

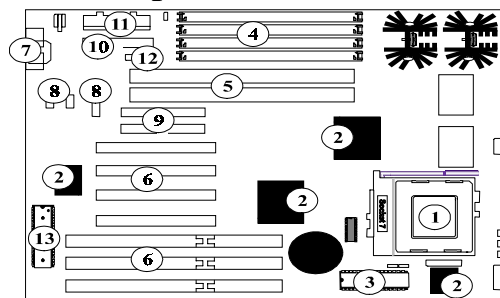
# 1 Introduction

## Main Features

The P5TX-B mainboard integrates the latest advances in processor, memory, and I/O technologies into a 3/4 Baby AT form factor that combines performance, flexibility, and easy of use into a highly integrated mainboard capable of meeting a variety of price/performance levels. The P5TX-B mainboard utilizes Intel Pentium® 82430 TX PCIsset. The board design will accept all Pentium family processors since P54C to P55C (supporting Intel Pentium® Processor with MMX™ technology) at speed of 75MHz to 200MHz. It also supports Cyrix 6x86 and AMD K5 processors. (refer to Appendix B and C) The memory subsystem supports up to 256MB of DRAM using 3.3V unbuffered 168-pin DIMM sockets and 72-pin SIMM sockets that accept Fast Page Mode (FPM), Extended Data Out (EDO) and Synchronous DRAM (SDRAM) memory. The L2 cache supports up to 512K Pipelined Burst SRAM and DRAM cache for option.

P5TX-B integrates a full set of I/O chip on board. The Intel 82371AB PCI/IDE Xcelerator (PIIX4) provides an integrated Bus Mastering IDE controller with two high performance IDE interfaces for up to four devices. It also supports two low cost Universal Serial Bus (USB) port to fit today and tomorrow's requirement. The Winbond W83877F Super I/O controller provides standard PC I/O function.

## Mainboard Description



- |                                |                           |
|--------------------------------|---------------------------|
| ① Processor Socket ( socket 7) | ⑧ Serial / Parallel Ports |
| ② Chipset                      | ⑨ IDE Connectors          |
| ③ System BIOS                  | ⑩ FDD Connector           |
| ④ SIMM Sockets                 | ⑪ Power Supply Connector  |
| ⑤ DIMM Sockets                 | ⑫ USB Header              |
| ⑥ Expansion Slots              | ⑬ Keyboard Controller     |
| ⑦ PS/2 Mouse & Keyboard Set    |                           |

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### **Specification**

#### **1. Processor Socket:**

One Socket 7 supports:

- Pentium® Processor 75/90/100/120/133/150/166/200 MHz. (P54C)
- Intel Pentium® Processor with MMX™ technology 166/200MHz.(P55C)
- Cyrix 6x86 / 6x86L and AMD K5 CPU. (refer to Appendix B and C)
- Upgrade capacity to future Pentium® OverDrive® Processor.

#### **2. Chipset:**

- Intel Pentium® 430TX PCIsset
- Winbond 83877F Series.

#### **3. System BIOS:**

- Award flash BIOS.
  - DMI 2.0
  - PnP 1.0a
  - PCI 2.1
  - CD ROM boot
  - APM 1.2
  - ACPI 1.0

#### **4. SIMM Sockets:**

- 4 pieces of 72-pin SIMM sockets with memory size from 4MB to 256MB.
- Support EDO / Fast Page Mode DRAM.
- Support Memory Module with 2/4/8/16/32/64 MB 5V FPM/EDO DRAM.

#### **5. DIMM Sockets:**

- 2 pieces of 168-pin DIMM sockets with memory size from 8MB to 256MB.
- Support Memory Module with 8/16/32/64/128 MB 3.3V unbuffered EDO or synchronous DRAM. (SDRAM)
- Compliance with JEDEC specifications for 3.3V unbuffered EDO/SDRAM Module.

#### **6. Expansion Slots:**

- 3 16-bit ISA slots with 100% ISA compatible function.
- 4 32-bit PCI slots all support PCI master.
  - PCI specification version 2.1.

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### **7. PS/2 Mouse & Keyboard Set:**

- Provides Connectors for PS/2 mouse & keyboard connector.

### **8. Serial / Parallel Ports:**

- One multi-mode parallel port with chip-protect circuitry supports standard, enhanced (EPP), high speed (ECP) mode.
- Two high speed 16C550 UART compatible buffer fast serial port.
- Support IrDA/ASKIR or Fast IR (optional) Infrared Interface.

