Chapter 1: Introduction

Welcome

Congratulations on purchasing the P6BAT-Me mainboard. This mainboard features the latest Elite ET82C693/596A chipset. The mainboard includes a Slot-1 processor slot and a PPGA (Plastic Pin Grid Array) Celeron Socket-PGA370 processor socket. **This feature means that you can install the mainboard with either a Pentium-III cartridge, a Pentium-II cartridge, the SEPP (Single Edge Processor Package) Celeron cartridge, or one of the new generation PPGA Celerons.**

The mainboard is micro-ATX sized and measures 245mm x 220mm. The board includes a built-in sound system, 5 expansion slots including an AGP graphics slot, and a full set of I/O ports. Using this mainboard, you can create the exact system you need. The supported processors cover a wide range of price/performance points so that you can build a system for high performance or low cost.

This chapter contains the following information:

- **About the Manual** explains how the information in this manual is organized
- **Checklist** comprises a list of the standard and optional components that are shipped with this mainboard
- **Recommendations** lists some Do's and Don'ts from the manufacturer to help ensure reliability and performance from this product
- **Features** highlights the functions and components that make this one of the best value mainboards on the market

About the Manual

The manual consists of the following chapters:

Introduction

Use the **Introduction** Chapter to learn about the features of the mainboard, and the checklist of items that are shipped with the package.

Installation

Use the **Installation** Chapter to learn how to install the mainboard and get your system up and running.

Setup

Use the **Setup** Chapter to configure the mainboard for optimum performance.

Software

Use the **Software** Chapter to learn how to use the software drivers and support programs that are provided with this mainboard.

Checklist

Compare the contents of your mainboard package with the standard checklist below. If any item is missing or appears damaged, please contact the vendor of your mainboard package.

Standard Items

- ✓ 1 x P6BAT-Me Mainboard
- ✓ 1 x Cable/Bracket Pack
  - Diskette drive ribbon cable
  - IDE drive ribbon cable
- ✓ This User's Manual
- ✓ Software Support CD-ROM Disc

Optional Items

- ♦ V.90 Fax/modem module

Recommendations

This mainboard automatically determines the CPU clock frequency and system bus frequency for the kind of processor that you install. You may be able to change these automatic settings by making changes to jumpers on the mainboard, or changing the settings in the system setup utility. We strongly recommend that you do not overclock the mainboard to run processors or other components faster than their rated speed.

Overclocking components can adversely affect the reliability of the system and introduce errors into your system. Overclocking can permanently damage the mainboard by generating excess heat in components that are run beyond the rated limits.

Components on this mainboard can be damaged by discharges of static electricity. Handle the board carefully holding it by the edges. Don't flex or stress the circuit board. Keep the board in its static-proof packing until you are ready to install it. Follow the static guidelines given at the beginning of chapter 2.

Features

The key features of this mainboard are the advanced Elite ET82C693/596A chipset, and the dual processor support so that you can install either a Slot1 processor cartridge or a PPGA Celeron. You can choose to develop a low-cost value system or a high-performance workstation.

Support for Pentium-III/Pentium-II Cartridges or PPGA Celeron

This mainboard support three kinds of Intel processors: Pentium-III cartridges, Pentium-II cartridges and SEPP or PPGA Celerons. Pentium-III cartridges feature 32K of internal level 1 cache memory and 512K of level-2 cache memory with improved instructions to handle 3D audio and video. speech recognition, MPEG2 motion picture encoding/decoding, and TCP/IP internet connections. The Pentium-III runs over a 100 MHz system bus and operates at clock speeds of 450 MHz up to 550 MHz or more.

The Pentium-II cartridges are very powerful processors that include 32K of internal level-1 cache memory and 512K of external level-2 cache memory. The first generation of Pentium-II cartridges ran over a 66 MHz system bus, but current Pentium-II cartridges run over a 100 MHz system bus and operate at clock speeds from 350 MHz up to 450 MHz or more. The slot-1 processor can also be used by the SEPP Celeron processors that can operate over a 66/100 MHz system bus and operate at clock speeds up to 466 MHz.

The new generation PPGA Celeron processors ship in the familiar square plastic package, and they install in a Zero Insertion Force (ZIF) socket called a Socket-370. The new Celeron processors are close to Pentium-II performance because they include a level-2 cache memory of 128K. However, they operate over a 66 MHz system bus and they currently ship at clock speeds of up to 533 MHz.

