

# Chapter 1: Introduction

## Welcome

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Congratulations on your purchase of the P6SEP-Me mainboard. The P6SEP-Me mainboard is a micro-ATX board measuring 243.8 mm by 200 mm and using a 4-layer printed circuit board. This board features a PGA370 ZIF (Zero Insertion Force) processor socket. This socket can be installed with the latest generation of Intel Celeron processors that are packaged in a Plastic Pin Grid Array (PPGA), just like the original Pentium processors. The mainboard supports a system bus speeds of 100 MHz so you can use high-performance PC-100 memory. The mainboard has integrated 2D/3D graphics, and integrated 3D audio, so a usable system can be created with the addition of just memory modules and a Celeron processor.

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,
- **Features** highlights the functions and components that make this one of the best value mainboards on the market

## About the Manual

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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**

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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 P6SEP-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**

- 1 x V 9.0 Fax/Modem Card

## **Features**

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This is a powerful platform that combines the low-cost/high-performance features of the new generation of Celeron processors with a 100 MHz system bus so that you can utilize high-performance PC-100 memory modules.

### ***Low-cost/high-performance Processing***

Intel's new generation of Celeron processors are shipped in the familiar PPGA square plastic package that are common to all Pentium and Pentium-compatible processors. The mainboard has a PGA370 ZIF socket for the installation of the Celeron. (*Note that the socket has a different pinout than Pentium/Pentium compatibles and cannot be used by Socket-7 processors.*) The Celeron processor features Pentium-II performance with internal clock speeds of 300, 333, 366, 400, 433, 466 and 500 MHz, 32K of level-1 cache memory, and 128K of level-2 cache memory. This mainboard allows entry-level and business-class users to move up to Pentium-II performance at minimum cost. Configuration for different processor speeds is automatically set by firmware and motherboard switch or jumper settings are not required.

### ***High-performance Memory***

The board has three DIMM sockets for the installation of 168-pin, 3.3V non-buffered DIMM memory modules. The DIMM memory modules must be installed with SDRAM memory chips. The board supports a memory bus of 100 MHz, so you must install high-performance PC-100 memory modules. Each installed memory module can be populated with 16 MB up to 512 MB of memory, so a total of 1.5 GB of memory can be installed. The integrated video system uses a shared memory architecture so that you must reserve some of the installed memory as video memory using the system BIOS. You must install at least one memory module, and the first memory module is installed in DIMM1.

### ***Highly Integrated Design***

This mainboard features a high level of integrated functions provided by the onboard chipsets. The SiS 620 Pentium-II PCI/AGP/3D VGA chipset provides all the north bridge support – Pentium-II CPU and memory addressing, integrated DRAM controller, PCI-IDE controller, AGP 3D graphics sub-system, and PCI-bus interface. The SiS 5595 provides the south bridge support – ACPI-compliant power management, real-time clock, and USB interface. The Winbond W83877TF is a single chip I/O solution, and the CMI8738 provides the onboard 3D audio feature. This highly integrated mainboard ensures stability and allows a fully functional system to be created by adding just a processor and memory.

### ***Built-in AGP 3D-Graphics***

This mainboard features a built-in 3D-graphics controller integrated in the SIS 620 chipset. The graphics controller uses a shared memory architecture that allows it use either 2 MB, 4 MB, or 8 MB of the system's main memory. The graphics controller has hardware accelerators for both 3D and 2D graphics and an MPEG decoder for DVD video playback. The graphics system will support extended high-resolution displays up to 1600 x 1200. At an XGA resolution of 1024 x 768, the graphics system supports a color depth of 16 million colors.

### ***Built-in PCI 3D Sound***

The CMI8738 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 RJ11

socket s 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.

### ***Solid Expansion Options***

Because this is a highly integrated board with built-in audio and a full set of I/O ports, it does not require a full set of expansion slots. The board provides three usable slots. The board has three 32-bit PCI slots and one 8/16-bit ISA slot. The ISA slot is shared with one of the PCI slots meaning that you can use either the ISA slot or the PCI slot, but not both at the same time.

### ***Integrated I/O***

Using the Winbond W83877TF I/O chip and the SiS 620 chipset, 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 headers to add in an infrared port or a second serial port. The mainboard has two PCI-IDE channels and a floppy disk drive interface.

### ***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 which 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 Celeron processor clock speeds so that you don't need to change mainboard jumpers and switches.