

## **Chapter 1**

### **INTRODUCTION**

The MS-6316 ATX IR3 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.

The Micro ATX IR3 mainboard is a high-performance personal computer mainboard based on the AMD Athlon® processor. This mainboard provides onboard Creative® ES1373 PCI technology in audio and onboard nVIDIA TNT2 technology in video. 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 (SPD). 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.

## **1.1 Mainboard Features**

### **CPU**

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

### **Chipset**

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

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

- 100MHz clock is supported. (200MHz Internal System Bus)

### **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**

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

**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.
  - 1 serial ports (COMA)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 4 USB ports
  - 1 IrDA connector for SIR.

**Video**

- nVIDIA Riva TNT2 M64
  - Running on AGP BUS.
  - Onboard 32MB SDRAM.
  - 3D Acceleration.

**Audio**

- Creative CT1373.
  - 64 Voice WaveTable Synthesizer
  - Sound Library of over 4000 different sounds
  - Support Microsoft Direct Sound, Direct Sound 3D, Direct Music, and A3DAPI.

**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.

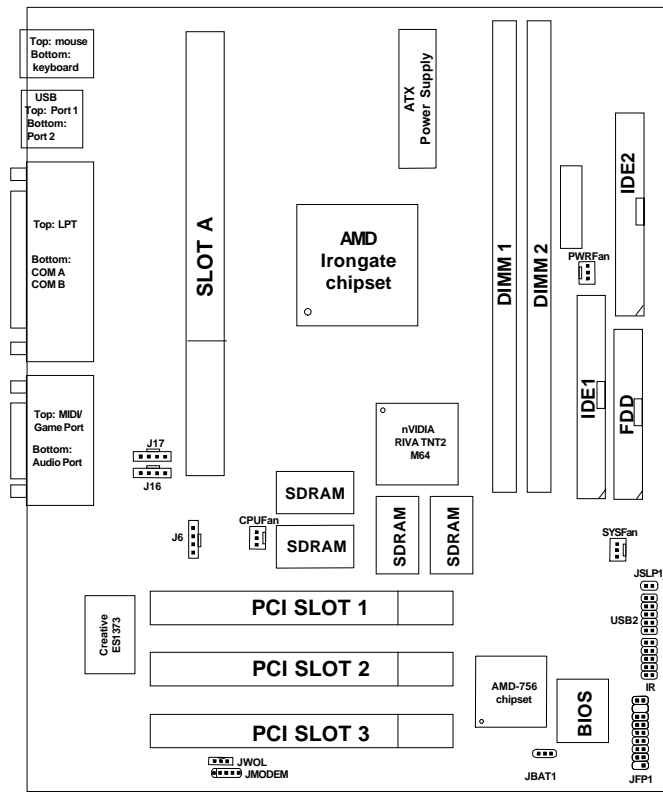
**Dimension**

- Micro ATX Form Factor:24.4cm(L) x 19.2cm(W) x 6 layers PCB

**Mounting**

- 6 mounting holes.

1.2 Mainboard Layout



MS-6316 Micro ATX IR3 Mainboard