TÜV CERT

CERTIFICATE

The TÜV CERT Certification Body for QM Systems of RWTÜV Systems GmbH

hereby certifies in accordance with TÜV CERT procedure that

ELITEGROUP COMPUTER SYSTEMS CO., LTD.
ECS MANUFACTURING (SHENZHEN) CO., LTD.
ELITE TECHNOLOGY (SHENZHEN) CO., LTD.

2F, No. 240, Sec. 1, Nei Hu Road, Taipei, Taiwan 114
No. 22, Alley 38, Lane 91, Sec. 1, Nei Hu Road, Taipei, Taiwan 114
No. 20 & No. 26, Free Trade Zone, Shatoujiao, Shenzhen City, GuangDong Province, China

has established and applies a quality system for

Design, Manufacturing and Sales of Mainboards, Personal Computers, Notebooks and Peripheral Cards

An audit was performed, Report No. **2.5-1585/2000**

Proof has been furnished that the requirements according to

ISO 9001 : 2000 / EN ISO 9001 : 2000 / JIS Q 9001 : 2000 / ANSI/ASQC Q9001 : 2000

are fulfilled. The certificate is valid until **27 January 2007**

Certificate Registration No. **04100 2000 1325**

The company has been certified since **2000**

Deutscher Akkreditierungsrat
DAR
TGA-ZM-30-96-00

Essen, 04.03.2004

RWTÜV

The TÜV CERT Certification Body for QM Systems of RWTÜV Systems GmbH

CERTIFICATION
SSCC

ISO14001 CERTIFICATE

Certificate No.: 061-04-E1-0065-R1-L

We hereby certify that

ECS MANUFACTURING (SHANZHEN) CO., LTD.

by reason of its

Environmental Management System

has been awarded this certificate for
compliance with the standard

ISO14001:1996

The Environmental Management System
applies in the following area:

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located at No. 20 & 26 (except 1F, 2F), Free Trade Zone,
Shatuojiao, Shenzhen City, Guangdong Province, P. R. China.
is engaged in manufacturing of Mother Board and Peripheral Card,
and interrelated managerial activities.**

Date of issue: 28th Sept. 2004
Date of expiry: 27th Sept. 2007
Signed by:

CNAB

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Version 1.0

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilieur du Canada.

About the Manual

The manual consists of the following:

Chapter 1

Introducing the Motherboard

Describes features of the motherboard.

Go to ⇨ page 1

Chapter 2

Installing the Motherboard

Describes installation of motherboard components.

Go to ⇨ page 7

Chapter 3

Using BIOS

Provides information on using the BIOS Setup Utility.

Go to ⇨ page 23

Chapter 4

Using the Motherboard Software

Describes the motherboard software

Go to ⇨ page 35

Chapter 5

SiS964 SATA RAID Setup Guide

Provides information about SATA RAID Setup

Go to ⇨ page 39

TABLE OF CONTENTS

Chapter 1
Introducing the Motherboard

Introduction

Thank you for choosing the 755FX-A939 motherboard. This motherboard is a high performance, enhanced function motherboard that supports Socket 939 AMD Sempron/Athlon 64/Athlon 64 FX and CPUs for high-end business or personal desktop markets.

The motherboard incorporates the SiS755 Northbridge (NB) and SiS964 Southbridge (SB) chipsets. The SiS755 Northbridge features the HyperTranport™ complaint bus driver technology to support AMD Athlon 64 processors. The Northbridge supports external AGP slot with AGP 8X/4X capability and Fast Write Transactions. Plus, SiS MuTIOL, a high bandwidth and mature technology, is incorporated to connect SiS755 and SiS964 MuTIOL Media IO together.

The SiS964 Southbridge supports Hi-Precision Event Timer (HPET) for Microsoft Windows with multiple DMA bus architecture that supports isochroous request and continuous packet transmission. It implements an EHCI compliant interface that provides 480Mb/s bandwidth for eight USB 2.0 ports, integrates AC'97 v2.3 compliant audio controller that features a 6-channel audio speaker out and HSP v.90 modem support. The Southbridge integrates a Serial ATA host controller that is SATA v1.0 compliant, supporting two SATA ports with maximum transfer rate up to 150 MB/s each. It provides dual independent IDE channels and each of them support PIO mode 0,1,2,3,4 and multiword DMA mode 0,1,2 and UltraDMA 133/100/66.

There is an advanced full set of I/O ports in the rear panel, including PS/2 mouse and keyboard connectors, COM1, LPT1,VGA port and four USB ports, one optional LAN port, and audio jacks for microphone, line-in, and line-out. This motherboard is designed in an ATX form factor using a four-layer printed circuit board and measures 305 mm x 220 mm.

Feature

Processor

This motherboard uses an 939-pin socket that carries the following features:

- Accommodates AMD Athlon64 processors
- Supports HyperTransport™ (HT) interface

HyperTransport™ Technology is a point-to-point link between two devices, it enables integrated circuits to exchange information at much higher speeds than currently available interconnect technologies.

Chipset

The SiS755 Northbridge (NB) and SiS964 Southbridge (SB) chipset are based on an innovative and scalable architecture with proven reliability and performance.

SiS755(NB)

- Support HyperTransport™ compliant bus driver with auto compensation capability
- Supports AGP 8X/4X Interface with fast write transaction
- Supports PCI power management configuration registers for supporting ACPI power down controller

SiS964 (SB)

- Concurrent servicing of all DMA Devices: Dual IDE Controllers, SATA controller, three USB 2.0/1.1 host controller, LAN MAC Controller and Audio/Modem DMA Controller
- Compliant with PCI 2.2 specificaiton supporting up to 6 PCI masters
- Compliant with Serial ATA 1.0 specification, supports power saving mode
- Compliant with AC'97 v2.3 supporting 6 channels of audio outputs
- Integrated USB 2.0 Controller with three root hubs and eight function ports

Memory

- DDR 400/333/266 DDR SDRAM with Dual Channel supported
- Accommodates two unbuffered 2.5V 184-pin DDR SDRAM DIMM sockets
- A total maximum capacity 2 GB

AC'97 Audio CODEC

- Compliant with the AC'97 v2.3 CODEC
- Supports 6-channel audio CODEC designed for PC multimedia systems
- Provides three analog line-level stereo inputs with 5-bit volume control: Line-in, CD, AUX
- Supports S/PDIF output function

Expansion Options

The motherboard comes with the following expansion options:

- Five 32-bit PCI v2.2 compliant slots
- One AGP slot
- Two IDE headers which support four IDE devices
- One floppy disk drive interface
- Two 7-pin SATA connectors

This motherboard supports Ultra DMA bus mastering with transfer rates of 133/100/66 MB/s.

Onboard LAN (optional)

The onboard LAN provides the following features:

- Supports 10/100 Mbps operation
- Supports half and full Duplex
- Supports IEEE 802.3u clause 28 auto negotiation

Integrated I/O

The motherboard has a full set of I/O ports and connectors:

- Two PS/2 ports for mouse and keyboard
- One serial port
- One parallel port
- Four USB ports
- One LAN port (optional)
- Audio jacks for microphone, line-in and line-out

BIOS Firmware

The motherboard uses AMI BIOS that enables users to configure many system features including the following:

- Power management
- Wake-up alarms
- CPU parameters
- CPU and memory timing

The firmware can also be used to set parameters for different processor clock speeds.

Some hardware specifications and software items are subject to change without prior notice.

Motherboard Components

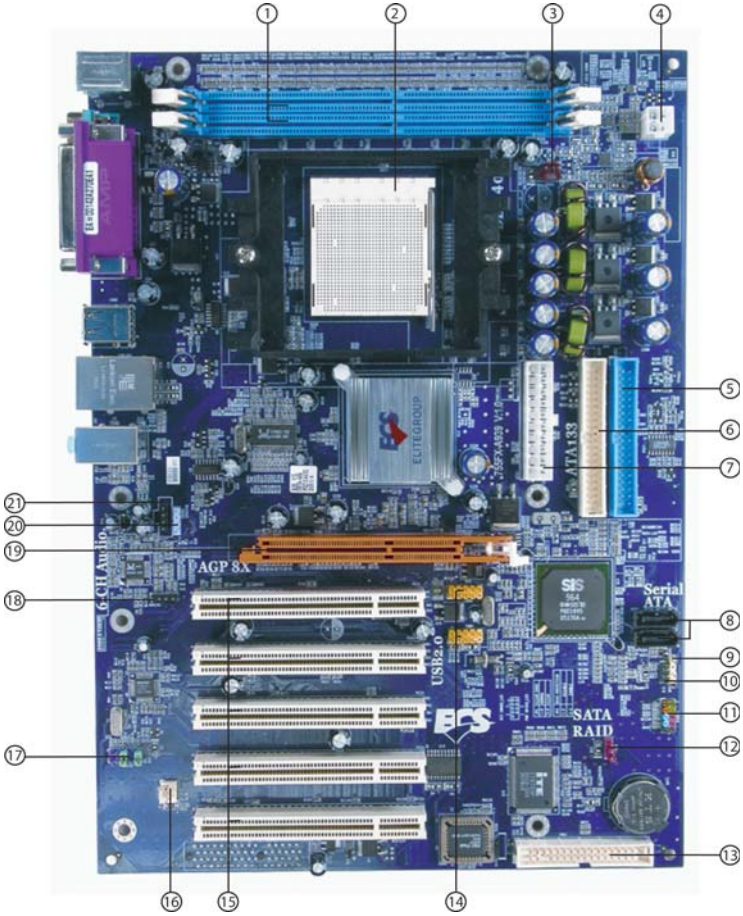


Table of Motherboard Components

LABEL	COMPONENT
1 DIMM1~2	184-pin DDR SDRAM slots
2 ATX12V	4-pin +12V power connector
3 CPU Socket	Socket 939 for AMD K8 processor
4 CPUFAN1	CPU cooling fan connector
5 IDE1	Primary IDE connector
6 IDE2	Secondary IDE connector
7 ATX1	Standard 20-pin ATX power connector
8 SATA1~SATA2	Serial ATA connectors
9 SJ1	Single-colored LED header
10 SPK1	Speaker header
11 PANEL1	Front Panel switch/LED header
12 JP1	Clear CMOS jumper
13 FDD1	Floppy disk drive connector
14 USB3 ~ 4	Front Panel USB headers
15 PCI1~5	32-bit add-on card slots
16 CASFAN1	Case cooling fan connector
17 AUDIO1	Front panel audio header
18 AUXIN1	Auxiliary in connector
19 AGP1	Accelerated Graphics Port Slot
20 SPDIFO1	SPDIF out header
21 CDIN1	Analog Audio Input connector

***** *optional component*

This concludes Chapter 1. The next chapter explains how to install the motherboard.

Memo

Chapter 2
Installing the Motherboard

Safety Precautions

- Follow these safety precautions when installing the motherboard
- Wear a grounding strap attached to a grounded device to avoid damage from static electricity
- Discharge static electricity by touching the metal case of a safely grounded object before working on the motherboard
- Leave components in the static-proof bags they came in
- Hold all circuit boards by the edges. Do not bend circuit boards

Choosing a Computer Case

There are many types of computer cases on the market. The motherboard complies with the specifications for the ATX system case. First, some features on the motherboard are implemented by cabling connectors on the motherboard to indicators and switches on the system case. Make sure that your case supports all the features required. Secondly, 755FX-A939 supports one or two floppy diskette drives and four enhanced IDE drives. Make sure that your case has sufficient power and space for all drives that you intend to install.

Most cases have a choice of I/O templates in the rear panel. Make sure that the I/O template in the case matches the I/O ports installed on the rear edge of the motherboard.

This motherboard carries an ATX form factor of 305 X 220 mm. Choose a case that accommodates this form factor.

Installing the Motherboard in a Case

Refer to the following illustration and instructions for installing the motherboard in a case.

Most system cases have mounting brackets installed in the case, which correspond the holes in the motherboard. Place the motherboard over the mounting brackets and secure the motherboard onto the mounting brackets with screws.

Ensure that your case has an I/O template that supports the I/O ports and expansion slots on your motherboard.

Do not over-tighten the screws as this can stress the motherboard.

Checking Jumper Settings

This section explains how to set jumpers for correct configuration of the motherboard.

Setting Jumpers

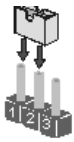
Use the motherboard jumpers to set system configuration options. Jumpers with more than one pin are numbered. When setting the jumpers, ensure that the jumper caps are placed on the correct pins.

The illustrations show a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN.

SHORT

OPEN

This illustration shows a 3-pin jumper. Pins 1 and 2 are SHORT



Checking Jumper Settings

The following illustration shows the location of the motherboard jumpers. Pin 1 is labeled.

Jumper Settings

Jumper	Type	Description	Setting (default)
JP1	3-pin	CLEAR CMOS	1-2: NORMAL 2-3: CLEAR Before clearing the CMOS, make sure to turn the system off.

Connecting Case Components

After you have installed the motherboard into a case, you can begin connecting the motherboard components. Refer to the following:

1. Connect the CPU cooling fan cable to **CPUFAN1**
2. Connect the case cooling fan connector to **CASFAN1**
3. Connect the case switches and indicator LEDs to the **PANEL1**. If there is a 3-pin LED cable, connect it to **SJ1**.
4. Connect the case speaker calbe to **SPK1**.
5. Connect the standard power supply connector to **ATX1**.
6. Connect the auxiliary case power supply connector to **ATX12V**.

CPUFAN1/CASFAN1: FAN Power Connectors

Pin	Signal Name	Function
1	GND	System Ground
2	+12V	Power +12V
3	Sense	Sensor

SPK1: Internal Speaker Header

Pin	Signal Name
1	VCC
2	NC
3	Ground
4	Signal

SJ1: Single-color LED header

Pin	Signal Name
1	ACPI LED
2	ACPI LED
3	5VSB

ATX1: ATX 20-pin Power Connector

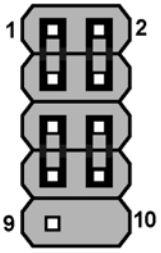
Pin	Signal Name	Pin	Signal Name
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS ON#
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PWRGD	18	-5V
9	+5VSB	19	+5V
10	+12V	20	+5V

ATX12V: ATX 12V Power Connector

Pin	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

Front Panel Header

The front panel header (PANEL1) provides a standard set of switch and LED headers commonly found on ATX or micro-ATX cases. Refer to the table below for information:



PANEL1

Pin	Signal Name	Function	Pin	Signal Name	Function
1	HD_LED_P	Hard disk LED+	2	FP PWR/SLP	*MSG LED+
3	HD_LED_N	Hard disk LED-	4	FP PWR/SLP	*MSG LED-
5	RST_SW_N	Reset Switch	6	PWR_SW_P	Power Switch
7	RST_SW_P	Reset Switch	8	PWR_SW_N	Power Switch
9	RSVD	Reserved	10	Key	No pin

** MSG LED (dual color or single color)*

Hard Drive Activity LED

Connecting pins 1 and 3 to a front panel mounted LED provides visual indication that data is being read from or written to the hard drive. For the LED to function properly, an IDE drive should be connected to the onboard IDE interface. The LED will also show activity for devices connected to the SCSI (hard drive activity LED) connector.

Power/Sleep/Message waiting LED

Connecting pins 2 and 4 to a single or dual-color, front panel mounted LED provides power on/off, sleep, and message waiting indication.

Reset Switch

Supporting the reset function requires connecting pin 5 and 7 to a momentary-contact switch that is normally open. When the switch is closed, the board resets and runs POST.

Power Switch

Supporting the power on/off function requires connecting pins 6 and 8 to a momentary-contact switch that is normally open. The switch should maintain contact for at least 50 ms to signal the power supply to switch on or off. The time requirement is due to internal de-bounce circuitry. After receiving a power on/off signal, at least two seconds elapses before the power supply recognizes another on/off signal.

