Chapter 1

INTRODUCTION

The ATX BX2 mainboard is a high-performance dual-processor personal computer mainboard based on the Intel® Pentium® II processor. The Intel® Pentium® II processor supports MMX™(Multimedia Extension) technology.

The mainboard uses the highly integrated Intel® 82440BX chipset to support the PCI/ISA and Green standards, and to provide the Host/AGP bridge. The 82371EB 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 Intel® 82371EB chipset also improves the IDE transfer rate by supporting Ultra DMA/33 IDE that transfers data at the rate of 33MB/s.

The mainboard also supports the System Hardware Monitor Controller as an optional function. This function includes: CPU /power supply/chassis fan revolution detect, CPU/system voltage monitor, system temperature monitor, and chassis intrusion detect(optional).

1.1 Mainboard Features

CPU
- Two Slot 1 for Intel® Pentium® II processor.
- Supports FSB 66MHz for 233MHz, 266MHz, 300MHz, 333MHz and higher.
        FSB 100MHz for 350MHz, 400MHz, 450MHz, 500MHz and higher

Chipset
- Intel® 82440BX AGP chipset.

Clock Generator
- 66.6MHz/100MHz clocks are supported.

Main Memory
- Supports eight memory banks using four 168-pin unbuffered DIMM sockets.
- Supports a maximum memory size of 1GB for Registered SDRAM and 512MB for Unbuffered SDRAM.
- Supports ECC(1- bit Error Code Correct) and EC(Multiple-Bit Error Detect) function.

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

On-Board IDE
- An IDE controller on the Intel® 82371EB PCI Chipset provides IDE HDD/ CD-ROM with PIO, Bus Master and Ultra DMA/33 operation modes.
- Can connect up to four IDE devices.

On-Board Dual Channel Ultra Wide SCSI
● Adaptec® 7895 Dual Channel Ultra Wide chipset.

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) or 1 serial port and 1 IrDA port.
    - 1 parallel port supports SPP/EPP/ECP mode
    - 2 USB ports

Switching Voltage Regulator
● On-board switching mode DC-DC Step Down Regulator.
● Conforms to Intel VRM ver 8.1 specifications.
● Over-Voltage and Over-Current protection.

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
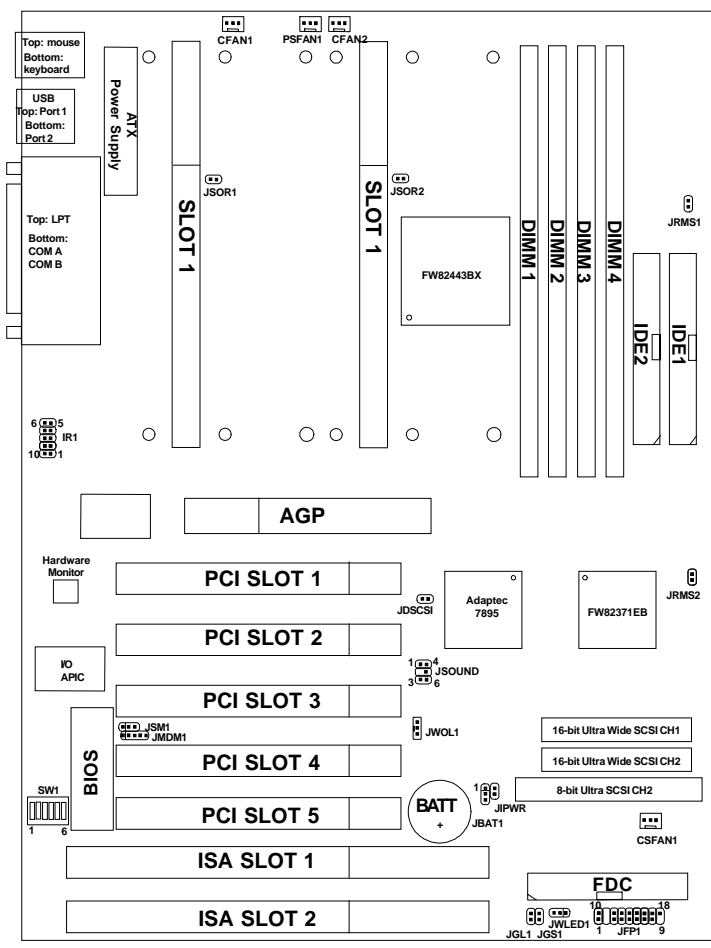● ATX form factor: 30cm(L) x 25cm(W) x 6 layers PCB

Mounting
● 9 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

1.2 Mainboard Layout

MS-6120