



Chapter 1

Introduction

1-1 Product Specifications

□ Processor

- Supports AMD Slot A processors up to 900MHz
- 100MHz DDR (Double Data Rate) transfer on K7 CPU address and data buses
- High efficiency switching power modules provides 1.6v for Vcc and up to 42A for Icc
- Foldable universal Slot A retention mechanism with Grounding

□ Chipset

- VIA Apollo KX133 (VT8371/686A) two chip AGPset

□ DRAM Memory

- Three 3.3V 168-pin DIMM sockets support up to 768MB
- Supports PC-100, PC-133 SDRAM, and VCM
- Provides single-bit ECC capability

□ Expansion Slots

- One AMR slot (Rev 1.0 compliant) for cost effective soft modem riser
- One 32-bit AGP slot for both 2x/4xAGP at 3.3v or 1.5v (Rev 2.0 compliant)
- Five 32-bit PCI slots (Rev 2.2 compliant)
- One 16-bit ISA slot (with sharing slot)

□ 2Mb Boot-Block Flash ROM

- Award System BIOS, supports PnP, APM, DMI,ACPI & Multi-device booting features i.e. floppy, LS120, CD-ROM, HDD(IDE, SCSI), ZIP-ATAPI etc.
- Includes Trend **ChipAway Virus** protection for virus-free boot and virus free operating system
- **BIOS Wonder** technology including ChipAway Virus, Flash BIOS Write Protect, Embedded Flash Utility, Built-in **Hard Disk Backup firmware**
- Optional **TwinBIOS** technology for security and management.

□ Embedded Ultra DMA-66 PCI IDE controller

- Supports two IDE ports up to 4 ATAPI devices
- Supports up to PIO Mode 4 up to 16.6MBps, Multi Mode 4 up to 66MBps with bus mastering
- Bus Master software drivers for all common multi-task operating systems

Embedded Super I/O Functions

- Two UARTs support two serial ports and IR function for HPSIR and ASKIR
- One parallel supports SPP/ECP/EPP
- One floppy disk drive connector supports up to 2.88MB, Japanese 3- Mode and 1Mbps transfer rate
- Supports Game/MIDI port for soft-audio

Double Stack Back-Panel I/O Connectors with PC99 Colored Codes

- PS/2 Mini-DIN keyboard and mouse ports
- Two Channel USB ports
- Two D-SUB 9-pin male serial port
- One D-SUB 25-pin female Printer port
- One D-SUB 15-pin female Game/MIDI port
- Audio Line-out, Line-in, Mic-in jacks

Embedded PCI Audio Subsystem

- Built-in Sample Rate Converter to ensure all internal operation at 48KHz
- Full-duplex operation for simultaneous recording and playback
- Built-in FM-emulation music synthesizer
- With external high quality AC'97 CODEC provides 90dB+ SNR CD quality audio
- Using wavetable data on the system memory
- Hardware SoundBlaster Pro for Windows DOS box and real-mode DOS legacy compatibility
- Complete software driver support for Win95/98/NT

Optional PCI Audio Subsystem

- CMedia 8738 audio chip w/ legacy audio SB16/Pro compatible
- Advanced 64-Voice Wavetable synthesizer
- Programmable independent sample rate from 4KHz to 48KHz for recording and playback
- Full-duplex operation for simultaneous recording and playback
- Supports MS DLS (Downloadable sample) level-1 technology with limitless variety of instrument samples using PC RAM
- Up to 8MB wavedata provides 128 GM, GS and WT-32 compatible instruments and 10 drum kits
- Supports HRTF 3D positional audio with MSDS, DS3D, DirectMusic, Aureal A3D and Creative EAX (Environment Audio Extensions) APIs
- 4-Channel speaker audio support is easy to build up a Home Theater environment
- Supports 24-bit S/PDIF-in/out for digital audio (i.e. compressed AC3 data)
- Supports Fiber Optic module for Internet music, PC, and MD connections
- Supports MIDI and dual game ports
- Embedded 32OHM .5w earphone amplifier

Embedded USB Controller

- USB host controller (UHCI v1.0 compliant) with Root Hub
- Four USB ports with over-current protection
- Optional USB riser with 2 additional USB ports

Embedded System Monitoring Hardware Subsystem

- 5 external voltage inputs for CPU Vcore, +12v, +5v, 2.5v and 3.3v (internal detecting)
- 2 temperature sensor with thermistor for CPU & System
- 2 Fan speed (CPU and System) monitoring and control with ON/OFF control in suspend


Board Dimensions

- Standard ATX form factor, 305mm x 210mm, 4 Layers

Switching Power Supply Requirement

Output Voltage	Max. Regulation Requirement	Min.Current Requirement(Amps)
+12V	+/- 5%	5.5
+5V	+/- 5%	15
+3.3V	+/- 5%	15
-5V	+/- 10%	0.5
-12V	+/- 10%	0.5
+5VSB	+/- 5%	0.75

Table 1-1

 3.3Vat 15Amps is necessary to guarantee full loading operation because some AGP cards and memory modules have high current consumption.

1-2 Product Feature

- Supports ACPI STR
- Embedded System Monitoring Hardware for electrical security
- Poly-fuse overcurrent protection for USB and keyboard circuitry
- Hardware design meets Microsoft PC99 requirements
- Complete Data Security:
 - * **Flash BIOS write protection** against unauthorized access
 - * **Trend ChipAway Virus** for a 100% virus free system boot-up
 - * **Embbded Flash Utility** to ease BIOS upgrade and eliminate in compatibility with the flash utility version.
 - * **Embedded HDD Instant Recovery** to protect against system crash.
- Advanced Management Features:
 - * Power-on events:
WOL(Wake-on-LAN) network card, Modem ring, RTC Alarm
 - * Software power-off control for Win95
 - * Over-ride power button
 - * Three states advanced Power-failure recovery: Always On, Always Off, Last state
 - * Chassis intrusion detection with mnemonics during power loss
 - * Blinking Power-LED in suspend



1-3 Package Contents

This product comes with the following components:

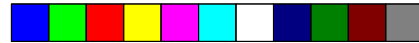
- One mainboard
- One 40-pin Ultra DMA-66 IDE connector ribbon cable (Figure 1-1)
 - * **Color coded connection for UDMA/66 cable**
 - Blue to mainboard, Gray to Master and Black to slave
- One 34-pin floppy disk drive ribbon cable (Figure 1-2)
- One User's Manual
- One CD-ROM that includes
 - Acrobat Reader
 - Award Flash EPROM Utility
 - Award DMI Utility for DOS
 - VIA Service Pack for Win9x/WinNT including Bus Master IDE drivers, AGP VxD and etc.
 - VIA Sound Driver for DOS/Win95/98/NT
 - Optional CMedia audio drivers for Win3.1, Win95/98/2000, NT4.0 and Linux
 - Optional CMedia Multimedia Decks
 - Optional **AIRBAG2000** software group including Sheperd2000, Trend PC-cillin, Norton AntiVirus, ADOBE ActiveShare, Appio and X-stop



Figure 1-1 UDMA66 IDE cable



Figure 1-2 Standard Floppy cable



Chapter 1

Memo

