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Ai sensi dell'art. 2 comma 3 del D.M. 275 del 30/10/2002

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2004/108/CE, 2006/95/CE e 1999/05/CE

quando ad esso applicabili

### **Short Declaration of conformity**

We declare this product is complying with the laws in force and meeting all the essential requirements as specified by the directives

2004/108/CE, 2006/95/CE and 1999/05/CE

whenever these laws may be applied

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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.
- To avoid injury, be careful of:
  - Sharp pins on headers and connectors
  - Rough edges and sharp corners on the chassis
  - Damage to wires that could cause a short circuit

### **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

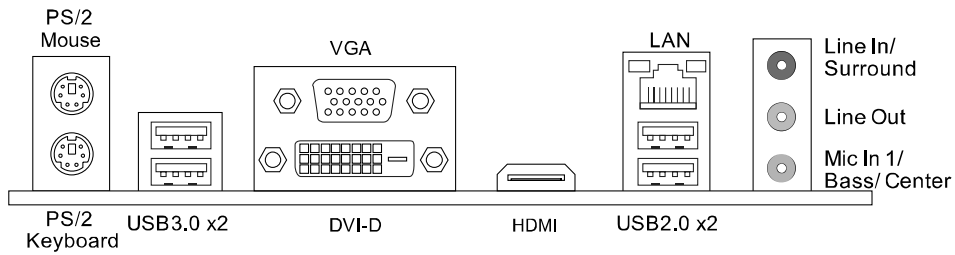
<p><b>Note:</b> The package contents may be different due to the sales region or models in which it was sold. For more information about the standard package in your region, please contact your dealer or sales representative.</p>
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## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Specifications		
Internal I/Os	Hi-Fi Z87S2 & Hi-Fi H87S2	Hi-Fi B85S2
	6x SATA 6.0Gb/s Connector	4x SATA 6.0Gb/s Connector
	2x USB 2.0 Header (each header supports 2 USB 2.0 ports)	2x SATA 3.0Gb/s Connector
	1x USB 3.0 Header (each header supports 2 USB 3.0 ports)	2x USB 2.0 Header (each header supports 2 USB 2.0 ports)
	1x 4-Pin Power Connector	1x USB 3.0 Header (each header supports 2 USB 3.0 ports)
	1x 24-Pin Power Connector	1x 4-Pin Power Connector
	1x CPU Fan Connector	1x 24-Pin Power Connector
	2x System Fan Connector	1x CPU Fan Connector
	1x Front Panel Header	2x System Fan Connector
	1x Front Audio Header	1x Front Panel Header
	1x Clear CMOS Header	1x Front Audio Header
	1x Consumer IR Header	1x Clear CMOS Header
	1x Serial Port Header	1x Consumer IR Header
	1x S/PDIF out Connector	1x Serial Port Header
	1x Printer Port Header	1x S/PDIF out Connector
	1x Printer Port Header	
Form Factor	ATX Form Factor, 305 mm x 210 mm	
OS Support	Windows 7/ 8 Biostar reserves the right to add or remove support for any OS with or without notice.	

## 1.4 Rear Panel Connectors



**Note1:** HDMI, DVI-D & VGA ports only work with an Intel® integrated Graphics Processor.

**Note2:** Maximum resolution:  
 HDMI: 4096 x 2160 @24Hz, compliant with HDMI 1.4a  
 DVI: 1920 x 1200 @60Hz  
 VGA: 1920 x 1200 @60Hz