Installing Hardware

Installing the Processor

Caution: When installing a CPU heatsink and cooling fan make sure that you DO NOT scratch the motherboard or any of the surface-mount resistors with the clip of the cooling fan. If the clip of the cooling fan scrapes across the motherboard, you may cause serious damage to the motherboard or its components.

On most motherboards, there are small surface-mount resistors near the processor socket, which may be damaged if the cooling fan is carelessly installed.

Avoid using cooling fans with sharp edges on the fan casing and the clips. Also, install the cooling fan in a well-lit work area so that you can clearly see the motherboard and processor socket.

Before installing the Processor

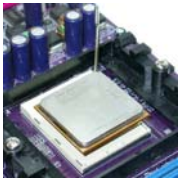
This motherboard automatically determines the CPU clock frequency and system bus frequency for the processor. You may be able to change the settings in the system Setup Utility. We strongly recommend that you do not over-clock processors or other components to run faster than their rated speed.

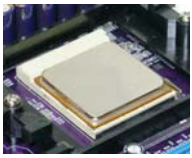
Warning: Over-clocking components can adversely affect the reliability of the system and introduce errors into your system. Over-clocking can permanently damage the motherboard by generating excess heat in components that are run beyond the rated limits.

This motherboard has a Socket 939 processor socket. When choosing a processor, consider the performance requirements of the system. Performance is based on the processor design, the clock speed and system bus frequency of the processor, and the quantity of internal cache memory and external cache memory.

CPU Installation Procedure

The following illustration shows CPU installation components.





1 Install your CPU. Pull up the lever away from the socket and lift up to 90-degree angle.
2 Locate the CPU cut edge (the corner with the pin hold noticeably missing). Align and insert the CPU correctly.
3 Press the lever down and apply thermal grease on top of the CPU.
4 Put the CPU Fan down on the retention module and snap the four retention legs of the cooling fan into place.
5 Flip the levers over to lock the heat sink in place and connect the CPU cooling Fan power cable to the CPUFAN connector. This completes the installation.

To achieve better airflow rates and heat dissipation, we suggest that you use a high quality fan with 4800 rpm at least. CPU fan and heatsink installation procedures may vary with the type of CPU fan/heatsink supplied. The form and size of fan/heatsink may also vary.

Installing Memory Modules

This motherboard accommodates two 184-pin 2.5V unbuffered DIMM and supports DDR400/ 333/266. You must install at least one module in any of the two slots. Each module can be installed with 256MB to 1GB of memory; the total memory capacity is 2GB.

DDR SDRAM memory module table

Memory module	Memory Bus
DDR 266	*133MHz*
DDR 333	*166MHz*
DDR 400	*200MHz*

Do not remove any memory module from its antistatic packaging until you are ready to install it on the motherboard. Handle the modules only by their edges. Do not touch the components or metal parts. Always wear a grounding strap when you handle the modules.

Installation Procedure

Refer to the following to install the memory modules.

1. This motherboard supports unbuffered DDR SDRAM only.
2. Push the latches on each side of the DIMM slot down.
3. Align the memory module with the slot. The DIMM slots are keyed with notches and the DIMMs are keyed with cutouts so that they can only be installed correctly.
4. Check that the cutouts on the DIMM module edge connector match the notches in the DIMM slot.
5. Install the DIMM module into the slot and press it firmly down until it seats correctly. The slot latches are levered upwards and latch on to the edges of the DIMM.
6. Install any remaining DIMM modules.

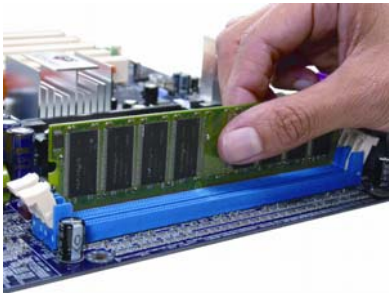


Table A: Unbuffered DIMM Support for 939-pin

Data Bus	Chip Selects				Maximum DRAM Speed	
	MEMCS_1L_L*	MEMCS_1H_L*	MEMCS_2L_L*	MEMCS_2H_L*	1T	2T
64-bits	Single rank	N/A	N/A	N/A	DDR400	DDR400
	Double rank	N/A	N/A	N/A	DDR400	DDR400
	N/A	N/A	Single rank	N/A	DDR400	DDR400
	N/A	N/A	Double rank	N/A	DDR400	DDR400
	Single rank	N/A	Single rank	N/A	DDR333	DDR400
	Single rank	N/A	Double rank	N/A	DDR200	DDR400
	Double rank	N/A	Single rank	N/A	DDR200	DDR400
	Double rank	N/A	Double rank	N/A	DDR200	DDR333
128-bits	Single rank	Single rank	N/A	N/A	DDR400	DDR400
	Double rank	Double rank	N/A	N/A	DDR400	DDR400
	N/A	N/A	Single rank	Single rank	DDR400	DDR400
	N/A	N/A	Double rank	Double rank	DDR400	DDR400
	Single rank	Single rank	Single rank	Single rank	DDR333	DDR400
	Single rank	Single rank	Double rank	Double rank	DDR200	DDR400
	Double rank	Double rank	Single rank	Single rank	DDR200	DDR400
	Double rank	Double rank	Double rank	Double rank	DDR200	DDR333

Note for "*": Memory types must be set to values consistent with system hardware.

Table B: DDR (memory module) QVL (Qualified Vendor List)

The following DDR400 memory modules have been tested and qualified for use with this motherboard.

Size	Vendor	Model Name
256MB	SAMSUNG	K4H560838D-TCC4
	TwinMOS	TMD7608F8E50D
	KingMax	KDL388P4EA-50A
	Winbond	W942508BH-5
	A-DATA	ADD8608A8A-5B
	A-DATA	ADD8608A8A-4.5B
	Kingston	D3208DL2T-5 0323PT01
	Kingston	9905192-012.A01
	Hynix	HY5DU5656822BT-D43
	Hynix	HY5DU56822BT-D43
	GEIL	GE08L3264D1WL5NKT3H71
	GEIL	G208L364D1TG5NKT3C
	Apacer	AM3A568ACT-5A
	Ramaxel	MT-46V32M8 TG-5BC
512MB	SAMSUNG	K4H560838D-TCC4
	SAMSUNG	K4H560838E-TCCC
	Infineon	HYB25D256800BT-5
	Elixir	N2DS25680BT-5T
	Kingston	D3208DL1T-5
	PSC	A2S56D30BTP
	Transcend	V58C2256804SAT5B
	ValueSelect	VS32MB-5 2B0402
	CORSAIR	CMX512-3200C2PT
	CORSAIR	CMX512-3500C2PT
	Mushkin	PC3500 level ONE
	UNIFOSA	USI 64M8B8-WB200-0431
	GEIL	GE1GB3200BDC
	AENEON	AED93T500
	AENEON	AED83T500
1GB	CORSAIR	CMX1024-3200PT

Installing a Hard Disk Drive/CD-ROM/SATA Hard Drive

This section describes how to install IDE devices such as a hard disk drive and a CD-ROM drive.

About IDE Devices

Your motherboard has a primary and secondary IDE channel interface (IDE1 and IDE2). An IDE ribbon cable supporting two IDE devices is bundled with the motherboard.

You must orient the cable connector so that the pin1 (color) edge of the cable correspoinds to the pin 1 of the I/O port connector.

IDE1: Primary IDE Connector

The first hard drive should always be connected to IDE1.

IDE2: Secondary IDE Connector

The second drive on this controller must be set to slave mode. The cinfiguration is the same as IDE1.

IDE devices enclose jumpers or switches used to set the IDE device as MASTER or SLAVE. Refer to the IDE device user's manual. Installing two IDE devices on one cable, ensure that one device is set to MASTER and the other device is set to SLAVE. The documentation of your IDE device explains how to do this.

About UltraDMA

This motherboard supports UltraDMA 133/100/66. UDMA is a technology that accelerates the performance of devices in the IDE channel. To maximize performance, install IDE devices that support UDMA and use 80-pin IDE cables that support UDMA 133/100/66.

About SATA Connectors

Your motherboard features two SATA connectors supporting a total of two drives. SATA refers to Serial ATA (Advanced Technology Attachment) is the standard interface for the IDE hard drives which are currently used in most PCs. These connectors are well designed and will only fit in one orientation. Locate the SATA connectors on the motherboard (see page 21) and follow the illustration below to install the SATA hard drives.

Installing Serial ATA Hard Drives

To install the Serial ATA (SATA) hard drives, use the SATA cable that supports the Serial ATA protocol. This SATA cable comes with an SATA power cable. You can connect either end of the SATA cable to the SATA hard drive or the connector on the motherboard.

SATA cable (optional)

SATA power cable (optional)

Refer to the illustration below for proper installation:

1 Attach either cable end to the connector on the motherboard.
2 Attach the other cable end to the SATA hard drive.
3 Attach the SATA power cable to the SATA hard drive and connect the other end to the power supply.

This motherboard does not support the "Hot-Plug" function.

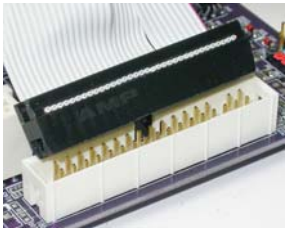
Installing a Floppy Diskette Drive

The motherboard has a floppy diskette drive (FDD) interface and ships with a diskette drive ribbon cable that supports one or two floppy diskette drives. You can install a 5.25-inch drive and a 3.5-inch drive with various capacities. The floppy diskette drive cable has one type of connector for a 5.25-inch drive and another type of connector for a 3.5-inch drive.

You must orient the cable connector so that the pin 1 (color) edge of the cable corresponds to the pin 1 of the I/O port connector.

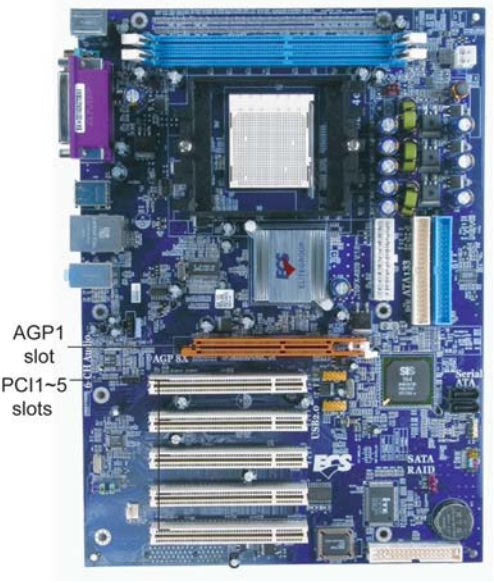
FDD1: Floppy Disk Connector

This connector supports the provided floppy drive ribbon cable. After connecting the single end to the onboard floppy connector, connect the remaining plugs on the other end to the floppy drives correspondingly.



Installing Add-on Cards

The slots on this motherboard are designed to hold expansion cards and connect them to the system bus. Expansion slots are a means of adding or enhancing the motherboard's features and capabilities. With these efficient facilities, you can increase the motherboard's capabilities by adding hardware that performs tasks that are not part of the basic system.



AGP Slot The AGP slot is used to install a graphics adapter that supports the 8X/4X AGP specification. It is AGP 3.0 compliant.

PCI Slots This motherboard is equipped with five standard PCI slots. PCI stands for Peripheral Component Interconnect and is a bus standard for expansion cards, which for the most part, is a supplement of the older ISA bus standard. The PCI slots on this board are PCI v2.2 compliant.

Before installing an add-on card, check the documentation for the card carefully. If the card is not Plug and Play, you may have to manually configure the card before installation.

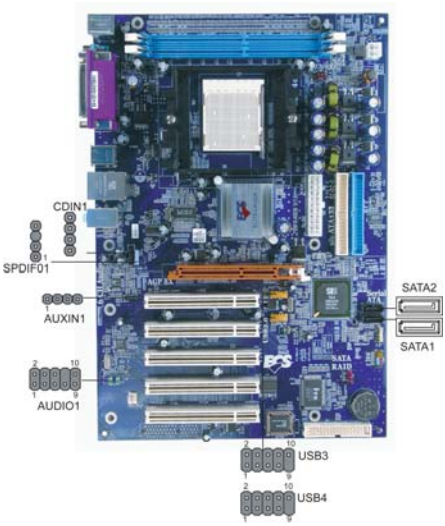
Follow these instructions to install an add-on card:

1 Remove a blanking plate from the system case corresponding to the slot you are going to use.
2 Install the edge connector of the add-on card into the expansion slot. Ensure that the edge connector is correctly seated in the slot.
3 Secure the metal bracket of the card to the system case with a screw.

For some add-on cards, for example graphics adapters and network adapters, you have to install drivers and software before you can begin using the add-on card.

Connecting Optional Devices

Refer to the following for information on connecting the motherboard's optional devices:



SPDIFO1: SPDIF out header

This is an optional header that provides an S/PDIF (Sony/Philips Digital Interface) output to digital multimedia device through optical fiber or coaxial connector.

Pin	Signal Name	Function
1	SPDIF	SPDIF digital output
2	+5VA	5V analog Power
3	Key	No pin
4	GND	Ground

AUDIO1: Front Panel Audio header

This header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal Name	Function
1	AUD_MIC	Front Panel Microphone input signal
2	AUD_GND	Ground used by Analog Audio Circuits
3	AUD_MIC_BIAS	Microphone Power
4	AUD_VCC	Filtered +5V used by Analog Audio Circuits
5	AUD_F_R	Right Channel audio signal to Front Panel
6	AUD_RET_R	Right Channel Audio signal to Return from Front Panel
7	REVD	Reserved
8	Key	No Pin
9	AUD_F_L	Left Channel Audio signal to Front Panel
10	AUD_RET_L	Left Channel Audio signal to Return from Front Panel

SATA1/SATA2: Serial ATA connectors

These connectors are use to support the new Serial ATA devices for the highest date transfer rates (150 MB/s), simpler disk drive cabling and easier PC assembly. It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and software compatibility with Parallel ATA.

Pin	Signal Name	Pin	Signal Name
1	Ground	2	TX+
3	TX-	4	Ground
5	RX-	6	RX+
7	Ground	-	-

USB3/USB4: Front Panel USB headers

The motherboard has four USB ports installed on the rear edge I/O port array. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connector to connect the front-mounted ports to the motherboard.

Pin	Signal Name	Function
1	USBPWR	Front Panel USB Power
2	USBPWR	Front Panel USB Power
3	USB_FP_P0-	USB Port 0 Negative Signal
4	USB_FP_P1-	USB Port 1 Negative Signal
5	USB_FP_P0+	USB Port 0 Positive Signal
6	USB_FP_P1+	USB Port 1 Positive Signal
7	GND	Ground
8	GND	Ground
9	Key	No pin
10	NC	Not connected

Please make sure that the USB cable has the same pin assignment as indicated above. A different pin assignment may cause damage or system hang-up.

AUXIN1: Auxiliary In header

This connector is an additional line-in audio connector. It allows you to attach a line-in cable when your rear line-in jack is set as line out port for 4-channel function.

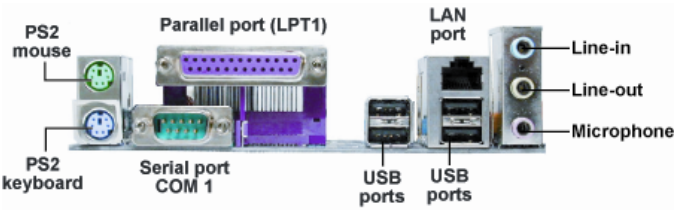
Pin	Signal Name	Function
1	AUX_L	AXU In left channel
2	GND	Ground
3	GND	Ground
4	AUX_R	AXU In right channel

CDIN1: Analog Audio Input header

Pin	Signal Name	Function
1	CD in_L	CD In left channel
2	GND	Ground
3	GND	Ground
4	CD in_R	CD In right channel

Connecting I/O Devices

The backplane of the motherboard has the following I/O ports:



PS2 Mouse Use the upper PS/2 port to connect a PS/2 pointing device.

