

Chapter 1

INTRODUCTION

The MICRO ATX AL12 mainboard is a high-performance personal computer mainboard. This mainboard supports Intel® Pentium® processor/Pentium® processor with MMX™ technology, AMD® K5/K6/K6-2, and Cyrix® 6x86/6x86L/6x86MX/MII processors. This mainboard combines leading edge AGP ATI® 3D 128VR technology in graphics and Creative® ES1373 PCI Enhanced technology in audio. The mainboard also supports three 32-bit PCI (Peripheral Component Interconnect) Local Bus standard slots.

The mainboard uses the highly integrated Aladdin® 5 chipset to support the PCI/ISA and Green standards, and to provide the Host/AGP bridge. The Aladdin® 5 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 Aladdin® 5 chipset also improves the IDE transfer rate by supporting Ultra DMA/33 IDE that transfer data at the rate of 33MB/s.

The mainboard also supports the Hardware Monitor Controller as an optional function. This function includes: CPU/chassis/power fan control, CPU temperature detect and protect, and system voltage detect.

1.1 Mainboard Features

CPU

- Socket 7 supports Intel® Pentium® processor/Pentium® processor with MMX™ technology.
- Cyrix® 6x86/6x86L/6x86MX/MII are supported.
- AMD® K6/K6-2/K6-3 processors are supported.

Chipset

- Aladdin® 5 M1541/M1543C chipset.

FSB (Front Side Bus)

- 100/95/83.3/75/66/60MHz clocks are supported.

Cache Memory

- Supports 512K or 1MB Pipelined Burst cache memory.

Switching Regulator

- Provides CPU with voltage ranging from 1.3V to 3.5V
- Support VI/O 3.45 for AMD K6 300 processor

Main Memory

- Supports four memory banks using two 168-pin unbuffered DIMM.
- Supports a maximum memory size of 256MB.
- Supports 3.3v Extended Data Output (EDO) and SDRAM DIMM.

Slots

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

On-Board IDE

- An IDE controller on the Aladdin® M1543C PCI Chipset provides IDE HDD/CD-ROM with PIO, DMA and Ultra DMA/33 operation modes.
- Connect up to four IDE devices.

Video

- ATI® 3D 128 VR
 - Running on AGP BUS.
 - Onboard 8MB SDRAM.
 - 3D Acceleration.

Audio

- Creative® ES1373
 - Running on PCI BUS.
 - 64 Voice and AC3 Capable
 - Support Direct Sound and Direct Sound 3D
 - AC97' Compliant

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
 - 2 USB ports
 - 1 IrDA connector for SIR/FIR.
 - 1 VGA port

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 24.5cm(W) x 4 layers PCB

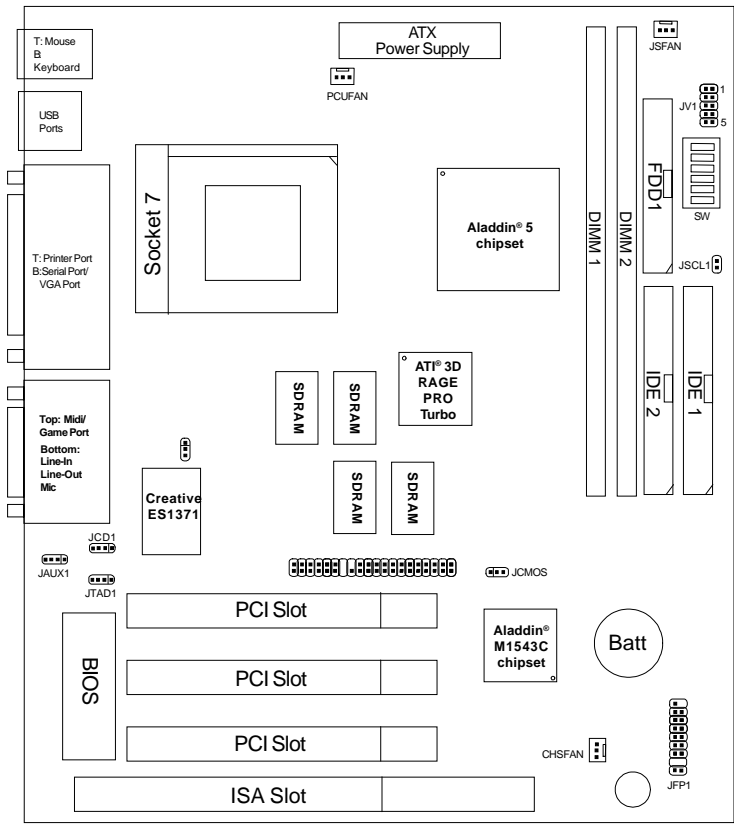
Mounting

- 7 mounting holes.

Remote Control

- Meet ACPI specifications.
- Power ON/OFF switch connector on-board.
- Soft Power-Off.
- Support modem ring wake-up .
- Support alarm wake-up.
- Support LAN wake-up.

1.2 Mainboard Layout



MS-5185 MICRO ATX AL12 Mainboard