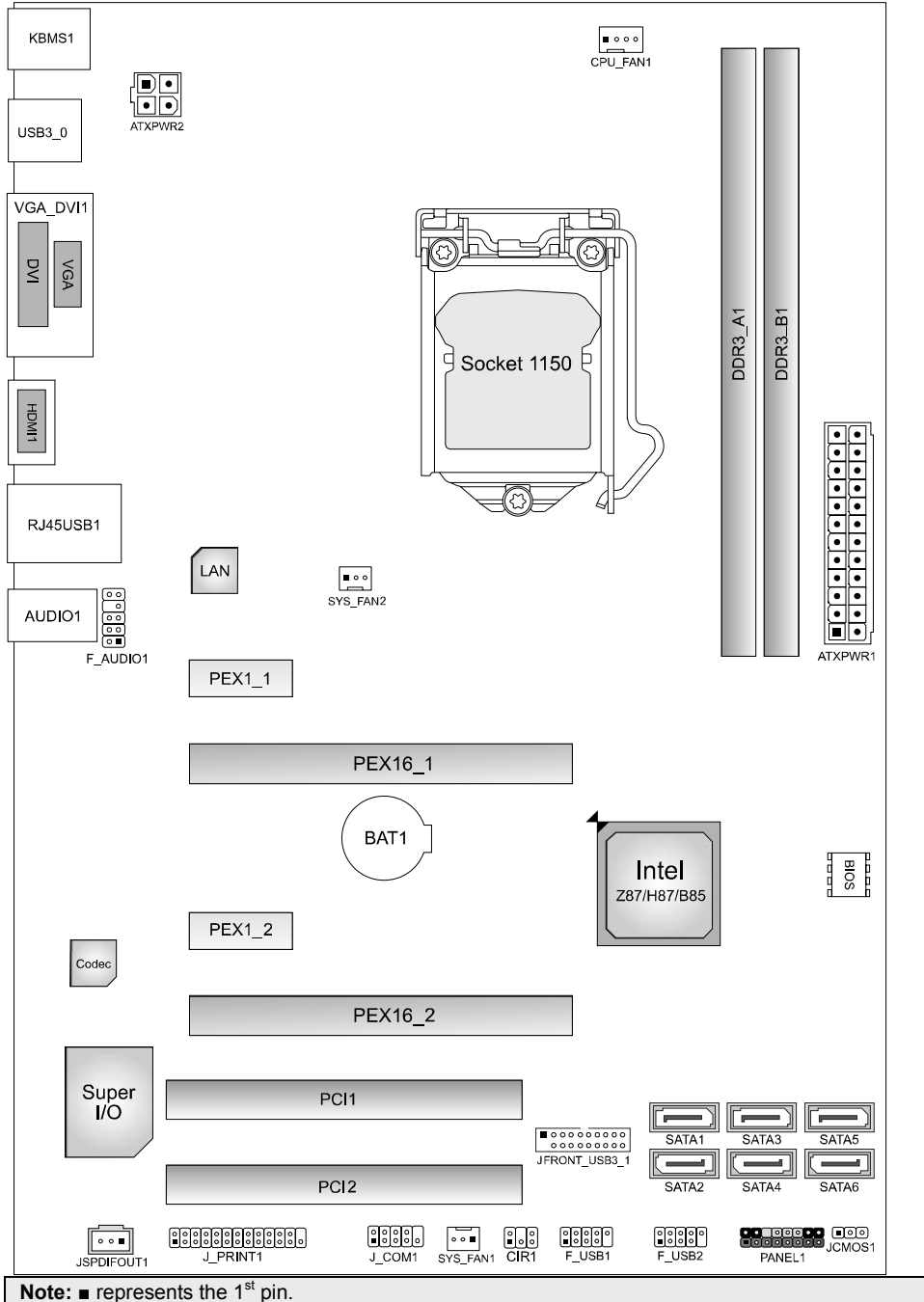
**Note3:** The mainboard supports three onboard display outputs at same time.

**Note4:** To configure 7.1-channel audio, you have to use a chassis with HD front panel audio module and enable the multi-channel audio feature through O.S. Audio Utility.

### The 2/ 4/ 5.1/7.1-channel configuration

Port	2-channel	4-channel	5.1 channel	7.1 channel
Blue (Rear Panel)	Line In	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Green (Rear Panel)	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink (Rear Panel)	Mic In	Mic In	Center/Subwoofer Out	Center/Subwoofer Out
Green (Front Panel)	--	--	--	Side Speaker Out

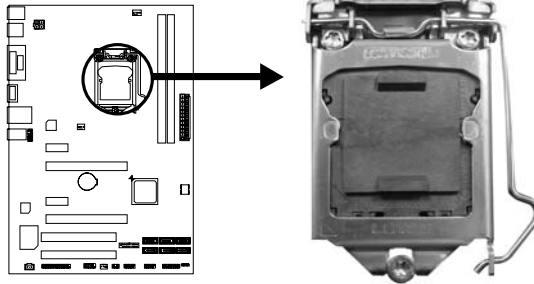
## 1.5 MOTHERBOARD LAYOUT



## CHAPTER 2: HARDWARE INSTALLATION

### 2.1 Install Central Processing Unit (CPU)

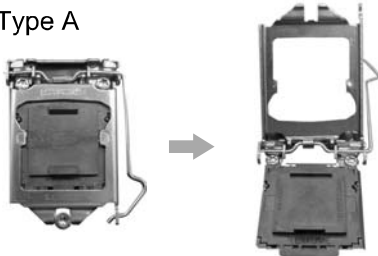
**Step 1:** Locate the CPU socket on the motherboard



