



## Chapter 1

# Introduction

### 1-1 Product Specifications

#### ❑ Processor

- Supports Socket-370 processors up to 700MHz processors
- Supports 66/100/133MHz system clocks
- High efficiency switching power modules with dual power delivery

#### ❑ Chipset

- SiS 630 AGPset with integrated **2D/3D** graphics controller

#### ❑ DRAM Memory

- Two 168-pin DIMM sockets support up to 512MB SDRAM
- Supports PC-133 SDRAM and VCM support

#### ❑ Expansion Slots

- One AMR slot (v 1.0 compliant)
- Two 32-bit PCI slots (Rev 2.2 compliant)

#### ❑ 2MB Boot-Block ISA Flash ROM

- Award System BIOS, supports PnP, APM, DMI, ACPI & Multi-device booting features i.e. floppy, LS120, HDD(IDE/SCSI), ZIP-ATAPI etc.
- Includes Trend **ChipAway Virus** protection for virus-free boot and virus free operating system
  - ✎ The Trend ChipAway Virus is a rule-based anti-virus technology and does not require periodical updates of virus code

#### ❑ Two Ultra DMA-66 PCI IDE Ports

- Supports up to PIO Mode 4 up to 16.6 Mps, Multi-word Mode 4 up to 66MBps with bus mastering
- Complete Bus Mastering software drivers for all well known multi-task operating systems

#### ❑ Embbed USB Controller

- Two OHCI USB host controller with Root Hub
- Four USB ports with over-current protection
- Optional USB riser with 2 additional USB ports





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### ❑ Onboard LPC I/O Controller

- SiS 950 LPC I/O chip with System Monitor Hardware
- One Parallel (SPP/ECP/EPP) and two Serial (16550A compliant) ports
- One floppy disk drive connector supports up to 2.88MB, Japanese 3-Mode, and 1Mbps transfer rates
- Supports HPSIR, ASKIR and CIR function shared with 2nd serial port

### ❑ Back-Panel I/O Connectors

- PC99 compliant color connectors
- PS/2 Mini-DIN keyboard and mouse ports
- Two Channel USB ports
- One RJ-45 Ethernet connector w/2 LED indicator
- One D-Sub 9-pin male serial port
- One D-Sub 15-pin female VGA 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

- 64-voices Polyphony Wavetable synthesizer supports all combinations of Stereo/Mono, 8-/16-bits, and Signed/Unsigned samples
- DirectMusic and DLS-1 support with unlimited downloadable samples in System Memory
- 64-Voice DS3D sound channels
- 32-Voice DS3D accelerator with IID, IAD and Doppler effects for DirectX 6 Virtual HRTF interactive 3D audio
- DirectSound accelerator for Volume, Pan and Pitch Shift Control on streaming or static buffers
- CD quality audio with 90dB+SNR using external high quality AC97/98 CODEC through AC-link
- On-Chip Sample Rate Converter ensures all Internal operation at 48KHz
- Supports SPDIF-out interface
- Full Legacy Compatibility
- Complete DirectX driver suite(DirectSound3D, DirectSound, DirectMusic, DirectInput) for Win98/2000
- Configuration Installation and Diagnostics under Real Mode DOS, Windows 98 DOSBox
- Windows 98/NT5.0 Configuration, Installation and Mixer Program





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### ❑ Embedded 3D AGP VGA controller

- 128-bit 2D/3D graphics engine with AGP v2.0 compliant interface
- Shared System Memory area up to 64MB
- Maximum 64MB frame buffer with Linear addressing
- Supports Hardware DVD accelerator (Built-in Hardware Motion Compensation, IDCT, VLD for video playback)
- Support multiple risers and multiple monitors
- Optimized Direct3D acceleration, complete Direct 6 support

### ❑ Embedded Fast Ethernet Controller

- Supports IEEE 802.3/802.3u 10/100Based-T
- Supports Auto-negotiation for 10/100Mbps speed selection and Auto-sensing for flexible mixed bandwidth network
- Full duplex Ethernet for up to 200Mbps throughput
- Supports WinNT, Novell, OS2 BIOS Boot-up
- Supports shield RJ-45 phone jack riser with one Link-LED, ACT-LED indicators

