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with the laws in force and meeting all
the essential requirements as specified
by the directives

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CHAPTER 1: INTRODUCTION

1.1 BEFORE YOU START

Thank you for choosing our product. Before you start installing the motherboard, please make sure you follow the instructions below:

- Prepare a dry and stable working environment with sufficient lighting.
- Always disconnect the computer from power outlet before operation.
- Before you take the motherboard out from anti-static bag, ground yourself properly by touching any safely grounded appliance, or use grounded wrist strap to remove the static charge.
- Avoid touching the components on motherboard or the rear side of the board unless necessary. Hold the board on the edge, do not try to bend or flex the board.
- Do not leave any unfastened small parts inside the case after installation. Loose parts will cause short circuits which may damage the equipment.
- Keep the computer from dangerous area, such as heat source, humid air and water.
- The operating temperatures of the computer should be 0 to 45 degrees Celsius.

1.2 PACKAGE CHECKLIST

- ✚ Serial ATA Cable x2
- ✚ Rear I/O Panel for ATX Case x1
- ✚ User's Manual x1
- ✚ Fully Setup Driver DVD x1

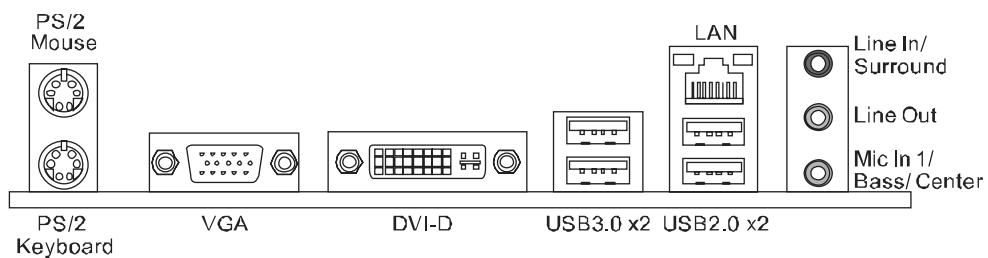
Note: The package contents may be different due to area or your motherboard version.

1.3 MOTHERBOARD FEATURES

SPEC			
CPU	Socket FM1		AMD 64 Architecture enables 32 and 64 bit computing
	AMD A-Series / E2-Series / Athlon II / Sempron processors		(Maximum Watt: 100W)
Chipset	AMD A75		
Super I/O	ITE 8728		Environment Control initiatives
	Provides the most commonly used legacy Super I/O functionality		H/W Monitor
	Low Pin Count Interface		Fan Speed Controller
			ITE's "Smart Guardian" function
Main Memory	DDR3 DIMM Slots x 2		Dual Channel Mode DDR3 memory module
	Max Memory Capacity 16GB		Supports DDR3 800/1066/1333/1600/1866
	Each DIMM supports 512MB/1GB/2GB/4GB/8GB DDR3		
SATA III	Integrated Serial ATA Controller		Data transfer rates up to 6 Gb/s. SATA Version 3.0 specification compliant. RAID 0,1,10 support
LAN	RTL8111F		10 / 100 Mb/s / 1Gb/s auto negotiation Half / Full duplex capability
Sound	ALC662		5.1channels audio out Supports HD Audio
USB3.0	A75		Data transfer rates up to 600 MB/s
Slots	PCI Express Gen2 x16 Slot	x1	Supports PCI-E Gen2 x16, x4 expansion cards
	PCI Express Gen2 x1 Slot	x2	Supports PCI-E Gen2 x1 expansion card
	PCI Slot	x3	Supports PCI expansion card
On Board Connectors	SATA Connector	x6	Each connector supports 1 SATA device
	Front Panel Connector	x1	Supports front panel facilities
	Front Audio Connector	x1	Supports front panel audio function
	S/PDIF out Connector	x1	Supports digital audio out function
	CPU Fan Header	x1	CPU Fan power supply (with Smart Fan function)
	System Fan Header	x2	System Fan Power supply

SPEC			
	CMOS clear Header	x1	Restore CMOS data to factory default
	USB2.0 Connector	x2	Each connector supports 2 front panel USB2.0 ports
	USB3.0 Connector	x1	Each connector supports 2 front panel USB3.0 ports
	Printer Port Connector	x1	Each connector supports 1 Printer port
	Serial Port Connector	x1	Connects to RS-232 Port
	Power Connector (24-Pin)	x1	Connects to Power supply
	Power Connector (4-Pin)	x1	Connects to Power supply
Back Panel I/O	PS/2 Keyboard / Mouse	x1	Connects to PS/2 Keyboard / Mouse
	VGA Port	x1	Connect to D-SUB monitor
	DVI-D Port	x1	Connect to DVI monitor
	LAN port	x1	Connect to RJ-45 ethernet cable
	USB2.0 Port	x2	Connect to USB2.0 devices
	USB3.0 Port	x2	Connect to USB3.0 devices
	Audio Jack	x3	Provide Audio-In/Out and Mic. connection
Board Size	200 mm (W) x 295 mm (L)		ATX
OS Support	Windows XP / Vista / 7		Biostar reserves the right to add or remove support for any OS With or without notice.

1.4 REAR PANEL CONNECTORS

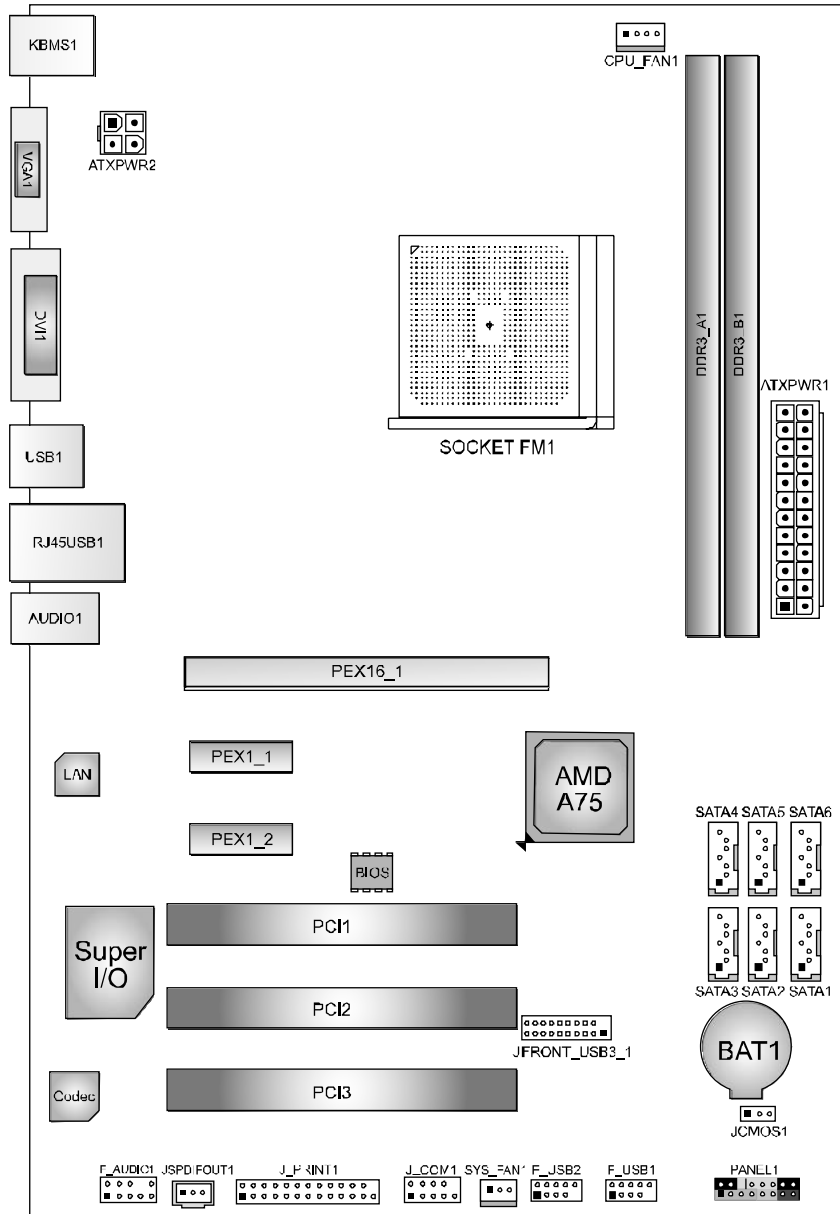


NOTE: DVI-D / VGA Output require an AMD family processor with integrated graphics.

NOTE: Since the audio chip supports High Definition Audio Specification, the function of each audio jack can be defined by software. The input / output function of each audio jack listed above represents the default setting. However, when connecting external microphone to the audio port, please use the Line In (Blue) and Mic In (Pink) audio jack.

NOTE: Maximum resolution:
 DVI: 1920 x 1200 @60Hz
 VGA: 2048 x 1536 @75Hz

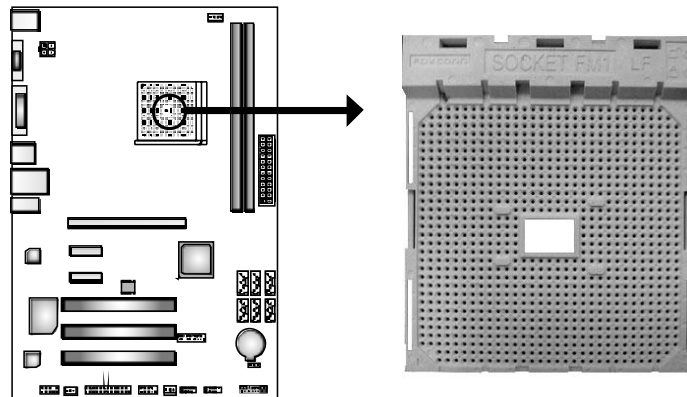
1.5 MOTHERBOARD LAYOUT



Note: ■ represents the 1st pin.

CHAPTER 2: HARDWARE INSTALLATION

2.1 INSTALLING CENTRAL PROCESSING UNIT (CPU)



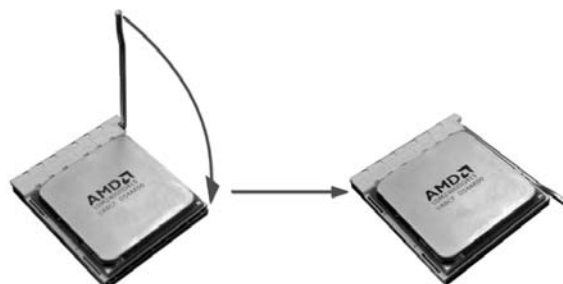
Step 1: Pull the lever toward direction A from the socket and then raise the lever up to a 90-degree angle.