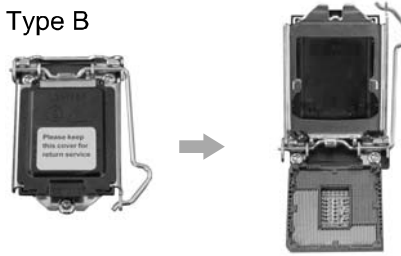
**Note1:** Remove Pin Cap before installation, and make good preservation for future use. When the CPU is removed, cover the Pin Cap on the empty socket to ensure pin legs won't be damaged.  
**Note2:** The motherboard might equip with two different types of pin cap. Please refer below instruction to remove the pin cap.

**Step 2:** Pull the socket locking lever out from the socket and then raise the lever up.

Type A

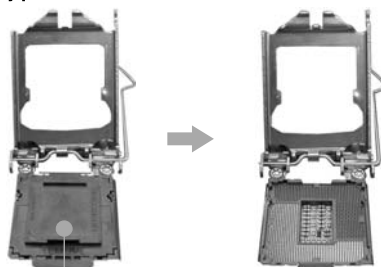


Type B



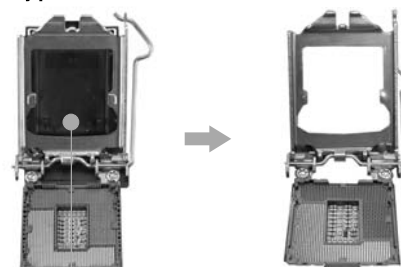
**Step 3:** Remove the Pin Cap.

Type A



Pin Cap

Type B



Pin Cap



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### Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

**Step 4:** Hold processor with your thumb and index fingers, oriented as shown. Align the notches with the socket. Lower the processor straight down without tilting or sliding the processor in the socket.



**Note1:** The LGA1155 CPU is not compatible with LGA 1150 socket. Do not install a LGA 1155 CPU on the LGA 1150 socket.

**Note2:** The CPU fits only in one correct orientation. Do not force the CPU into the socket to prevent damaging the CPU.

**Step 5:** Hold the CPU down firmly, and then lower the lever to locked position to complete the installation.

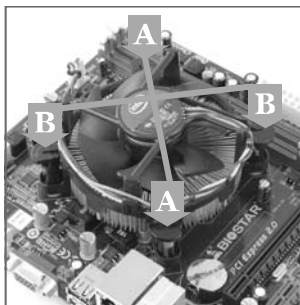


## 2.2 Install a Heatsink

**Step 1:** Place the CPU fan assembly on top of the installed CPU and make sure that the four fasteners match the motherboard holes. Orient the assembly and make the fan cable is closest to the CPU fan connector.



**Step 2:** Press down two fasteners at one time in a diagonal sequence to secure the CPU fan assembly in place. Ensure that all four fasteners are secured.



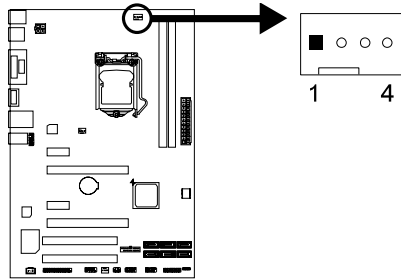
**Note1:** Do not forget to connect the CPU fan connector.

**Note2:** For proper installation, please kindly refer to the installation manual of your CPU heatsink.

## 2.3 Connect Cooling Fans

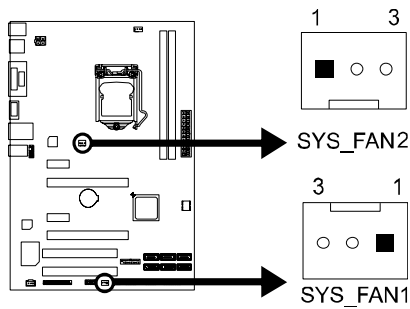
These fan headers support cooling-fans built in the computer. The fan cable and connector may be different according to the fan manufacturer.

