Overview

Based on the new highly-integrated Intel 430TX PCIset, the VT-503 combines blistering Pentium® processor performance with support for intelligent diagnostic and power management features like Hardware Monitoring, DMI (Desktop Management Interface) and ACPI (Advanced Configuration and Power Interface), to provide a powerful and versatile Baby AT-size platform for leading-edge PC '97 compliant systems.

With its switching voltage regulator, the VT-503 runs a complete range of Intel Pentium® processors, including the Intel Pentium processor with MMX™ technology, as well as the AMD-K5™ and Cyrix/IBM 6x86™, and is easily upgradable to the Cyrix/IBM MX™ and the AMD-K6™. For added power and performance, the VT-503 takes up to 512KB Pipeline Burst Level II cache and up to 512MB DRAM via four-72 SIMM sockets and two 168-pin DIMM sockets which accept high-speed EDO, and lightning-fast SDRAM memory types.

The VT-503 comes with a full set of I/O features including two USB connectors. The board also has an integrated PCI Bus Master Enhanced IDE controller with support for the new Ultra DMA/33 protocol, which doubles ATA-2 Hard Disk Drive data transfer rates to 33MB/s while maintaining full backwards compatibility with existing PIO Mode 3, PIO Mode 4 and DMA Mode 2 devices.

Fully compliant with the Microsoft PC'97 standard at both the hardware and BIOS levels, the VT-503 comes with support for intelligent Hardware Monitoring and DMI features which continuously check the thermal status of your system and reduce the cost of ownership through improved manageability.

Chapter 1 of this manual gives you a brief overview of the VT-503 mainboard, including its main components and features. Chapter 2 contains advice on how to upgrade and install key components on the mainboard, while Chapter 3 provides detailed information about the board's BIOS settings. For the most

up-to-date information about your mainboard and the latest FAQs and BIOS updates, visit FIC Online at **www.fic.com.tw**.

Package Checklist

Please check that your package contains all the items listed below. If you discover any item is damaged or missing, please contact your vendor.

■ The VT-503 mainboard

■ This user manual

■ One IDE HDD cable

■ One floppy disk drive cable

■ One printer and COM1 cable

■ One COM2 cable

■ One USB riser card (optional)

■ One PS/2 mouse cable (optional)

■ Software utility (optional)
   ■ Desktop Management Interface (DMI) software
   ■ Bus master IDE driver

Main Features

The VT-503 mainboard comes with the following high-performance features:

■   Easy Installation
   BIOS with support for Plug and Play, auto detection of IDE hard drives,
   LS-120 drives, MS Windows™ 95, Windows™ NT, and OS2™.

■   Leading Edge Chipset
   Intel 82430TX PCIset, a two-chip BGA solution with integrated DRAM
   and L2 cache controllers as well as support for Intel's new Dynamic Power
   Management Architecture (DPMA), Concurrent PCI (PCI 2.0 and 2.1),
   and USB.

■   Flexible Processor Support
   Onboard 321-pin ZIF socket and switching voltage regulator support
   complete range of leading-edge processors:
   Intel Pentium® P55C with MMX™ technology 166/200/233 MHz
   processors.
   Intel Pentium® P54C/P54CS 90/100/120/133/150/166/200 MHz
   processors.
   AMD-K6™-166 (166 MHz) / K6-200 (200 MHz) / K6-233 (233 MHz) /
   K6-266 (266 MHz) / K6-300 (300 MHz)   processors.
   AMD-K5™- PR90 (90 MHz) / K5-PR100 (100 MHz) / K5-PR120 (90
   MHz) / K5-PR133 (100 MHz) / K5-PR150 (105 MHz) / K5-PR166 (116
   MHz) / K5-PR200 (133 MHz) processors.
   Cyrix 6x86MX™- PR166 (150 MHz) / 6x86MX-PR200 (166 MHz) / 6x86-
   MX-PR233 (200 MHz) / 6x86MX-PR266 (233 MHz) processors.
   Cyrix 6x86™- PR133+ (110 MHz) / 6x86-PR150+ (120 MHz) / 6x86-
   PR166+ (133 MHz) processors.
   IBM 6x86MX™- PR166 (150 MHz) / 6x86MX-PR200 (166 MHz) / 6x86-
   MX-PR233 (200 MHz) / 6x86MX-PR266 (233 MHz) processors.
   IBM 6x86™- PR133+ (110 MHz) / 6x86-PR150+ (120 MHz) / 6x86-
   PR166+ (133 MHz) processors.