PS2 Keyboard Use the lower PS/2 port to connect a PS/2 keyboard.

Parallel Port (LPT1) Use LPT1 to connect printers or other parallel communications devices.

Serial Port (COM1) Use the COM port to connect serial devices such as mice or fax/modems. COM1 is identified by the system as COM1/3.

LAN Port (optional) Connect an RJ-45 jack to the LAN port to connect your computer to the Network.

USB Ports Use the USB ports to connect USB devices.

Audio Ports Use the three audio ports to connect audio devices. The first jack is for stereo line-in signal. The second jack is for stereo line-out signal. The third jack is for microphone.

This concludes Chapter 2. The next chapter covers the BIOS.

Chapter 3
Using BIOS

About the Setup Utility

The computer uses the latest American Megatrends BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

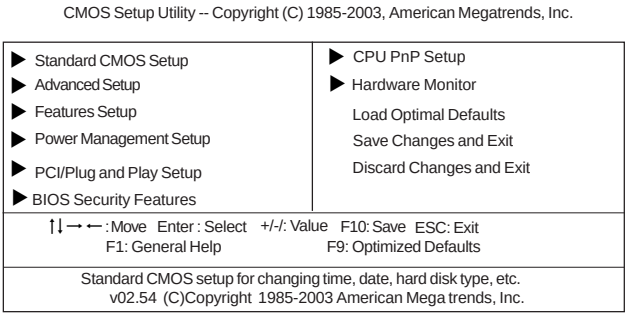
- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL to enter SETUP

Press the delete key to access the BIOS Setup Utility:



BIOS Navigation Keys

The BIOS navigation keys are listed below:

KEY	FUNCTION
ESC	Exits the current menu
←↑↓→	Scrolls through the items on a menu
+/-	Modifies the selected field's values
F1	Displays a screen that describes all key functions
F8	Loads failsafe defaults
F9	Loads an optimized setting for better performance
F10	Saves the current configuration and exits setup
ESC	Exits the current menu

Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

1. If your motherboard has a BIOS protection jumper, change the setting to allow BIOS flashing.
2. If your motherboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.
3. Create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)
4. Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the system diskette you created in Step 3.
5. Turn off your computer and insert the system diskette in your computer's diskette drive. (You might need to run the Setup Utility and change the boot priority items on the Boot Configuration Features, to force your computer to boot from the floppy diskette drive first.)
6. At the A:\ prompt, type the Flash Utility program name and the file name of the new BIOS, then press <Enter>
7. When the installation is complete, remove the floppy diskette from the diskette drive and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten.

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

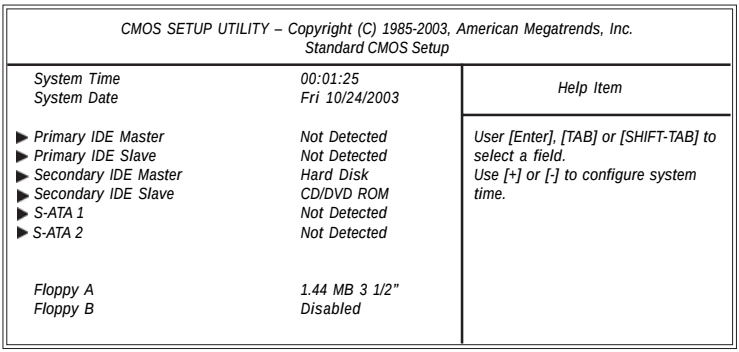
Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ▶) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle ▶.

Standard CMOS Setup

This option displays basic information about your system.



System Time & System Date

These items set up system date and time.

Primary/Secondary IDE Master/Slave

Your computer has two IDE channel and each channel can be installed with one or two devices (Master and Slave). In addition, this motherboard supports two SATA channels and each channel allows one SATA device to be installed. Use these items to configure each device on the IDE channel.

Floppy A/B (1.44MB 3 1/2")

These items set up size and capacity of the floppy diskette drive(s) installed in the system.

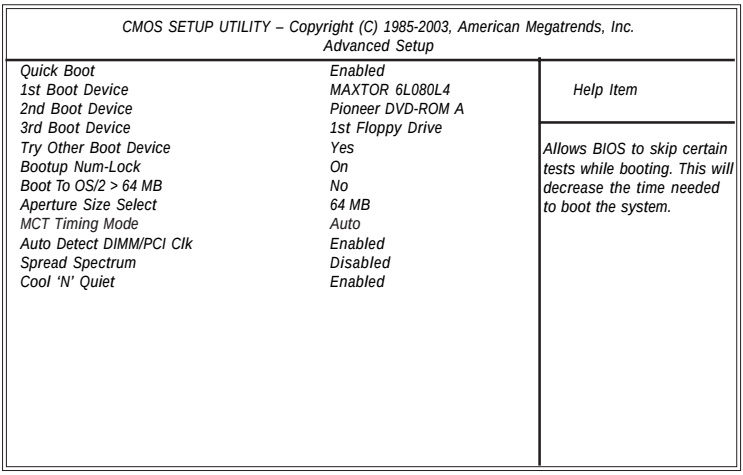
S-ATA1/S-ATA2 (Not Detected)

These items display the status of auto detection of S-ATA Devices when "Onboard SATA-IDE" sets to" IDE".

Press <Esc> to return to the main menu page.

Advanced Setup Page

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.



Quick Boot (Enabled)
If you enable this item, the system starts up more quickly be elimination some of the power on test routines.

1st Boot Device/2nd Boot Device/3rd Boot Device(MAXTOR 6L080L4/ Pioneer DVD-ROM/1st Floppy Drive)
Use these items to determine the device order the computer uses to look for an operating system to load at start-up time.

Try Other Boot Device(Yes)
If you enable this item, the system will also search for other boot devices if it fails to find an operating system from the first two locations.

Bootup Num-Lock(On)
This item determines if the Num Lock key is active or inactive at system start-up time.

Boot To OS/2> 64MB (No)
Enable this item if you are booting the OS/2 operating system and you have more than 64MB of system memory installed.

Aperture Size Select (64MB)
This item defines the size of aperture if you use a graphic adapter.

MCT Timing (Auto)
MCT (Memory controller), this item allows you to adjust memory timing

Auto Detect DIMM/PCI Clk (Enabled)
When this item is enabled, BIOS will disable the clock signal of free DIMM/PCI slots.

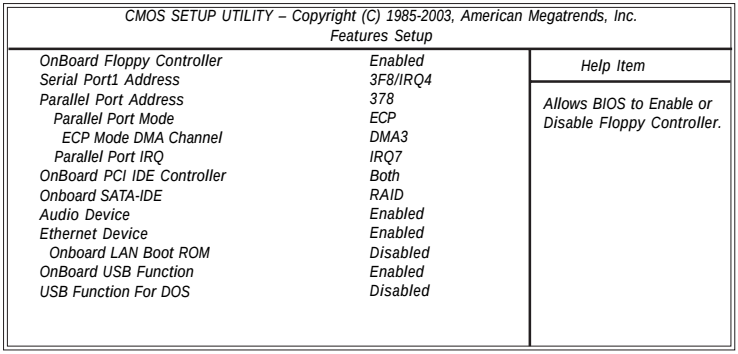
Spread Spectrum (Disabled)
If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

Cool 'N' Quiet (Enabled)
This item helps the system to lower the frequency when CPU idles. When the frequency decreases, the temperature will drop automatically as well.

Press <Esc> to return to the main menu setting page.

Features Setup Page

This page sets up some parameters for peripheral devices connected to the system.



OnBoard Floppy Controller (Enabled)
Use this item to enable or disable the onboard floppy disk drive interface.

Serial Port1 Address (3F8/IRQ4)
Use this item to enable or disable the onboard COM1 serial port, and to assign a port address.

Parallel Port Address (378)
This item enables or disables the onboard LPT1 parallel port, and assigns a port address. The Auto setting will detect and available address.

Parallel Port Mode (ECP)
Use this item to set the parallel port mode. You can select Normal (Standard Parallel Port), ECP (Extended Capabilities Port), EPP (Enhanced Parallel Port), or EPP & ECP.

ECP Mode DMA Channel (DMA3)
When the onboard parallel port is set to ECP mode, the parallel port can use DMA 3 or DMA 1.

Parallel Port IRQ (IRQ7)
Use this item to assign IRQ to the parallel port.

OnBoard PCI IDE Controller (Both)
Use this item to enable or disable the onboard PCI IDE channel.

OnBoard SATA-IDE (RAID)
Use this item to enable or disable the onboard IDE channel.

Audio Device (Enabled)

This item enables or disables the AC'97 audio chip.

Ethernet Device (Enabled)

This item enables or disables the onboard Ethernet LAN.

Onboard LAN Boot ROM (Disabled)

Use this item to enable or disable the booting from the onboard LAN or a network add-in card with a remote boot ROM installed.

OnBoard USB Function (Enabled)

Enable this item if you plan to use the USB ports on this motherboard.

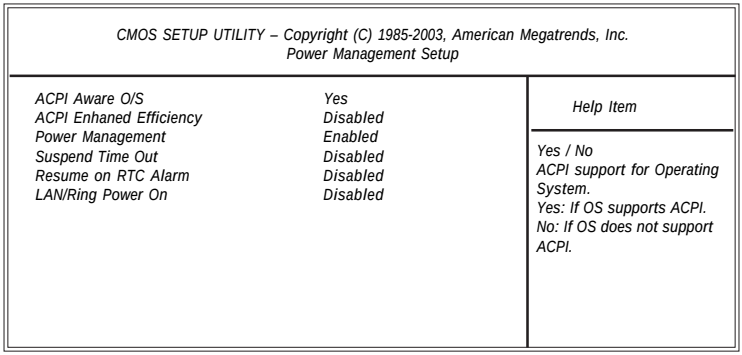
USB Function For DOS (Disabled)

Enable this item if you plan to use the USB ports on this motherboard in a DOS environment.

Press <Esc> to return to the main menu setting page.

Power Management Setup Page

This page sets up some parameters for system power management operation.



ACPI Aware O/S (Yes)

This itme supports ACPI (Advanced Configuraion and Power Management Interface). Use this item to enable or disable the ACPI feature.

ACPI Enhanced Efficiency (Disabled)

This item allows you to enable or disable ACPI Enhanced Efficiency function.

Power Management (Enabled)

Use this item to enable or disable a power management scheme. If you enable power management, you can use this item below to set the power management operation. Both APM and ACPI are supported.

Suspend Time Out (Disabled)

This item sets up the timeout for Suspend mode in minutes. If the time selected passes without any system activity, the computer will enter power-saving Suspend mode.

Resume on RTC Alarm (Disabled)

The system can be turned off with a software command. If you enable this item, the systemcan automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATXpower supply in order to use this feature.

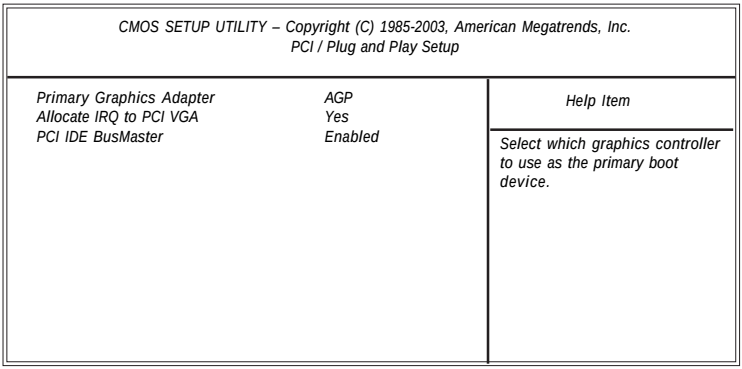
LAN/Ring Power On (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the Modem/Ring, or traffic on the network adapter. You must use an ATX power supply in order to use this feature.

Press <Esc> to return to the main menu setting page.

PCI / Plug and Play Setup Page

This page sets up some parameters for devices installed on the PCI bus and those utilizing the system plug and play capability.



Primary Graphics Adapter (AGP)

This item indicates if the primary graphics adapter uses the PCI or the AGP bus. The default AGP setting still lets the onboard display work and allows the use of a second display card installed in an AGP slot.

Allocate IRQ to PCI VGA (Yes)

If this item is enabled, an IRQ will be assigned to the PCI VGA graphics system. You set this value to No to free up an IRQ.

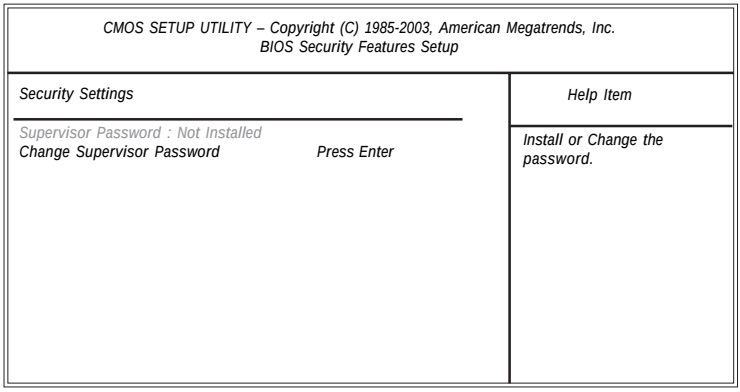
PCI IDE BusMaster (Enabled)

This item enables or disables the DMA under DOS mode. We recommend you to leave this item at the default value.

Press <Esc> to return to the main menu setting page.

BIOS Security Features Setup Page

This page helps you install or change a password.



Supervisor Password

This item indicates whether a supervisor password has been set. If the password has been installed, *Installed* displays. If not, *Not Installed* displays.

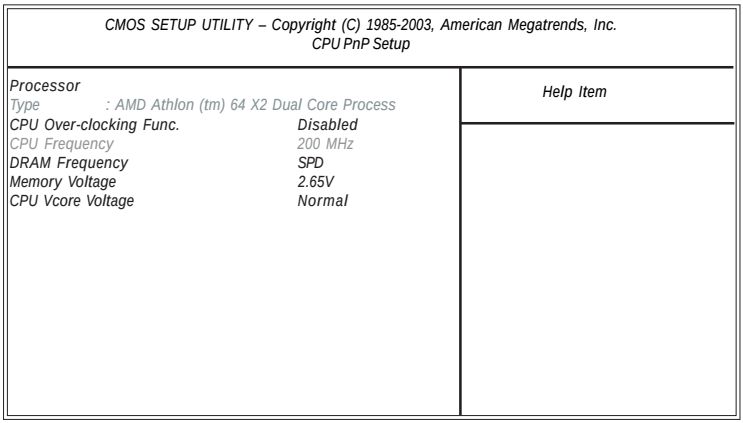
Change Supervisor Password

You can select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Press <Esc> to return to the main menu setting page.

CPU PnP Setup Page

This page helps you manually configure the mainboard for the CPU. The system will automatically detect the type of installed CPU and make the appropriate adjustments to the items on this page.



Processor

These items show the brand of the CPU installed in your system.

CPU Over-clocking Func (Disabled)

This item decides the CPU over-clocking function installed in your system. If the over-clocking fails, please turn off the system power. And then, hold the PageUp key (similar to the Clear CMOS function) and turn on the power, the BIOS will recover the safe default.

CPU Frequency (200MHz)

This item shows the frequency of the CPU installed in your system.