### CPU\_FAN1: CPU Fan Header



Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate sense
4	Smart Fan Control (By Fan)

### SYS\_FAN1/2: System Fan Header

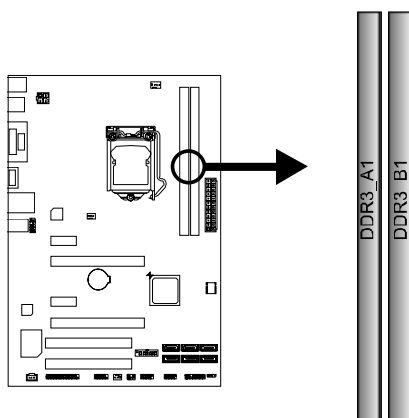


Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate sense

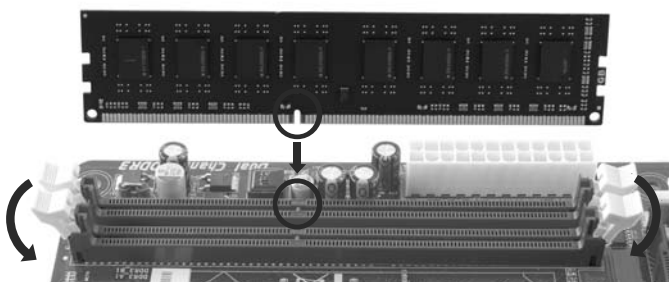
**Note:** CPU\_FAN1, SYS\_FAN1/2 support 4-pin and 3-pin head connectors. When connecting with wires onto connectors, please note that the red wire is the positive and should be connected to pin#2, and the black wire is Ground and should be connected to pin#1(GND).

## 2.4 Install System Memory

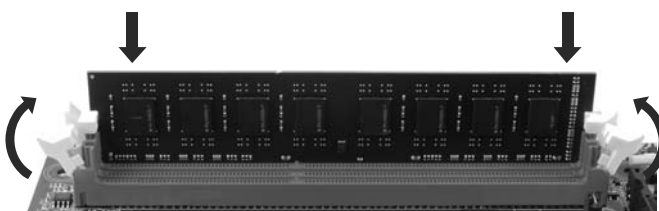
### DDR3 Modules



**Step 1:** 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.



**Step 2:** 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.

### 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	

### 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 means memory not installed.)

<b>Note:</b> The DRAM bus width of the memory module must be the same (x8 or x16)
---

## 2.5 Expansion Slots

### Install an Expansion Card

You can install your expansion card by following steps:

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Place a card in the expansion slot and press down on the card until it is completely seated in the slot.
4. Secure the card's metal bracket to the chassis back panel with a screw.
5. Replace your computer's chassis cover.
6. Power on the computer, if necessary, change BIOS settings for the expansion card.
7. Install related driver for the expansion card.

**PEX16\_1: PCI-Express Gen3 x16 Slot**

- PCI-Express 3.0 compliant.
- Maximum theoretical realized bandwidth of 16GB/s simultaneously per direction, for an aggregate of 32GB/s totally.

**PEX16\_2: PCI-Express Gen2 x4 Slot**

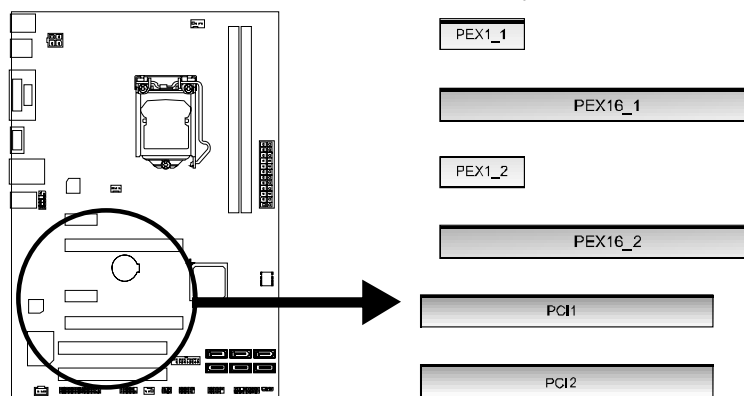
- PCI-Express 2.0 compliant.
- Maximum theoretical realized bandwidth of 2GB/s simultaneously per direction, for an aggregate of 4GB/s totally.

**PEX1\_1/1\_2: PCI-Express Gen2 x1 Slots**

- PCI-Express 2.0 compliant.
- Data transfer bandwidth up to 500MB/s per direction; 1GB/s in total

**PCI1/ PCI2: Peripheral Component Interconnect Slots**

The PCI slots support cards used in PCs include: LAN cards, sound cards, modems, TV tuner cards and other cards that comply PCI standard.



