

# Chapter 1

## Introduction

### 1-1 Product Specifications

#### ❑ Processor

- Supports AMD Socket A Duron and Athlon processors
- Supports 133MHz (266MHz Internal System Bus)

#### ❑ Chipset

- VIA KT266 VT8366/VT8233 dual chip AGPset

#### ❑ DRAM Memory

- Two 184-pin DDR DIMM sockets support up to 2GB
- Supports PC1600/PC2100 DDR SDRAM
- Two 3.3V 168-pin DIMM sockets support up to 2GB
- Supports PC-100, PC-133 SDRAM

#### ❑ Expansion Slots

- One **CNR** slot (v1.0 compliant) for low cost modem solution.
- One Universal-AGP slot for both 2X/4XAGP at 3.3v or 1.5v (v2.0 compliant)
- Five 32-bit PCI slots (Rev 2.2 compliant)
- One **ACR** 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
  - 🔗 Trend ChipAway Virus is a rule-based anti-virus technology and does not require periodical updates of virus code

#### ❑ Embedded Ultra DMA-100 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 and Multi Word Mode 5 up to 100MBps with bus mastering
- Bus Mastering software drivers for common multi-task operating systems

#### ❑ Onboard Ultra I/O

- ITE 8705 chip with keyboard controller
- Three 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

❑ **Double Stack Back-Panel I/O Connectors**

- PC99 Compliant color connectors
- PS/2 Mini-DIN keyboard and mouse port
- Two USB ports
- Two 9-pin D-SUB male Serial port
- One 25-pin D-SUB female Printer port
- Audio Line-in/out and Mic-in jacks
- One 15-pin D-SUB female Game/MIDI port

❑ **Onboard PCI Audio Subsystem** (optional)

- 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
- Supports HRTF 3D positional audio with MSDS, DS3D, DirectMusic, Aural A3D and Creative EAX (Environment Audio Extensions), C3DX APIs
- 4 or 6 (optional) channel speaker audio support is easy to build up a Home Theater environment
- (Optional) supports Fiber Optic module for Internet music, PC, and MD connections
- Supports MIDI and dual game ports

❑ **Embedded Audio Subsystem** (optional)

- AC'97 V2.1 compliant CODEC with integrated SRC

❑ **Embedded System Monitor Hardware**

- 8 external voltage inputs for Vcore, +/-12v, +5v, 2.5v and 3.3v (internal detecting), 1.5v, vcc5sby
- 1 temperature sensor with thermistor for CPU
- 2 Fan speed (CPU and System) monitoring

❑ **Embedded USB Controller**

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

❑ **Board Dimensions**

- ATX form factor, 305mm x 242mm, 4 Layers

## ❑ Advanced Management Features

- Poly-fuse protection for USB and keyboard circuitry
- Complete Data Security:
  - \* **Flash BIOS write protection** against unauthorized access
  - \* **Trend ChipAway Virus** for a 100% virus free system boot-up
  - \* **Embedded Flash Utility** to ease BIOS upgrade and eliminate in compatibility with the flash utility version.
- Advanced Management Features:
  - \* Power-on events:
    - WOL(Wake-on-LAN) network card, Modem ring, RTC Alarm
  - \* Software power-off control for Win9x
  - \* Over-ride power button
  - \* Three states advanced Power-failure recovery: Always On, Always Off, Last state

## ❑ Switching Power Supply Requirement

| Output Voltage | Max. Regulation Requirement | Min. Current Requirement (Amps) |
|----------------|-----------------------------|---------------------------------|
| +12V           | +/- 5%                      | 5.5                             |
| +5V            | +/- 5%                      | 20                              |
| +3.3V          | +/- 5%                      | 15                              |
| -5V            | +/- 10%                     | 0.5                             |
| -12V           | +/- 10%                     | 0.5                             |
| <b>+5VSB</b>   | <b>+/- 5%</b>               | <b>0.75</b>                     |

**Table 1-1**



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

## 1-2 Package Contents

This product comes with the following components:

- One mainboard
- One 40-pin (80-wire) UDMA-66/100 IDE connector ribbon cable (Figure 1-1)
  - \* **Color coded connection for UDMA-66/100 cable**
    - Blue to mainboard, Gray to Master and Black to slave
- One 34-pin floppy disk drive ribbon cable (Figure 1-2)
- One Terminator module (Figure 1-3)
- Optional 6 Channel Audio Adapter card with cable (Figure 1-4)
- One User's Manual
- One CD-ROM that includes
  - Acrobat Reader
  - Award Flash Utility
  - Award DMI Utility for DOS
  - VIA audio driver and utility for DOS/Win9x/NT
  - VIA LAN driver for DOS/Win9x/Win2000/NT
  - VIA Service Pack for Win9x/WinNT including Bus Master IDE drivers, AGP VxD and etc.
  - Optional **Value Pack 2001** software group including Norton AntiVirus, AutoSave, ADOBE ActiveShare, Acrobat Reader, Imagemore, X-stop, Appio and Ewalla.