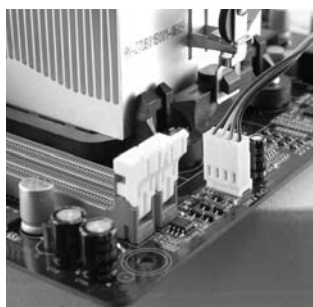
Step 2: Look for the white triangle on socket, and the gold triangle on CPU should point towards this white triangle. The CPU will fit only in the correct orientation.



Step 3: Hold the CPU down firmly, and then close the lever toward direct B to complete the installation.



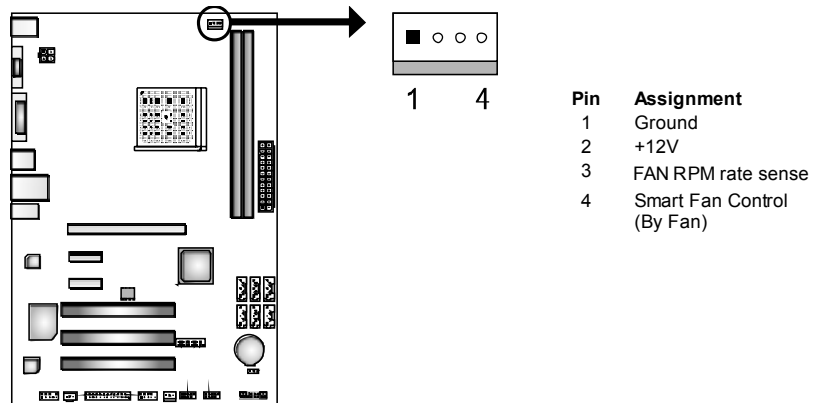
Step 4: Put the CPU Fan on the CPU and buckle it. Connect the CPU FAN power cable to the CPU_FAN1. This completes the installation.



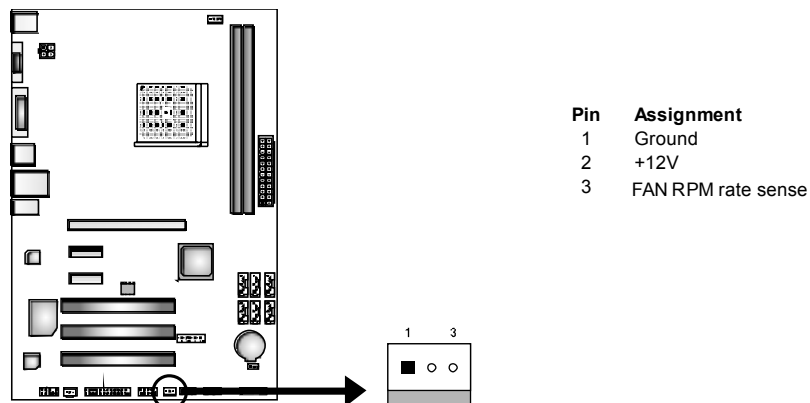
2.2 FAN HEADERS

These fan headers support cooling-fans built in the computer. The fan cable and connector may be different according to the fan manufacturer. Connect the fan cable to the connector while matching the black wire to pin#1.

CPU_FAN1: CPU Fan Header



SYS_FAN1: System Fan Header

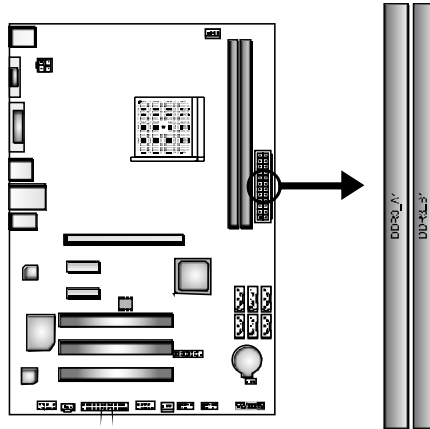


Note:

CPU_FAN1, SYS_FAN1 support 4-pin and 3-pin head connectors. When connecting with wires onto connectors, please note that the red wire is the positive and should be connected to pin#2, and the black wire is Ground and should be connected to GND.

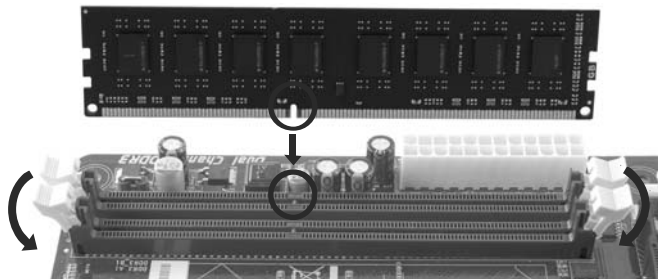
2.3 INSTALLING SYSTEM MEMORY

A. DDR3 Modules



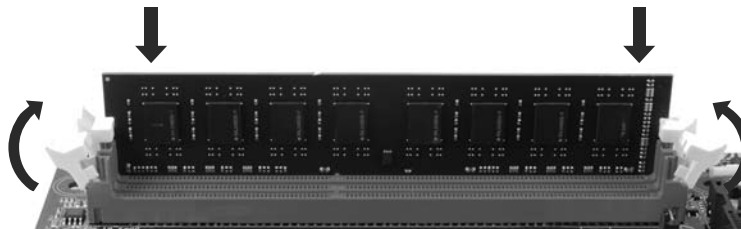
Step1:

Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot such that the notch on the DIMM matches the break on the Slot.



Step2:

Insert the DIMM vertically and firmly into the slot until the retaining chip snap back in place and the DIMM is properly seated.



Note:

If the DIMM does not go in smoothly, do not force it. Pull it all the way out and try again.

B. Memory Capacity

DIMM Socket Location	DDR3 Module	Total Memory Size
DDR3_A1	512MB/1GB/2GB/4GB/8GB	Max is 16GB.
DDR3_B1	512MB/1GB/2GB/4GB/8GB	

C. Dual Channel Memory Installation

Please refer to the following requirements to activate Dual Channel function:
Install memory module of the same density in pairs, shown in the table.

Dual Channel Status	DDR3_A1	DDR3_B1
Disabled	O	X
Disabled	X	O
Enabled	O	O

(O means memory installed; X, not installed.)

Note:

The DRAM bus width of the memory module must be the same(x8 or x16)

D. DDR Speed Support

Please refer to the following table for DDR speed reference:

# of DIMM per Channel	# of Ranks per DIMM	Max DDR Speed Grade for 1.50V DIMM
1 of 1 UDIMM	xR	DDR3-1866
1 of 2 UDIMMs	xR	DDR3-1600 / DDR3-1333

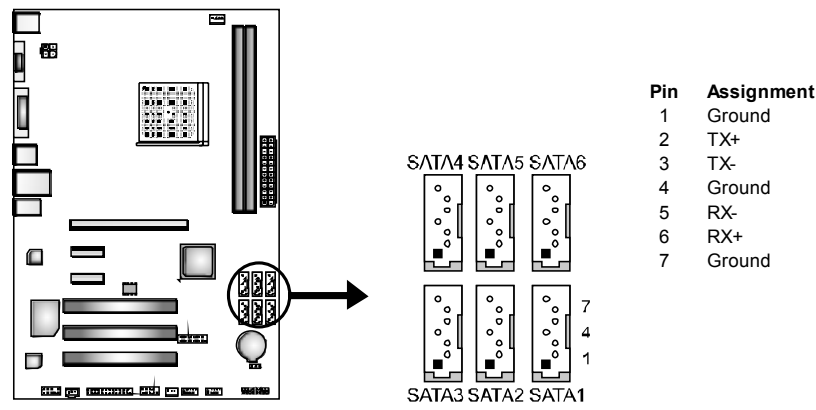
Note:

xR: Single or double side memory module

2.4 CONNECTORS AND SLOTS

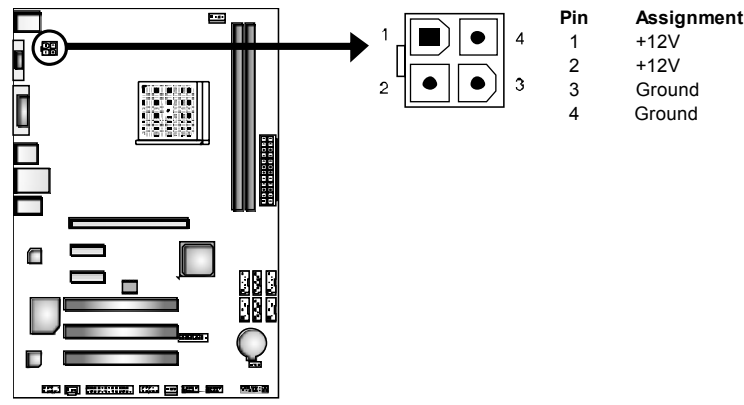
SATA1~SATA6: Serial ATA Connectors

The motherboard has 6 channels SATA interface, it satisfies the SATA 3.0 spec and with transfer rate of 6.0Gb/s.



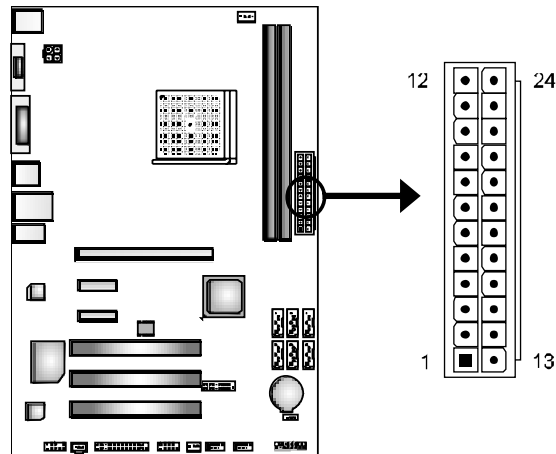
ATXPWR2: ATX Power Source Connector

This connector provides +12V to CPU power circuit.



ATXPWR1: ATX Power Source Connector

This connector allows user to connect 24-pin power connector on the ATX power supply.



