Chapter 1

INTRODUCTION

The ATX BX10 mainboard is a high-performance personal computer mainboard based on the Intel® Socket 370 processor. The Intel® Socket 370 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. Its functions include: CPU /power supply/chassis fan revolution detect, CPU/ system voltage monitor, system temperature monitor, chassis intrusion detect and TOP TECH II as an optional function.

1.1 Mainboard Features

CPU
- Socket 370 for Intel® Celeron™ processor
- Supports 300MHz, 333MHz, 366MHz, 400MHz, 433MHz, 466MHz and faster.

Chipset
- Intel® 82443BX/PIIX4E chipset.

FSB (Front Side Bus)
- 66.6MHz, 100MHz and faster clocks are supported.

Main Memory
- Supports six memory banks using three 168-pin unbuffered DIMM.
- Supports a maximum memory size of 384MB (8M x 8) or 768MB (16M x 4) registered DIMM only.
- Supports ECC(1-bit Error Code Correct) function.
- Supports 3.3v SDRAM DIMM.

Slots
- One AGP slot.
    - AGP specification compliant
    - AGP 66/133MHz 3.3v device support
- Five 32-bit Master PCI Bus slots and two 16-bit ISA Bus slots (wherein one PCI/ISA slot is shared).
  *See Chapter 2-26 for further details on PCI 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.
- 2 serial port (COM A) + (COM B)
- 1 parallel port supports SPP/EPP/ECP mode
- 2 USB ports
- 1 IrDA connector for SIR.
- 1 Audio port (Line_Out, Line_In, and Mic_In Jack) and 1 MIDI/
  Game Port

Audio (Optional)
● Creative® ES1373 Audio Controller
- 64 Voice wavetable synthesizer
- DOS Game Compatibility
- AC3 Capable
- AC97' Compliant

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
● ATX Form Factor : 30cm(L) x 19.2cm(W) x 4 layers PCB
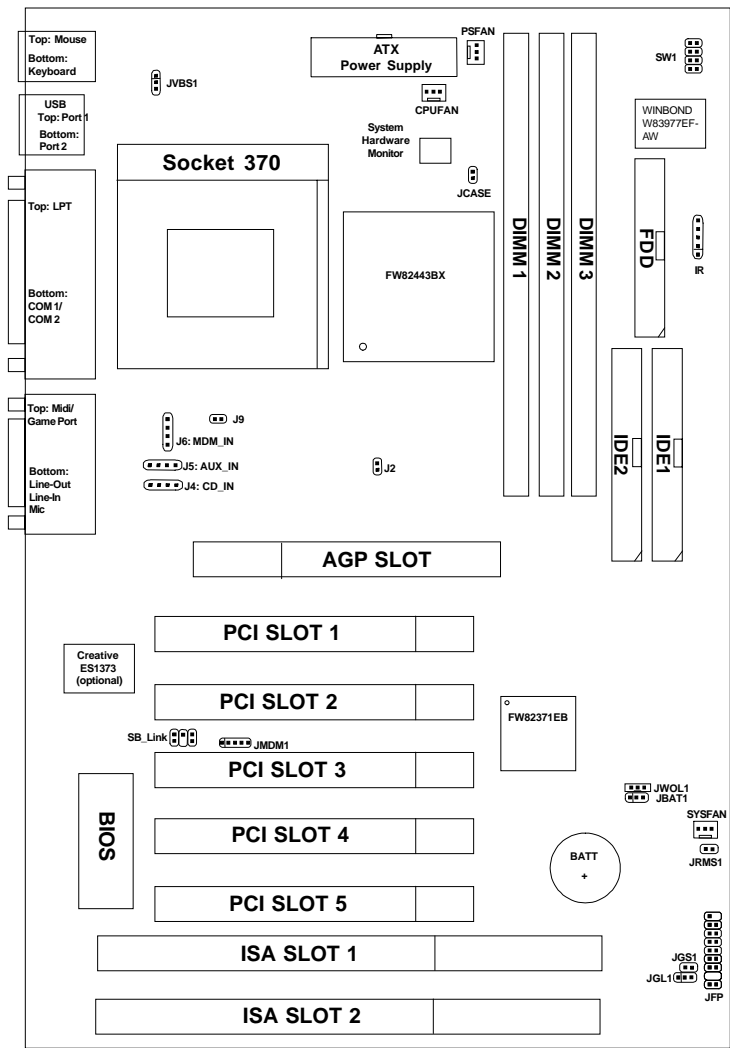
Mounting
● 6 mounting holes.

System Hardware Monitor
- CPU/Power Supply/Chassis Fan Revolution Detect
- CPU Fan Control detects the CPU temperature, then determine the FAN SPEED, which utilizes PC Alert program (the fan will automatically stop when the system enters suspend mode)
- System Voltage Detect
- Added 5VSB and Battery Voltage Detect
- CPU Overheat Warning.
- Display Actual Current Voltage
- Chassis Intrusion

Other Features
- Keyboard Password Wake-Up
- LAN Wake-Up
- Internal/External Modem Wake-Up
- SB_Link Ready

1.2 Mainboard Layout

Top: Mouse
Bottom: Keyboard

JVBS1

ATX Power Supply

PSFAN

SW1

USB
Top: Port 1
Bottom: Port 2

CPUFAN

WINBOND W83977EF-AW

Socket 370

System Hardware Monitor

Top: LPT

JCASE

Bottom: COM 1/ COM 2

FW82443BX

DIMM 1

DIMM 2

DIMM 3

FDD

IR

Top: Midi/ Game Port

J9

J6: MDM_IN

Bottom: Line-Out Line-In Mic

J5: AUX_IN

J4: CD_IN

J2

IDE2

IDE1

AGP SLOT

PCI SLOT 1

Creative ES1373 (optional)

PCI SLOT 2

FW82371EB

SB_Link

JMDM1

PCI SLOT 3

JWOL1
JBAT1

SYSFAN

BIOS

PCI SLOT 4

BATT
+

JRMS1

PCI SLOT 5

ISA SLOT 1

JGS1
JGL1

JFP

ISA SLOT 2

MS-6153 ATX BX10 Mainboard