### **9. PCI IDE Connector:**

- Build-in Intel Pentium® 82371AB chip 32-bit PCI IDE interface with 2 IDE channels.
  - Independent Timing of up to 4 drives.
  - PIO Mode 4 transfers up to 14 MB/Sec.
  - Support *Ultra* 33 Synchronous DMA mode transfers up to 33 MB/Sec.
  - Support glue-less *Swap-Bay* option with full electrical isolation.

### **10. FDD Connector:**

- One floppy drive connector supports 360K/ 720K / 1.2MB / 1.44MB/2.88MB floppy drives.

### **11. Power Supply Connector:**

- Provide the connectors for standard PC/AT power supply.

### **12. USB Header:**

- Provide the interface for use of two USB channels.
- Two USB V1.0 Ports for serial transfers at 1.5 or 12 MB/Sec.
- Support UHCI Design Guide Rev1.1 interface.

### **13. Keyboard Controller:**

- It is function compatible with Intel Pentium® 8042 Keyboard Controller, which provides enhanced gate A20 switching & PS/2 compatible mouse.

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## **Mainboard Layout**

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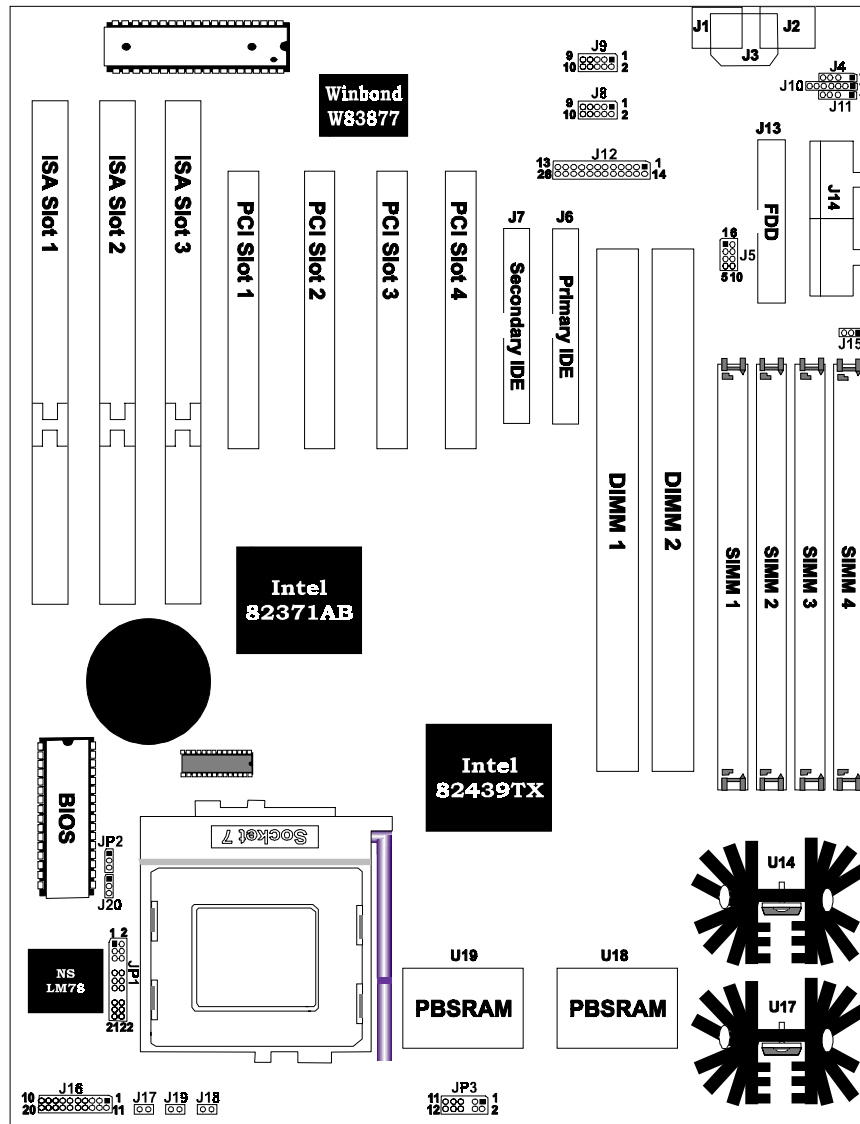


Figure 1. P5TX-B Mainboard Layout