Chapter 1

INTRODUCTION

The Baby-AT VI14 mainboard is a high-performance personal computer mainboard. This mainboard supports Intel® Pentium® processor/Pentium® processor with MMX™ technology, Cyrix®/IBM® 6x86/6x86L/6x86MX/MII, AMD® K5/K6/K6-2, and IDT™ Winchip processors. The mainboard also supports four 32-bit PCI (Peripheral Component Interconnect) Local Bus standard slots.

The mainboard uses the highly integrated VIA® 598AT chipset to support the AGP/PCI/ISA and Green standards, and to provide the Host/AGP bridge. The VIA® 586B chipset integrates all system control functions such as ACPI (Advanced Configuration and Power Interface). The ACPI provides more Energy Saving Features for the OSPM(OS Direct Power Management) function. The VIA® 586B chipset also improves the IDE transfer rate by supporting Ultra DMA/33 IDE that transfer data at the rate of 33MB/s.

The mainboard uses the programmable synchronous DC/DC controller for advanced processors. Synchronous operation allows the elimination of heat sinks in many applications. The mainboard also provides 22 output voltage from 1.80V to 3.50V in 100mV increments.

The mainboard also supports the System Hardware Monitor Controller as an optional function. This function includes: CPU fan control, CPU temperature detect and protect & system voltage detect.

1.1 Mainboard Features

Processor

- Socket 7 supports Intel® Pentium® processor/Pentium® processor with MMX™ technology.
- The Cyrix®/IBM® 6x86/6x86L/6x86MX/MII, AMD® K5/K6/K6-2 and IDT™ Winchip processors are also supported.

Chipset

- VIA® MVP3 chipset.

Clock Generator

- 66/75/83.3/95/100/112/124/133MHz clocks are supported.

Cache Memory

- Supports 1MB (Pipelined Burst SRAM) L2 Cache.

Main Memory

- Supports a maximum memory size of 768MB.
- Supports six memory banks using two 168-pin DIMM and two 72-pin SIMM.
- DIMM
  - supports 3.3v EDO(Extended Data Output) and SDRAM.
  - support Unbuffered DIMM.

Slots

- One AGP(Accelerated Graphics Port) slot.
  - AGP specification compliant
  - AGP 66/133MHz 3.3v device support
- Four 32-bit Master PCI Bus slots and two 16-bit ISA bus slots (wherein one PCI/ISA is shared).
- Supports 3.3v/5v PCI bus Interface.

On-Board IDE

- An IDE controller provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA/33 operation modes.
- Can connect up to four IDE devices.

On-Board Peripherals

- On-Board Peripherals include:
  - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
  - 2 serial ports (COMA + COMB)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 2 USB ports
  - 1 IrDA connector for SIR.
- Switching Regulator
  - provides CPU with voltage range from 1.80v to 3.52v.

BIOS

- The mainboard BIOS provides "Plug & Play" BIOS which detects the peripheral devices and expansion cards of the board automatically.
- The mainboard provides a Desktop Management Interface (DMI) function which records your mainboard specifications.

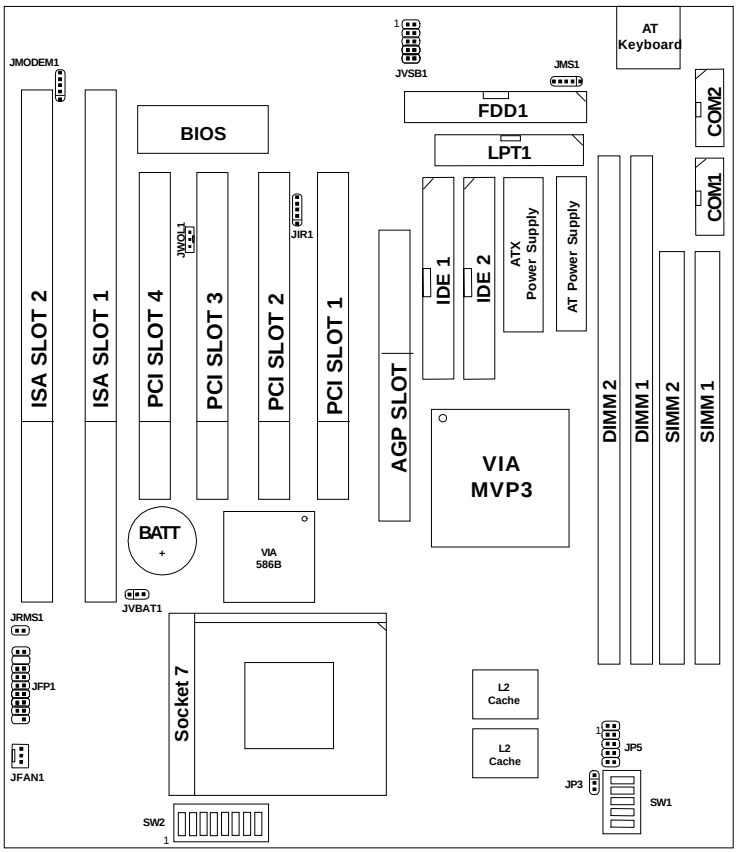
Dimension

- Baby-AT Form Factor : 24.4cm(L) x 22.2cm(W) x 4 layers PCB

Mounting

- 5 mounting holes.

1.2 Mainboard Layout



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