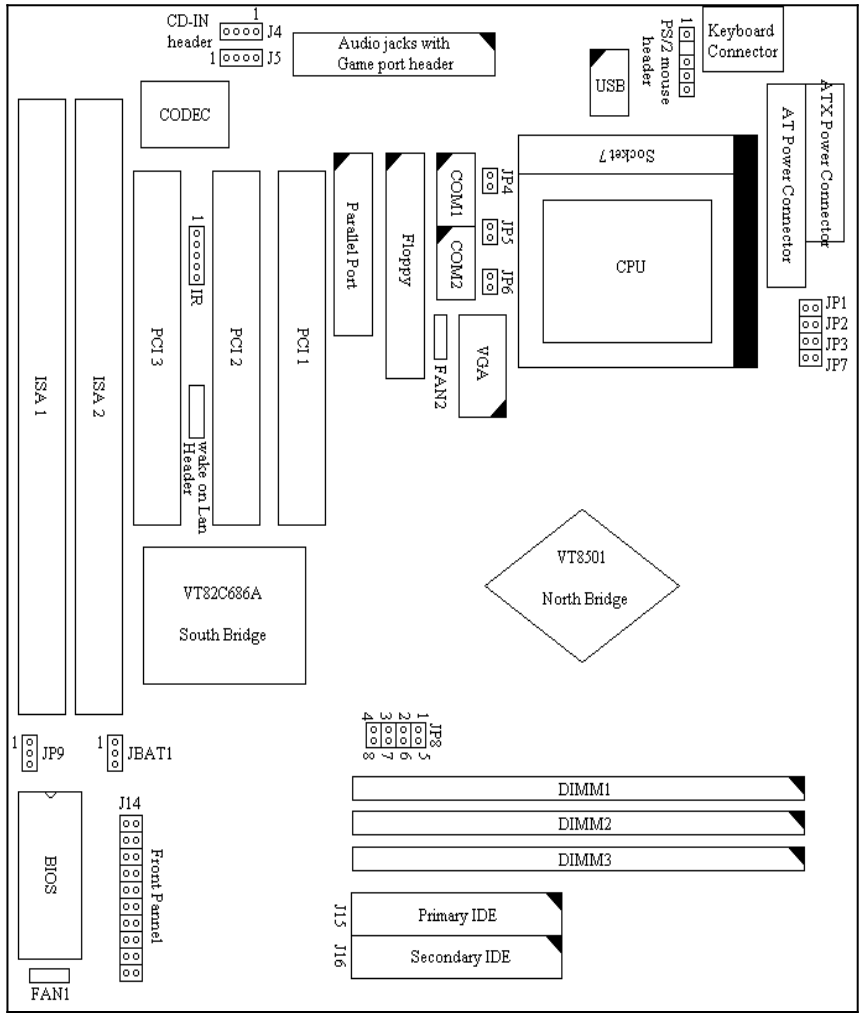
- Award Anti-Boot Virus & PnP BIOS with ACPI, AGP, DMI and green function support.
- Support 2.88MB, Iomega ZIP-100M and IDE LS-120 FDD bootable from floppy, HDD, CD-ROM, SCSI, Network, LS-120, ZIP or others.

Others

- Supports two 16 bit ISA slots and three 32 bit PCI Slots.
- ATX and Baby AT power connector option.
- Temperature, Voltage and Fan Speed Monitoring.
- Baby AT form factor. The board dimension is 220mm*230mm.
- Software Power-off control function in Win95 and Win98 with ATX power supply.

1-2 MainBoard Layout

The following figure is the layout of P5MVP4.