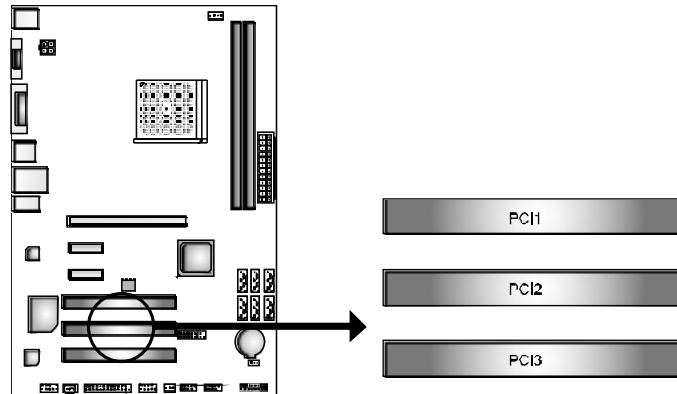
Pin	Assignment	Pin	Assignment
13	+3.3V	1	+3.3V
14	-12V	2	+3.3V
15	Ground	3	Ground
16	PS_ON	4	+5V
17	Ground	5	Ground
18	Ground	6	+5V
19	Ground	7	Ground
20	NC	8	PW_OK
21	+5V	9	Standby Voltage+5V
22	+5V	10	+12V
23	+5V	11	+12V
24	Ground	12	+3.3V

Note:

Before you power on the system, please make sure that both ATXPWR1 and ATXPWR2 connectors have been plugged-in.

PCI1/ PCI2/ PCI3: Peripheral Component Interconnect Slots

This motherboard is equipped with 3 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slots are designated as 32 bits.

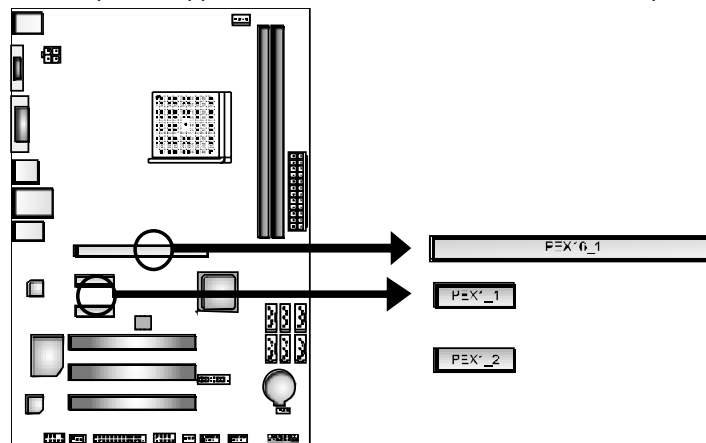


PEX16_1: PCI-Express Gen2 x16 Slot

- PCI-Express 2.0 compliant.
- Maximum theoretical realized bandwidth of 8GB/s simultaneously per direction, for an aggregate of 16GB/s totally.
- PCI-Express Gen2 supports a raw bit-rate of 5.0Gb/s on the data pins.
- 2X bandwidth over the PCI-Express 1.1 architecture.

PEX1_1/PEX1_2: PCI-Express Gen2 x1 Slot

- PCI-Express 2.0 compliant.
- Data transfer bandwidth up to 500MB/s per direction; 1GB/s in total.
- PCI-Express supports a raw bit-rate of 2.5Gb/s on the data pins.



CHAPTER 3: HEADERS & JUMPERS SETUP

3.1 HOW TO SETUP JUMPERS

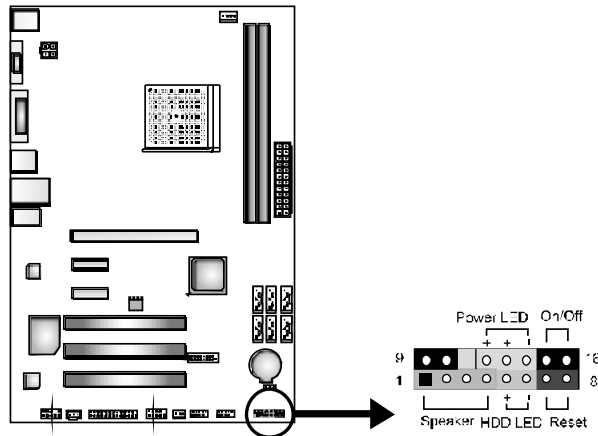
The illustration shows how to set up jumpers. When the jumper cap is placed on pins, the jumper is “close”, if not, that means the jumper is “open”.



3.2 DETAIL SETTINGS

PANEL1: Front Panel Header

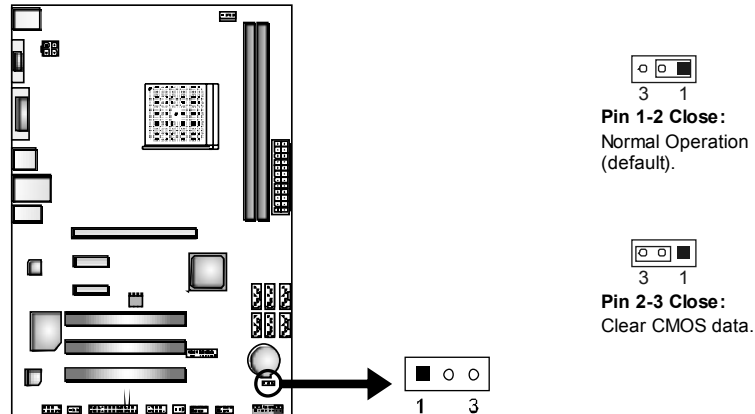
This 16-pin connector includes Power-on, Reset, HDD LED, Power LED, and speaker connection. It allows user to connect the PC case's front panel switch functions.



Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker Connector	9	N/A	N/A
2	N/A		10	N/A	
3	N/A		11	N/A	
4	Speaker	Hard drive LED	12	Power LED (+)	Power LED
5	HDD LED (+)		13	Power LED (-)	
6	HDD LED (-)		14	Power LED (+)	
7	Ground	Reset button	15	Power button	Power-on button
8	Reset control		16	Ground	

JCMOS1: Clear CMOS Header

Placing the jumper on pin2-3 allows user to restore the BIOS safe setting and the CMOS data. Please carefully follow the procedures to avoid damaging the motherboard.

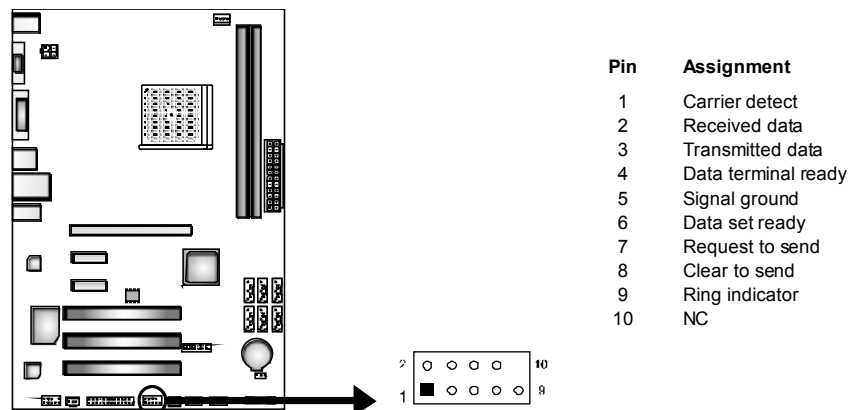


※ Clear CMOS Procedures:

1. Remove AC power line.
2. Set the jumper to "Pin 2-3 close".
3. Wait for five seconds.
4. Set the jumper to "Pin 1-2 close".
5. Power on the AC.
6. Load Optimal Defaults and save settings in CMOS.

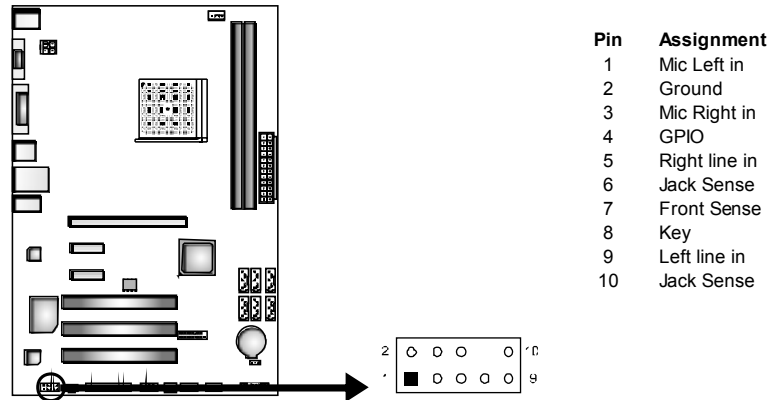
J_COM1: Serial port Connector

The motherboard has a Serial Port Connector for connecting RS-232 Port.



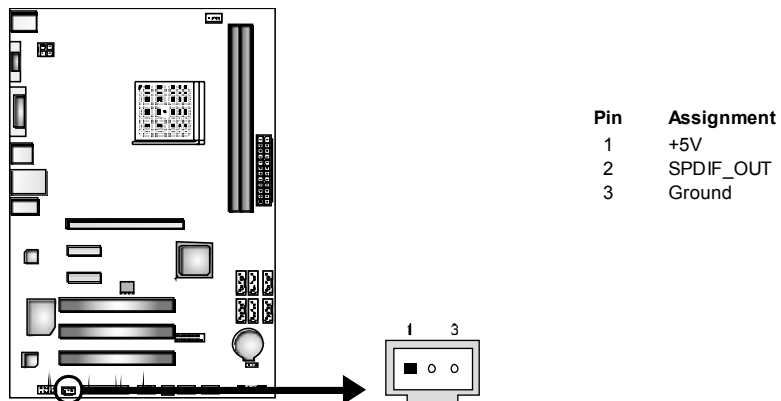
F_AUDIO1: Front Panel Audio Header

This header allows user to connect the front audio output cable with the PC front panel. This header supports HD and AC'97 audio front panel connector.



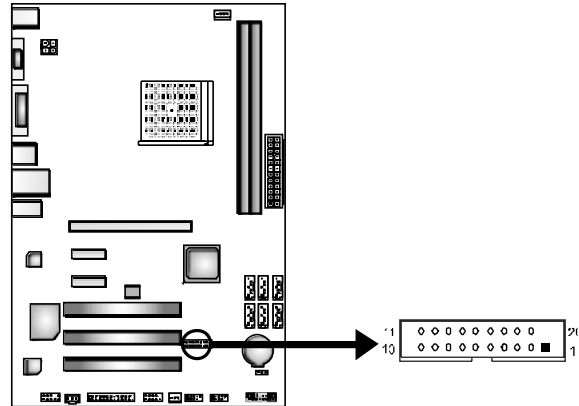
JSPDIFOUT1: Digital Audio-out Connector

This connector allows user to connect the PCI bracket SPDIF output header.