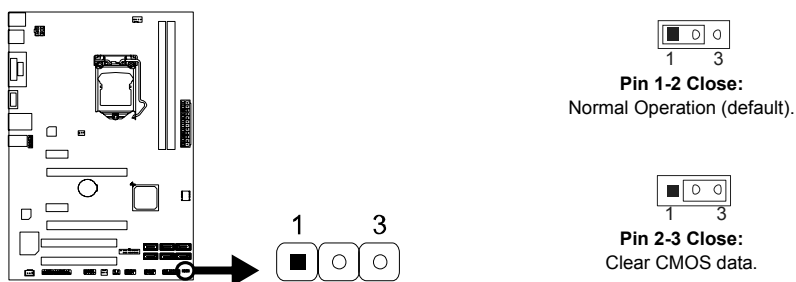
## 2.6 Jumper Setting

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”.



### JCMOS1: Clear CMOS Jumper

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



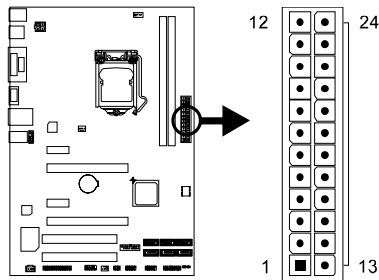
#### ※ Clear CMOS Procedures:

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.

## 2.7 Headers & Connectors

### ATXPWR1: ATX Power Source Connector

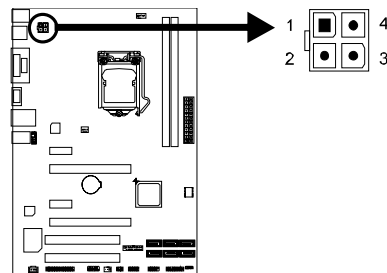
This connector allows user to connect an ATX 24-pin power supply. Make sure to find the proper orientation before plugging the connector.



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

### ATXPWR2: ATX Power Source Connector

The connector provides +12V to the CPU power circuit.



Pin	Assignment
1	+12V
2	+12V
3	Ground
4	Ground

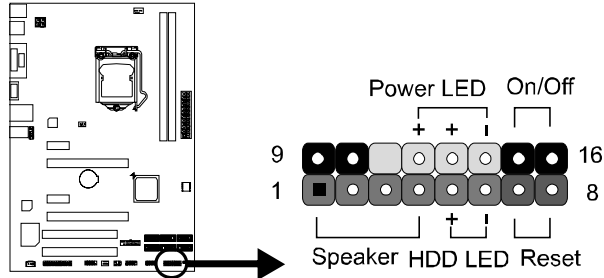
**Note1:** Before you power on the system, please make sure that both ATXPWR1 and ATXPWR2 connectors have been plugged-in.

**Note2:** Insufficient power supplied to the system may result in instability or the peripherals not functioning properly. Use of a PSU with a higher power output is recommended when configuring a system with more power-consuming devices.



**PANEL1: Front Panel Header**

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

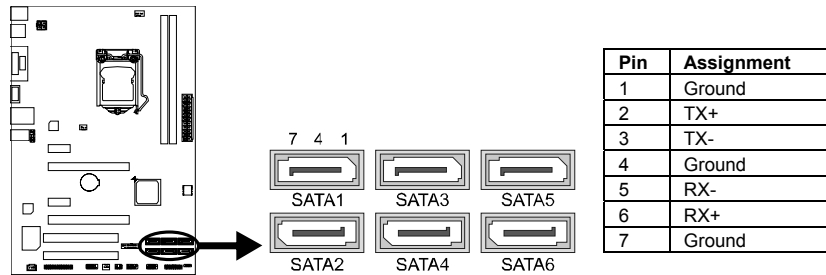


Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker Connector	9	N/A	N/A
2	N/A		10	N/A	
3	N/A		11	N/A	
4	Speaker		12	Power LED (+)	Power LED
5	HDD LED (+)	13	Power LED (+)		
6	HDD LED (-)	14	Power LED (-)		
7	Ground	Reset button	15	Power button	Power-on button
8	Reset control		16	Ground	

**SATA1~SATA6: Serial ATA Connectors**

These connectors connect to SATA hard disk drives via SATA cables. Please refer below table for SATA data transfer rates.

