Chapter 1

INTRODUCTION

The MICRO ATX mainboard is a high-performance personal computer mainboard based on the Intel® Pentium® II/III processor. This mainboard features the leading edge Creative® ES1373 PCI technology in audio. The Intel® Pentium® II/III processor supports MMX™ (Multimedia Extension) technology.

The mainboard uses the highly integrated VIA VT82C693/VT82C693A chipset to support the Host/AGP bridge. The VIA VT82C596B 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 VT82C596B chipset also improves the IDE transfer rate by supporting Ultra DMA/33/66 IDE that transfers data at the rate of 33/66MB/s.

The mainboard also supports the System Hardware Monitor Controller. Its functions include: CPU /power supply/chassis fan revolution detect, CPU/ system voltage monitor, system temperature monitor, and chassis intrusion detect(optional).

1.1 Mainboard Features

CPU
- Slot 1 for Intel® Pentium® II/Pentium® III/Celeron™ processor.
- Supports 233MHz, 266MHz, 300MHz, 333MHz, 350MHz, 400MHz, 450MHz, 500MHz, 550MHz, 600MHz and faster.

Chipset
- VIA VT82C693/VT82C693A/VT82C596B

Clock Generator
- 66, 100 and 133 MHz (VT82C693A only) clocks are supported

Main Memory
- Supports four memory banks using two 168-pin DIMM.
- Supports a maximum memory size 512MB
- Supports ECC(1-bit Error Code Correct) function.
- Supports 3.3v SDRAM DIMM.

Slots
- One AGP slot.
- Three 32-bit Master PCI Bus slots and one 16-bit ISA bus slots wherein one shared slot can be used as ISA or PCI.
- Supports 3.3v/5v PCI bus Interface.

On-Board IDE
- An IDE controller on the VIA VT82C596B Chipset provides IDE HDD/ CD-ROM with PIO, Bus Master and Ultra DMA/33/66 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 USB ports
  - 2 serial port (COM 1) and (COM 2)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 1 IrDA connector for SIR.

Sound
- Creative® ES1373
  - Running on PCI BUS.
  - 64 Voice and AC3 Capable (ES1373 only)
  - Support Direct Sound and Direct Sound 3D
  - AC97' Compliant

I/O Chip
- Winbond® multi super I/O W83977TF
  - 2M bps fast tape drive, IRQ sharing
  - Device Power Management
  - Real time clock (256 bytes RAM)
  - 8042-based keyboard controller (support PS/2 mouse)

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.
- ACPI(Advanced Configuration and Power Interface) feature.

Dimension
- MICRO ATX Form Factor : 24.4cm(L) x 19.2cm(W) x 4 layers PCB

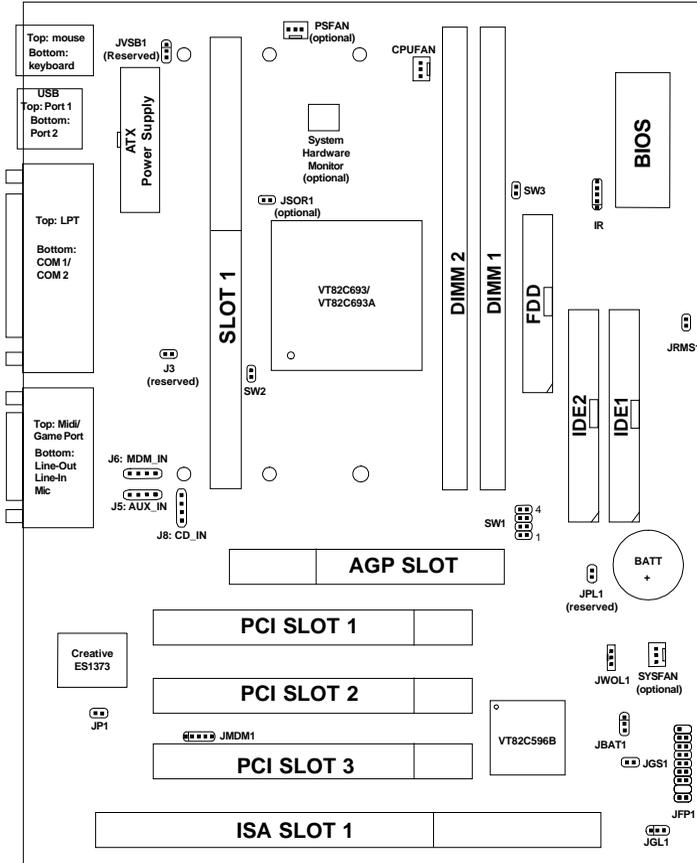**Mounting**
- 6 mounting holes.

System Hardware Monitor (Optional)
- CPU/Power Supply/Chassis Fan Revolution Detect
- CPU Fan Control (the fan will automatically stop when the system enters suspend mode)
- System Voltage Detect
- CPU Overheat Warning.
- Display Actual Current Voltage

Other Features
- Keyboard Password Wake-Up (reserved)
- LAN Wake-Up
- Internal/External Modem Wake-Up

1.2 Mainboard Layout

MS-6156 MICRO ATX Mainboard