JFRONT_USB3_1: Header for USB 3.0 Ports at Front Panel

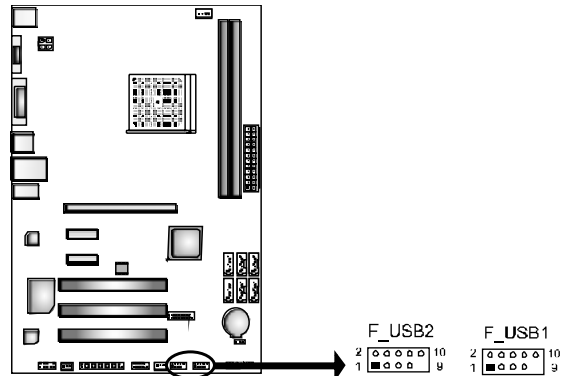
This header allows user to connect additional USB cable on the PC front panel, and also can be connected with internal USB devices, like USB card reader.



Pin	Assignment	Pin	Assignment
1	VBUS0	11	D2+
2	SSRX1-	12	D2-
3	SSRX1+	13	Ground
4	Ground	14	SSTX2+
5	SSTX1-	15	SSTX2-
6	SSTX1+	16	Ground
7	Ground	17	SSRX2+
8	D1-	18	SSRX2-
9	D1+	19	VBUS1
10	ID	20	Key

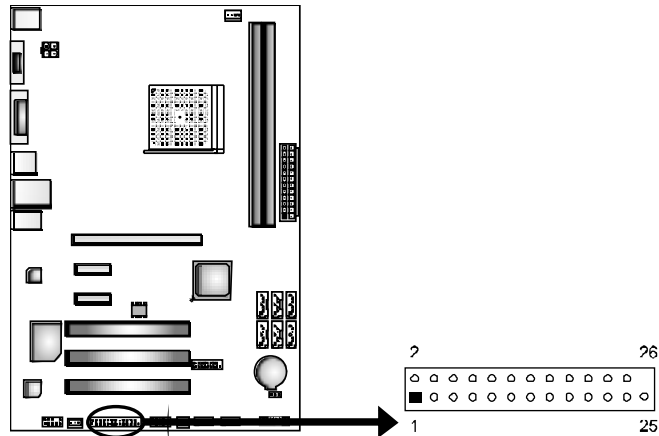
F_USB1/F_USB2: Headers for USB 2.0 Ports at Front Panel

These headers allow user to connect additional USB cable on the PC front panel, and also can be connected with internal USB devices, like USB card reader.



J_PRINT1: Printer Port Connector

This header allows you to connector printer on the PC.



Pin	Assignment	Pin	Assignment
1	-Strobe	14	Ground
2	-ALF	15	Data 6
3	Data 0	16	Ground
4	-Error	17	Data 7
5	Data 1	18	Ground
6	-Init	19	-ACK
7	Data 2	20	Ground
8	-Scltin	21	Busy
9	Data 3	22	Ground
10	Ground	23	PE
11	Data 4	24	Ground
12	Ground	25	SCLT
13	Data 5	26	Key

CHAPTER 4: AMD DUAL GRAPHICS TECHNOLOGY

4.1 AMD DUAL GRAPHICS TECHNOLOGY INTRODUCTION

When user adds a PCIe display adapter, it can be integrated with IGD to show better performance. To make the two video devices work simultaneously and normally, please refer to the following setting.

4.2 AMD DUAL GRAPHICS REQUIREMENT

- **Operating System:** Windows Vista / Windows 7
- **Supported DUAL Graphics Combinations:**

GFX \ APU	A4-Series HD 6410D	A6-Series HD 6530D	A8-Series™ HD 6550D
HD 6670	Attach Only (No DG)	Y	Y
HD 6570	Attach Only (No DG)	Y	Y
HD 6450	Y	Y	Y
HD 6350	Y	Attach Only (No DG)	Attach Only (No DG)

Note:

- ✦ “Attach Only (No DG)” indicates supported discrete graphics attachment without Dual Graphics.
- ✦ E-Series CPU do not support Dual Graphics.

Notice:

Single Channel or unbalanced memory does not support Dual Graphic function. Please use at least DDR3-1333 4G (2G+2G).

NOTE

The information described above in this manual is for your reference only and the actual information and settings on board may be different from this manual. For further AMD Dual Graphics information, please visit the following website:

<http://www.amd.com>

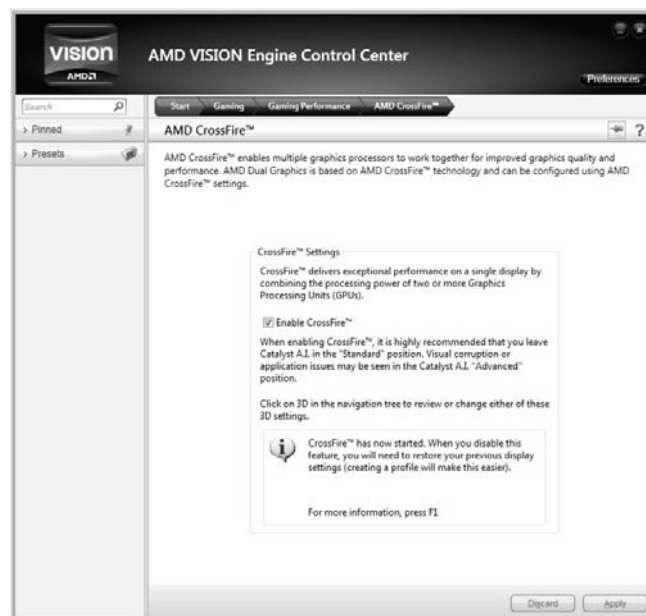
4.3 AMD DUAL GRAPHICS SETUP

Step 1: Insert Dual Graphics-Ready graphics card into PEX16_1 slot.

Step 2: Set the BIOS setting as follows:
[Chipset]→[North Bridge]→[Surround View]→[Enabled]



Step 3: Install Driver DVD Chipset Driver, and reboot the system. Activate AMD VISION Engine Control Center to make sure CrossFire has been enabled.



CHAPTER 5: RAID FUNCTIONS

5.1 OPERATING SYSTEM

Supports Windows Vista and Windows 7.

5.2 RAID ARRAYS

RAID supports the following types of RAID arrays:

RAID 0: RAID 0 defines a disk striping scheme that improves disk read and write times for many applications.

RAID 1: RAID 1 defines techniques for mirroring data.

RAID 10: RAID 10 combines the techniques used in RAID 0 and RAID 1.

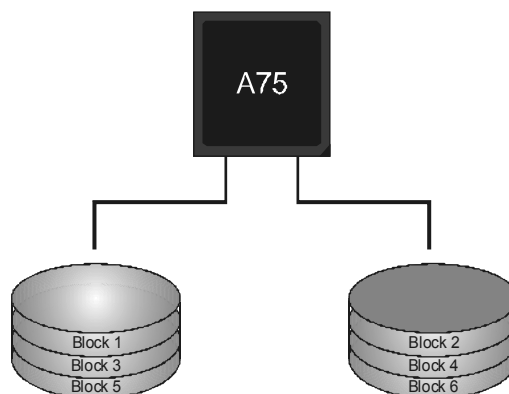
5.3 How RAID WORKS

RAID 0:

The controller “stripes” data across multiple drives in a RAID 0 array system. It breaks up a large file into smaller blocks and performs disk reads and writes across multiple drives in parallel. The size of each block is determined by the stripe size parameter, which you set during the creation of the RAID set based on the system environment. This technique reduces overall disk access time and offers high bandwidth.

Features and Benefits

- **Drives:** Minimum 2, and maximum is up to 6 or 8. Depending on the platform.
- **Uses:** Intended for non-critical data requiring high data throughput, or any environment that does not require fault tolerance.
- **Benefits:** provides increased data throughput, especially for large files. No capacity loss penalty for parity.
- **Drawbacks:** Does not deliver any fault tolerance. If any drive in the array fails, all data is lost.
- **Fault Tolerance:** No.

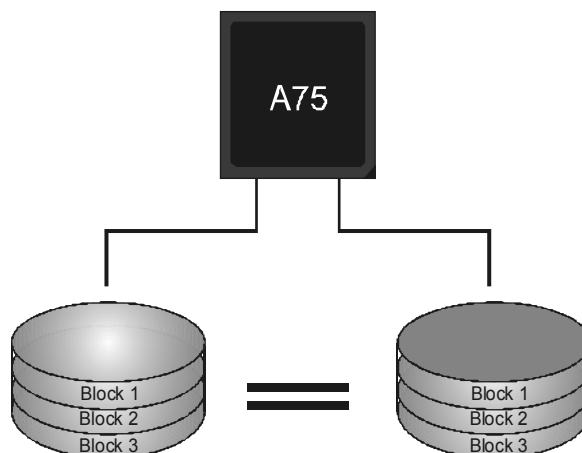


RAID 1:

Every read and write is actually carried out in parallel across 2 disk drives in a RAID 1 array system. The mirrored (backup) copy of the data can reside on the same disk or on a second redundant drive in the array. RAID 1 provides a hot-standby copy of data if the active volume or drive is corrupted or becomes unavailable because of a hardware failure. RAID techniques can be applied for high-availability solutions, or as a form of automatic backup that eliminates tedious manual backups to more expensive and less reliable media.

Features and Benefits

- **Drives:** Minimum 2, and maximum is 2.
- **Uses:** RAID 1 is ideal for small databases or any other application that requires fault tolerance and minimal capacity.
- **Benefits:** Provides 100% data redundancy. Should one drive fail, the controller switches to the other drive.
- **Drawbacks:** Requires 2 drives for the storage space of one drive. Performance is impaired during drive rebuilds.
- **Fault Tolerance:** Yes.

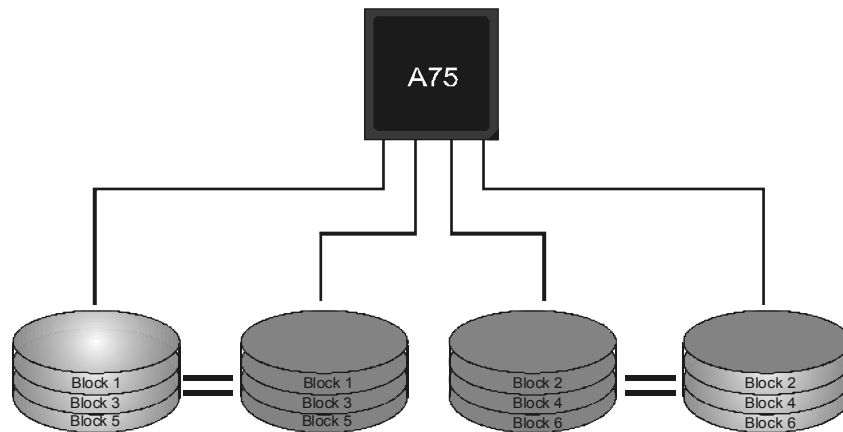


RAID 10:

RAID 1 drives can be striped using RAID 0 techniques. Resulting in a RAID 10 solution for improved resiliency, performance and rebuild performance.

