

## **Chapter 1**

### **INTRODUCTION**

The MICRO ATX BX7 mainboard is a high-performance personal computer mainboard based on the Intel® Pentium® II processor. This mainboard combines leading edge AGP ATI® 3D RAGE PRO/RAGE PRO Turbo technology in graphics and Creative® ES1371/ES1373(reserved) PCI technology in audio. The Intel® Pentium® II processor supports MMX™ (Multimedia Extension) technology.

The mainboard uses the highly integrated Intel® 82443BX AGP chipset to support the PCI/ISA and Green standards, and to provide the Host/AGP bridge. The Intel® 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. 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/Celeron™ processor.
- Supports 233MHz, 266MHz, 300MHz, 333MHz, 350MHz, 400MHz, 450MHz, and faster.

### **Chipset**

- Intel® 82443BX/PIIX4E chipset.

### **Clock Generator**

- 66/68/75/83/100/112/133MHz clocks are supported.

### **Main Memory**

- Supports four memory banks using two 168-pin unbuffered DIMM.
- Supports a maximum memory size of 256MB (8M x 8) or 512MB (16M x 4) registered DIMM only.
- Supports ECC(1-bit Error Code Correct) function.
- Supports 3.3v SDRAM DIMM.

### **Slots**

- Three 32-bit Master PCI Bus slots and one 16-bit ISA bus slots.
- Supports 3.3v/5v PCI bus Interface.

### **On-Board IDE**

- An IDE controller on the Intel® PIIX4E 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 Peripherals**

- On-Board Peripherals include:
    - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
    - 1 serial port (COM A) + 1 serial connector (COM B)
    - 1 parallel port supports SPP/EPP/ECP mode
    - 2 USB ports
    - 1 IrDA connector for SIR.
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**VGA**

- ATI® 3D RAGE PRO/RAGE PRO TURBO 2x
  - Running on AGP BUS.
  - Onboard 8MB SDRAM.
  - 3D Acceleration.
  - AGP 2x mode (133MHz) support pipelined and sideband protocols.

**Sound**

- Creative® ES1371/ES1373 (reserved)
  - 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 W83977F
  - 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.

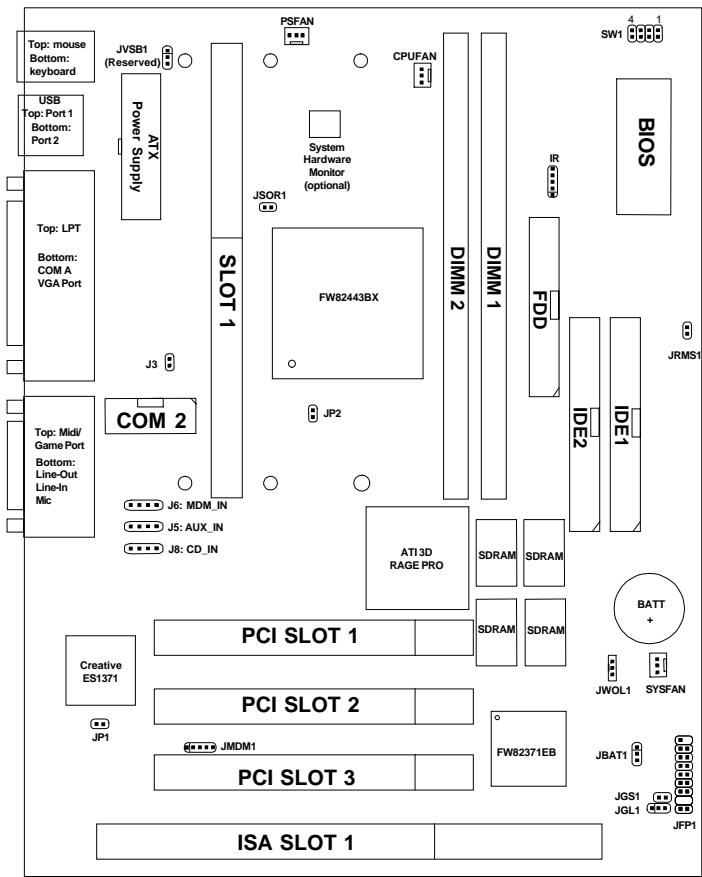
**System Hardware Monitor (optional)**

- 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-6147 MICRO ATX BX7 Mainboard