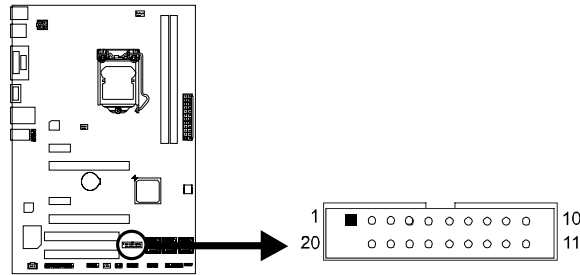
Connectors	SATA1	SATA2	SATA3	SATA4	SATA5	SATA6
Hi-Fi Z87S2	SATA 6Gb/s					
Hi-Fi H87S2	SATA 6Gb/s					
Hi-Fi B85S2	SATA 6Gb/s				SATA 3Gb/s	



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

### JFRONT\_USB3\_1: Header for USB 3.0 Ports at Front Panel

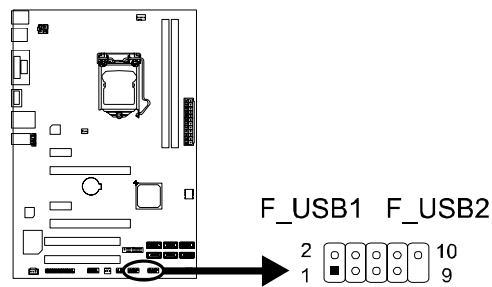
This header allows user to add additional USB ports on the PC front panel, and also can be connected with a wide range of external peripherals.



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\_USB1/2: Header for USB 2.0 Ports at Front Panel

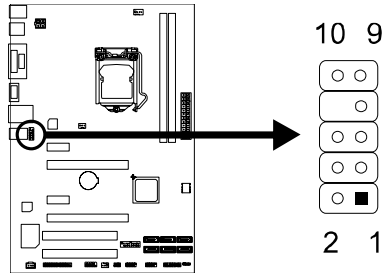
This header allows user to add additional USB ports on the PC front panel, and also can be connected with a wide range of external peripherals.



Pin	Assignment
1	+5V (fused)
2	+5V (fused)
3	USB-
4	USB-
5	USB+
6	USB+
7	Ground
8	Ground
9	NC
10	Key

### F\_AUDIO1: Front Panel Audio Header

This header allows user to connect the chassis-mount front panel audio I/O which supports HD and AC'97 audio standards.

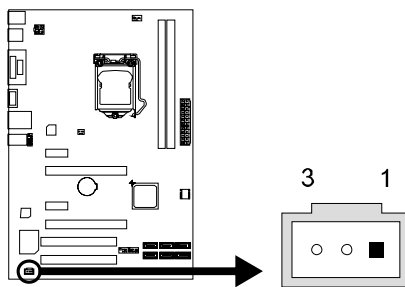


HD Audio		AC'97	
Pin	Assignment	Pin	Assignment
1	Mic Left in	1	Mic In
2	Ground	2	Ground
3	Mic Right in	3	Mic Power
4	GPIO	4	Audio Power
5	Right line in	5	RT Line Out
6	Jack Sense	6	RT Line Out
7	Front Sense	7	Reserved
8	Key	8	Key
9	Left line in	9	LFT Line Out
10	Jack Sense	10	LFT Line Out

**Note1:** It is recommended that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high definition audio capability.  
**Note2:** Please try to disable the "Front Panel Jack Detection" if you want to use an AC'97 front audio output cable. The function can be found via O.S. Audio Utility.  
**Note3:** To configure 7.1-channel audio, you have to use a chassis with HD front panel audio module and enable the multi-channel audio feature through O.S. Audio Utility.

### JSPDIFOUT1: Digital Audio-out Connector

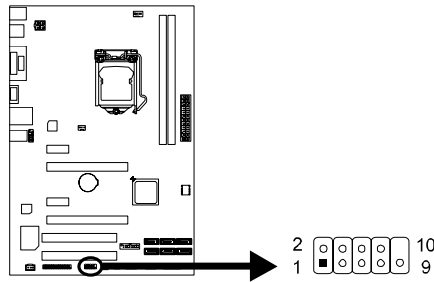
The connector is for connecting the S/PDIF output bracket.