System assemblers can install either a Pentium-III or Pentium-II cartridge or the SEPP Celeron in the slot-1 processor slot. Alternatively, they can install a second generation PPGA Celeron in the Socket-370 processor socket. Assemblers can choose the processor they need to meet performance or price targets. You can configure the system for any of the supported processor clock speeds using the BIOS setup utility. It is not necessary to set switches or jumpers.

Three DIMM Memory Slots

The board has three DIMM slots for the installation of 168-pin, 3.3V standard or registered SDRAM (Synchronous Dynamic Random Access Memory) memory modules. The system supports memory that has built-in error correction (EC), error correction code (ECC), or has no error correction.

If you are using a Pentium-III/PentiumII processor cartridge that operates over a 100 MHz system bus, you must install PC-100 compliant memory modules (memory that operates at 100 MHz). If you install the SEPP or PPGA Celeron processor or an older Pentium-II that runs at 66 MHz, you can install memory that operates at 66 MHz.

You can install one, two or three modules. Each memory module can hold a maximum capacity of 256 MB of standard SDRAM chips so maximum memory capacity is 768 MB.

Optimized Chipset

This board uses the Elite ET82C6931/596A chipset. The ET82C693 forms the north bridge and supports system buses of 66 and 100 MHz. It is AGP Rev. 1 compliant and supports 3.3v AGP devices operating over a 66/133 MHz bus. The memory bus supports the fastest access (X-1-1-1) for both 66 MHz and 100MHz operation. The board is compliant with PCI Rev.2.1 operating at 33 MHz Four PCI Bus masters are supported. The south bridge is provided by the 596A. This chip supports ACPI (Advanced Configuration and Power Interface) Rev 1.0, onboard PCI IDE channels, USB ports, and a System Management Bus for OS control and configuration of devices.

Built-in PCI 3D Sound

The Elite PCI Audio CMI 8738 is a single chip solution for PCI-bus 3D audio. The chip provides Sound Blaster 16-bit-compatible audio, plus support for Microsoft' s DirectSound 3D specification and Aureal A3D interface. The sound ports include jacks for speakers, microphone and stereo in, and a game/MIDI port. The audio system supports full duplex operation and drivers are available for WIN 95/98 and WIN NT 4.0. The audio system can output sound to 4 loudspeakers and also supports SPDIF 24-bit digital sound input and output.

Optional Built-in Communications

The mainboard has an integrated fax/modem connector. As an option, you can purchase a fax/modem extension bracket which connects the line and telephone RJII sockets to the board. The fax/modem supports the V.90 protocol that allows transmissions at up to 56Kbps and is fully

compatible with earlier transmission and error correction standards. It supports automatic fall back and caller ID.

Expansion Options

Although this is a micro-ATX board, it has a generous allocation of expansions slots. One AGP slot is available for the installation of an Accelerated Graphics Port graphics adapter. Three 32-bit PCI slots can be used by PCI expansion cards. One legacy 8/16-bit ISA slot can be used by ISA cards. The ISA slot is shared with one of the PCI slots. This means that you can use either the ISA slot or the PCI slot, but you cannot use both at the same time.

Integrated I/O

The board has a comprehensive set of integrated I/O ports. The I/O port array features PS/2 keyboard and mouse ports, a parallel port, two USB ports, one serial port, a monitor port, a game/MIDI port, and three audio jacks. Optionally, you can use the built-in mainboard header to add in an infrared port. The mainboard has two PCI-IDE channels and a floppy disk drive interface.

Hardware Monitoring

The mainboard is installed with an integrated hardware monitoring system. Using this system and the monitoring software supplied with the board, users and system administrators can monitor critical parameters such as the CPU temperature, the fan speeds and so on. Hardware monitoring helps maintain the system and reduce maintenance costs and downtime.

Keyboard Power On Feature

Using the system BIOS setup program, you can configure the system to turn on using a keyboard-typed password. A green keyboard is not required.

Programmable Firmware

The mainboard includes Award BIOS that allows BIOS setting of CPU parameters. The fully programmable firmware enhances the system features and allows users to set power management, CPU and memory timing, LAN and modem wake-up alarms, and so on. The firmware can also be used to set parameters for different processor clock speeds so that you don't need to change mainboard jumpers and switches.