Features and Benefits

- **Drives:** Minimum 4, and maximum is 6 or 8, depending on the platform.
- **Benefits:** Optimizes for both fault tolerance and performance, allowing for automatic redundancy. May be simultaneously used with other RAID levels in an array, and allows for spare disks.
- **Drawbacks:** Requires twice the available disk space for data redundancy, the same as RAID level 1.
- **Fault Tolerance:** Yes.



CHAPTER 6: USEFUL HELP

6.1 DRIVER INSTALLATION NOTE

After you installed your operating system, please insert the Fully Setup Driver DVD into your optical drive and install the driver for better system performance.

You will see the following window after you insert the DVD



The setup guide will auto detect your motherboard and operating system.

Note:

If this window didn't show up after you insert the Driver DVD, please use file browser to locate and execute the file **SETUP.EXE** under your optical drive.

A. Driver Installation

To install the driver, please click on the Driver icon. The setup guide will list the compatible driver for your motherboard and operating system. Click on each device driver to launch the installation program.

B. Software Installation

To install the software, please click on the Software icon. The setup guide will list the software available for your system, click on each software title to launch the installation program.

C. Manual

Aside from the paperback manual, we also provide manual in the Driver DVD. Click on the Manual icon to browse for available manual.

Note:

You will need Acrobat Reader to open the manual file. Please download the latest version of Acrobat Reader software from
<http://www.adobe.com/products/acrobat/readstep2.html>

6.2 SOFTWARE

Installing Software

1. Insert the Setup DVD to the optical drive. The drivers installation program would appear if the Autorun function has been enabled.
2. Select **Software Installation**, and then click on the respective software title.
3. Follow the on-screen instructions to complete the installation.

Launching Software

After the installation process, you will see the software icon “eHOT Line” / “BIOS Update” appears on the desktop. Double-click the icon to launch the utility.

eHot-Line (Optional)

eHot-Line is a convenient utility that helps you to contact with our Tech-Support system. This utility will collect the system information which is useful for analyzing the problem you may have encountered, and then send these information to our tech-support department to help you fix the problem.



Before you use this utility, please set Outlook Express as your default e-mail client application program.

*represents important information that you must provide. Without this information, you may not be able to send out the mail.

This block will show the information which would be collected in the mail.

*Describe condition of your system.

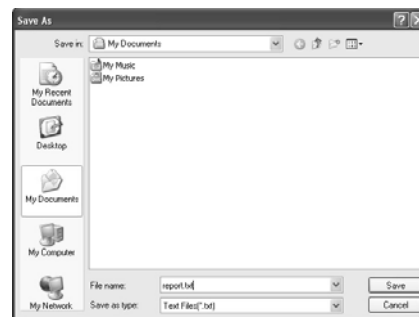
The screenshot shows the eHot-Line utility window. It has a title bar 'eHot-Line' and a menu bar with 'File', 'Help', and 'About'. The main area is divided into two panes. The left pane, titled 'Base board information:', contains a list of system details: Caption: Base Board, CreationClassName: Win32_BaseBoard, Description: Base Board, HostingBoard: TRUE, HotSwappable: FALSE, Manufacturer: BIOSTAR Group, Name: Base Board, PoweredOn: TRUE, Product: TA780G M2+, Removable: FALSE, Replaceable: TRUE, RequiresDaughterBoard: FALSE, SerialNumber: None, Status: OK, Tag: Base Board, Version: 6.0. The right pane, titled 'Symptom Description:', is empty. Below the panes are input fields for 'Region:', 'CC E-mail:', 'Memory Module Manufacture:', and 'Power Supply Manufacture/model:'. At the bottom are three buttons: 'Send', 'Save As...', and 'Exit'. Annotations with arrows point to various parts of the window: 'This block will show the information which would be collected in the mail.' points to the left pane; '*Describe condition of your system.' points to the right pane; '*Select your area or the area close to you.' points to the 'Region:' field; 'Provide the e-mail address that you would like to send the copy to.' points to the 'CC E-mail:' field; '*Provide the name of the memory module manufacturer.' points to the 'Memory Module Manufacture:' field; 'Provide the name of the power supply manufacturer and the model no.' points to the 'Power Supply Manufacture/model:' field; 'Send the mail out.' points to the 'Send' button; 'Exit this dialog.' points to the 'Exit' button; and 'Save these information to a .txt file' points to the 'Save As...' button.

After filling up this information, click **“Send”** to send the mail out. A warning dialog would appear asking for your confirmation; click **“Send”** to confirm or **“Do Not Send”** to cancel.



If you want to save this information to a .txt file, click **“Save As...”** and then you will see a saving dialog appears asking you to enter file name.

Enter the file name and then click **“Save”**. Your system information will be saved to a .txt file.



Open the saved .txt file, you will see your system information including motherboard/BIOS/CPU/video/device/OS information. This information is also concluded in the sent mail.



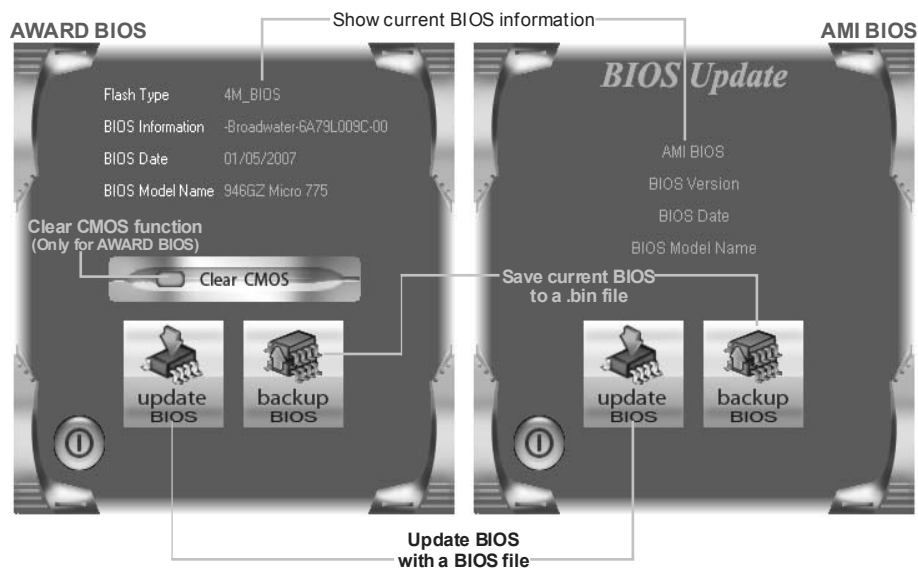
We will not share customer's data with any other third parties, so please feel free to provide your system information while using eHot-Line service.



If you are not using Outlook Express as your default e-mail client application, you may need to save the system information to a .txt file and send the file to our tech support with other e-mail application. Go to the following web <http://www.biostar.com.tw/app/en-us/about/contact.php> for getting our contact information.

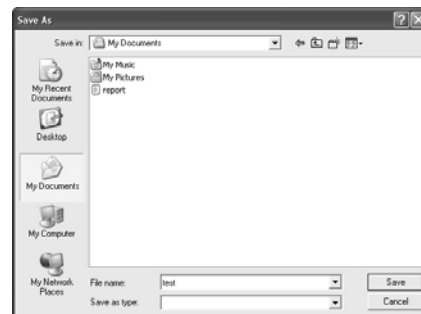
BIOS Update

BIOS Update is a convenient utility which allows you to update your motherboard BIOS under Windows system.



<Backup BIOS>

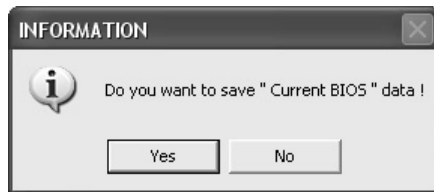
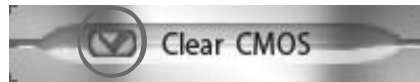
Once click on this button, the saving dialog will show. Choose the position to save file and enter file name. (We recommend that the file name should be English/number and no longer than 7 characters.) Then click **Save**.



<Update BIOS>

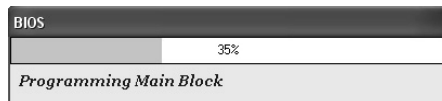
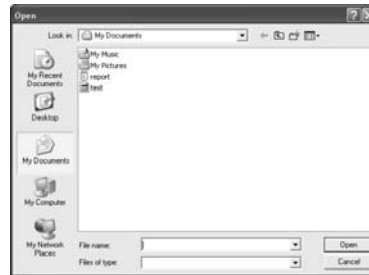
Before doing this, please download the proper BIOS file from the website.

For AWARD BIOS, update BIOS procedure should be run with Clear CMOS function, so please check on Clear CMOS first.



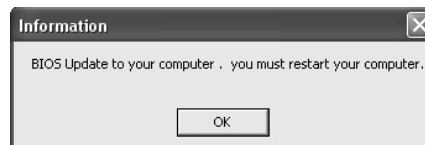
Then click Update BIOS button, a dialog will show for asking you backup current BIOS. Click **Yes** for BIOS backup and refer to the Backup BIOS procedure; or click **No** to skip this procedure.


After the BIOS Backup procedure, the open dialog will show for requesting the BIOS file which is going to be updated. Please choose the proper BIOS file for updating, then click on **Open**.



The utility will update BIOS with the proper BIOS file, and this process may take minutes. Please do not open any other applications during this process.

After the BIOS Update process, click on **OK** to restart the system.



While the system boots up and the full screen logo shows, press  <Delete> key to enter BIOS setup.

In the BIOS setup, use the **Load Optimized Defaults** function and then **Save and Exit Setup** to exit BIOS setup. BIOS Update is completed.



All the information and content above about the software are subject to be changed without notice. For better performance, the software is being continuously updated. The information and pictures described above are for your reference only. The actual information and settings on board may be slightly different from this manual.

6.3 EXTRA INFORMATION

CPU Overheated

If the system shutdown automatically after power on system for seconds, that means the CPU protection function has been activated.

When the CPU is over heated, the motherboard will shutdown automatically to avoid a damage of the CPU, and the system may not power on again.

In this case, please double check:

1. The CPU cooler surface is placed evenly with the CPU surface.
2. CPU fan is rotated normally.
3. CPU fan speed is fulfilling with the CPU speed.

After confirmed, please follow steps below to relief the CPU protection function.

1. Remove the power cord from power supply for seconds.
2. Wait for seconds.
3. Plug in the power cord and boot up the system.