Pin	Assignment
1	+5V
2	SPDIF_OUT
3	Ground

### J\_COM1: Serial Port Header

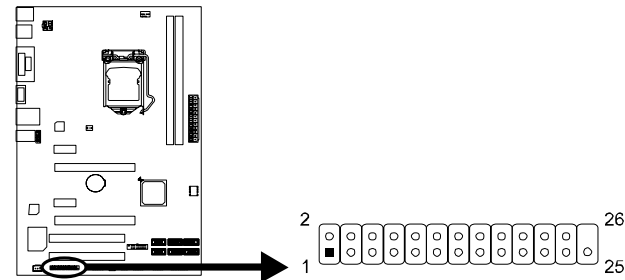
The motherboard has a serial port header for connecting RS-232 Port.



Pin	Assignment
1	Carrier detect
2	Received data
3	Transmitted data
4	Data terminal ready
5	Signal ground
6	Data set ready
7	Request to send
8	Clear to send
9	Ring indicator
10	NC

### J\_PRINT1: Printer Port Header

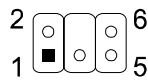
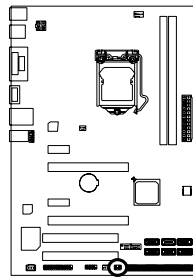
This header allows user to connect a printer to the PC.



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

### CIR1: Consumer IR Header

This header is for infrared remote control and communication.



Pin	Assignment
1	IrDA serial input
2	Ground
3	Ground
4	Key
5	IrDA serial output
6	IR Power

## CHAPTER 3: UEFI BIOS & SOFTWARE

### 3.1 UEFI BIOS Setup

- The BIOS Setup program can be used to view and change the BIOS settings for the computer. The BIOS Setup program is accessed by pressing the <DEL> key after the Power-On Self-Test (POST) memory test begins and before the operating system boot begins.
- For further information of setting up the UEFI BIOS, please refer to the UEFI BIOS Manual in the Setup DVD.

### 3.2 BIOS Update

The BIOS can be updated using either of the following utilities:

- **BIOSTAR BIOS Flasher:** Using this utility, the BIOS can be updated from a file on a hard disk, a USB drive (a flash drive or a USB hard drive), or a CD-ROM.
- **BIOSTAR BIOS Update Utility:** It enables automated updating while in the Windows environment. Using this utility, the BIOS can be updated from a file on a hard disk, a USB drive (a flash drive or a USB hard drive), or a CD-ROM, or from the file location on the Web.

#### **BIOSTAR BIOS Flasher**

BIOSTAR BIOS Flasher is a BIOS flashing utility providing you an easy and simple way to update your BIOS via USB pen drive.

**Note1:** This utility only allows storage device with FAT32/16 format and single partition.

**Note2:** Shutting down or resetting the system while updating the BIOS will lead to system boot failure.

#### **Updating BIOS with BIOSTAR BIOS Flasher**

1. Go to the website to download the latest BIOS file for the motherboard.
2. Then, copy and save the BIOS file into a USB flash (pen) drive.
3. Insert the USB pen drive that contains the BIOS file to the USB port.
4. Power on or reset the computer and then press <F12> during the POST process.

5. After entering the POST screen, the BIOS-FLASHER utility pops out. Choose [fs0] to search for the BIOS file.



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## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

6. Select the proper BIOS file, and a message asking if you are sure to flash the BIOS file. Click Yes to start updating BIOS.



7. A dialog pops out after BIOS flash is completed, asking you to restart the system. Press the [Y] key to restart system.



8. While the system boots up and the full screen logo shows up, press <DEL> key to enter BIOS setup. After entering the BIOS setup, please go to the **Save & Exit**, using the **Restore Defaults** function to load Optimized Defaults, and select **Save Changes and Reset** to restart the computer. Then, the BIOS Update is completed.

### **BIOS Update Utility (through the Internet)**

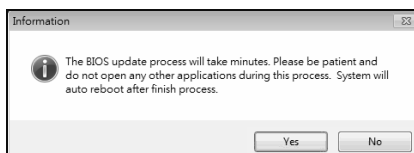
1. Installing BIOS Update Utility from the DVD Driver.
2. Please make sure the system is connected to the internet before using this function.

3. Launch BIOS Update Utility and click the **Online Update** button on the main screen.

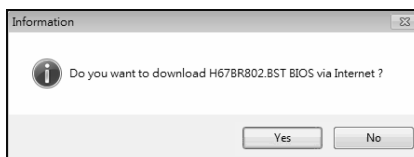


## Motherboard Manual

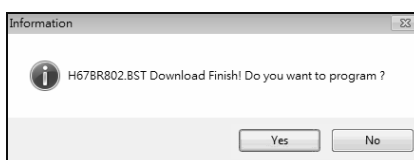
4. An open dialog will show up to request your agreement to start the BIOS update. Click **Yes** to start the online update procedure.