DRAM Frequency (SPD)

This item shows the frequency of the DRAM in your system.

Memory Voltage (2.65V)

This item allows you to control memory voltage.

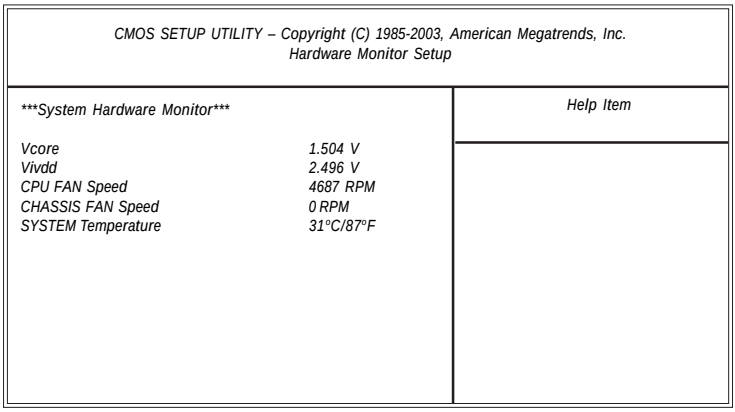
CPU Vcore Voltage (Normal)

This item allows you to adjust the processor's core voltage to give it a small boost.

Press <Esc> to return to the main menu setting page.

Hardware Monitor Page

This page sets up some parameters for the hardware monitoring function of this motherboard.



SYSTEM Temperature

These items display system temperature measurement.

FANs & Voltage Measurements

These items indicate cooling fan speeds in RPM and the various system voltage measurements.

Press <Esc> to return to the main menu setting page.

Load Optimal Defaults

This option opens a dialog box that lets you install optimized defaults for all appropriate items in the Setup Utility. Press <OK> and then <Enter> to install the defaults. Press <Canel> and then <Enter> to not install the defaults. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press <F9>.

Save Changes and Exit

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, press <OK> to save and exit, or press <Cancel> to return to the main menu:

Discard Changes and Exit

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, press <OK> to discard changes and exit, or press <Cancel> to return to the main menu.

If you have made settings that you do not want to save, use the "Discard Changes and Exit" item and press <OK> to discard any changes you have made.

Chapter 4
Using the Motherboard Software

About the Software CD-ROM

The support software CD-ROM that is included in the motherboard package contains all the drivers and utility programs needed to properly run the bundled products. Below you can find a brief description of each software program, and the location for your motherboard version. More information on some programs is available in a README file, located in the same directory as the software.

Never try to install all software from folfer that is not specified for use with your motherboard.

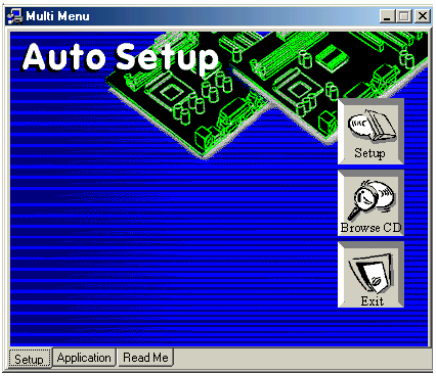
Before installing any software, always inspect the folder for files named README.TXT, INSTALL.TXT, or something similar. These files may contain important information that is not included in this manual.

Auto-installing under Windows 98/ME/2000/XP

The Auto-install CD-ROM makes it easy for you to install the drivers and software for your motherboard.

If the Auto-install CD-ROM does not work on your system, you can still install drivers through the file manager for your OS (for example, Windows Explorer). Refer to the Utility Folder Installation Notes later in this chapter.

The support software CD-ROM disc loads automatically under Windows 98/ME/2000/XP. When you insert the CD-ROM disc in the CD-ROM drive, the autorun feature will automatically bring up the install screen. The screen has three buttons on it, Setup, Browse CD and Exit.



If the opening screen does not appear; double-click the file "setup.exe" in the root directory.

Setup Tab

Setup	Click the **Setup** button to run the software installation program. Select from the menu which software you want to install.
Browse CD	The **Browse CD** button is the standard Windows command that allows you to open Windows Explorer and show the contents of the support CD. Before installing the software from Windows Explorer, look for a file named README.TXT, INSTALL.TXT or something similar. This file may contain important information to help you install the software correctly. Some software is installed in separate folders for different operating systems, such as DOS, WIN NT, or WIN98/95. Always go to the correct folder for the kind of OS you are using. In install the software, execute a file named SETUP.EXE or INSTALL.EXE by double-clicking the file and then following the instructions on the screen.
Exit	The **EXIT** button closes the Auto Setup window.

Application Tab

Lists the software utilities that are available on the CD.

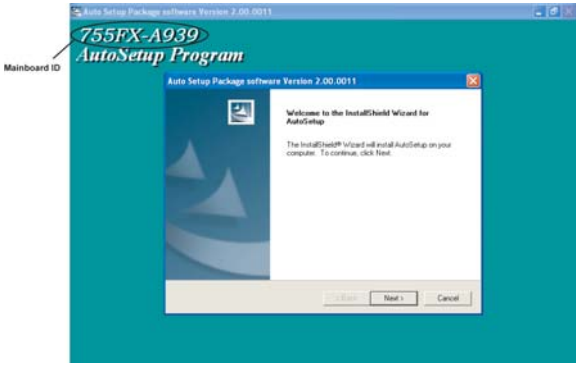
Read Me Tab

Displays the path for all software and drivers available on the CD.

Running Setup

Follow these instructions to install device drivers and software for the motherboard:

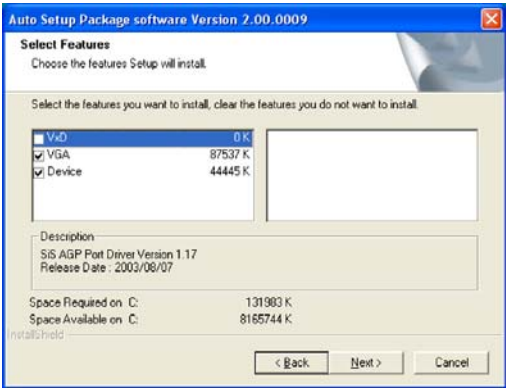
1. *Click **Setup**. The installation program begins:*



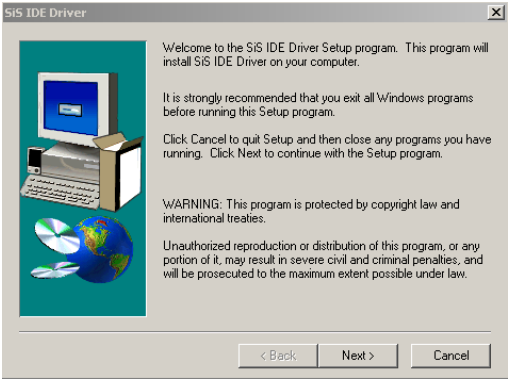
The following screens are examples only. The screens and driver lists will be different according to the motherboard you are installing.

The motherboard identification is located in the upper left-hand corner.

2. *Click **Next.** The following screen appears:*



3. *Check the box next to the items you want to install. The default options are recommended.*
4. *Click **Next** run the Installation Wizard. An item installation screen appears:*



5. *Follow the instructions on the screen to install the items.*

Drivers and software are automatically installed in sequence. Follow the onscreen instructions, confirm commands and allow the computer to restart a few times to complete the installation.

Manual Installation

Insert the CD in the CD-ROM drive and locate the PATH.DOC file in the root directory. This file contains the information needed to locate the drivers for your motherboard.

Look for the chipset and motherboard model; then browse to the directory and path to begin installing the drivers. Most drivers have a setup program (SETUP.EXE) that automatically detects your operating system before installation. Other drivers have the setup program located in the operating system subfolder.

If the driver you want to install does not have a setup program, browse to the operating system subfolder and locate the readme text file (README.TXT or README.DOC) for information on installing the driver or software for your operating system.

Utility Software Reference

All the utility software available from this page is Windows compliant. They are provided only for the convenience of the customer. The following software is furnished under license and may only be used or copied in accordance with the terms of the license.

These software(s) are subject to change at anytime without prior notice. Please refer to the support CD for available software.

AMI/AWARD Flash Utility

This utility lets you erase the system BIOS stored on a Flash Memory chip on the motherboard, and lets you copy an updated version of the BIOS to the chip. Proceed with caution when using this program. If you erase the current BIOS and fail to write a new BIOS, or write a new BIOS that is incorrect, your system will malfunction. Refer to Chapter 3, Using BIOS *for more information.*

WinFlash Utility

The Award WinFlash utility is a Windows version of the DOS Award BIOS flash writer utility. The utility enables you to flash the system BIOS stored on a Flash Memory chip on the motherboard while in a Windows environment. This utility is currently available for WINXP\ME\2000\98SE. To install the WinFlash utility, run WINFLASH.EXE from the following directory: \UTILITY\WINFLASH 1.51

This concludes Chapter 4. Refer to the next chapter for information about SATA RAID Setup.

Chapter 5
SiS 964 SATA RAID Setup Guide

Introduction for SiS964 SATA RAID Function

The 964 S-ATA controller only support two serial ATA on two independent ports. The Serial ATA RAID is designed to provide a cost-effective, high performance RAID solution that adds performance and/or reliability to PC desktops and/or servers using Serial ATA/150 hard disks.

Serial ATA RAID function supports striping (RAID 0), mirroring (RAID 1), and span (JBOD). Please note that the function supports hard disk drives only and the 964 S-ATA controller don't support Striping + mirroring (Raid 0+1).

With striping, identical drives can read and write data in parallel to increase performance. Mirroring increases read performance through load balancing and elevator sorting while creating a complete backup of your files. Span would increase the logic hard disk space.

Serial ATA RAID striped arrays can double the sustained data transfer rate of Serial ATA/ 150. Serial ATA RAID fully supports Serial ATA/150 specification of up to 150MB/sec per drive, depending on individual drive specifications.

Features

- The SiS 964 controller only support two Serial ATA (Serial ATA RAID) drivers.
- Support RAID function: RAID 0, RAID 1, JBOD.
- Support bootable disk.
- Windows-based RAID Utility software tool (only support Windows XP and 2000).
- BIOS Utility.

Support Operating Systems

Support Microsoft Windows 98/98SE/ME/2000 Professional and Server/XP.

What is RAID?

This section will give you an overview about the RAID system and introduce the basic background and glossary which you need to know before using "SiS RAID Controller Application".

1 **RAID:** (Redundant Array of Independent Disk Drives) use jointly several hard drives to increase data transfer rates and data security. It depends on the number of drives present and RAID function you select to fulfill the security or performance purposes or both.

2 **RAID 0:** Also known as "Stripping". All of the data are distributed evenly to all of the existing drives. You gain benefits on performance because the data transfer rate is multiplied by the number of drives. However, RAID 0 has high risks of data security. All of the stored data will be lost if even any one drive in the RAID set crashes.

3 **RAID 1:** Also known as "Mirroring". Two hard drives are required. The goal of RAID 0 is to ensure data security. Data is written to two or more drives synchronously. That is, 100% duplication of data from one drive to another.

4 **JBOD:** (Just a Bunch of Drives). Also known as “Spanning”. Two or more hard drives are required. Several hard disk types configured as a single hard disk. The hard drives are simply hooked up in series. This expands the capacity of your drive and results in a useable total capacity. However, JBOD will not increase any performance or data security.

Installing Software Drivers

SiS provides RAID driver for SiS 964 SATA with RAID function.

1 For RAID function, SiS 964 support RAID0, RAID1 and JBOD by software RAID driver only.
2 Support the function of installing windows to RAID array.

New Windows 2000/XP Installation

1 Start the installation:
Boot from the CD-ROM. Press F6 when the message “Press **F6** key if you need to install third party SCSI or RAID driver” appears.
2 When the Windows 2000/XP Setup window is generated, press **S** key to specify an Additional Device(s).
3 Insert the driver diskette into drive A: and press Enter.
4 Choose one of the following items:
***“WinXP SiS Raid/IDE Controller”*,**
***“Win2000 SiS Raid/IDE Controller”*,**
that appears on screen, and then press the Enter key.
5 Press Enter to continue with installation or if you need to specify any additional devices to be installed, do so at this time. Once all devices are specified, Press Enter to continue with installation.
6 From the Windows 2000/XP Setup screen, press the Enter key. Setup will now load all device files and then continue the Windows 2000/XP installation.
7 Please install the driver package again (ex. SiS RAID driver v1.00) while the operation system has been setup.

If you would like to install windows to any RAID set, you should create RAID from BIOS utility or SiS 964 RAID Utility first and then follow the steps above.

Existing Windows 2000/XP/98/Me Installation

1 Install the driver by executing SiS driver setup utility.
2 The drivers will be automatically installed.

Confirming Windows 2000/XP Driver Installation

1 From Windows 2000/XP, open the Control Panel from “My Computer” followed by the System icon.
2 Choose the “Hardware” tab, then click the “Device Manager” tab.
3 Click the “+” in front of “SCSI and RAID Controllers” hardware type. The driver **“SiS 180 Raid Controller”** should appear.

Confirming Windows 98/Me Driver Installation

1 From Windows 98/Me, open the Control Panel from “My Computer” followed by the System icon.
2 Choose the “Device Manager” tab.
3 Click the “+” in front of “IDE ATA/ATAPI Controllers” hardware type. The driver **“SiS 180 IDE Dual Channel”** and **“SiS 180 IDE/RAID Controller”** should appear.

BIOS Utility Operation

BIOS Utility supports windows 2000/XP/98/Me.

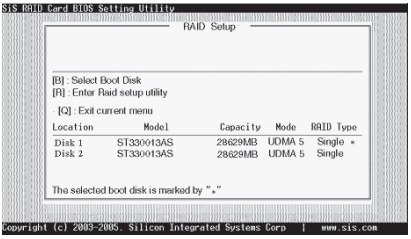
Starting BIOS Utility

1 Boot your system. If this is the first time you have booted with the SiS 964 and the drives installed, the BIOS will display the following:

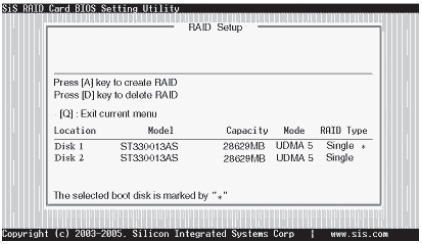
```
Silicon Integrated Systems Corp. RAID BIOS Setting Utility v0.XX
(c) 2003-2005 Silicon Integrated Systems Corp. All Rights Reserved.


Press <Ctrl.<S> to run BIOS Setting Utility
```

2 Press <Ctrl-S> keys to display the SiS 964 Utility Main Menu.



3 You can press <B> key to select the boot disk on the 964 controller. The yellow highlight will show on the disk and you can switch it to select the disk you wanted. Press “Enter” key to select it and the selected boot device will be marked by “*”. The default boot device will be set as **Disk 1**.
4 Press <R> to display the RAID setup menu below. This is the fastest and easiest method to creating your first array.



Create RAID

- SIS 964 controller support RAID 0, RAID 1 and JBOD.

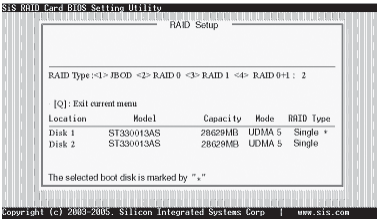
Creating a RAID 0 (Stripe) Array for Performance

- SIS 180 enables users to create striped arrays with 2, 3, or 4 drives.
- SIS 964 only supports 2 SATA drivers to create a stripe array.