Or you can:

1. Clear the CMOS data.
(See "Close CMOS Header: JCMOS1" section)
2. Wait for seconds.
3. Power on the system again.

BIO-Flasher

BIO-Flasher is a BIOS flashing utility providing you an easy and simple way to update your BIOS via USB pen drive or floppy disk.

The BIO-Flasher is built in the BIOS chip. To enter the utility, **press <F12> during the Power-On Self Tests (POST)** procedure while booting up.

Updating BIOS with BIO-Flasher

1. Go to the website to download the latest BIOS file for the motherboard.
2. Then, save the BIOS file into a USB pen drive or a floppy disk.
3. Insert the USB pen drive or the floppy disk that contains the BIOS file to the USB port or the floppy disk drive.
4. Power on or reset the computer and then press **<F12>** during the **POST** process. A select dialog as the picture on the right appears. Select the device contains the BIOS file and press **<Enter>** to enter the utility.



5. The utility will show the BIOS files and their respective information. Select the proper BIOS file and press **<Enter>** then **<Y>** to perform the BIOS update process.

6. After the update process, the utility will ask you to reboot the system. Press **<Y>** to proceed. BIOS update completes.



- This utility only allows storage device with FAT32/16 format and single partition.
- Shutting down or resetting the system while updating the BIOS will lead to system boot failure.

6.4 AMI BIOS BEEP CODE

Boot Block Beep Codes

Number of Beeps	Description
1	No media present. (Insert diskette in floppy drive A:)
2	"AMIBOOT.ROM" file not found in root directory of diskette in A:
3	Insert next diskette if multiple diskettes are used for recovery
4	Flash Programming successful
5	File read error
7	No Flash EPROM detected
10	Flash Erase error
11	Flash Program error
12	"AMIBOOT.ROM" file size error
13	BIOS ROM image mismatch (file layout does not match image present in flash device)

POST BIOS Beep Codes

Number of Beeps	Description
1	Memory refresh timer error
3	Base memory read/write test error
6	Keyboard controller BAT command failed
7	General exception error (processor exception interrupt error)
8	Display memory error (system video adapter)

Troubleshooting POST BIOS Beep Codes

Number of Beeps	Troubleshooting Action
1, 3	Reseat the memory, or replace with known good modules.
6, 7	<p>Fatal error indicating a serious problem with the system. Consult your system manufacturer. Before declaring the motherboard beyond all hope, eliminate the possibility of interference by a malfunctioning add-in card. Remove all expansion cards except the video adapter.</p> <ul style="list-style-type: none"> ● If beep codes are generated when all other expansion cards are absent, consult your system manufacturer's technical support. ● If beep codes are not generated when all other expansion cards are absent, one of the add-in cards is causing the malfunction. Insert the cards back into the system one at a time until the problem happens again. This will reveal the malfunctioning card.
8	If the system video adapter is an add-in card, replace or reseat the video adapter. If the video adapter is an integrated part of the system board, the board may be faulty.

6.5 TROUBLESHOOTING

Probable	Solution
<ol style="list-style-type: none"> 1. There is no power in the system. Power LED does not shine; the fan of the power supply does not work 2. Indicator light on keyboard does not shine. 	<ol style="list-style-type: none"> 1. Make sure power cable is securely plugged in. 2. Replace cable. 3. Contact technical support.
System is inoperative. Keyboard lights are on, power indicator lights are lit, and hard drives are running.	Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.
System does not boot from a hard disk drive, but can be booted from optical drive.	<ol style="list-style-type: none"> 1. Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. 2. Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.
System only boots from an optical drive. Hard disks can be read, applications can be used, but system fails to boot from a hard disk.	<ol style="list-style-type: none"> 1. Back up data and applications files. 2. Reformat the hard drive. Re-install applications and data using backup disks.
Screen message shows "Invalid Configuration" or "CMOS Failure."	Review system's equipment. Make sure correct information is in setup.
System cannot boot after user installs a second hard drive.	<ol style="list-style-type: none"> 1. Set master/slave jumpers correctly. 2. Run SETUP program and select correct drive types. Call the drive manufacturers for compatibility with other drives.

APPENDIX: SPEC IN OTHER LANGUAGES

GERMAN

Spezifikationen		
CPU	Socket FM1	Die AMD 64-Architektur unterstützt eine 32-Bit- und
	AMD A-Series / E2-Series / Athlon II /	64-Bit-Datenverarbeitung
	Sempron Prozessoren	(Maximales Watt: 100W)
Chipsatz	AMD A75	
Super E/A	ITE 8728	Umgebungskontrolle,
	Bietet die häufig verwendeten alten Super	Hardware-Überwachung
	E/A-Funktionen.	Lüfterdrehzahl-Controller
	Low Pin Count-Schnittstelle	"Smart Guardian"-Funktion von ITE
Arbeitsspeicher	DDR3 DIMM-Steckplätze x 2	
	Max. 16GB Arbeitsspeicher	Dual-Kanal DDR3 Speichermodul
	Jeder DIMM unterstützt 512MB/ 1GB/2GB/4GB/8GB DDR3.	Unterstützt DDR3 800/1066/1333/1600/1866
SATA III	Integrierter Serial ATA-Controller	Datentransferrate bis zu 6 Gb/s
		Konform mit der SATA-Spezifikation Version 3.0
		Unterstützt RAID 0,1,10
LAN	RTL8111F	10 / 100 / 1000 Mb/s Auto-Negotiation
		Halb- / Vollduplex-Funktion
Audio-Codec	ALC662	5.1-Kanal-Audioausgabe
		Unterstützt High-Definition Audio
USB3.0	A75	Datenübertragungsraten bis zu 600 MB / s
Steckplätze	PCI Express Gen2 x16 Steckplatz	x1
	PCI Express Gen2 x1 Steckplatz	x2
	PCI Steckplatz	x3
Onboard-Anschluss	SATA-Anschluss	x6
	Fronttafelanschluss	x1
	Front-Audioanschluss	x1
	S/PDIF Ausgangsanschluss	x1
		Jeder Anschluss unterstützt 1 SATA-Laufwerk
		Unterstützt die Fronttafelfunktionen
		Unterstützt die Fronttafel-Audioanschlussfunktion
		Unterstützt die digitale Audioausgabefunktion

Spezifikationen			
	CPU-Lüfter-Sockel	x1	CPU-Lüfterstromversorgungsanschluss (mit Smart Fan-Funktion)
	System-Lüfter-Sockel	x2	System-Lüfter-Stromversorgungsanschluss
	"CMOS löschen"-Sockel	x1	
	USB2.0-Anschluss	x2	Jeder Anschluss unterstützt 2 Fronttafel-USB2.0-Anschlüsse
	USB3.0-Anschluss	x1	Jeder Anschluss unterstützt 2 Fronttafel-USB3.0-Anschlüsse
	Druckeranschluss Anschluss	x1	Jeder Anschluss unterstützt 1 Druckeranschluss
	Serieller Anschluss	x1	
	Stromanschluss (24-polig)	x1	
	Stromanschluss (4-polig)	x1	
Rückseiten-E/A	PS/2-Tastatur / Maus	x1	
	VGA-Anschluss	x1	
	DVI-D-Anschluss	x1	
	LAN-Anschluss	x1	
	USB2.0-Anschluss	x2	
	USB3.0-Anschluss	x2	
	Audioanschluss	x3	
Platinengröße	200 mm (B) X 295mm (L)		
OS-Unterstützung	Windows XP / Vista / 7		Biostar behält sich das Recht vor, ohne Ankündigung die Unterstützung für ein Betriebssystem hinzuzufügen oder zu entfernen.

FRENCH

<i>SPEC</i>		
UC	Socket FM1 Processeurs AMD A-Series / E2-Series / Athlon II / Sempron	L'architecture AMD 64 permet le calcul 32 et 64 bits (Watt maximum : 100W)
Chipset	AMD A75	
Super E/S	ITE 8728 Fournit la fonctionnalité de Super E/S patrimoniales la plus utilisée. Interface à faible compte de broches	Initiatives de contrôle environnementales, Moniteur de matériel Contrôleur de vitesse de ventilateur Fonction "Gardien intelligent" de l'ITE
Mémoire principale	Fentes DDR3 DIMM x 2 Capacité mémoire maximale de 16Go Chaque DIMM prend en charge des DDR3 de 512Mo/1Go/2Go/4Go/8Go	Module de mémoire DDR3 à mode à double voie Prend en charge la DDR3 800/1066/1333/1600/1866
SATA III	Contrôleur Serial ATA intégré	Taux de transfert jusqu'à 6 Go/s. Conforme à la spécification SATA Version 3.0 Prise en charge RAID 0,1,10
LAN	RTL8111F	10 / 100 / 1000 Mb/s négociation automatique Half / Full duplex capability
Codec audio	ALC662	Sortie audio à 5.1 voies Prise en charge de l'audio haute définition
USB3.0	A75	Taux de transfert de données jusqu'à 600 Mo / s
Fentes	Fente PCI Express Gen2 x16 x1 Fente PCI Express Gen2 x1 x2 Fente PCI x3	
Connecteur embarqué	Connecteur SATA x6 Connecteur du panneau avant x1 Connecteur Audio du panneau avant x1 Connecteur de sortie S/PDIF x1	Chaque connecteur prend en charge 1 périphérique SATA Prend en charge les équipements du panneau avant Prend en charge la fonction audio du panneau avant Prend en charge la fonction de sortie audio numérique

SPEC		
	Embase de ventilateur UC	x1
	Embase de ventilateur système	x2
	Embase d'effacement CMOS	x1
	Connecteur USB2.0	x2
	Connecteur USB3.0	x1
	Connecteur de Port d'imprimante	x1
	Port série	x1
	Connecteur d'alimentation (24 broches)	x1
	Connecteur d'alimentation (4broches)	x1
E/S du panneau arrière	Clavier / Souris PS/2	x1
	Port VGA	x1
	Port DVI-D	x1
	Port LAN	x1
	Port USB2.0	x2
	Port USB3.0	x2
	Fiche audio	x3
Dimensions de la carte	200mm (l) X 295 mm (H)	
Support SE	Windows XP / Vista / 7	Biostar se réserve le droit d'ajouter ou de supprimer le support de SE avec ou sans préavis.