CD-IN header
J4
J5
Audio jacks with Game port header
USB
PS/2 mouse header
Keyboard Connector
ATX Power Connector
AT Power Connector
CODEC
Socket 7
CPU
COM1
COM2
JP4
JP5
JP6
Parallel Port
Floppy
VGA
FAN2
IR
wake on Lan Header
PCI 3
PCI 2
PCI 1
ISA 1
ISA 2
JP1
JP2
JP3
JP7
VT8501
North Bridge
VT82C686A
South Bridge
JP8
JP9
JBAT1
DIMM1
DIMM2
DIMM3
BIOS
J14
Front Pannel
Primary IDE
Secondary IDE
J15
J16
FAN1

Chapter 2 Hardware Setup

2-1 Connectors Location and Description

CN1 : Keyboard Connector

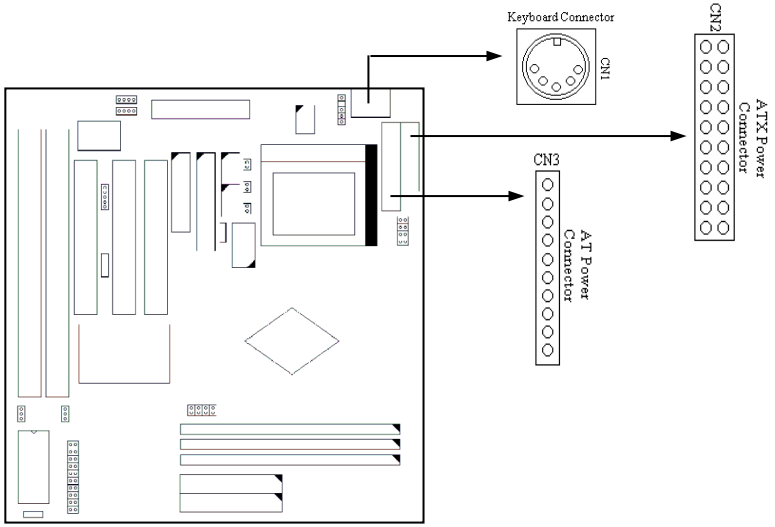
A 5-pin female DIN keyboard connector is located at the upper right corner of the mainboard. Plug the keyboard jack directly in to this connector.

CN2 : ATX Power Connector

This type of connector already support the remote ON/OFF and soft-off.

CN3 : AT Power Connector

A standard 12-pin AT or PS/2 connector. Be sure to attach the Connectors with the two black wires at center.



J1 : PS/2 Mouse Connector

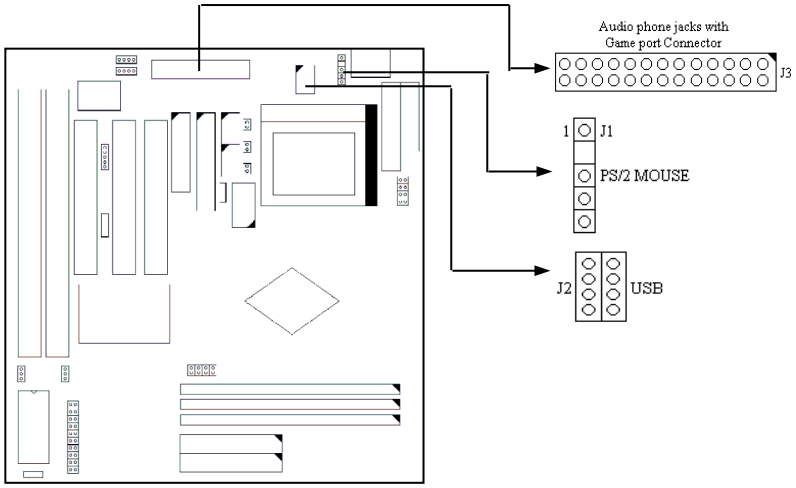
The mainboard provides a 5-pin connector and a PS/2 mouse cable. You can plug a PS.2 mouse to PS/2 mouse cable.

J2 : USB Connector

A 2*4 pin header support two USB port. Attach the cable (option) to provide connection to USB device.