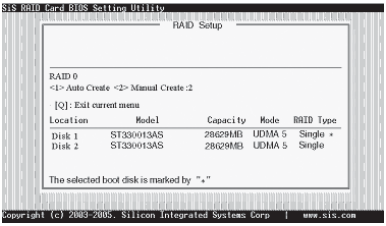
To create an array for best performance, follow these steps:

1 Press <A> to start creating a RAID array.

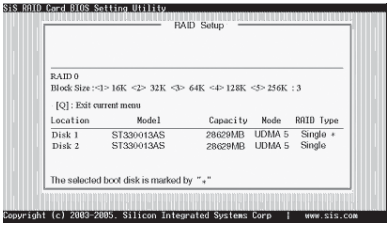
2 Press <2> and <Enter> to select RAID 0.



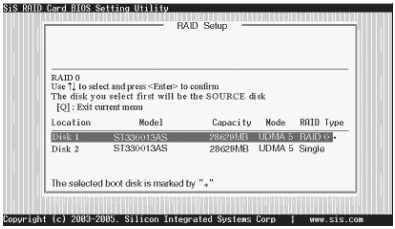
3 You will have two selections to create a RAID 0 array. **The default value is <1>**. If you select **<1>Auto Create**, you can create a RAID 0 array faster and easier. The Blocksize will be selected by its default value “64K”. The result after creating will be show on **step 8**. Besides, you also can select **<2>Manual Create**, see following steps.



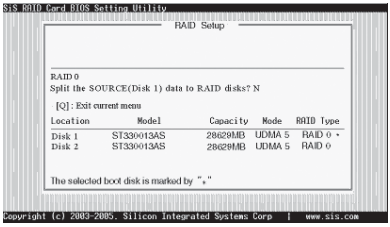
4 Press <1>-<5> keys and <Enter> to select Block Size. (Default:64K)



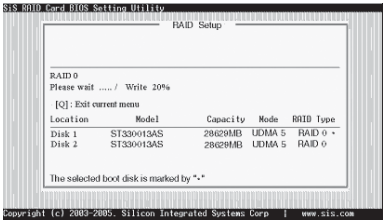
5 Use <↑ > < ↓ > to select disk, and press <Enter> to select disk, <Q> to exit. When you press <Enter> on the disk you wanted, the RAID Type will be changed from Single to RAID 0. An the disk you select first will be the SOURCE disk.



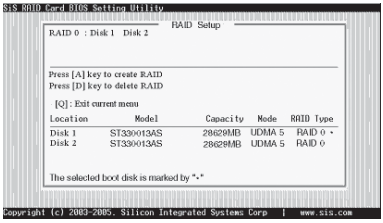
6 Next, you will see a message “Split the SOURCE(DISK x) data to RAID disks?”. Press <N> and <Enter> to create RAID 0 array only or press <Y> and <Enter> to split the data from source disk to other disks.



7 Starting splitting action, the following frame will be shown.

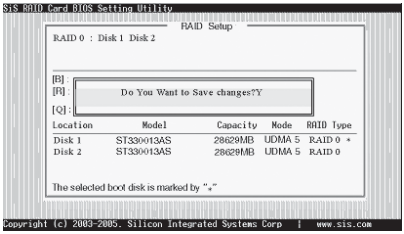


8 After all steps finished, press ,<Q> until escape the setup menu and RAID 0 array will be show on the top of the main frame.



9 Press <Q> again to exit this BIOS utility and the red message frame will show. Press <Y> and <Enter> to save changes.

10 Once the array has been created, you will need to FDISK and format the array as if it were a new single hard drive.



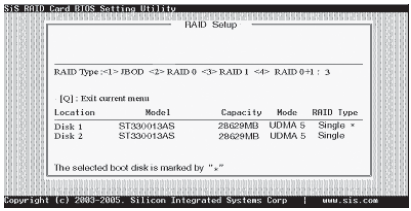
Creating a RAID 1 (Mirror) Array

SIS 964/180 enables users to create Mirror arrays with 2 drives only.

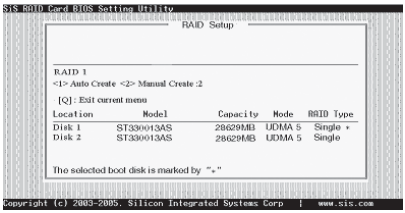
To create a Mirror array, follow these steps:

1 Press <A> to start creating a RAID array.

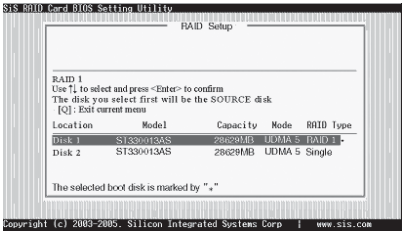
2 Press <3> and <Enter> to select Mirror.



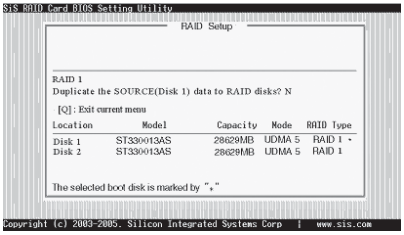
3 You will have two selections to create a RAID 1 array. **The default value is <1>**. If you select **<1>Auto Create**, you can create a RAID 1 array faster and easier. The result after creating will be show on **step 7**. Besides, you also can select **<2>Manual Create**, see following steps.



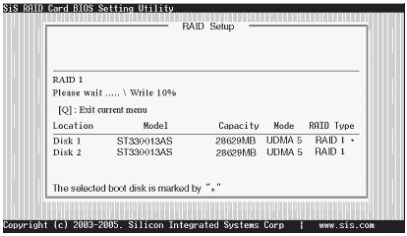
4 Use <↑ > < ↓ > to select disk, and press <Enter> to select disk, <Q> to exit. When you press <Enter> on the disk you wanted, the RAID Type will be changed from **Single** to **RAID 1**. The same as RAID 0, the disk you select first will be the SOURCE disk.



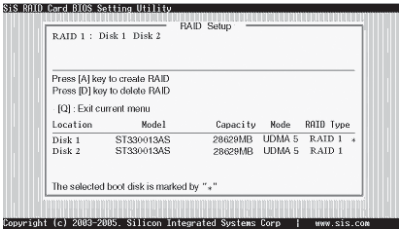
5 Next, you will see a message “Duplicate the SOURCE (DISK x) data to RAID disks?”. Press <N> and <Enter> to create RAID 1 array only or press <Y> and <Enter> to duplicate the data from source disk to mirror disk.



6 Starting duplicating action, the following frame will be showing.



7 After all steps finished, press <Q> until escape the setup menu and RAID 1 array will be show on the top of the main frame.



8 Press <Q> again to exit this BIOS utility and the red message frame will show as the same as the creation of the RAID 0 array. Press <Y> and <Enter> to save changes.

9 Once the array has been created, you will need to FDISK and format the array as if it were a new single hard drive.

Creating a JBOD Array

1 SIS 180 enables users to create JBOD arrays with 2,3, or 4 drives.

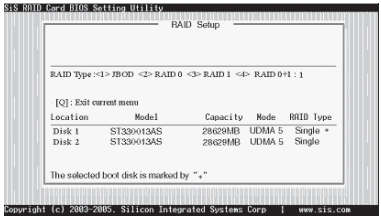
2 SIS 964 only supports 2 SATA drivers to create a JBOD arrays.

To create an JBOD array, follow these steps:

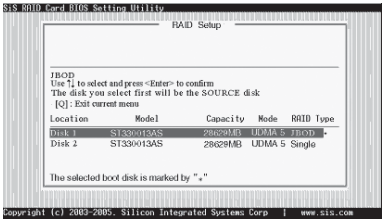
1 Press <A> to start creating a RAID array.

2 Press <1> and <Enter> to select JBOD.

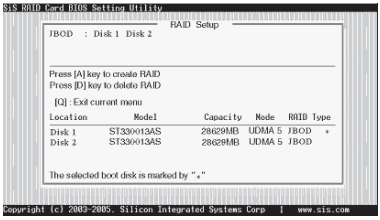
3 You will have two selections to create a JBOD array. **The default value is <1>**. If you select **<1>Auto Create**, you can create a JBOD array faster and easier. The result after creating will be show on **step 5**. Besides, you also can select **<2>Manual Create**, see following steps.



4 Use <↑> <↓ > to select disk, and press <Enter> to select disk, <Q> to exit. When you press <Enter> on the disk you wanted, the RAID Type will be changed from **Single** to **JBOD**.



5 After all steps finished, press <Q> until escape the setup menu and JBOD array will be show on the top of the main frame.



6 Press <Q> again to exit this BIOS utility and the red message frame will show as the same age as the creation of the RAID 0 array. Press <Y> and <Enter> to save changes.

7 Once the array has been created, you will need to FDISK and format the array as if it were a new single hard drive.

This concludes Chapter 5.

Caractéristiques

Processeur

Cette carte mère utilise un socket de 939 broches ayant les caractéristiques suivantes :

- Reçoit des processeurs AMD Athlon64
- Supporte l'interface HyperTransport™ (HT)

La Technologie HyperTransport™ est une liaison point à point entre deux matériels, elle permet à des circuits intégrés d'échanger des informations à des vitesses bien plus élevées que ne le permettent les technologies à interconnexions actuellement disponibles.

Chipset

La SiS 755 Northbridge (NB) et SiS964 Southbridge (SB) sont basés sur une architecture novatrice et dimensionnable avec une fiabilité et des performances prouvées.

SiS755(NB)

- Supporte le pilote de bus compatible HyperTransport™ avec capacité de compensation auto
- Supporte l'interface AGP 8X/4X avec w/Fast Write Transaction
- Supporte les registres de configuration de gestion d'alimentation PCI pour prendre en charge le contrôleur de coupure d'alimentation ACPI

SiS964(SB)

- Entretien simultané pour tous les Périphériques DMA: Contrôleurs IDE Doubles, contrôleur SATA , trois contrôleurs d'hôte USB 2.0 /1.1 et un contrôleur d'hôte USB 2.0, Contrôleur MAC LAN et Contrôleur DMA Audio/Modem.
- Conforme aux spécifications PCI 2.3 prenant en charge jusqu'à 6 maîtres PCI
- Conforme aux spécifications ATA 1.0 Série, supporte le mode d'économie d'énergie.
- Conforme à AC'97 v2.3 supportant 6 Canaux de sorties audio.
- Contrôleur USB 2.0 intégré avec trois hubs racine et huit ports de fonction.

Mémoire

- SDRAM DDR 400/333/266 DDR avec double canal pris en charge
- Reçoit deux sockets DIMM SDRAM DDR de 184 broches 2,5V sans mémoire tampon
- Une capacité maximum totale de 2 Go

AC'97 Audio CODEC

- Conforme au CODEC AC'97 V2.3
- Prend en charge le CODEC audio 6 canaux destiné aux systèmes multimédia PC
- Offre trois entrées stéréo de niveau de ligne analogique avec contrôle de volume 5 bits: Ligne d'entrée, CD, AUX
- Prend en charge la fonction de sortie S/PDIF

Multi-Language Translation

Options d'Extensions

La carte mère est livrée avec les options d'extensions suivantes:

- Cinq logements conforme PCI v2.3 32 bits
- Un logement AGP
- Deux embases IDE prenant en charge quatre périphériques IDE
- Une interface de lecteur de disquette
- Deux connecteurs SATA à 7 broches

Cette carte mère prend en charge la maîtrise de bus Ultra DMA avec des vitesses de transfert de 133/100/66 Mo/s.

LAN Interne (Optionnel)

Le LAN interne offre les caractéristiques suivantes:

- Supporte le fonctionnement en 10/100 Mbps
- Supporte le fonctionnement en half/full duplex
- Supporte l'auto-négociation IEEE 802.3u clause 28

E/S intégrées

La carte mère comporte un ensemble complet de connecteurs et de ports E/S :

- Deux ports PS/2 pour souris et clavier
- Un port série
- Un port parallèle
- Quatre ports USB
- Un port LAN (optionnel)
- Prise audio pour micro, entrée de ligne et sortie de ligne

Microprogramme BIOS

La carte mère utilise AMI BIOS qui permet à l'utilisateur de configurer bon nombre de fonctions du système, dont :

- Gestion d'alimentation
- Alertes de réveil
- Paramètres de CPU
- Synchronisation de CPU et de mémoire

Le micro-programme peut également être utilisé pour définir les paramètres pour différentes vitesses d'horloge de processeur.

Certaines spécifications matérielles et certains éléments logiciels sont susceptibles de modification sans préavis.

Multi-Language Translation

Leistungsmerkmale

Prozessor

Dieses Motherboard verwendet einen 939-Pin Sockel mit den folgenden Merkmalen:

- Nimmt AMD Athlon64 Prozessoren auf
- Unterstützt HyperTransport™ (HT) Interface

HyperTransport™ Technologie ist ein Punkt-zu-Punkt Link zwischen zwei Geräten. Es ermöglicht integrierten Schaltkreisen einen Informationsaustausch mit wesentlich höherer Geschwindigkeit als bei gängigen Interconnect-Technologien.

Chipsatz

Die SiS755 Northbridge (NB) und SiS964 Southbridge (SB) basieren auf einer innovativen und skalierbaren Architektur mit bewiesener Zuverlässigkeit und Leistung.

SiS755(NB)

- Unterstützt HyperTransport™-gemäßen Bustreiber mit Auto-Compensation-Fähigkeit
- Unterstützt AGP 8X/4X-Interface mit Fast Write-Abwicklung
- Unterstützung PCI-Power-Management-Konfigurationsregister zur Unterstützung eines ACPI Power Down-Controllers

SiS964(SB)

- Gleichzeitige Bedienung aller DMA-Geräte: Duale IDE-Controller, SATA-Controller, drei USB 2.0/1.1 Host-Controller, LAN MAC-Controller und Audio/Modem DMA-Controller
- Entspricht PCI 2.3 Spezifikation und unterstützt bis zu 6 PCI-Masters
- Gemäß Serial ATA 1.0 Spezifikationen, unterstützt den Stromsparmodus .
- Entspricht AC'97 v2.3 und unterstützt 6-Kanal-Audioausgaben
- Onboard-USB 2.0-Controller mit drei Root Hub und acht Port.

Speicher

- Unterstützung für DDR 400/333/266 DDR SDRAM mit Dualkanal
- Nimmt zwei ungepufferte 2.5V 184-Pin DDR SDRAM DIMM-Steckplätze auf
- Die maximale Kapazität liegt bei 2 GB

AC'97 Audio CODEC

- Entspricht AC' 97 V2.3 CODEC
- Unterstützt 6-Kanal Audio CODEC, entwickelt für Multimedia PC-Systeme
- Stellt drei analoge Line-Level Stereoeingänge mit 5-bit Lautstärkeregelung zur Verfügung: Line-in, CD, AUX
- Unterstützt S/PDIF Ausgangsfunktion

Multi-Language Translation

Erweiterungsmöglichkeiten

Das motherboard bietet die folgenden Erweiterungsoptionen:

- Fünf 32-bit PCIv2.3-Steckplätze
- Ein AGP-Steckplatz
- Zwei IDE-Header, die vier IDE-Geräte unterstützen
- Eine Schnittstelle für ein Floppydiskettenlaufwerk
- Zwei 7-Pin SATA Anschlüsse

Das Motherboard unterstützt UltraDMA Bus Mastering mit einer Übertragungsrate von133/100/66 MB/Sek.

