

Chapter 1

INTRODUCTION

The MS-6192 ATX CA7 mainboard is a high-performance computer mainboard based on Intel® 820 chipset. The MS-6192 is designed for the Intel® Pentium™ II/III processor for high-end business/personal desktop markets.

The Intel® 820 chipset is the first generation chipset for the Intel® Pentium® II/III processor. 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 820 chipset to provide an efficient communication channel between the memory controller hub and I/O controller hub.

The Intel 820 chipset contains three core components: the Memory Controller Hub (MCH), the I/O Controller Hub (ICH) and the Firmware Hub (FWH). The MCH integrates a 100MHz/133MHz CPU FSB, 266/300/356/400MHz RDRAM controller and high-speed hub interface for communication with the ICH. The ICH integrates an 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 MCH.

The Intel® 82802 Firmware Hub (FWH) component is part of the Intel® 820 chipset. The FWH is key to enabling future security and manageability infrastructure for the PC platform.

1.1 Mainboard Features

CPU

- Support Intel® Pentium® II/III & Coppermine 100/133MHz FSB processor.
- Support 350/400/450/500/533/600MHz or higher processor

Chipset

- Intel® 820 Camino chipset. (324 BGA)
 - Optimized for Pentium III processor
 - Increased memory bandwidth (RDRAM)
 - AGP 4x/2x universal slot
 - Support 100/133MHz FSB
- Intel® ICH chipset. (241 BGA)
 - AC'97 Controller Integrated
 - 2 full IDE channels, up to ATA66
 - Low pin count interface for SIO
- Intel® MTH chipset. (241 BGA)
 - 100MHz SDRAMs on SRIMMs and DIMMs
 - 64Mbit and 128Mbit SDRAM Technologies
 - 400MHz Direct Rambus Channel
 - Maximum of 4 SDRAM rows per MTH. All rows share the same SDRAM Data bus.
 - Supports Powerdown and Self Refresh Low Power States of SDRAMs

Front Side Bus (FSB)

- 100/133MHz clocks are supported.

Main Memory

- Support two 184-pin RIMM and two 168-pin DIMM sockets.
- Support a maximum RDRAM/SDRAM memory size of 24 device 768MB.

Slots

- One AMR (Audio Modem Riser) slot.
- One AGP (Accelerated Graphics Port) slot.
 - AGP specification compliant
 - AGP 66/133MHz 3.3/1.5v device support
- Five 32-bit Master PCI Bus slots and one 16-bit ISA slot
 - 1 PCI slot is shared with onboard Audio
- Supports 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
 - 1 IrDA connector for SIR.
 - 1 Diagnostic LED
 - 1 Game Port
 - 1 Audio Port (Line-In, Line-Out, Mic-In)

Audio

- ICH chip integrated
 - Creative® CT5880 (optional)
 - PCI 2.2 compliant
 - PC97/PC98 specification compliant
 - 3D audio effects.
 - 32-voice XG wavetable synthesizer
 - Direct Sound Hardware Accelerator
 - Direct Music Hardware Accelerator
 - Full-Duplex stereo
 - Support SPDIF connector
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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

- ATX Form Factor

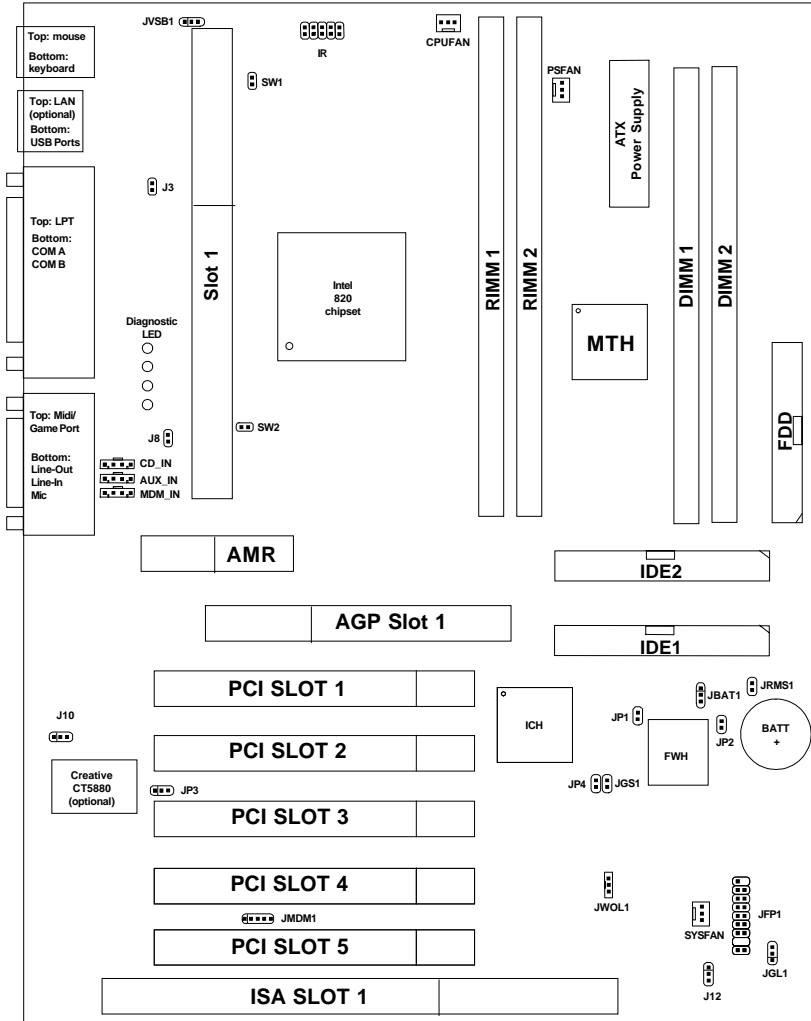
Mounting

- 10 mounting holes.

Other features

- CPU core/bus ratio & FSB frequencies setting through BIOS.
- Diagnostic LED system status display
- Reset button protect
- Keyboard/Mouse Power on function
- Support suspend to RAM (STR)

1.2 Mainboard Layout



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