### ❑ Embedded Telephone and Modem Subsystem

- Full Duplex VirtualPhone Speaker Phone with Modem CODEC
- HSP V.90 Modem

### ❑ Optional video Transceiver TV/LCD/2nd CRT Output

- Supports PAL/NTSC TV system with auto sensing
- Supports TV/Primary VGA independent display resolution and Frame rate at enhanced mode
- Supports TFT-12/18/24-bit monitor
- Provides Gamma correction that independent of primary VGA

### ❑ Embedded P/S Keyboard and Mouse Controller

- Supports Password security and Hot-key Power-up

### ❑ Embedded RTC with HW Y2K Solution

### ❑ Board Dimensions

- Flex-ATX form factor, 9" x 7.5" (229mm x 190mm), 4 layers
- Optional a 40-pin PCI slot behind 2nd slot for PCI riser of low-profile PC designer





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### □ Product Feature

- Poly-fuse over-current protection for USB and keyboard circuitry
  - Supports ACPI STR (Suspend to RAM) ready!
  - Embedded hardware audio provides full DOS S/W compatibility to support legacy gaming and educational markets
  - 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 Capabilities:**
    - \* Power-on events: Keyboard password, WOL(Wake-on-LAN) network card, Modem ring, RTC-Alarm, CIR, USBs
    - \* Software power-off control for Win95 Over-ride power button
    - \* Blinking Power-LED in suspend
    - \* Hardware Reset protect
    - \* Power failure recovery
- ! Three states selectable once Vsb loose: Always On, Always Off and Last state

### □ 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



3.3V at 15Amps is necessary to 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 Ultra DMA-66 IDE connector ribbon cable (Figure 1-1)
  - \* **Color coded connection for UDMA/66 cable**  
Blue to mainboard, Ground in blue, Gray to Master and Black to slave
- ☐ One 34-pin floppy disk drive ribbon cable (Figure 1-2a) or (Figure 1-2b)
- ☐ One User's Manual
- ☐ One CD-ROM that includes
  - Acrobat Reader
  - Award System BIOS Flash Utility and Award DMI Utility for DOS
  - SiS Bus Master IDE drivers for Win9X, WinNT4.0
  - SiS AGP VXD Driver
  - SiS USB Supplement
  - Audio Driver for DOS/Win9X/NT
  - Audio Utility for Win95/NT
  - Fast Ethernet and Modem Drivers for Win95/NT
  - System Health Monitoring Software with DMI Browser
  - Trend **PC-cillin** Anti-virus v3.1 Utility (eight different languages)
  - Optional **AIRBAG2000** software group including Sheperd2000, Trend PC-cillin, Norton AntiVirus, ADOBE ActiveShare, Appio and X-stop