Onboard LAN (Optional)

Das Onboard-LAN hat folgende Funktionen:

- Unterstützt Betrieb bei 10/100 Mbps
- Unterstützt half/full duplex Betrieb
- Unterstützt IEEE 802.3u Paragraph 28 Auto-Negotiation

Integrierte I/O

Das Motherboard hat einen vollständigen Satz von I/O-Schnittstellen bzw. -Anschlüssen:

- Zwei PS/2-Anschlüsse für Maus und Tastatur
- Eine serielle Schnittstelle
- Eine parallele Schnittstelle
- Vier USB-Anschlusse
- Ein LAN-Anschluss (optional)
- Audiobuchse für Mikrofon, Line-In und Line-Out

BIOS-Firmware

Das Motherboard verwendet AMI BIOS, das es Benutzern gestattet, viele Systemfunktionen inkl. der Folgenden zu konfigurieren:

- Energieverwaltung
- Aufweckfunktionen
- CPU-Parameter
- CPU- und Arbeitsspeicherfrequenz

Die Firmware kann auch zur Einstellung von Parametern für verschiedene Prozessortaktgeschwindigkeiten verwendet werden.

Manche Hardwarespezifikationen und Softwareelemente können ohne Ankündigung geändert werden.

Multi-Language Translation

Caratteristiche

Processore

La scheda madre utilizza una presa a 939 pin che offre le seguenti caratteristiche:

- Compatibilità con processori AMD Athlon64
- Supporto di interfaccia HyperTransport™ (HT)

La tecnologia HyperTransport™ consente il collegamento point-to-point fra due dispositivi e quindi un trasferimento di informazioni tra circuiti integrati molto più veloce di quanto sia possibile con le attuali tecnologie di interconnessione.

Chipset

I chipset SiS755 Northbridge (NB) e SiS964 Southbridge (SB) sono basati su un'architettura innovativa e scalabile di provata affidabilità e di eccellenti prestazioni.

SiS755 (NB)

- Supporto di driver per bus conforme a HyperTransport™ con capacità di autocompensazione
- Supporta l'interfaccia AGP 8X/4X con Funzione Transizione Fast Write
- Supporto per la gestione "Risparmio Energia" PCI garantendo la compatibilità con i controller ACPI

SiS964 (SB)

- Supporto simultaneo di tutti i componenti DMA: doppio controller IDE, controller SATA, tre host controller USB 2.0/1.1, controller LAN MAC e controller DMA Audio/Modem
- Conforme alle specifiche PCI 2.3, in grado di supportare fino a 6 master PCI.
- Conforme alle specifiche Serial ATA 1.0, supporto delle modalità di risparmio energetico .
- Conforme alla specifica AC'97 v2.3 con supporto di 6 canali audio in uscita
- Controller USB 2.0 integrato con tre hub e otto porte funzione

Memoria

- Supporto di SDRAM DDR 400/333/266 con Dual Channel
- Compatibile con due prese DIMM per DDR SDRAM da 2,5 V a 184 pin prive di buffer
- Capacità totale massima di 2 GB

CODEC Audio AC'97

- Conforme alla specifica AC'97 v2.3 CODEC
- Supporto di CODEC audio a 6 canali per sistemi PC multimediali
- Tre ingressi analogici stereo lineari con controllo volume a 5 bit: Line-In, CD, AUX
- Supporto di funzionalità S/PDIF in uscita

Multi-Language Translation

Opzioni d'espansione

La scheda madre è dotata delle seguenti opzioni di espansione

- Cinque slots PCI v2.3 a 32 bit
- Uno slot AGP
- Due connettori IDE per il supporto di 4 componenti IDE
- Una interfaccia floppy disk
- Due connettori SATA a 7 pin.

La scheda madre supporta il bus mastering Ultra DMA con transfer rate 133/100/66 MB/sec.

LAN su scheda (Opzionale)

La scheda LAN integrata é dotata delle seguenti funzioni:

- Supporto di operazioni a 10/100 Mbps
- Supporto operazioni half/full duplex
- Supporto di Auto-negotiation IEEE 802.3u norma 28

I/O integrato

La scheda madre ha una serie completa di porte e connettori I/O:

- Due porte PS/2 per mouse e tastiera
- Una porta seriale
- Una porta parallela
- Quattro porte USB
- Una porta LAN (opzionale)
- Connettori audio per microfono, ingresso linea ed uscita linea

Firmware BIOS

La scheda madre impiega il software AMI BIOS che abilita gli utenti a configurare molte caratteristiche de sistema, tra cui sono incluse le seguenti:

- Risparmio energetico
- Allarmi di riattivazione
- Parametri CPU
- Temporizzazione di CPU e memoria

Il Firmware può anche essere utilizzato per impostare i parametri di diverse velocità di temporizzazione del processore.

Alcune specifiche hardware ed elementi software sono soggetti a modifica senza preavviso.

Multi-Language Translation

Características

Procesador

Esta placa principal usa un zócalo 939-pin que lleva las sigtes. características:

- Acomoda procesadores AMD Athlon64
- Soporta la interfaz HyperTransport™ (HT)

La Tecnología HyperTransport™ es un vínculo punto a punto entre dos dispositivos, habilita circuitos integrados para intercambiar la información en velocidades más rápidas que las tecnologías de interconexión disponibles actualmente.

Chipset

Los chipsets Northbridge SiS755 (NB) y Southbridge SiS964 (SB) están basados en una arquitectura innovadora y escalable con fiabilidad y rendimiento comprobados.

SiS755(NB)

- Soporta el driver de bus conforme a HyperTransport™ con capacidad de autocompensación
- Soporta la interfaz AGP 8X/4X c/ Transacción de Escritura Rápida
- Soporta los registros de configuración de administración de suministro PCI para soportar el controlador de apagado ACPI

SiS964(SB)

- Servicio concurrente de todos los Dispositivos DMA : Controladores IDE Dual, controlador SATA, tres controladores anfitriones USB 2.0/1.1, controlador LAN MAC y Controlador DMA Audio/Modem
- Conformidad de la especificación PCI 2.3 que soporta hasta 6 másters PCI
- Conforme con la espec. Serial ATA 1.0, soporta modo de ahorro de energía .
- Conformidad con AC'97 v2.3 que soporta 6 Canales de salidas de audio
- Controlador USB 2.0 integrado con tres hubs de raíz y ocho puertos funcionales

Memoria

- DDR 400/333/266 DDR SDRAM con soporte de Canal Dual
- Acomoda dos zócalos 2.5V 184-pin DDR SDRAM DIMM sin buffer
- Capacidad máxima total de 2 GB

CODEC de audio AC'97

- Conforme con el CODEC AC'97 v2.3
- Soporta CODEC de audio de 6 canales diseñaods para los sistemas multimedia
- Provee tres entradas en estéreo a nivel de línea análogicas con control de volumen de 5-bit: LINE-iIN CD, AUX
- Soporta la función de salida S/PDIF

Multi-Language Translation

Opciones de expansión

La placa principla viene con las sigtes. opciones de expansión:

- Cinco ranuras conforme con 32-bit PCI v2.3
- Una ranura AGP
- Dos cabezales IDE que soporta cuatro dispositivos IDE
- Una interfaz de lector de floppy
- Dos conectores 7-pin SATA

La placa principal soporta mastering de bus Ultra DMA con índices de transferencia de 133/100/66 MB/s.

LAN en abordo (Optativo)

El LAN abordo provee las sigtes. características:

- Soporta la operación 10/100 Mbps
- Dúplex completo y medio
- Soporta la autonegociación IEEE 802.3u claúsula 28

I/O integrado

La placa base tiene un conjunto completo de puertos I/O y conectores:

- Dos puertos PS/2 para ratón y de teclado
- Un puerto serie
- Un puerto paralelo
- Cuatro puertos USB
- Un puerto LAN (optativo)
- Clavijas de audio para micrófono, entrada de línea y salida de línea

Firmware de BIOS

La placa base utiliza AMI BIOS que permite a los usuarios configurar muchas funciones del sistema, incluyendo las siguientes:

- Administración de energía
- Alarmas de encendido
- Parámetros CPU
- Temporización de memoria y CPU

El firmware también puede utilizarse para ajustar los parámetros para diversas velocidades del reloj del procesador.

Algunas especificaciones de hardware y elementos de software están sujetos a cambios sin previo aviso.

Multi-Language Translation

Características

Processador

Esta motherboard usa uma ficha de 939 pinos que possui as seguintes características:

- Acomoda processadores AMD Athlon64
- Suporta interface HyperTransport™ (HT)

Tecnologia de HyperTransport™ Té um link ponto-a-ponto entre dois dispositivos, permite circuitos integrados para trocar informação a velocidades muito mais elevadas que as disponíveis actualmente em tecnologias de interconexão.

Chipset

O SiS755 Northbridge (NB) e o SiS964 Southbridge (SB) baseia-se numa inovadora arquitectura escalável, com confiança e desempenho comprovados.

SiS755(NB)

- Suporta HyperTransport™ compatível com driver bus com capacidade de auto-compensação
- Suporta Interface AGP 8X/4X com Transação de Escrita Rápida
- Suporta registos de configuração de gestão de potência PCI para suportar controlador de baixa potência ACPI

SiS964(SB)

- Manutenção concorrente de todos os dispositivos DMA: Controladores IDE Duplos, controlador SATA, três controladores host USB 2.0/1.1, Controlador LAN MAC e Controlador DMA Áudio/Modem
- Cumpre com especificação PCI 2.3 suportando até 6 PCI masters
- Série ATA 1.0,suporta o modo de poupança de energia
- Cumpre com AC'97 v2.3 suportando 6 Canais de saídas áudio
- Controlador USB 2.0 Integrado com três hubs de raiz e oito portas de função

Memória

- DDR 400/333/266 DDR SDRAM com suporte de Bicanal
- Acomoda duas fichas DIMM SDRAM DDR de 184 pin 2.5 V sem buffers
- Uma capacidade máxima total de 2 GB

Codec Áudio AC'97

- Cumpre com o AC'97 v2.3 CODEC
- Suporta CODEC áudio com 6 canais concebido para sistemas multimédia para PC
- Fornece três entradas estéreo nível de linha analógicas com controlo de volume de 5 bits: LIne-in, CD, AUX
- Suporta uma função de saída S/PDIF

Multi-Language Translation

Opções de expansão

A placa principal vem equipada com as seguintes opções de expansão:

- Cinco ranhuras compatíveis com PCI v2.3 de 32 bits
- Uma ranhura AGP
- Dois colectores IDE que suportam quatro dispositivos IDE
- Uma interface da unidade de disquete
- Dois conectores SATA de 7 pinos

Esta motherboard suporta mastering bus Ultra DMA com taxas de transferência de 133/100/66MB/s.

LAN integrada (Opcional)

A LAN incorporada oferece as seguintes características:

- Suporta um funcionamento de 10/100 Mbps
- Suporta o funcionamento meio/completo duplex
- Suporta auto-negociação IEEE 802.3u cláusula 28

E/S integradas

A placa principal conta com um conjunto completo de portas e conectores E/S:

- Duas portas PS/2 para o rato e o teclado
- Uma porta de série
- Uma porta paralela
- Quatro portas USB
- Uma porta LAN (opcional)
- Tomadas de áudio para microfone, linha de entrada e linha de saída

Firmware do BIOS

A placa principal usa o AMI BIOS que permite aos usuários configurar vários recusos do sistema, como:

- Gerenciamento de energia
- Alarmes de reativação
- Parâmetros da CPU
- Sincronização da CPU e memória

O firmware também pode ser usado para definir os parâmetros de diferentes velocidades de clock do processador.

Alguns itens de software e especificação de hardware estão sujeitos a alterações sem prévio aviso.

Multi-Language Translation

機能

プロセッサ

本マザーボードには、939ピンのソケットが1つ搭載されていて、次の特徴があります：

- AMD Athlon64 プロセッサ対応
- HyperTransport™ (HT) インターフェースへの対応

HyperTransport™技術とは、二つのデバイスを1対1(point-to-point)で接続する技術であり、従来のインターコネクト技術に比較して、集積回路同士の情報交換を高速化します。

チップセット

SiS755 Northbridge(NB)およびSiS964 Southbridge(SB)チップセットは、実証された信頼性と性能を持つ革新的で拡張性のあるアーキテクチャに基づいています。

SiS755(NB)

- 自動補償動作可能のHyperTransportTM 対応バス駆動装置をサポート
- 高速書込み方式の AGP 8X/4X インターフェースをもサポート
- PCI電源管理設定登録機能でACPIパワーダウンコントロールをサポート

SiS964 (SB)

- すべてのDMAデバイスの同時稼動が可能、これらのデバイスにはデュアルIDE コントローラ、SATA コントローラ、3つのUSB 2.0/1.1 ホストコントローラ、LAN MAC コントローラ、およびオーディオ/モデムDMA コントローラがある
- PCI2.3規格に準拠することで、最大6つまでのPCIマスター設備の取り付けが可能
- シリアルATA 1.0仕様に準拠し、省電力モードをサポート
- AC'97 v2.3に準拠し、6 チャネルオーディオ出力をサポート
- 統合したUSB 2.0コントローラで、3つのルートハブと8つのポートを提供

メモリー

- デュアルチャネルのDDR 400/333/266 DDR SDRAMを採用
- バッファなし2.5V 184ピンDDR SDRAM DIMMソケットを2つ搭載
- 合計で最大2GBまでの容量に対応可能

AC'97 Audio CODEC

- AC'97 v2.3仕様に適合
- PCマルチメディアシステムの6チャネルオーディオCODECをサポート
- 5ビット音声コントロール可能のアナログラインレベルのステレオ入力が3つ：ラインイン、CD、およびAUX
- S/PDIF出力をもサポート

Multi-Language Translation

拡張オプション

このメインボードには次の拡張オプションがあります:

- 32ビットPCIスロットが5つ
- AGPスロットが1つ
- IDEヘッダーが2つ (4つのIDEデバイスの接続を可能)
- フロッピーディスクインターフェースが1つ
- 7ピンSATAコネクタが2つ

このマザーボードは、133/100/66MB/秒の転送速度でのUltra DMA/バスマスタリングをサポートします。

オンボードLAN (オプション)

オンボードLANは、次の機能を提供します

- 10/100 Mbps動作対応
- 半/全二重動作
- IEEE 802.3u clause 28による自動折衝をサポート

統合I/O

マザーボードには、次のI/Oポートやコネクタを揃えています

- マウスとキーボード用のPS/2ポートが2つ
- シリアルポート が1つ
- パラレルポート が1つ
- USBポート が4つ
- LANポート が1つ(オプション)
- マイク、ラインイン、ラインアウト用オーディオジャック

BIOSファームウェア

本マザーボードはAMI BIOSを採用することにより、次の機能を含めた多様なシステム構成を可能にしました

- 電源管理
- ウェークアップアラーム
- CPUパラメータ
- CPUおよびメモリのタイミング

さらに、所定のパラメータを設定することによって、プロセッサのクロック速度を変更することもできます。

一部のハードウェア仕様とソフトウェアアイテムは、予告なしに変更することがありますので、ご了承ください。

Multi-Language Translation

특징

프로세서

본 마더보드는 939 핀 소켓을 사용하여 다음과 같은 특성을 지닌다:

- AMD 애슬론 64 프로세서 사용
- HyperTransport™ (HT) 인터페이스 지원

HyperTransport™ 기술은 두 장치간의 point-to-point 링크로, 집적 회로가 기존의 상호 연결 기술 보다 더 빠른 속도로 정보를 교환할 수 있다.

칩셋

SiS755 Northbridge (NB) 와 SiS964 Southbridge (SB) 칩셋은혁신적이고 범위성을 지닌 아키텍처를 바탕으로 인정된 신뢰성과 성능을 지닌다.

