

# Chapter 1

## Introduction

### 1-1 Product Specifications

#### ❑ Processor

- Supports Intel Socket 478 Pentium 4 processors
- System bus 400MHz

#### ❑ Chipset

- Intel 845 + ICH2 chipset

#### ❑ DRAM Memory

- Three 168-pin DIMM sockets support up to 3 GB of SDRAM
- Supports PC-133 SDRAM

#### ❑ Expansion Slots

- One Universal-AGP slot for both 2X/4XAGP at 1.5v (v2.0 compliant)
- Five 32-bit PCI slots (Rev 2.2 compliant)
- One CNR slot for modem, audio and LAN support



This motherboard support only 1.5v AGP electricals. AGP card using 3.3v or other voltages may result in system boot up failure, malfunction, etc.

#### ❑ Boot-Block Flash ROM

- Award System BIOS, supports PnP, APM, DMI, ACPI & Multi-device booting features i.e. floppy, LS120, CD/DVD-ROM, HDD(IDE, SCSI), ZIP-ATAPI etc.

#### ❑ 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 8712 LPC with system monitoring hardware
- 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, Japanese 3-Mode, and 1Mbps transfer rates

#### ❑ Embedded USB Controller

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

❑ **Double Stack Back-Panel I/O 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

❑ **PCI Audio Subsystem**

- CMedia 8738 audio chip w/ legacy audio SB16/Pro compatible
- Advanced 64-Voice Wavetable synthesizer
- Full-duplex operation for simultaneous recording and playback
- Supports HRTF 3D positional audio with MSDS, DS3D, DirectMusic, Aureal A3D and Creative EAX (Environment Audio Extensions) APIs
- 6-Channel speaker audio support is easy to build up a Home Theater environment

❑ **Embedded Audio Subsystem AC-link (optional)**

- Full-duplex operation for simultaneous recording and playback
- Built-in FM-emulation music synthesizer
- External high quality AC97 CODEC provides 90dB+SNR CD quality audio

❑ **Embedded System Monitor Hardware**

- 8 external voltage inputs
- 2 temperature sensor with thermistor for CPU and System
- 2 Fan speed monitoring with ON/OFF control in suspend

❑ **Board Dimensions**

- ATX form factor, 305mm x 220mm, 4 Layers

❑ **Advanced Management Features**


- Embedded System Monitoring Hardware
- Poly-fuse protection for USB and keyboard circuitry
- Embedded BIOS flash utility
- Complete Data Security:
  - \* **Flash BIOS write protection** against unauthorized access
  - \* **Trend ChipAway Virus**, to ensure virus-free booting procedure

- **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
- \* Power-failure recovery
- \* Blinking Power-LED in suspend
- \* Hardware Reset Protect

## 1-2 Package Contents

This product comes with the following components:

- One mainboard
  - One 40-pin (80-wire) UDMA-100 IDE connector ribbon cable (Figure 1-1)
    - \* **Color coded connection for UDMA 100 cable**
    - Blue to mainboard, Gray to Master and Black to slave
  - One 34-pin floppy disk drive ribbon cable (Figure 1-2)
  - Optional USB adaptor (Figure 1-3)
  - One User's Manual
  - One CD-ROM that includes
    - Acrobat Reader
    - Award Flash Utility
    - Award DMI Utility for DOS
    - Audio driver and utility
    - Intel 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.
-  See the Readme.txt file in the CD-ROM's root directory for installation instructions of all driver and software utilities.