**Figure 1-1** UDMA/66 IDE cable



**Figure 1-2a** Standard Floppy cable



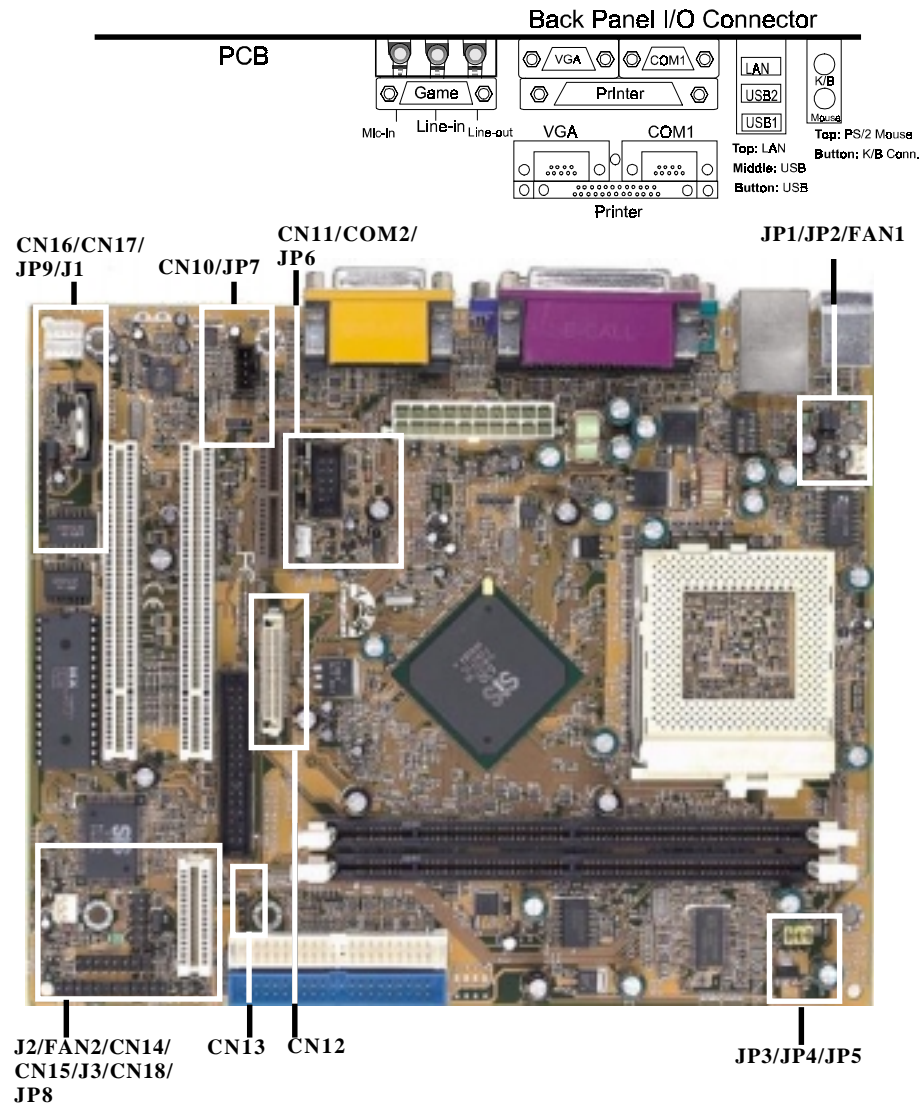
**Figure 1-2b** Optional 5.25 in. floppy cable





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### 1-3 Mainboard Layout





## 1-4 Connector and Jumper Reference Chart

Jumper & Connector No.	Function	Page
CN1	PS/2 mouse and keyboard ports	20
CN8	ATX Power Supply Connector	13
CN10	CD-ROM Audio-in Connector	20
CN11	WOL (Wake-on-LAN) Connector	20
CN12	Optional LTI-II Connector	21
CN13	I <sup>2</sup> C Connector	21
CN14	Optional PCI Riser Connector	21
CN15	IR/CIR Connector	22
CN16	Audio Mono in/out Connector	22
CN17	AUX-IN Connector	22
CN18	Keyboard lock & Power indicator LED Connector	14
	System reset switch Connector	15
	Speaker Connector	15
	Green switch / Green LED Connector	15
	Turbo LED Connector	15
	IDE activity LED Connector	15
	Over-ride power button Connector	14
J1	Optional Speaker out and Mic In Connector	18
J2	S/PDIF Connector	18
J3	USB Ports and USB 3/4 Connector	19
FAN1/FAN2	CPU/System Cooling Fan Connectors	19
JP1	PS/2 Keyboard/Mouse Power-on Function Jumper	16
JP2	USB (1/2 )Device Power On Function Jumper	16
JP3/JP4/JP5	CPU-DRAM Frequency Setting Jumper	16
JP6	Clear CMOS Data Jumper	17
JP7	AC'97 CODEC Jumper	17
JP8	Front Panel USB (3/4) Device Power on Function	17
JP9	CIR password Function Jumper	18



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# Memo