SiS755(NB)

- 자동 보정 기능을 지닌 HyperTransport™ 호환 버스 드라이버 지원
- AGP 8X/4X 인터페이스 Fast Write Transaction 지원
- ACPI 파워 다운 컨트롤러 지원을 위한 PCI 전원 관리 구성 레지스터 지원

SiS964(SB)

- 모든 DMA 장치의 동시 사용: 듀얼 IDE 컨트롤러, SATA 컨트롤러, 3 개의 USB 2.0/1.1 호스트 컨트롤러, LAN MAC 컨트롤러 및 오디오/모뎀 DMA 컨트롤러
- 최대 6 개의 PCI 마스터를 지원하는 PCI 2.3 사양과 부합
- 시리얼 ATA 1.0 사양 호환, 절전 모드 지원 .
- 6 개의 오디오 출력 채널을 지원하는 AC'97 v2.3 과 부합
- 3 개의 루트 허브와 8 개의 기능 포트를 지닌 통합 USB 2.0 컨트롤러

메모리

- DDR 400/333/266 DDR SDRAM, 듀얼 채널 지원
- 2 개의 unbuffered 2.5V 184 핀 DDR SDRAM DIMM 소켓 사용
- 총 최대 용량 2 GB

AC'97 오디오 코덱

- AC' 97 v2.3 코덱 부합
- PC 멀티미디어 시스템을 위해 디자인 된 6 채널 오디오 코덱 지원
- 5 비트 볼륨 컨트롤의 아날로그 라인 레벨 스테레오 입력 3개 : Line-in, CD, AUX
- S/PDIF 출력 기능 지원

Multi-Language Translation

확장 옵션

마더보드에는 다음과 같은 확장 옵션이 있습니다.

- 32 비트 PCI v2.3 호환 슬롯 5 개
- AGP 슬롯 1 개
- 4 개의 IDE 장치를 지원하는 IDE 헤더 2 개
- 플로피 디스크 드라이브 인터페이스 1 개
- 7핀 SATA 커넥터 2개

메인보드는 전송 속도 133/100/66 MB/s 의 Ultra DMA bus mastering 을 지원한다

온보드 LAN(선택 품목)

온보드 LAN에는 다음과 같은 특징이 있습니다.

- 10/100 Mbps 오퍼레이션 지원
- half/full duplex 오퍼레이션 지원
- IEEE 802.3u 제 28 조 자동 선택 (auto negotiation) 지원

통합 I/O

마더보드에는 충분한 수의 I/O 포트 및 커넥터가 있습니다.

- 마우스 및 키보드용 PS/2 포트 2개
- 시리얼 포트 1개
- 병렬 포트 1개
- USB 포트 4개
- LAN 포트 1개(선택 품목)
- 마이크, 라인 인 및 라인 아웃용 오디오 단자

바이오스 펌웨어

마더보드는 다음의 기능은 물론 많은 시스템 기능을 설정할 수 있게 하는 AMI 바이오스를 사용합니다.

- 전원 관리
- 웨이크업(Wake-up) 경보
- CPU 매개 변수
- CPU 및 메모리 타이

펌웨어를 사용하여 다른 프로세서 클록 속도에 대한 매개 변수를 설정할 수도 있습니다.

일부 하드웨어 사양 및 소프트웨어 항목은 사전 통보 없이 변경될 수 있습니다.

Multi-Language Translation

功能

處理器

本主機板設有一個939針插座，此插座支援如下功能：

- 可搭載 AMD Athlon64 處理器
- 支援 HyperTransport™ (HT) 介面

HyperTransport™技術爲以點對點方式連接兩台設備的技術，藉此，積體電路間能夠以後高於現有各種內部連接技術(interconnect technology)技術的速度來交換資訊。

晶片組

SiS755北橋及SiS964南橋晶片組，採用了獨創且具有擴充功能的架構，能夠發揮最佳的穩定性及功能。

SiS755(NB)

- 支援具自動補償功能的HyperTransportTM 相容匯流排驅動器
- 支援AGP 8X/4X 介面(有快寫功能)
- 支援PCI電源管理設定登錄，可支援ACPI斷電控制器

SiS964(SB)

- 同時對所有DMA裝置提供服務。這些裝置有雙IDE雙控制器、SATA 控制器 、3個 USB 2.0/1.1 主控制器、 LAN MAC 控制器、及音訊/數據機 DMA控制器
- 相容於 PCI 2.3規格，支援6個PCI主控器
- 符合序列ATA 1.0規格，並支援省電模式
- 符合AC' 97 v2.3規格，支援6聲道音訊輸出
- 整合有USB 2.0控制器，具有3個集線器及8個連接埠

記憶體

- 採用雙通道DDR 400/333/266 DDR SDRAM
- 2個無緩衝的 2.5V 184針DDR SDRAM DIMM插槽
- 最大容量 2 GB

音效

- 相容於AC'97 2.3版CODEC規格
- 支援爲個人電腦多媒體系統設計的6聲道音訊CODEC功能
- 提供具有5位元音量控制功能的3種類比線級立體音效輸入：LINE-IN、CD、及AUX
- 支援S/PDIF輸出功能

Multi-Language Translation

擴充選項

主機板機載有下列擴充選項功能:

- 5個32位元PCI插槽
- 1個AGP插槽
- 2個IDE接頭，支援4個IDE裝置
- 1個軟碟機介面
- 2個7針SATA插頭

主機板也支援Ultra DMA 匯流排主控功能，可提供133 / 100 / 66 MB/sec之傳輸速率。

機載LAN(選項)

機載 LAN功能具有如下功能:

- 支援 10/100 Mbps 動作
- 支援半/全雙工
- 支援 IEEE 802.3u clause 28定義之自動協商功能

整合 I/O

主機板具有一組齊全的 I/O 連接埠及連接頭：

- 2 個 PS/2 埠，供滑鼠與鍵盤使用
- 1 個串列埠
- 1 個平行埠
- 4 個USB埠
- 1 個區域網路埠 (選項)
- 麥克風音頻插座、線性輸入及線性輸出

BIOS 韌體

本主機板使用 AMI BIOS，使用者可以組態設定許多系統功能，包括如下：

- 電源管理
- 喚醒警鈴
- CPU 參數
- CPU 及記憶體的時脈定時

此外，也可藉由參數的設定，調整處理器的時脈速度。

部份硬體規格和軟體內容可能會在未經通知的情況下更動，敬請見諒。

功能

处理器

主板使用一个 939-pin 插座，此插座具有以下特点：

- 支持 AMD AMD Athlon64 处理器
- 支持 HyperTransport™ (HT) 接口

HyperTransport™ 技术是一种在两台设备间进行点到点连接的技术，它可以让集成电路使用比当前互连技术更高的速度进行信息交换。

芯片组

SiS755 北桥 (NB) 和 SiS964 南桥 (SB) 芯片组是基于一种新型的、可扩展的架构，能提供已经证明的可靠性和高性能。

SiS755(NB)

- 支持带自动补偿功能的 HyperTransport™ 总线驱动程序
- 支持带快写处理功能的 AGP 8X/4X 接口
- 支持 PCI电源管理配置寄存器，用于支持 ACPI 掉电控制器

SiS964(SB)

- 所有 DMA 设备的并发服务：双 IDE 控制器、SATA 控制器、3 个 USB 2.0/1.1主控器、LAN MAC 控制器和音频/调制解调器 DMA 控制器
- 符合 PCI 2.3 规格，最多支持 6 个 PCI 主控器
- 符合串行 ATA 1.0 规格，支持节电模式
- 符合 AC'97 v2.3 规格，支持 6 声道音频输出
- 集成 USB 2.0 控制器，带有 3 个 Root Hub 和 8 个功能端口

内存

- DDR 400/333/266 DDR SDRAM 双通道支持
- 支持非缓冲 2.5V 184-pin DDR SDRAM DIMM 插槽
- 总共最大可支持 2 GB

AC'97 音频编解码器

- 符合AC'97 v2.3 编解码器规格
- 支持为PC多媒体系统设计的 6 声道音频编解码器
- 提供 3 路带 5 位音量控制的模拟线路电平立体声输入：线入、CD 和 AUX
- 支持 S/PDIF 输出功能

扩展选项

此主板提供如下扩展选项：

- 5 个 32 位 PCI v2.3 扩展槽
- 1 个AGP 槽
- 2 个 IDE 接口，可支持 4 个 IDE 设备
- 1 个软驱接口
- 2 个 7-pin SATA 接口

此主板支持 Ultra DMA 总线控制，传输速率可达 133 / 100 / 66 MB/sec。

Multi-Language Translation

Onboard LAN (可选)

板上集成的 LAN 提供以下功能

- 支持 10/100 Mbps 工作模式
- 支持半双工/全双工工作
- 支持IEEE 802.3u 第 28 项的自协商

集成 I/O

此主板具有完整的 I/O 端口和插孔：

- 2 个用于连接鼠标和键盘的 PS/2 端口
- 1 个串口
- 1 个并口
- 4 个 USB 端口
- 1 个 LAN 端口（可选）
- 麦克风、线入和线出声音插孔

BIOS

此主板使用 AMI BIOS，可以让用户自己配置以下系统功能：

- 电源管理
- 唤醒报警
- CPU 参数
- CPU 和记忆定时

还可用于设置不同处理器时钟速度的参数

某些硬件规格和软件项目若有更改恕不另行通知。

Характеристики

Процессор

Данная материнская плата оборудована 939-штырьковым сокетом и обладает следующими характеристиками:

- Предназначена для процессоров AMD Athlon64
- Обслуживает интерфейс HyperTransport™ (HT)

Технология HyperTransport™ обеспечивает связь двух устройств по протоколу point-to-point, позволяя гораздо более быстрый обмен информацией между интегральными микросхемами, чем тот, который обеспечивается существующими технологиями.

Чипсет

Чипсеты SiS755 «Северный мост» (Northbridge, NB) и SiS964 «Южный мост» (Southbridge, SB) построены с использованием инновационной масштабируемой архитектуры, обеспечивающей высокую надежность и производительность.

SiS755(NB)

- Поддерживает драйвер шины HyperTransport™ с фозможностью автокомпенсации
- Поддерживает интерфейс AGP 8X/4X с режимом Fast Write
- Поддерживает управление энергией PCI и контроллер выключения жесткого диска ACPI

SiS964(SB)

- Параллельное обслуживание всех DMA-устройств : Двойной IDE-контроллер, SATA-контроллер, три USB 2.0/1.1 хост-контроллера, контроллер LAN MAC и аудио/модем DMA-контроллер
- Совместимость со спецификацией PCI 2.3, поддерживающей до 6 PCI master-устройств
- Совместимость со спецификацией Serial ATA 1.0, поддержка режима энергосбережения
- Совместимость с AC'97 v2.3, поддержка 6-канального аудиовыхода
- Встроенный контроллер USB 2.0 с трехканальным концентратором и восьмью функциональными портами

Память

- DDR 400/333/266 DDR SDRAM с поддержкой двухканального режима
- Два слота для небуферизованной памяти 2.5V 184-pin DDR SDRAM DIMM
- Общий объем памяти 2 GB

AC'97 Аудио CODEC

- Совместимость с AC'97 V2.3 CODEC
- Поддержка 6-канального аудио-CODEC для компьютерных мультимедиальных систем
- Три аналоговых стереовхода с 5-битной регуляцией громкости: LINE-IN, CD, AUX
- Поддержка выхода S/PDIF

Multi-Language Translation

Возможности расширения

Существуют следуюшие опции расширения данной материнской платы:

- Пять 32-битных слотов PCI v2.3
- Один слот AGP
- Два разъема IDE с поддержкой четырех устройств IDE
- Один разъем для накопителя на гибких дисках
- Два разъема 7-pin SATA

Плата поддерживает захват управления шиной Ultra DMA со скоростью передачи 133/100/66 МБ/с.

Встроенный сетевой адаптер LAN (опционально)

Встроенный сетевой адаптер LAN обладает следующими характеристиками:

- Поддерживает режим работы 10/100 Mbps
- Поддерживает режимы Half/Full duplex
- Поддерживает режим автовыбора IEEE 802.3u вер. 28

Интегрированный вход/выход

Плата снабжена полным набором портов входа/выхода и разъемов:

- Два порта PS/2 для подключения мыши и клавиатуры
- Один серийный порт
- Один параллельный порт
- Четыре порта USB
- Один порт LAN (опционально)
- Гнездо для подключения микрофона, гнезда аудио-входа и выхода

BIOS

Плата работает под AMI BIOS, который позволяет пользователю конфигурировать различные характеристики системы:

- Управление питанием
- Сигналы пробуждения системы
- Параметры CPU
- Время доступа для CPU и памяти

BIOS допускает также установку параметров для различных частот процессора.

Некоторые параметры платы и характеристики ее программного обеспечения могут быть изменены без предварительного уведомления.

Multi-Language Translation

Cechy

Procesor

Ta płyta główna wyposażona w 939-nóżkowe złącze procesora i posiada następujące właściwości:

- Obsługuje procesory AMD Athlon64
- Obsługuje zaawansowany interfejs HyperTransport™ (HT)

Technologia HyperTransport™ jest protokołem komunikacji między dwoma urządzeniami, który umożliwia układom zcalonym wymieniać informację z dużo większymi szybkościami niż dotychczas stosowane technologie wzajemnych połączeń.

Chipset

Mostek północny (NB) SiS755 i mostek południowy (SB) SiS964 chipsetu oparty jest na nowatorskiej i skalowalnej architekturze o sprawdzonej niezawodności i funkcjonalności.

SiS755(NB)

- Obsługuje sterownik szyny HyperTransport™ posiadający funkcję autokompensacji
- Obsługuje sterownik AGP 8X/4X z opcją Fast Write Transaction
- Obsługuje konfigurację rejestrów zarządzania mocą PCI niezbędnych do obsługi kontrolera wyłączenia zasilania

SiS964(SB)

- Obsluguje wszystkie współczesne urządzenia DMA: kontrolery dual IDE, kontrolery SATA, trzy kontrolery USB 2.0/1.1, kontroler LAN MAC i kontroler audio/modem DMA
- Zgodnie z protokołem PCI 2.3 obsługuje do 6 urządzeń PCI typu masters
- Zgodnie z protokołem Serial ATA 1.0 zapewnia tryb oszczędności energii
- Zgodnie z protokołem AC'97 v2.3 zapewnia 6 kanałowe wyjście audio
- Zintegrowany kontroler USB 2.0 z trójdrożnym rozdzielnikiem i ośmiofunkcyjnym złączem

Pamięć

- DDR 400/333/266 DDR SDRAM z obsługą dwu kanałów
- Zaopatrzony w dwa gniazda niebuforowanej pamięci typu 2.5V 184-nóżek DDR SDRAM DIMM
- Maksymalnie obsługuje 2GB pamięci

AC'97 audio CODEC

- Zgodność z AC'97 V2.3 CODEC
- Obsługa 6-kanałowego audio-CODEC dla multimedialnych systemów komputerowych
- Trzy analogowe linie wejścia stereo z 5-bitową regulacją głosnoći: LINE-IN, CD, AUX
- Obsługa funkcji wyjścia S/PDIF

Multi-Language Translation

Możliwości rozbudowy

Płyta główna wyposażona jest w następujące gniazda:

- Pięć 32 bitowych gniazd PCI zgodnych z wersją 2.3.
- Jedno gniazdo AGP
- Dwa złącza IDE obsługujące cztery urządzenia IDE
- Jedno złącze obsługujące stacje dyskietek
- Dwa 7-nóżkowe złącza SATA

Płyta główna obsługuje magistralę Ultra DMA o szybkościach przesyłu 133/100/66MB/s.