ITALIAN

SPECIFICA		
CPU	Socket FM1 Processori AMD A-Series / E2-Series / Athlon II / Sempron	L'architettura AMD 64 abilita la computazione 32 e 64 bit (Watt massimo: 100W)
Chipset	AMD A75	
Super I/O	ITE 8728 Fornisce le funzionalità legacy Super I/O usate più comunemente. Interfaccia LPC (Low Pin Count)	Funzioni di controllo dell'ambiente: Monitoraggio hardware Controller velocità ventolina Funzione "Smart Guardian" di ITE
Memoria principale	Alloggi DIMM DDR3 x 2 Capacità massima della memoria 16GB Ciascun DIMM supporta DDR3 512MB/1GB/2GB/4GB/8GB	Modulo di memoria DDR3 a canale doppio Supporto di DDR3 800/1066/1333/1600/1866
SATA III	Controller Serial ATA integrato	Velocità di trasferimento dei dati fino a 6 Gb/s. Compatibile specifiche SATA Versione 3.0 Supporto RAID 0,1,10
LAN	RTL8111F	Negoziiazione automatica 10 / 100 / 1000 Mb/s Capacità Half / Full Duplex
Codec audio	ALC662	Uscita audio 5.1 canali Supporto audio High-Definition (HD)
USB3.0	A75	Velocità di trasferimento dati fino a 600 MB / s
Alloggi	Alloggio PCI Express Gen2 x16 x1 Alloggio PCI Express Gen2 x1 x2 Alloggio PCI x3	
Connettori su scheda	Connettore SATA x6 Connettore pannello frontale x1 Connettore audio frontale x1 Connettore output S/PDIF x1 Collettore ventolina CPU x1 Collettore ventolina sistema x2	Ciascun connettore supporta 1 unità SATA Supporta i servizi del pannello frontale Supporta la funzione audio pannello frontale Supporta la funzione d'output audio digitale Alimentazione ventolina CPU (con funzione Smart Fan) Alimentazione ventolina di sistema

SPECIFICA		
	Collettore cancellazione CMOS x1	
	Connettore USB2.0 x2	Ciascun connettore supporta 2 porte USB2.0 pannello frontale
	Connettore USB3.0 x1	Ciascun connettore supporta 2 porte USB3.0 pannello frontale
	Connettore Porta stampante x1	Ciascun connettore supporta 1 Porta stampante
	Porta seriale x1	
	Connettore alimentazione (24 pin) x1	
	Connettore alimentazione (4pin) x1	
I/O pannello posteriore	Tastiera / Mouse PS/2 x1	
	Porta VGA x1	
	Porta DVI-D x1	
	Porta LAN x1	
	Porta USB2.0 x2	
	Porta USB3.0 x2	
	Connettore audio x3	
Dimensioni scheda	200 mm (larghezza) x 295 mm (altezza)	
Sistemi operativi supportati	Windows XP / Vista / 7	Biostar si riserva il diritto di aggiungere o rimuovere il supporto di qualsiasi sistema operativo senza preavviso.

SPANISH

Especificación			
CPU	Conector FM1		La arquitectura AMD 64 permite el procesado de 32 y
	Procesadores AMD A-Series / E2-Series /		64 bits
	Athlon II / Sempron		(Vatio máximo: 100W)
Conjunto de chips	AMD A75		
Súper E/S	ITE 8728		Iniciativas de control de entorno,
	Le ofrece las funcionalidades heredadas de		Monitor hardware
	uso más común Súper E/S.		Controlador de velocidad de ventilador
	Interfaz de cuenta Low Pin		Función "Guardia inteligente" de ITE
Memoria principal	Ranuras DIMM DDR3 x 2		
	Capacidad máxima de memoria de 16GB		Módulo de memoria DDR3 de canal Doble
	Cada DIMM admite DDR de 512MB/1GB/2GB/4GB/8GB		Admite DDR3 de 800/1066/1333/1600/1866
SATA III			Tasas de transferencia de hasta 6 Gb/s.
	Controlador ATA Serie Integrado		Compatible con la versión SATA 3.0
			Admite RAID 0,1,10
Red Local	RTL8111F		Negociación de 10 / 100 / 1000 Mb/s
			Funciones Half / Full dúplex
Códexs de sonido	ALC662		Salida de sonido de 5.1 canales
			Soporte de sonido de Alta Definición
USB3.0	A75		Tasas de transferencia de datos hasta 600 MB / s
Ranuras	Ranura PCI Express Gen2 x16	X1	
	Ranura PCI express Gen2 x1	X2	
	Ranura PCI	X3	
Conectores en placa	Conector SATA	X6	Cada conector soporta 1 dispositivos SATA
	Conector de panel frontal	X1	Soporta instalaciones en el panel frontal
	Conector de sonido frontal	X1	Soporta funciones de sonido en el panel frontal
	Conector de salida S/PDIF	X1	Soporta función de salida de sonido digital

Especificación		
	Cabecera de ventilador de CPU X1 Cabecera de ventilador de sistema X2 Cabecera de borrado de CMOS X1 Conector USB2.0 X2 Conector USB3.0 X1 Conector Puerto de impresora X1 Puerto serie X1 Conector de alimentación (24 patillas) X1 Conector de alimentación (4patillas) X1	Fuente de alimentación de ventilador de CPU (con función Smart Fan) Fuente de alimentación de ventilador de sistema Cada conector soporta 2 puertos USB2.0 frontales Cada conector soporta 2 puertos USB3.0 frontales Cada conector soporta 1 Puerto de impresora
Panel trasero de E/S	Teclado / Ratón PS/2 X1 Puerto VGA X1 Puerto DVI-D X1 Puerto de red local X1 Puerto USB2.0 X2 Puerto USB3.0 X2 Conector de sonido X3	
Tamaño de la placa	200 mm. (A) X 295 mm. (H)	
Soporte de sistema operativo	Windows XP / Vista / 7	Biostar se reserva el derecho de añadir o retirar el soporte de cualquier SO con o sin aviso previo.

PORTUGUESE

ESPECIFICAÇÕES			
CPU	Socket FM1		A arquitetura AMD 64 permite uma computação de 32 e 64 bits
	Processadores AMD A-Series / E2-Series /		(Watt máximo: 100W)
	Athlon II / Sempron		
Chipset	AMD A75		
Especificação do Super I/O	ITE 8728 Proporciona as funcionalidades mais utilizadas em termos da especificação Super I/O. Interface LPC (Low Pin Count).		Iniciativas para controlo do ambiente Monitorização do hardware Controlador da velocidade da ventoinha Função "Smart Guardian" da ITE
Memória principal	Ranuras DIMM DDR3 x 2 Capacidade máxima de memória: 16GB Cada módulo DIMM suporta uma memória DDR3 de 512MB/ 1GB/2GB/4GB/8GB		Módulo de memória DDR3 de canal duplo Suporta módulos DDR3 800/1066/1333/1600/1866
SATA III	Controlador Serial ATA integrado		Velocidades de transmissão de dados até 6 Gb/s. Compatibilidade com a especificação SATA versão 3.0 Suporta as funções RAID 0,1,10
LAN	RTL8111F		Auto negociação de 10 / 100 / 1000 Mb/s Capacidade semi/full-duplex
Codec de som	ALC662		Saída de áudio de 5.1 canais Suporta a especificação High-Definition Audio
USB3.0	A75		Taxas de transferência de dados até 600 MB / s
Ranuras	Ranhura PCI Express Gen2 x16	x1	
	Ranhura PCI Express Gen2 x1	x2	
	Ranhura PCI	x3	
Conectores na placa	Conector SATA	x6	Cada conector suporta 1 dispositivo SATA
	Conector do painel frontal	x1	Para suporte de várias funções no painel frontal
	Conector de áudio frontal	x1	Suporta a função de áudio no painel frontal
	Conector de saída S/PDIF	x1	Suporta a saída de áudio digital

ESPECIFICAÇÕES		
	Conector da ventoinha da CPU x1 Conector da ventoinha do sistema x2 Conector para limpeza do CMOS x1 Conector USB2.0 x2 Conector USB3.0 x1 Conector da para impressora x1 Porta série x1 Conector de alimentação (24 pinos) x1 Conector de alimentação (4 pinos) x1	Alimentação da ventoinha da CPU (com a função Smart Fan) Alimentação da ventoinha do sistema Cada conector suporta 2 portas USB2.0 no painel frontal Cada conector suporta 2 portas USB3.0 no painel frontal Cada conector suporta 1 Porta para impressora
Entradas/Saídas no painel traseiro	Teclado / Rato PS/2 x1 Porta VGA x1 Porta DVI-D x1 Porta LAN x1 Porta USB2.0 x2 Porta USB3.0 x2 Tomada de áudio x3	
Tamanho da placa	200 mm (L) X 295 mm (A)	
Sistemas operativos suportados	Windows XP / Vista / 7	A Biostar reserva-se o direito de adicionar ou remover suporte para qualquer sistema operativo com ou sem aviso prévio.

POLISH

<i>SPEC</i>		
Procesor	Socket FM1	Architektura AMD 64 umożliwia przetwarzanie 32 i 64 bitowe
	AMD A-Series / E2-Series / Athlon II / Sempron Procesory	(Maksymalny Watt: 100W)
Chipset	AMD A75	
Pamięć główna	Gniazda DDR3 DIMM x 2	Moduł pamięci DDR3 z trybem podwójnego kanału
	Maks. wielkość pamięci 16GB	Obsługa DDR3 800/1066/1333/1600/1866
	Każde gniazdo DIMM obsługuje moduły 512MB/1GB/2GB/4GB/8GB DDR3	
Super I/O	ITE 8728	Funkcje kontroli warunków pracy,
	Zapewnia najbardziej powszechne funkcje Super I/O.	Monitor H/W
	Interfejs Low Pin Count	Kontroler prędkości wentylatora Funkcja ITE "Smart Guardian"
SATA III	Zintegrowany kontroler Serial ATA	Transfer danych do 6 Gb/s.
		Zgodność ze specyfikacją SATA w wersji 3.0
		Obsługa RAID 0,1,10
LAN	RTL8111F	10 / 100 / 1000 Mb/s z automatyczną negocjacją szybkości
		Działanie w trybie połowicznego/pełnego duplexu
Kodek dźwiękowy	ALC662	5.1 kanałowe wyjście audio
		Obsługa High-Definition Audio
USB3.0	A75	Cena transferu danych do 600 MB / s
Gniazda	Gniazdo PCI Express Gen2 x16	x1
	Gniazdo PCI Express Gen2 x1	x2
	Gniazdo PCI	x3
Złącza wbudowane	Złącze SATA	x6 Każde złącze obsługuje 1 urządzenie SATA
	Złącze panela przedniego	x1 Obsługa elementów panela przedniego
	Przednie złącze audio	x1 Obsługa funkcji audio na panelu przednim
	Złącze wyjścia S/PDIF	x1 Obsługa funkcji cyfrowego wyjścia audio

SPEC		
	Złącze główkowe wentylatora procesora x1 Złącze główkowe wentylatora systemowego x2 Złącze główkowe kasowania CMOS x1 Złącze USB2.0 x2 Złącze USB3.0 x1 Złącze Port drukarki x1 Port szeregowy x1 Złącze zasilania (24 pinowe) x1 Złącze zasilania (4 pinowe) x1	Zasilanie wentylatora procesora (z funkcją Smart Fan) Zasilanie wentylatora systemowego Każde złącze obsługuje 2 porty USB2.0 na panelu przednim Każde złącze obsługuje 2 porty USB3.0 na panelu przednim Każde złącze obsługuje 1 Port drukarki
Back Panel I/O	Klawiatura / Mysz PS/2 x1 Port VGA x1 Port DVI-D x1 Port LAN x1 Port USB2.0 x2 Port USB3.0 x2 Gniazdo audio x3	
Wymiary płyty	200 mm (S) X 295 mm (W)	
Obsługa systemu operacyjnego	Windows XP / Vista / 7	Biostar zastrzega sobie prawo dodawania lub odwoływania obsługi dowolnego systemu operacyjnego bez powiadomienia.