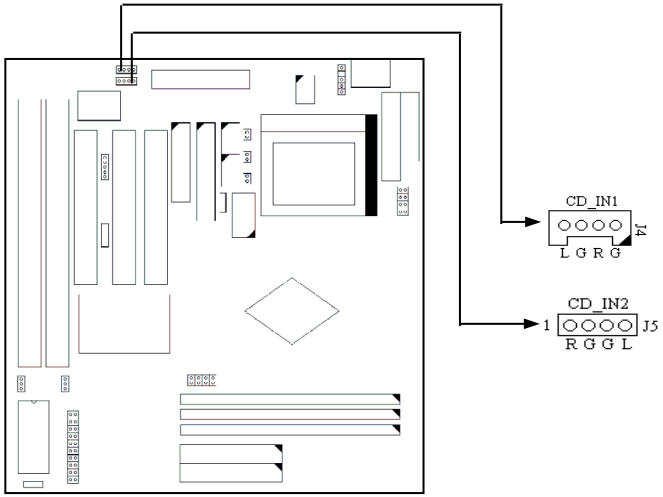
J3 : Audio phone jacks with Game port connector

Attach a Audio cable connection with J3 to support Line-in, Line-out and game port device.



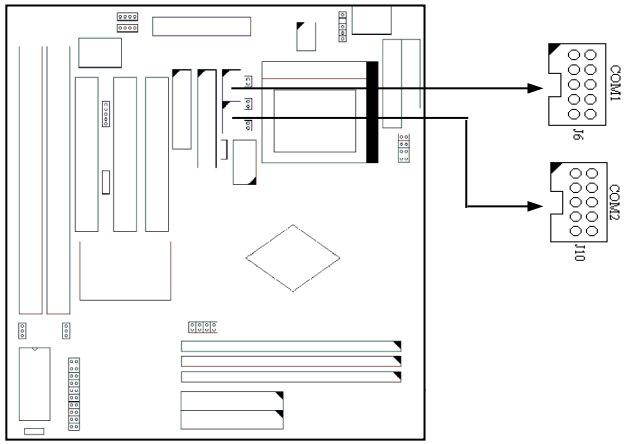
J4, J5 : CD-IN Header

Provide two difference dimension to support CD-IN function. The J4 pitch is 2.0mm, J5 is 2.54mm.



J6, J10 : COM1/COM2 Serial Port Connectors

The mainboard has two serial ports COM1 and COM2. These two ports are 16550A fully compatible high speed.
Communication ports that send/receive 16 bytes FIFOs. Attach COM ports cable directly into these connectors to support mouse or modem device.



J7 : Floppy Disk Connector

The mainboard also provide a standard floppy disk connector, that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. You can attach a floppy disk cable directly to this connector.

J8 : Parallel Port Connector

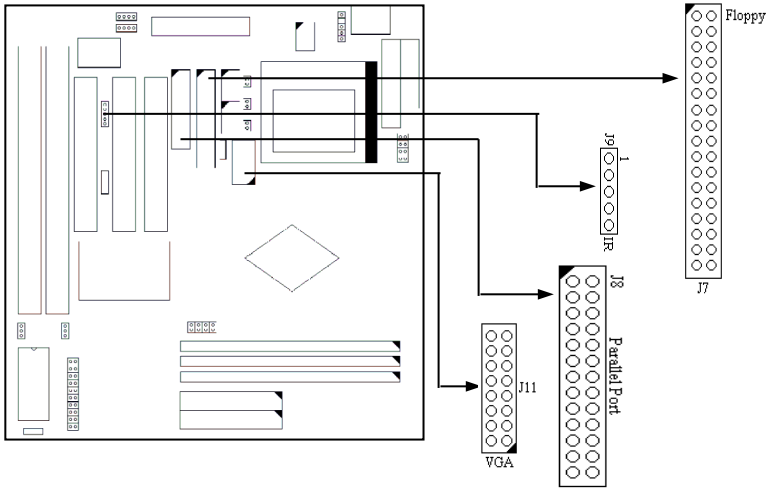
The mainboard provides a connector and attach a cable for LPT A parallel port is a standard printer port that also supports Enhanced Parallel Port (EPP) and Extended capabilities Parallel Port (ECP).