Zintegrowana obsługa sieci LAN (opcjonalnie)

Zintegrowana obsługa sieci LAN posiada następujące właściwości:

- Obsługuje tryb 10/100 Mbps
- Zdolność Half/Full duplex
- Obsługuje tryb autowyboru IEEE 802.3u wer. 28

Zintegrowane We/Wy

Płyta główna wyposażona jest w pełny zestaw gniazd i złączy We/Wy:

- Dwa gniazda PS/2 dla myszy i klawiatury
- Jedno gniazdo szeregowe
- Jedno gniazdo równoległe
- Cztery gniazda USB
- Jedno gniazdo LAN (opcjonalnie)
- Gniazdo wejściowe mikrofonowe, gniazdo wejściowe i wyjściowe dzwięku (audio)

Firmowy BIOS

Płyta główna wyposażona jest w BIOS firmy AMI, który pozwala użytkownikowi konfigurować wiele cech systemu włączając w to następujące właściwości:

- Zarządzanie poborem mocy
- Alarmy typu Wake-up
- Parametry pracy procesora
- Ustalenia szybkoœci pracy procesora i pamiêci

BIOS może być używany do ustalania parametrów wpływających na szybkości pracy zegara procesora.

Niektóre parametry dotyczące płyty i jej oprogramowania mogą ulec zmianie bez uprzedniego powiadomienia.

Multi-Language Translation

Vlastnosti

Procesor

Tato základní deska je určena pro procesory 939-pin a může nabídnout následující vlastnosti:

- Použití pro procesory AMD Athlon64 s jádrem
- Podporuje rozraní Hyper-Transport™(HT)

Technologie HyperTransport ™ je přímým spojením mezi dvěma zařízeními, umožňující integrovaným obvodům výměnu informací vyššími rychlostmi, než jaké nabízejí současné technologie.

Čipová sada

Čipová sada SiS755 s northbridge (NB) a southbridge (SB)SiS964 je založena na inovativní a škálovatelné architektuře s ověřenou spolehlivostí a výkonem.

SiS755(NB)

- Podpora Hyper-Transport™ kanálů s autokompenzacni funkce
- Podpora rozhraní AGP 8X/4X s rychlým zápisem
- Podpora registrů konfigurace řízení spotřeby PCI a podpora řadiče vypnutí systému ACPI

SiS964(SB)

- Současná obsluha všech zařízení DMA: duální řadiče IDE, řadič SATA, tři hostitelské řadiče USB 2.0/1.1, řadič LAN MAC a řadič audio/modemu DMA
- Splňuje požadavky standardu PCI 2.3 s podporou 6 hlavních kanálů PCI
- Splňuje požadavky standardu Serial ATA 1.0, podporuje režim řízení spotřeby energie
- Splňuje požadavky standardu AC'97 v2.3, podporuje 6 výstupních audio kanálů
- Integrovaný řadič USB 2.0 se třemi kořenovými rozbočovači a osmi funkčními porty.

Paměť

- Paměti DDR 400/333/266 DDR SDRAM s dvoukanálovým přenosem
- K dispozici jsou dvě patice 2,5 V, 184 kolíků DDR SDRAM DIMM bez vyrovnávací paměti
- Celková maximální kapacita paměti 2 GB

Zvukový kodek AC'97

- Splňuje požadavky standardu kodeku AC'97 v2.3
- Podpora 6kanálového zvukového kodeku určeného pro multimediální PC systémy
- Nabízí tří analogové linkové stereo vstupy s 5bitovým řízení hlasitosti: LINE-IN, CD, AUX
- Podpora výstupní funkce S/PDIF

Multi-Language Translation

Možnosti rozšíření

Základní deska je dodávána s následujícími možnostmi rozšíření

- Pět 32bitové patice PCI v2.3
- Jedna patice AGP
- Dva konektory IDE, podporující připojení až 4 zařízení IDE
- Jedno rozraní pro disketovou mechaniku
- Dva 7kolíkové konektor SATA

Základní deska podporuje řízení sběrnice Ultra DMA s přenosovými rychlostmi 133/100/66 MB/s.

Vestavění síťové rozhraní LAN (volitelně)

Vestavěné síťové rozhraní LAN nabízí následující možnosti:

- Podpora 10/100Mbps přepínání
- Možnost poloviční a plného duplexu
- Podpora IEEE 802.3u klauzule 28 auto negotiation

Integrovaný vstup/výstup

Základní deska je vybavena kompletní sadou vstupních portů a konektorů I/O:

- Dva porty PS/2 pro myš a klávesnici
- Jeden sériový port
- Jeden paralelní port
- Čtyři porty USB
- Jeden port LAN (volitelně)
- Zvukové konektory pro mikrofon, zvukový vstup a výstup

Firmware BIOS

Základní deska využívá BIOS formy AMI, který uživateli umožňuje nakonfigurovat mnoho systémových parametrů, včetně následujících:

- Řízení spotřeby
- Alarmy při spouštění systému
- Parametry CPU
- Časování CPU a paměti

Firmware může být rovněž použit k nastavení parametrů pro různé taktovací frekvence procesoru.

Některé technické parametry hardware a software se mohou měnit bez předchozího upozornění.

Multi-Language Translation

Caracteristici

Procesorul

Această placă de bază foloseşte un pin socket 939 care posedă următoarele caracteristici:

- Se acomodează cu procesoarele AMD Athlon64
- Sprijină interfaţa HyperTransport™ (HT)

Tehnologia HyperTransport™ este o legătură punct-la-punct între două aparate, care permite viteze mult mai mari de schimb al informaţiilor între circuitele integrate, decât cel asigurat de tehnologiile de interconectare actuale.

Setul de chipuri

Seturile de chipuri SiS755 Northbridge (NB) şi SiS964 Southbridge (SB) se bazează pe o arhitectură inovatoare şi scalabilă, care s-a impus deja prin fiabilitate şi performanţă.

SiS755(NB)

- Sprijină HyperTransport™ care este comformă cu driverul bus, cu capacitate de autocompensare
- Suportă interfaţă AGP 8X/4X, cu suport pentru tranzacţii Fast Write (operaţii de scriere rapidă)
- Suportă regiştri de configurare a gestiunii energiei PCI pentru a suporta controler ACPI pentru întreruperea alimentării cu energie

SiS964(SB)

- Deservire concurentă a tuturor aparatelor DMA: controlere IDE duale, controler SATA, trei controlere gazdă USB 2.0/1.1, controler LAN MAC şi controler DMA Audio/ Modem
- Compatibil cu specificaţia PCI, versiunea 2.3, care suportă cel mult 6 module PCI master
- Compatibil cu specificaţia Serial ATA 1.0, suportând modul de funcţionare economicos
- Compatibil cu AC'97, versiunea 2.3, suportând 6 canale audio de ieşire
- Controler USB 2.0 integrat, cu trei socluri de bază şi opt porturi funcţionale

Memoria

- Suport DDR 400/333/266 DDR SDRAM cu canal dual
- Poate suporta două sloturi 184 DDR SDRAM DIMM fără zonă tampon, de 2,5 V
- Capacitatea maximă este de 2 GB

AC'97 Audio CODEC

- Compatibil cu CODEC AC'97, versiunea 2.3
- Suportă CODEC audio de 6 canale, destinat sistemelor multimedia ale calculatoarelor
- Asigură trei linii intrare stereo analoge, cu control al volumului pe 5 biţi: LINE-IN, CD, AUX
- Suportă funcţia de ieşire S/PDIF

Multi-Language Translation

Opţiuni de extindere

Placa de bază este dotată următoarele posibilităţi de extindere:

- Cinci sloturi PCI de 32 biţi compatibile cu versiunea 2.3
- Un slot AGP
- Două conectoare IDE care suportă patru unităţi IDE
- O interfaţă pentru unitate floppy
- Două conectoare SATA 7

Această placă de bază suportă Ultra DMA bus mastering cu viteza de transfer de 133/100/66MB/s.

Onboard LAN (opţional)

Onboard LAN are următoarele caracteristici:

- Sprijină operaţiile 10/100 Mbps
- Posibilitate de semi-duplex sau duplex total
- Sprijină IEEE 802.3u clauza 28 cu negociere automată

I/O integrată

Placa de bază este dotată cu un set complet de porturi şi conectoare I/O:

- Două porturi PS/2, pentru mouse şi tastatură
- Un port serial
- Un port paralel
- Patru porturi USB
- Un port LAN (opţional)
- Mufe audio pentru microfon, intrare şi ieşire audio

Firmware BIOS

Această placă de bază utilizează AMI BIOS, care permite utilizatorului să configureze mai mulţi parametri ai sistemului, cum ar fi:

- Gestionarea energiei
- Alarme de trezire
- Parametri CPU
- Temporizare CPU şi memorie

Acest firmware poate fi utilizat şi pentru a seta parametrii diferitelor frecvenţe de comandă ale procesorului.

Anumite specificaţii hardware şi elemente de software pot fi modificate fără înştiinţare prealabilă.

Multi-Language Translation

Спецификация

Процесор

Тази дънна платка има гнездо 939 със следните възможности:

- помества процесори AMD Athlon64
- поддържа интерфейс HyperTransport™ (HT)

Технологията HyperTransport™ е връзка точка-до-точка (point-to-point) между две устройства, която предоставя възможност интегрираните вериги да обменят информация на много по-висока скорост от досегашно съществуващите технологии.

Чипсет

Чипсетът със северен мост SiS755 и южен мост SiS964 е изграден на базата на оригинална архитектура с възможност за надстройка с доказана надеждност и производителност.

SiS755(NB)

- поддържа драйвер за шина, съвместим с HyperTransport™, с възможност за автоматично компенсиране
- Поддръжка на интерфейс AGP 8X/4X с Fast Write Transaction
- Поддръжка на управление на захранването PCI и контролер ACPI power down

SiS964(SB)

- Едновременна поддръжка на всички DMA устройства: два IDE контролера, SATA контролер, три USB 2.0/1.1 host контролера, LAN MAC контролер и Audio/Modem DMA контролер.
- съвместимост със спецификацията PCI 2.3 с поддръжка до 6 PCI мастъра
- съвместимост със спецификацията Serial ATA 1.0 с поддръжка на икономичен режим на захранване
- съвместимост с AC'97 v2.3 с поддръжка на 6-канален звук
- Интегриран USB 2.0 контролер с три колектора и осем функционални порта

Памет

- Поддръжка на двуканална памет DDR 400/333/266 DDR SDRAM
- два небуферирани цокъла DDR SDRAM DIMM 184-щифта 2.5V
- общ максимален капацитет 2 GB

AC'97 Audio CODEC

- съвместимост с AC'97 V2.3 CODEC
- поддръжка на 6-канален аудио CODEC специално създаден за мултимедийни системи
- Включва три аналогови линейни стерео входа с 5-битов контрол на силата на звука: LINE-IN, CD, AUX
- поддръжка на функцията S/PDIF Out

Multi-Language Translation

Възможности за разширяване

Дънната платка има следните разширителни възможности:

- Пет слота 32-bit PCI v2.3
- един AGP слот
- Два колектора IDE с поддръжка на четири IDE устройства
- един конектор за флопидисково устройство
- два 7-щифтови SATA конектора

Дънната платка поддържа шина Ultra DMA 133/100/66MB/s.

Интегриран мрежов контролер (опция)

Спецификация на интегрирания мрежов контролер:

- поддържа работа с 10/100 Mbps
- Half/Full duplex
- поддържа IEEE 802.3u клауза 28 за автоматичен диалог

Интегриран Вход/Изход контролер

Дънната платка има пълен набор от I/O портове и конектори:

- два PS/2 порта за мишка и клавиатура
- един сериен порт
- един паралелен порт
- четири USB порта
- един LAN порт (опция)
- Аудио жакове за микрофон, линеен вход и линеен изход

BIOS Firmware

Дънната платка използва AMI BIOS с възможност за различни системни настройки, включително

- управление на захранването
- Wake-up аларми
- параметри на процесора
- синхронизиране на процесора и паметта

настройка на скоростта на часовника на процесора

Хардуерните и софтуерни спецификации и параметри могат да бъдат изменени без предупреждение.

Multi-Language Translation

Jellemző

Processzor

Ez az alaplap egy 939-es pin socket-et használ, mely az alábbi jellemzőkkel rendelkezik:

- AMD Athlon64 processzorral kompatibilis
- Támogatja a HyperTransport™ (HT) interfészt

A HyperTransport™ technológia egy ponttól pontig való kapcsolat két készülék között, és segítségével az integrált áramkörök közötti információcsere sebessége sokkal nagyobb, mint a jelenleg rendelkezésre álló összekapcsolási technológiák esetében.

Lapkakészlet

Az SiS755 Northbridge (NB) és SiS964 Southbridge (SB) lapkakészletek egy újító és méretezhető, nagy megbízhatóságú és teljesítőképességű architektúrára épülnek.

SiS755(NB)

- Támogatja a HyperTransport™ –et mely kompatibilis az automata kiegyenlítéssel működő busz driverrel
- Támogatja a Fast Write (gyors írás) műveletet használó AGP 8X/4X interfészt
- Támogatja a PCI energiagazdálkodást konfiguráló regisztereket az ACPI kikapcsolás vezérlő támogatására

SiS964(SB)

- Az összes DMA eszköz egyidejű kiszolgálása: duál IDE vezérlők, a SATA vezérlő, három 2.0/1.1 USB gazda vezérlő, LAN MAC vezérlő, valamint Audio/Modem DMA vezérlő
- a PCI 2.3 szabvánnyal kompatibilis, maximum 6 PCI mastert támogat
- Kompatibilis a soros ATA 1.0 szabvánnyal, az energiatakarékos üzemmódot is támogatja
- Kompatibilis az AC”97 2.3-as verziójával, maximum 6 audio kimenet csatornát támogat
- Beépített USB 2.0 vezérlő, amely három alaphub-bal és nyolc funkcionális porttal rendelkezik

Memória

- DDR 400/333/266 DDR SDRAM, duál csatorna támogatásával
- Két puffermentes, 2,5 V-os, 184 tűs DDR SDRAM DIMM foglalattal rendelkezik
- Maximális kapacitása 2 GB

AC’97 Audio CODEC

- Kompatibilis az AC’97 2.3-as CODEC változatával
- A számítógép multimédiás rendszereinek szánt hat csatornás audio CODEC-et támogat
- Három analóg sztereo bemenetet biztosít 5 bites hangerő vezérléssel: AUDIO BEMENET, CD, AUX
- Támogatja az S/PDIF kimeneti funkciót

Multi-Language Translation

Bővítési lehetőségek

Az alaplap a következő bővítési lehetőségekkel rendelkezik:

- Öt 32 bites, a PCI 2.3-as verziójával kompatibilis foglalattal rendelkezik
- Egy AGP foglalat
- Két IDE csatlakozó négy IDE eszköz támogatására
- Egy hajlékonylemez meghajtó interfész
- Két 7 tűs SATA csatlakozó

Ez az alaplap a 133/100/66 MB/s átviteli sebességű Ultra DMA 'bus mastering' megoldást is támogatja.

Alaplapon levő LAN (választható)

Az alaplapon levő LAN jellemzői:

- Támogatja a 10/100 Mbps operációt
- Teljes/fél duplex lehetőség
- Támogatja az 28 –as szerkezetű IEEE 802.3u-t

Beépített I/O

Az alaplapot az I/O portok és csatlakozók teljes készletével szerelték fel:

- Két PS/2 port az egér és a billentyűzet számára
- Egy soros port
- Egy párhuzamos port
- Négy USB port
- Egy LAN port (választható)
- Audio csatlakozók mikrofon, bemenet és kimenet számára

BIOS Firmware

Az alaplapon levő AMI BIOS segítségével a felhasználó a rendszer sok paraméterét állíthatja be, például:

- Energiagazdálkodás
- Ébresztési riasztások
- CPU paraméterek
- CPU és memória időzítés

A firmware segítségével a processzor órajel-frekvenciáinak paramétereit is beállíthatják.

Bizonyos hardverjellemzők és szoftverelemek előzetes bejelentés nélkül módosulhatnak.

Multi-Language Translation