Chapter 1

INTRODUCTION

The Micro ATX IR2 mainboard is a high-performance personal computer mainboard based on the AMD Athlon® processor. This mainboard provides onboard Creative® ES1373 PCI technology in audio. The AMD Athlon® processor is the newest microprocessor in the AMD K86™ family of microprocessors.

The mainboard uses the highly integrated AMD® 751 system controller and AMD 756 peripheral controller. The AMD-751 system controller features: the S2k system interface supports a 100Mhz clock and double-data rate (DDR) transfers, the 33MHz 32-bit bus interface supports up to three masters, the 66MHz AGP 1.0 compliant interface supports 2x data transfer mode, and High Speed memory designed to support a 100MHz SDRAM (PC-100-compatible-DIMM) with serial presence detect(PSD). The AMD-756 peripheral bus controllers feature an integrated ISA bus controller, an enhanced IDE controller with Ultra DMA-66 support, and a keyboard/mouse controller.

The MS-6191 ATX IR2 mainboard is one of our system board to implement the AMD-750 chipset (AMD-751 and AMD-756), which supports a single Slot A for AMD Athlon® processor.

1.1 Mainboard Features

CPU
- Slot A for AMD® Athlon™ processor.
- Support 500MHz, 550MHz, 600MHz, or higher processor

Chipset
- AMD® Irongate™ chipset. (Northbridge)
  - 200MHz EV6 System Interface speed
  - 100MHz SDRAM
  - 1x/2x AGP
  - Status - Silicon currently in bring-up
- AMD® 756™ (Viper) chipset. (Southbridge)
  - OHCI USB
  - APIC
  - ACPI Power Management

Front Side Bus (FSB)
- 100MHz clock is supported.

Main Memory
- Supports two memory banks using two 168-pin unbuffered DIMM sockets.
- Supports a maximum memory size of 512MB for SDRAM.
- Supports 3.3v PC100 SDRAM DIMM.

Slots
- One AGP (Accelerated Graphics Port) slot.
  - AGP specification compliant
  - AGP 66/133MHz 3.3v device support
- Three 32-bit Master PCI Bus slots.
- Supports 3.3v/5v PCI bus Interface.
- PCI 2.2 Compliant

On-Board IDE
- An IDE controller on the AMD® 756™ Viper chipset provides IDE HDD/ CD-ROM with PIO 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 ports (COMA + COMB)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 4 USB ports
  - 1 IrDA connector for SIR.

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.
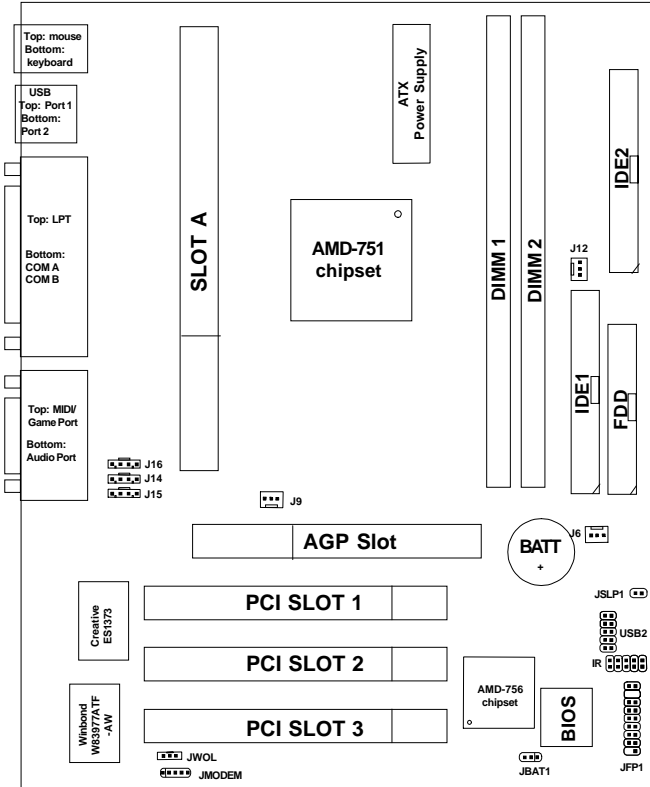
Dimension
- Micro ATX Form Factor

Mounting
- 6 mounting holes.

1.2 Mainboard Layout

MS-6191 Micro ATX IR2 Mainboard