

# Chapter 1: Introduction

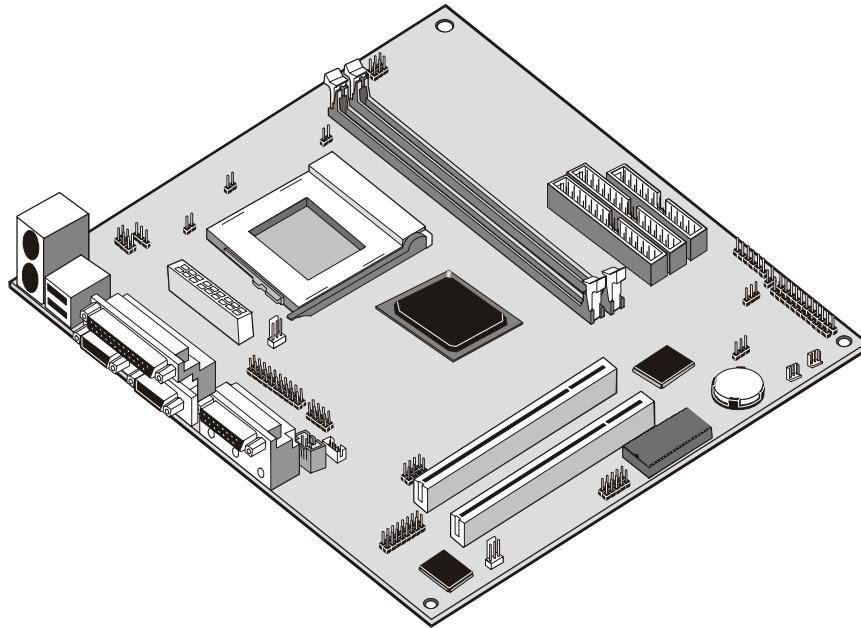
## Welcome

---

Congratulations on purchasing the P6STP-FL mainboard.

The P6STP-FL mainboard is a Flex-ATX mainboard that uses 4-layer printed circuit board and measures 228mm x 190mm. The mainboard has a PPGA (Plastic Pin Grid Array) PGA370 processor socket. **This feature means that you can install the mainboard with a PPGA Celeron or FC-PGA Coppermine processor.**

The P6STP-FL is installed with the very powerful SIS630 chipset, which includes integrated **built-in video, audio, networking and communications** capabilities. Two 32-bit PCI expansion slots are provided. Two DIMM sockets are available for the installation of up to 1 GB SDRAM memory. This mainboard is an ideal platform for an inexpensive entry level or business class multimedia personal computer.



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 P6STP-FL 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.90 Fax/modem Card

## 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 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 wide range of processors that can be installed, and the high level of integration, which includes built-in audio, video, networking, and communications.

### ***Value-class Processors***

As a platform for a value PC, the P6STP-FL includes a socket-370 for the installation of the latest PGA and FC-PGA packaging processors from Intel.

The new generation PGA 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.

The FC-PGA Coppermine processor operates over a 66, 100 or 133 MHz system bus. The FC-PGA Coppermine ships with clock speeds running from 500 MHz through to 750 MHz.

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.

### ***Powerful Chipset Support***

The processor is supported by the powerful SiS630 chipset. The SiS630 includes a built-in 128-bit AGP graphics accelerator, an integrated 3D PCI audio controller, and a built-in 10BaseT/100BaseTX network controller. The SiS630 controls up to 1 GB of SDRAM memory. The chipset also supports ACPI Ver.1.0 (Advanced Configuration and Power Management Interface) and APM (Advanced Power Management) power management. It provides two PCI IDE channels with UDMA 33/66, a floppy diskette drive interface, and two bus-mastering PCI slots. The chipset meets the requirements for the PC99 specification.

### ***Inexpensive Memory***

The board has two 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 P6STP-FL board supports a memory bus of 100 MHz. Each installed memory module can be

populated with 16 MB up to 512 MB of memory, so a maximum total of 1 GB 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, with a minimum capacity of 16 MB, which can be installed in either available DIMM slot.

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

As well as the SIS630 chipset, the P6STP-FL features other highly integrated silicon chips. The SIS950 I/O controller handles the mainboard's I/O functions, as well as hardware monitoring. The HT8738/PCI C3DX is a two-chip solution that provides an integrated audio and fax/modem system.

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

The SiS630 chipset includes an integrated 128-bit 2D/3D graphics accelerator. The graphics system uses the Ultra-AGP architecture and uses a shared memory scheme that allows up to 64 MB of system memory to be used as video memory. The graphics system includes special accelerators for DVD playback and supports screen resolutions up to 1920 x 1440 and color depths up to 16 M (True Color). Driver support is provided for Windows 95/98, Windows 2000, Windows NT 4.0, and OS/2.

### ***Built-in V.90 Fax/modem (DAA Module is optional)***

The P6STP-FL mainboard has a built-in 56 Kbps fax/modem. That supports the V.90 protocol. The chip is integrated with the built-in audio system to support voice as well as data transmissions. In order to use the built-in fax/modem, you must install a DAA module that supplies the RJ11 sockets for LINE and TELEPHONE.

### ***Expansion Options***

The P6STP-FL mainboard is pre-installed with features such as audio, video, networking and a DAA module (optional) for a modem, that normally requires add-in cards, so the two 32-bit PCI slots provide plenty of expansion potential. The PCI slots support bus mastering.

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

The mainboard has a full set of I/O ports and connectors. The I/O template on the backplane includes two PS/2 ports for mouse and keyboard, one serial port, one parallel port, one VGA monitor port, one game/MIDI port, two USB ports and audio jacks for microphone, line-in and line-out. The board has a header for the optional installation of an IR port, a second serial port, and 24-bit digital audio. The board includes

two PCI IDE channels with UltraDMA 33/66 support, and a floppy disk drive interface.

#### ***Hardware Monitoring***

Hardware monitoring is fully supported and the board ships with hardware monitoring software. System assemblers and network administrators can reduce downtime and repair costs by monitoring critical temperatures and voltages on the system. The supplied hardware monitoring software lets you set parameters that prompt warnings when they are exceeded.

#### ***Keyboard Power On Feature***

Using the system BIOS setup program, you can configure the system to turn on by using a keyboard typed password or by pressing a hot-key combination (Ctrl+Alt+Backspace). 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 Celeron processor clock speeds so that you don't need to change mainboard jumpers and switches.