RUSSIAN

СПЕЦ		
CPU (центральный процессор)	Гнездо FM1 Процессоры AMD A-Series / E2-Series / Athlon II / Sempron	Архитектура AMD 64 разрешать обработка данных на 32 и 64 бит (Максимальный ватт: 100W)
Набор микросхем	AMD A75	
Основная память	Слоты DDR3 DIMM x 2 Максимальная ёмкость памяти 16ГБ Каждый модуль DIMM поддерживает 512МБ/1ГБ/2ГБ/4ГБ/8ГБ DDR3	Модуль памяти с двухканальным режимом DDR3 Поддержка DDR3 800/1066/1333/1600/1866
Super I/O	ITE 8728 Обеспечивает наиболее используемые действующие функциональные возможности Super I/O. Интерфейс с низким количеством выводов	Инициативы по охране окружающей среды, Аппаратный монитор Регулятор скорости Функция ITE "Smart Guardian" (Интеллектуальная защита)
SATA III	Встроенное последовательное устройство управления ATA	скорость передачи данных до 6 гигабит/с. Соответствие спецификации SATA версия 3.0 Поддержка RAID 0,1,10
Локальная сеть	RTL8111F	Автоматическое согласование 10 / 100 / 1000 Мб/с Частичная / полная дуплексная способность
Звуковой кодек	ALC662	Звуковая поддержка High-Definition 5.1канальный звуковой выход
USB3.0	A75	скорости передачи данных до 600 МБ / с
Слоты	Слот PCI Express Gen2 x16 x1 Слот PCI Express Gen2 x1 x2 Слот PCI x3	
Встроенный разъём	Разъём SATA x6 Разъём на лицевой панели x1 Входной звуковой разъём x1 Разъём вывода для S/PDIF x1	Каждый разъём поддерживает 1 устройство SATA Поддержка устройств на лицевой панели Поддержка звуковых функций на лицевой панели Поддержка вывода цифровой звуковой функции

СПЕЦ		
	Контактирующее приспособление вентилятора центрального процессора x1	Источник питания для вентилятора центрального процессора (с функцией интеллектуального вентилятора)
	Контактирующее приспособление вентилятора системы x2	Источник питания для вентилятора системы
	Открытое контактирующее приспособление CMOS x1	
	USB2.0-разъём x2	Каждый разъём поддерживает 2 USB2.0-порта на лицевой панели
	USB3.0-разъём x1	Каждый разъём поддерживает 2 USB3.0-порта на лицевой панели
	Разъём Порт подключения принтера x1	Каждый разъём поддерживает 1 Порт подключения принтера
	Последовательный порт x1	
	Разъём питания (24 вывод) x1	
	Разъём питания (4 вывод) x1	
Задняя панель средств ввода-вывода	Клавиатура / Мышь PS/2 x1	
	Порт VGA x1	
	Порт DVI-D x1	
	Порт LAN x1	
	USB2.0-порт x2	
	USB3.0-порт x2	
	Гнездо для подключения наушников x3	
Размер панели	200 мм (Ш) X 295 мм (В)	
Поддержка OS	Windows XP / Vista / 7	Biostar сохраняет за собой право добавлять или удалять средства обеспечения для OS с или без предварительного уведомления.

ARABIC

المواصفات		
وحدة المعالجة المركزية	FM1 مقبس AMD A-Series / E2-Series / Athlon II / Sempron	إجراء العمليات الحسابية بسرعة 32 و 64 بت. AMD 64 تمكين تقنية (100: فصوص واط)
مجموعة الشرائح	AMD A75	
الذاكرة الرئيسية	قناة DDR3 DIMM عدد 2 سعة ذاكرة فصوص 16 جيجا بايت ميغا 512/سعة DDR3 تدعم ذاكرة من نوع DIMM تدعم كل قناة بايت 1/2 و 4 و 8 جيجا بايت	مزودة القناة DDR3 بذاكرة سعات DDR3 1866/1600/1333/1066/800 تدعم الذاكرة من نوع ميغا بايت
Super I/O	ITE 8728 الأكثر استخداماً. Super I/O وفّر وظيفة Low Pin Count Interface تدعم تقنية	وسائل التحكم في البيئة: مراقب لمعرفة حالة الأجهزة مراقب في سرعة المروحة ITE من "Smart Guardian" وظيفة
SATA III	متكامل Serial ATA تحكم	نقل البيانات بسرعة تصل إلى 6 جيجابت/ثانية. الإصدار SATA مطابقة لمواصفات RAID 0,1,10 تدعم تقنية
شبكة داخلية	RTL8111F	تقارب ثنائي 10/100 ميجا بايت / ثنائية و 1 جيجا بت/ثانية إمكانية النقل المزدوج الكامل/القصفي
كوديك الصوت	ALC892	تدعم تقنية الصوت عالي التعريف من 5.1 قنوات لخرج الصوت
USB3.0	A75	ثنائية / بايت ميغا 600 إلى تصل بيئات نقل معدلات
الفتحات	قناة PCI Express Gen2 x16 عدد 1 قناة PCI Express Gen2 x1 عدد 2 قناة PCI عدد 3	
المنفذ على سطح اللوحة	منفذ SATA عدد 6 منفذ اللوحة الأممية عدد 1 منفذ الصوت الأممي عدد 1	SATA يدعم كل منفذ واحد من أجهزة يدعم تجهيزات اللوحة الأممية يدعم وظيفة الصوت باللوحة الأممية

المواصفات		
منفذ خرج SPDIF	عدد 1	يدعم وظيفة خرج الصوت الرقمي
وصلة مروحة وحدة المعالجة المركزية	عدد 1	Smart Fan توصيل الطاقة لمروحة وحدة المعالجة مع وظيفة
وصلة مروحة النظام	عدد 2	توصيل الطاقة لمروحة النظام
وصلة مسح CMOS	عدد 1	
منفذ USB2.0	عدد 2	يدعم كل منفذ قمتي USB2.0 باللوحة الأممية
منفذ USB3.0	عدد 1	يدعم كل منفذ قمتي USB3.0 باللوحة الأممية
منفذ طباعة	عدد 1	
منفذ تسلسلي	عدد 1	
منفذ توصيل الطاقة (24 دبوس)	عدد 1	
منفذ توصيل الطاقة (4 دبوس)	عدد 1	
لوحة مفاتيح / ملوس PS/2	عدد 1	
منافذ VGA	عدد 1	
منافذ DVI-D	عدد 1	
منفذ شبكة اتصال محلية	عدد 1	
منافذ USB2.0	عدد 2	
منافذ USB3.0	عدد 2	
مقيس صوت	عدد 3	
منفذ دخل/خرج اللوحة الخلفية		
حجم اللوحة	200مم (عرض) X295 مم (ارتفاع)	
دعم أنظمة التشغيل	Windows XP / Vista / 7	بحقها في إضافة أو إزالة الدعم لأي نظام تشغيل بإخطار أو بدون Biostar حفظ إخطار .

JAPANESE

仕様		
CPU	Socket FM1 AMD A-Series / E2-Series / Athlon II / Sempron プロセッサ	AMD 64アーキテクチャでは、32ビットと64ビット計算が 可能です (最高のワット: 100W)
チップセット	AMD A75	
メインメモリ	DDR3 DIMMスロット x 2 最大メモリ容量16GB 各DIMMは 512MB/1GB/2GB/4GB/8GB DDR3 をサポート	デュアル チャンネルモードDDR3 メモリモジュール DDR3 800/1066/1333/1600/1866 をサポート
Super I/O	ITE 8728 もつとも一般に使用されるレガシーSuper I/O機 能を採用しています。 低ピンカウントインターフェイス	環境コントロールインシアチップ、 H/Wモニター ファン速度コントローラ/ モニター ITEの「スマートガーディアン」機能
SATA III	統合シリアルATA コントローラ	最高6 Gb/秒のデータ転送速度 SATAバージョン3.0仕様に準拠。 RAID 0,1,10のサポート
LAN	RTL8111F	10 / 100 / 1000 Mb/秒のオートネゴシエーション 半/全二重機能
サウンド Codec	ALC662	ハイデフィニションオーディオのサポート 5.1 チャンネルオーディオアウト
USB3.0	A75	データ転送速度最大600 MB /秒の
スロット	PCI Express Gen2 x16スロット x1 PCI Express Gen2 x1スロット x2 PCIスロット x3	
オンボードコ ネクタ	SATAコネクタ x6 フロントパネルコネクタ x1 フロントオーディオコネクタ x1 S/PDIFアウトコネクタ x1 CPUファンヘッダ x1 システムファンヘッダ x2	各コネクタは1つのSATAデバイスをサポートします フロントパネル機能をサポートします フロントパネルオーディオ機能をサポートします デジタルオーディオアウト機能をサポートします CPUファン電源装置(スマートファン機能を搭載) システムファン電源装置

仕様		
	CMOSクリアヘッダ	x1
	USB2.0コネクタ	x2
	USB3.0コネクタ	x1
	プリンタポートコネクタ	x1
	シリアルポート	x1
	電源コネクタ(24ピン)	x1
	電源コネクタ(4ピン)	x1
背面パネル I/O	PS/2キーボード / マウス	x1
	VGAポート	x1
	DVI-Dポート	x1
	LANポート	x1
	USB2.0ポート	x2
	USB3.0ポート	x2
	オーディオジャック	x3
ボードサイズ	200 mm (幅) X 295 mm (高さ)	
OSサポート	Windows XP / Vista / 7	Biostarは事前のサポートなしにOSサポートを追加または削除する権利を留保します。

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