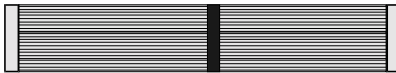


Figure 1-1 UDMA 66/100 IDE cable

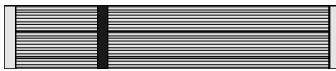


Figure 1-2 Standard Floppy cable

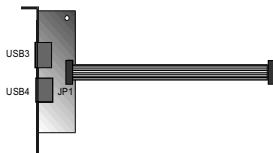


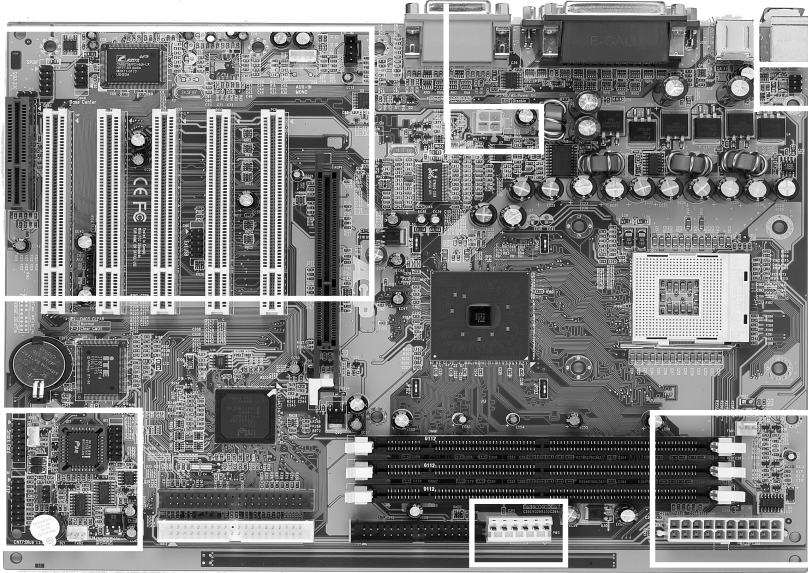
Figure 1-1 Optional USB Adaptor

### 1-3 Mainboard Layout

CN2,CN3,CN4,CN4B  
CN4C,CN6,CN10,JP8

PW2  
(12V)

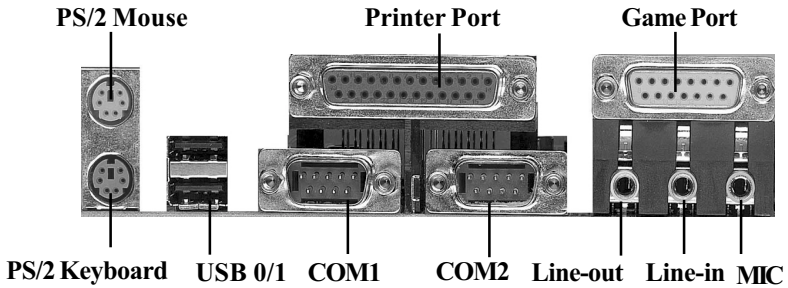
JP5,JP6



CN1,CN5,CN7,CN17  
JP1,IR2,FAN2

PW3  
(3.3V,5V)

FAN1,PW1



## 1-4 Connector and Jumper Reference Chart

Jumper & Connector No.	Function	Page
JP1	Clear CMOS Data Jumper	9
JP5	Power On By Keyboard	9
JP6/JP6A	Power On By USB 1/2 and 3/4	9
JP8	Onboard Audio	9
CN1	Over ride Power Button Connector	8
	Power Indicator LED Connector	
	Green Switch/Green LED Connector	
	System Reset Switch Connector	
	Speaker Connector	
	IDE Activity LED Connector	
CN2	CD-ROM Audio in Connector	9
CN3	Auxiliary Audio-in Connector	9
CN4	Optional Audio Mono-in/out Connector	10
CN4B	AC3 Surround/Center + Bass Connector	10
CN4C	Optional S/PDIF-in/out Connector	10
CN5	WOL (Wake-on-LAN) Connector	10
USB1/CN6	USB 1/2 Ports and USB 3/4 Connector	10
CN7	Smart Card Reader Connector	10
CN10	Alert On LAN Connector	10
CN17	Blue LED Connector	11
CN22	Front Panel Audio Connector	11
IR2	IR/CIR Connector	11
FAN1/FAN2	CPU/System Cooling Fan Connector	11
PW1/PW2	ATX/ATX12V Power Supply Connector	7