Figure 1-1 UDMA-66/100 IDE cable



Figure 1-3 Terminator card

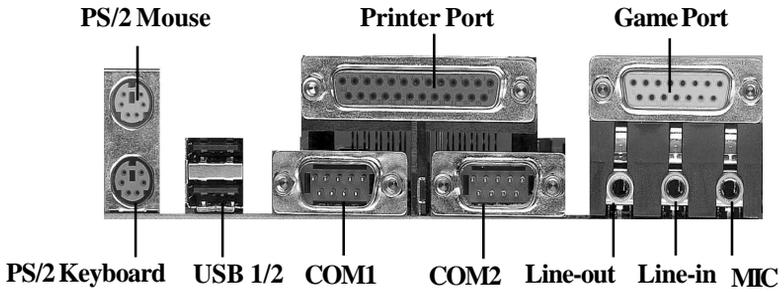
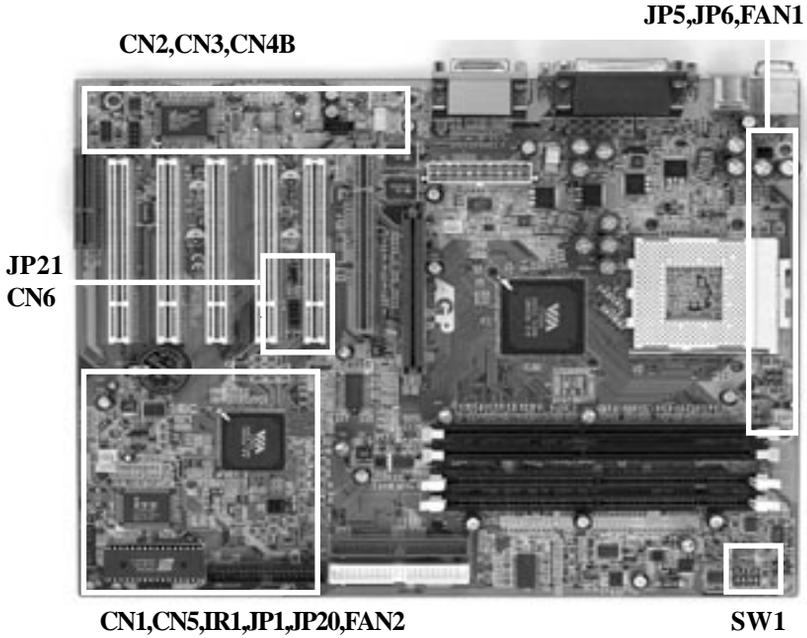


Figure 1-2 Standard Floppy cable



Figure 1-4 (Optional) 6 Channel Audio Adapter card

# 1-3 Mainboard Layout



**1-4 Connector and Jumper Reference Chart**

| <b>Jumper &amp; Connector No.</b> | <b>Function</b>                        | <b>Page</b> |
|-----------------------------------|--|-------------|
| JP1                               | Clear CMOS Data                        | 13          |
| JP5                               | PS/2 Keyboard Power-on Function        | 13          |
| JP6/JP21                          | USB 0/1 & 2/3 Device Power On Function | 13          |
| JP20                              | CPU Bus Frequency                      | 14          |
| CN1                               | Over Ride Power Button Connector       | 11          |
|                                   | Power Indicator LED Connector          | 11          |
|                                   | System Reset Switch Connector          | 12          |
|                                   | Speaker Connector                      | 12          |
|                                   | Green Switch Connector                 | 12          |
|                                   | IDE Activity LED Connector             | 12          |
| CN2                               | CD-ROM Audio-in                        | 14          |
| CN3                               | Auxiliary Audio-in                     | 14          |
| CN4B                              | Bass/Center and Rear L/R Speaker       | 14          |
| CN5                               | WOL (Wake-on-LAN) Connector            | 15          |
| USB1/CN6                          | USB Ports and USB 3/4 Connector        | 15          |
| IR1                               | IR connector                           | 16          |
| SW1                               | Frequency Ratio Setting                | 16          |
| PT1                               | PS/2 Mouse and Keyboard Ports          | 16          |
| FAN1/FAN2                         | CPU/System Cooling Fan Connectors      | 17          |
| PW1                               | ATX Power supply Connector             | 10          |