

Chapter 1: Introduction

Welcome

Congratulations on your purchase of the P5VP-A+ mainboard. The P5VP-A+ is a mini-sized ATX motherboard measuring 180mm wide by 305mm long. The board includes a socket-7 for the installation of any Pentium, Pentium MMX, or Pentium-compatible processor such as the AMD K5/K6 series and the Cyrix/IBM 6X86 series. The mainboard includes an AGP slot for an accelerated graphics port display card, four 32-bit PCI slots, and two 8/16-bit ISA slots. A full suite of I/O ports are integrated on the mainboard, and a connector is provided for an optional infrared port.

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

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 P5VP-A+ Mainboard
- ✓ 1 x Cable/Bracket Pack
 - Diskette drive ribbon cable
 - IDE drive ribbon cable
- ✓ This User's Manual
- ✓ Software Support Disks

Features

The P5VP-A+ combines the stability and economy of a socket-7 mainboard with advanced features such as an AGP slot and 32-bit PCI expansion slots.

Economical Processing

The socket-7 processor socket supports a wide range of low cost Pentium and Pentium compatible processors from a variety of vendors. The mainboard supports a full range of processor voltages, processor clocks, and system bus speeds, so the board can be configured for almost any Pentium/Pentium-pinout processor. The list includes the Intel Pentium and Pentium-MMX, the AMD K5 or K6, the Cyrix/IBM 6X86 series, and the IDT C6 series. All of these processors deliver acceptable entry-level to business-class performance. All the processors have internal level-1 cache memory, and performance is further enhanced by the 512K/1 MB of level-2 PBSRAM cache memory that is installed on the mainboard.

High-Capacity Memory Support

Unlike many competitive socket seven boards, the P5VP-A+ has three DIMM sockets for 168-pin, 3.3 volt memory modules. The mainboard supports SDRAM memory modules and ECC (error correction code) and EC (error checking) are also supported. Using standard SDRAM DIMMs, each socket can be installed with a maximum of 256 MB memory for a total maximum memory of 768 MB.

Highly Integrated Support Chipset

The system logic is provided by the two-piece VIA chipset, the VT82C598MVP and the VT82C586B. The VT82C598MVP provides support for the Rev. 1.0 AGP slot. It meets the requirements for PC97 and supports the L2 cache memory, the PCI bus arbiter and the integrated Host-to-PCI bridge. The VT82C586B includes a PCI-to-ISA

bridge, power management functions, and full peripheral support including keyboard controller, DMA controller, real time clock, USB host control, and a plug and play controller.

Versatile Expansion Options

The P5VP-A+ mainboard has a full set of expansion slots. The Rev 1.0 AGP slot supports any of today's very-high performance AGP display adapters. There are four 32-bit PCI slots for high performance expansion cards, and two ISA slots for legacy 8-bit or 16-bit expansion cards. In total then, there are seven free slots available. The system is ready to run with the addition of just a display adapter so six slots are available for expansion cards, such as a sound card, a fax/modem, and network adapter, and so on.

Basic I/O Ports Integrated

The mainboard provides a basic set of I/O ports. The I/O ports are supported by the Winbond W83877 Super I/O chip and also the VIA chipset. The board has external connectors for two serial ports (UART 16550 –compatible), two USB ports, one parallel port (bidirectional/EPP/ECP), one PS/2 mouse port and one PS/2 keyboard port. A connector is provided for an optional standard infrared port. The mainboard includes an interface for one or two floppy disk drives, and two PCI IDE channels which can support UltraDMA-33 drives.

Programmable Firmware

The mainboard includes Award BIOS firmware. The firmware is on a flash memory chip for easy upgrades. The fully programmable firmware enhances the system features and allows users to set power management, hardware monitoring, system timing, and so on.

Full Software Support

The mainboard ships with a full set of support software including Bus-Mastered Ultra-DMA drivers, Windows 95 patch program, and Flash BIOS utility. Optionally, the support software can include a system monitor utility, LAN desk client manager, and a Desktop Management Interface, for system administrators.

Optional Hardware Monitoring

Optionally, the mainboard can be installed with a GL518SM system monitoring chip. The system monitor chip can track critical hardware parameters such as the processor temperature, the power supply voltages and the cooling fan speed. This option is very useful for the administration of large networked installations.