■   Various External Bus and CPU/Bus Frequency Ratio Support
   The mainboard supports the Bus frequency of 50 / 60 / 66.8 MHz and the
   CPU/Bus frequency ratio of 1x / 1.5x / 1.75x / 2x / 2.5x / 3x / 3.5x / 4x /
   4.5x / 5x / 5.5x.
   (Please refer to Sec. **Install the CPU** in Chapter 2 for more information).

■ Ultra-fast Level II Cache
Supports 512KB onboard Pipeline Burst Level II direct-mapped write-back cache.

■ Versatile Main Memory Support
Accepts up to 512MB RAM using four SIMMs of 8, 16, 32, 64, 128MB with support for FPM and EDO DRAM and two DIMMs of 8, 16, 32, 64, 128MB with support for EDO DRAM and lightning-fast SDRAM.

■ ISA & PCI Expansion Slots
Three 16-bit ISA and four 32-bit PCI expansion slots provide all the room you need to install a full range of add-on cards.

■ Enhanced PCI Bus Master IDE Controller with Ultra DMA/33 Support
Integrated Enhanced PCI Bus Master IDE controller features two dual-channel connectors that accept up to four Enhanced IDE devices, including CD-ROM and Tape Backup Drives, as well as Hard Disk Drives supporting the new Ultra DMA/33 protocol which doubles data transfer rates to 33MB/sec. Standard PIO Mode 3, PIO Mode 4, and DMA Mode 2 devices are also supported.

■ Super Multi I/O
Integrated ITE IT8679 Plug and Play multi-I/O chipset features two high-speed 16550A compatible serial ports, one IR port, one EPP/ECP capable parallel port, and one FDD connector.

■ USB Support
Two USB ports on an optional riser card allow convenient, high-speed Plug and Play connections to the growing number of USB compliant external peripheral devices on the market.

■ Optional IrDA Connector
An optional IrDA connector for wireless infrared connections is available.

Advanced Features

■ CPU Thermal Monitoring Alert (optional)
A special heat sensor located under the CPU monitors the CPU temperature to make sure that the system is operating at a safe heat level. If the temperature is too high, the sensor automatically generates an SMI (System Management Interrupt) to turn on the system fan and slow down the CPU clock frequency. At the same time, the system warns you that the CPU is overheating. CPU utilization is restored to normal levels when the temperature returns to a safe level.

■ Switching Voltage Regulator
This mainboard features a switching voltage regulator, which significantly reduces the temperature of the CPU and regulator itself. The switching voltage regulator also ensures full upgradability to the next generation of Socket 7 processors, which will require more electrical current and generate more heat both in the processor and the system.

PC '97 Compliant

This mainboard is fully compliant with the new PC '97 standard at both the BIOS and hardware levels. PC '97 is a set of hardware, bus and device design requirements set by Microsoft in conjunction with other industry leaders aimed at making PCs easier to use by maximizing cooperation between the operating system and hardware. The system design requirements under PC '97 support a synergy among PC hardware, Microsoft Windows® Operating Systems, and Windows®-based software. Key elements include support for Plug and Play compatibility and power management for configuring and managing all system components, and 32-bit device drivers and installation procedures for both Windows® 95 and Windows® NT.

ACPI Ready (optional)

When you install a remote power supply, this mainboard fully implements the new ACPI (Advanced Configuration Power Interface) standard. ACPI enables PCs to come on instantly when accessed by a user and remain available to perform certain tasks even after the PC is turned off. Additional benefits of ACPI include improved thermal management, reduced energy consumption, and OS directed Plug and Play capabilities.

■　Soft-Off Support
The mainboard's Soft-Off feature allows you to turn off your computer using the Operating System (Windows® 95). The feature requires a power supply with a soft-off power controller.

■　Remote Ring-On
The Remote Ring-On function allows your computer to be turned on remotely via a modem while it is in Sleep Mode. The Remote Ring-On function requires a power supply with a soft-off power controller.

■　RTC Alarm
The RTC alarm feature allows you to implement a number of useful functions, such as automatically sending out a fax late at night.

DMI (Desktop Management Interface)

Enhanced system manageability is becoming an increasingly important factor in reducing the total cost of ownership of systems, particularly in a corporate environment. To provide this capability, this mainboard supports DMI at the BIOS level and includes a DMI Configuration Utility to maintain the Management Information Format Database.