

Chapter 1

INTRODUCTION

The MSI ATX TX5 mainboard is a high-performance personal computer mainboard. This mainboard supports Intel® Pentium® processor/Pentium® processor with MMX™ technology, Cyrix® 6x86/6x86L/6x86MX processor, and AMD® K5/K6 processor. The mainboard also supports four 32-bit PCI (Peripheral Component Interconnect) Local Bus standard slots.

The mainboard uses the highly integrated Intel® 83430TX chipset to support the PCI/ISA and Green standards, and to provide the Host/PCI bridge. The Intel® 82430TX 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 Intel® 82430TX 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 LM78 and LM75 Hardware Monitor Controller which are optional functions. The LM78 function includes: CPU chassis/power fan control, CPU temperature detect and protect, system voltage detect and chassis intrusion detect. The LM75 function includes: CPU overheat warning.

1.1 Mainboard Features

CPU

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

Chipset

- Intel® 82430 TX chipset.

Cache Memory

- Supports 512K pipelined burst cache memory.
- Supports Direct Map Organization and Write-Back cache policy.

Main Memory

- Supports five memory banks using two 72-pin SIMM sockets and three 168-pin DIMM sockets (for unbuffered DIMM).
- Up to 256 Mbytes main memory.
- Supports EDO Hyper Page Mode DRAM, Standard Fast Page mode DRAM and SDRAM(Synchronous DRAM).

Slots

- Four 32-bit PCI Bus slots (four 32-bit bus master PCI slots + four 16-bit ISA bus slots). One shared slot can be used as ISA or PCI.

On-Board IDE

- Supports Bus Master and Ultra DMA/33 IDE.
- Supports up to 4 IDE drives.

On-Board Peripherals

- On-Board Peripherals include:
 - 1 floppy port supports 2 FDD
 - 2 serial ports (COMA + COMB)
 - 1 parallel port supports ECP or EPP mode
 - USB Ports
 - IR (reserved)

Dimensions

- Standard ATX form factor
- 30cm(L) x 18.6cm(W) x 4 layer PCB
- Double deck I/O connectors, compatibles with Intel® Venus mainboard

Mounting

- 6 mounting holes

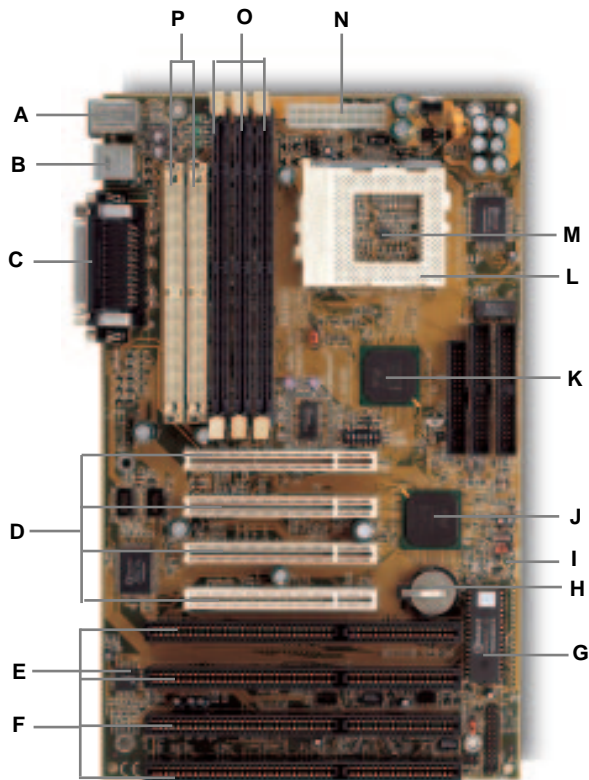
LM78 System Hardware Monitor(optional)

- CPU fan Rotation Speed Control
- CPU Fan Control/Power Fan Control (the fan will automatically stop when the system enters suspend mode)
- System Voltage Detect
- CPU Overheat Warning (reserved)
- Chassis Intrusion Detect(reserved)
- Display Actual Current Voltage

Other Features

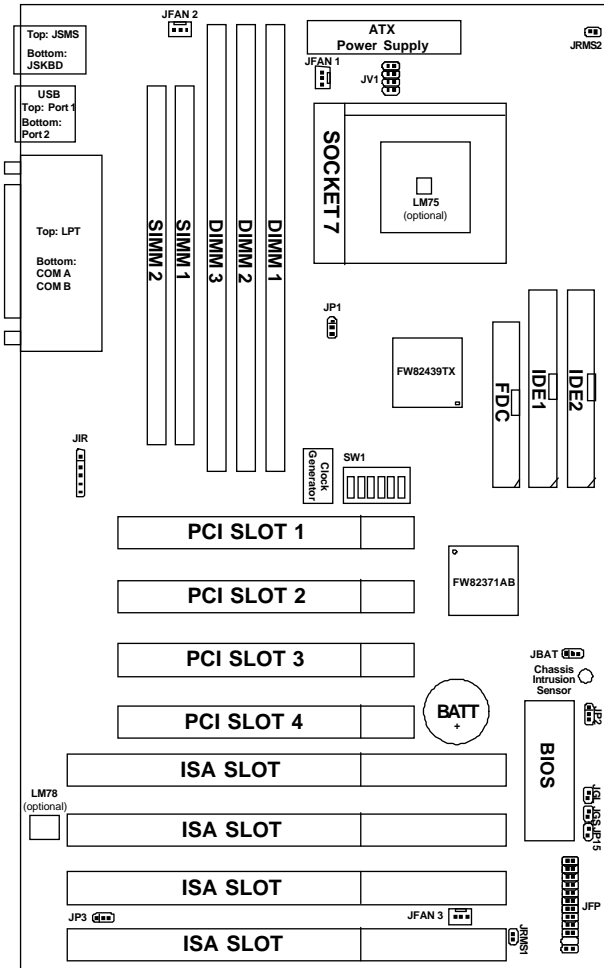
- Poly Fuse used by keyboard and USB devices
- Keyboard password wake up system(reserved)
- CPU Vcore voltage protect
- Meets ACPI specifications
- Power ON/OFF switch connector on board
- Soft Power-Off
- Ring Wake-Up
- Alarm Wake-Up

1.2 Parts of the Mainboard



| | | |
|----------|--|--|
| A | PS/2 Ports | Top: Mouse Bottom: Keyboard |
| B | USB Ports | Top: Port 1 Bottom: Port 2 |
| C | COM/LPT Ports | Top: Parallel Port Bottom: Two Serial Ports |
| D | Four 32-Bit PCI SLOTS | |
| E | LM78 | |
| F | Four 16-Bit ISA SLOTS | |
| G | Flash BIOS | |
| H | Coin Type Battery | |
| I | Chassis Intrusion Sensor | |
| J | Intel® 82371AB (PIIX 4) chipset | |
| K | Intel® 82489TX chipset | |
| L | CPU Socket 7 | |
| M | LM75 | |
| N | ATX 20-Pin Power Connector | |
| O | Three 168-PIN DIMM SOCKETS | |
| P | Two 72-PIN SIMM SOCKETS | |

1.3 Mainboard Layout



MS-5158