

Chapter 1

INTRODUCTION

The ATX SI20 mainboard is a high-performance personal computer mainboard. This mainboard supports Intel®Pentium®processor/Pentium® processor with MMX™ technology, Cyrix®6x86/6x86L/6x86MX, and AMD® K5/K6 processors. The mainboard also supports one AGP slot and three 32-bit PCI (Peripheral Component Interconnect) Local Bus standard slots.

The mainboard uses the highly integrated SiS®5591 chipset to support the AGP/PCI/ISA and Green standards, and to provide the Host/AGP bridge. The SiS®5591 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 SiS®5595 chipset also improves the IDE transfer rate by supporting Ultra DMA/33 IDE that transfer data at the rate of 33MB/s. In addition to this, it also offers hardware monitor function as an optional function.

1.1 Mainboard Features

CPU

- Socket 7 supports Intel® Pentium® processor/Pentium® processor with MMX™ technology.
- The Cyrix® 6x86/6x86L/6x86MX and AMD® K5/K6 processors are also supported.

Chipset

- SiS® 5591 chipset. (North Bridge Controller)
- SiS® 5595 chipset. (South Bridge Controller)

Cache Memory

- Supports 512K PB SRAM.

Main Memory

- Supports six memory banks using three 168-pin unbuffered DIMM
- Supports a maximum memory size of 768 for EDO and 384MB for SDRAM.
- Supports parity check and ECC function.
- Supports 3.3V Extended Data Output (EDO), and SDRAM DIMM.

Slots

- One AGP(Accelerated Graphics Port) slot.
 - AGP specification compliant
 - AGP 66/133MHz 3.3v device support
 - ASYM AGP support 75 & 83 MHz processor (reserved)
- Three 32-bit Master PCI Bus slots and three 16-bit ISA bus slots wherein one slot is shared.
- Supports 3.3v/5v PCI bus Interface.

On-Board IDE

- An IDE controller on the SiS® 5595 chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA/33 operation modes.
- 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
 - 2 USB ports
 - 1 IrDA connector for SIR.

Regulators

- Switching Regulator
 - provides CPU with voltage range from 2.0v to 3.52v.
- Linear Regulator (optional)
 - support power supply with 3.3v and power supply without 3.3v.

Sound (optional)

- Crystal®4235/4237B chipset .
 - 3D audio effects.
 - 16 bit full-duplex stereo.
 - 16 bit address decode.

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.

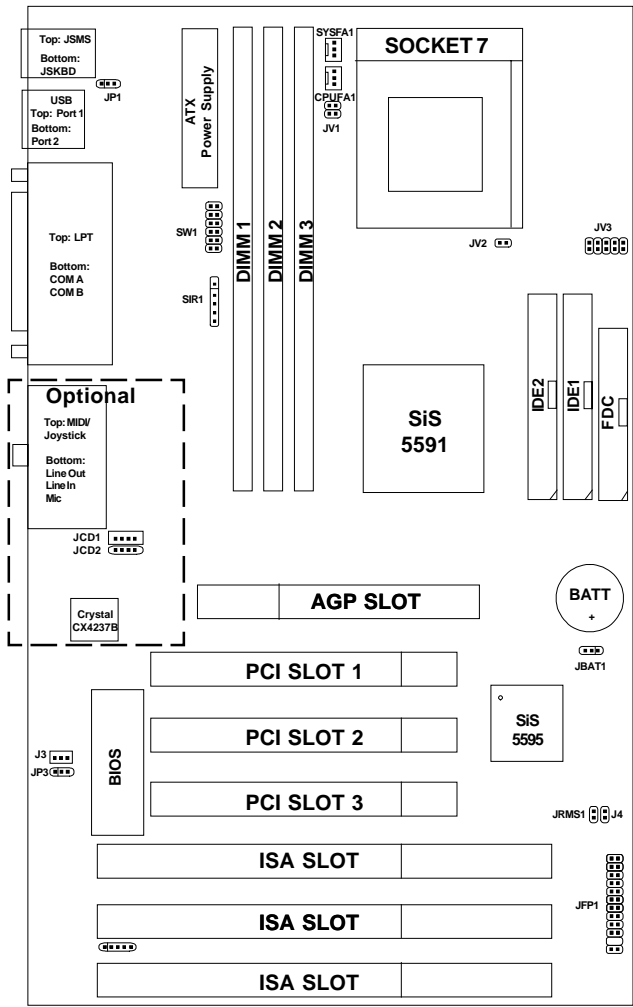
Dimension

- ATX Form Factor : 30cm(L) x 18.6cm(W) x 4 layers PCB

Mounting

- 7 mounting holes

1.2 Mainboard Layout



MS-5172