

Chapter 1

Introduction

Overview

TX 400 green main board provides a highly integrated solution for fully compatible, high performance PC/AT platforms and supports Intel Pentium, Cyrix 6x86, M2 and AMD K5, K6 microprocessors. It features Write-Back Secondary Cache memory for 256MB DRAMs, so as to give full play to the advantages of the Pentium, Cyrix 6x86, M2 and AMD K5, K6 CPUs. The main board offers a wide range of interfaces which supports integrated on-board IDE and on-board I/O functions.

The current Green function is compliant with ACPI specification and OS Directed Power Management.

Key Features

CPU

- Supports Intel Pentium 75, 90, 100, 120, 133, 150, 166, 180, 200, 233 MHz, Intel Pentium Processor with MMX technology.
- Supports Cyrix 6x86 100MHz (P120 Plus), 110MHz (P133 Plus), 120MHz (P150 Plus), 133MHz (P166 Plus), 150MHz (P200 Plus)*, 6x86L and M2 CPUs.
- Supports AMD K5 PR75, PR90, PR100, PR120, PR133, PR166 and K6 PR166, PR200, PR233 CPUs.
- Switching regulator (2.0~3.5V circuit) on board.

Chipset

Main memory

- Intel's 82439 TX, PIIX4, 324 Pin BGA package chipset.
- Supports 4x72pin SIMM modules and 2x168 pin DIMM modules.
- 64-bit data path for flexible memory size expands from 8MB up to 256MB DRAMs for SIMM socket.
- Supports Fast Page mode DRAM and EDO DRAM for SIMM socket.
- Supports from 8MB to 64MB 3.3V/unbuffered SDRAM DIMM or 3.3V/unbuffered EDO DIMM for DIMM slot.

****:** The maximum speed of Intel PCIset specification is 66MHz only, it's recommended by Intel not to set system clock frequency as 75MHz.

Introduction

- Cache memory*
- Provides 512KB L2 Pipeline Burst Cache on board.
- On-board IDE*
- Supports 2 PCI Bus Master (Bus Master works as DMA Mode 2 type) IDE ports.
 - Supports PIO mode up to Mode 4 Timing.
 - Supports “Ultra DMA/33” synchronous DMA mode transfers up to 33MB/sec.
 - Supports 2 Fast IDE interfaces for up to 4 IDE devices e.g. IDE hard disks and CD ROMs drives.
- Green function*
- Supports 3 green modes: Doze, Standby and Suspend
 - Power LED will blink when system is in the green status.
- CPU Overheat Protection*
- When CPU fan malfunctions, the system will deactivate the CPU Clock line to decrease CPU utilization to the speed upon detection of system been overheated and the speaker alarms to inform users. This will prevent CPU being damaged from overheat.
- On-board I/O*
- 3 x ISA Slots and 4 x PCI Slots.
 - Uses NS Plug & Play IO chip Win 977.
 - Supports up to two 3.5" or 5.25" floppy drives 360K/720K/1.2M/1.44M/2.88M format.
 - Supports 120MB floppy drive.
 - All I/O ports can be enabled or disabled in BIOS.
 - Two high speed 16550 compatible UARTS (COM1/COM2/COM3/COM4 selective) with 16-byte send/receive FIFOs and support MIDI mode.
 - One parallel port at I/O address 378H/278H/3BCH with additional bi-direction I/O capability and multi-mode selection (SPP/EPP/ECP) (IEEE1284 compliant).
 - Provides protection circuit to prevent damages to the parallel port when a connected printer is powered up or operated at a higher voltage.
 - Supports PS/2 mouse and PS/2 keyboard (optional).
 - Supports IrDA TX/RX Header.
 - Supports USB (Universal Serial Bus) in specification.
- BIOS*
- Licensed advanced AWARD BIOS. Supports Flash ROM BIOS, Plug and Play ready, DMI ready. Built-in NCR810 SCSI BIOS.
- Power supply*
- Baby AT.
- Board size*
- 220mm x 250mm.