J9 : IR Port Connector

The system board provides a 5 pin header as an option module for wireless transmitting and receiving.

J11 : VGA Connector

This on board AGP 2D/3D Graphics Accelerator design also provides a connector and VGA cable to directly connection to Monitor.

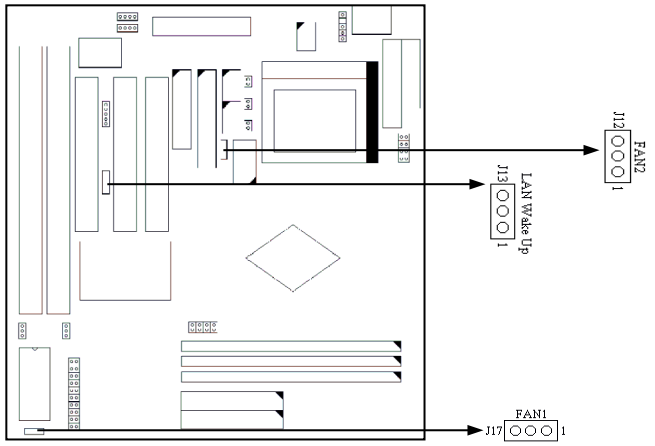


J12, J17 : CPU Fan (FAN2) and chassis Fan (FAN1) connectors

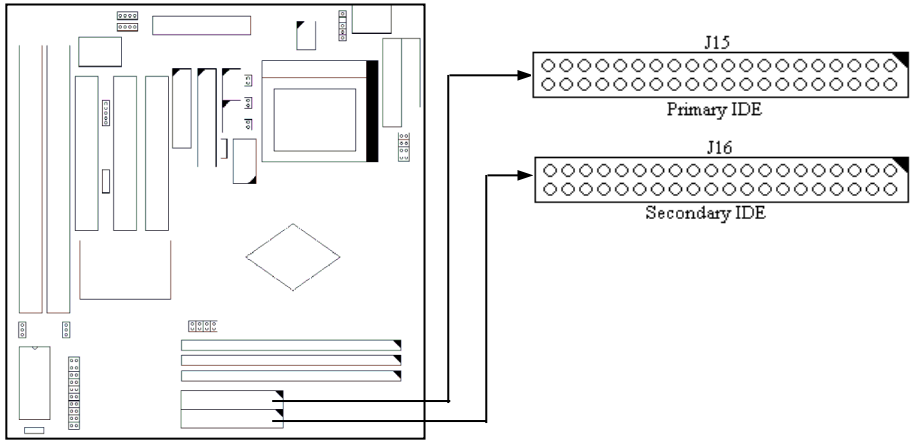
Provide two Fan connectors to support CPU and chassis cooling Fan. The J12 FAN2 is CPU Fan and J17 FAN1 is chassis Fan. These connectors also could be control and provides speed monitoring function.

J13 : LAN WAKE UP HEADER

Provides a LAN WAKE UP header to support wake up on lane function.



J15, J16 : Hard Disk Connector

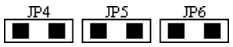
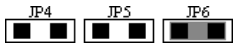


J14 : Front Panel connector

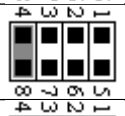
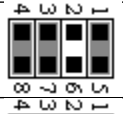
The Power LED, Sleep Mode LED, Standby Button, Speaker, HDD LED, Rest button and Power On button (for ATX power only) are all ground in J14 connector block for easy installation. The figure as below show the detail :

PW-LED : The Power LED is always lit while the system power is on.

JP4, JP5, JP6 : CPU

Rate	Jumper	Rate	Jumper
2.5x		4.5x	
3.0x		5.0x	
2.0x		4.0x	
1.5x/3.5x		5.5x	

JP8 : Bus Clock Select

Bus Clock	JP8	Bus Clock	JP8
60MHz		100MHz	
66MHz		105MHz	
75MHz		115MHz	
83MHz		120MHz	

95MHz		**124MHz**