

## **Chapter 1**

### **INTRODUCTION**

The MICRO ATX WH1 mainboard is a high-performance computer mainboard based on Intel® 810 chipset. The MS-6137 is designed for the Intel® Celeron™ (PPGA) processor for inexpensive business/personal desktop markets.

The Intel® 810 chipset is the first generation Integrated Graphics chipset for the Intel® Celeron™ processor. The graphics accelerator architecture consists of dedicated multi-media engines executing in parallel to deliver high performance 3D, 2D, and motion compensation video capabilities. An integrated centralized memory arbiter allocates memory bandwidth to multiple system agents to optimize system memory utilization. A new chipset component interconnect, the hub interface, is designed into the Intel 810 chipset to provide an efficient communication channel between the memory controller hub and I/O hub controller.

The Intel® 810 chipset contains three core components: the Graphics and Memory Controller Hub (GMCH/GMCH0), the I/O Controller Hub (IHO/ICH) and the Firmware Hub (FWH). The GMCH integrates a 66/100MHz, P6 family system bus controller, integrates 2D/3D graphics accelerator, 100MHz SDRAM controller and high-speed hub interface for communication with the IHO/ICH. The IHO/ICH integrates an Ultra ATA/33(IHO) or Ultra ATA/66(ICH) controller, USB host controller, LPC interface controller, FWH interface controller, PCI interface controller, AC'97 digital controller and a hub interface for communication with the GMCH/GMCH0.

The Intel® 82802 Firmware Hub (FWH) component is part of the Intel® 810 chipset. The FWH is key to enabling future security and manageability infrastructure for the PC platform.

## **1.1 Mainboard Features**

### **CPU**

- Support Socket370 for Intel® Celeron™ processor.
- Support 300MHz, 333MHz, 366MHz, 400MHz, 433MHz, 466Mhz , 500Mhz or higher

### **Chipset**

- Intel® 810 (GMCH) chipset. (421 BGA)
  - Integrated Graphics Controller
  - Intel DDM Architecture
  - SDRAM memory Independent of System Bus
- Intel® ICH chipset. (241 BGA)
  - AC'97 Controller Integrated
  - 2 full IDE channels, up to ATA66
  - Low pin count interface for SIO

### **Front Side Bus (FSB)**

- 66/100MHz clocks are supported.

### **Main Memory**

- Support two 168-pin DIMM sockets.
- Support a maximum memory size of 256MB(64-bit technology) or 512MB(128-bit technology) SDRAM.

### **Slots**

- One AMR(Audio Modem Riser) and one PTI(PanelLink TV-Out Interface)
- Three 32-bit Master PCI Bus slots and one 16-bit ISA bus slot(optional).
- Support 3.3v/5v PCI bus Interface.

### **On-Board IDE**

- An IDE controller on the ICH chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA/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 serial port (COMA + COMB)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 2 USB ports and 1 USB connector(shared)
  - 1 IrDA connector for SIR
  - 1 VGA port

**Video**

- GMCH chip integrated
- 2D/3D Graphics
- Onboard 4MB Display Cache (optional)

**Audio**

- ICH chip integrated
- AC97 2.0 Interface

**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**

- Micro ATX Form Factor

**Mounting**

- 6 mounting holes.

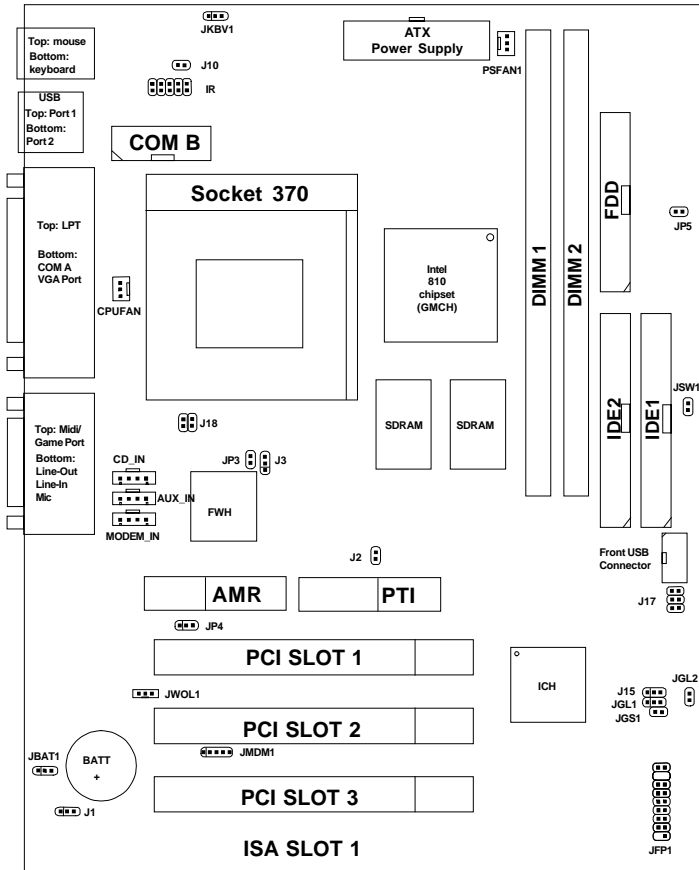
**System Hardware Monitor**

- CPU/Power Supply 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-6137 MICRO ATX WH1 Mainboard