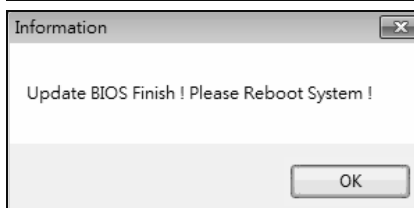
5. If there is a new BIOS version, the utility will ask you to download it. Click **Yes** to proceed.



6. After the download is completed, you will be asked to program (update) the BIOS or not. Click **Yes** to proceed.



7. After the updating process is finished, you will be asked you to reboot the system. Click **OK** to reboot.



8. While the system boots up and the full screen logo shows up, press <DEL> key to enter BIOS setup. After entering the BIOS setup, please go to the **Save & Exit**, using the **Restore Defaults** function to load Optimized Defaults, and select **Save Changes and Reset** to restart the computer. Then, the BIOS Update is completed.

### BIOS Update Utility (through a BIOS file)

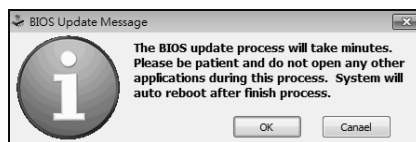
1. Installing BIOS Update Utility from the DVD Driver.
2. Download the proper BIOS from <http://www.biostar.com.tw/>

3. Launch BIOS Update Utility and click the **Update BIOS** button on the main screen.

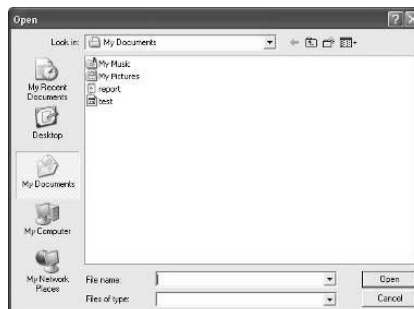




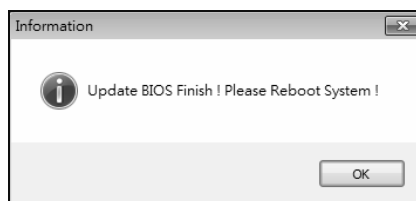
4. A warning message will show up to request your agreement to start the BIOS update. Click **OK** to start the update procedure.



5. Choose the location for your BIOS file in the system. Please select the proper BIOS file, and then click on **Open**. It will take several minutes, please be patient.



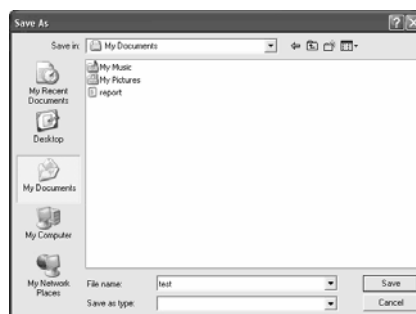
6. After the BIOS Update process is finished, click on **OK** to reboot the system.



7. While the system boots up and the full screen logo shows up, press <DEL> key to enter BIOS setup. After entering the BIOS setup, please go to the **Save & Exit**, using the **Restore Defaults** function to load Optimized Defaults, and select **Save Changes and Reset** to restart the computer. Then, the BIOS Update is completed.

### Backup BIOS

Click the Backup BIOS button on the main screen for the backup of BIOS, and select a proper location for your backup BIOS file in the system, and click **Save**.



## 3.3 Software

### Installing Software

1. Insert the Setup DVD to the optical drive. The driver installation program would appear if the Auto-run 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 is completed, you will see the software icon showing on the desktop. Double-click the icon to launch it.

**Note1:** All the information and content about following software are subject to be changed without notice. For better performance, the software is being continuously updated.

**Note2:** The information and pictures described below are for your reference only. The actual information and settings on board may be slightly different from this manual.

### BIOScreen Utility

This utility allows you to personalize your boot logo easily. You can choose BMP as your boot logo so as to customize your computer.



Please follow the step-by-step instructions below to update boot logo:

- Load Image : Choose the picture as the boot logo.
- Transform : Transform the picture for BIOS and preview the result.
- Update Bios : Write the picture to BIOS Memory to complete the update.

## eHot-Line

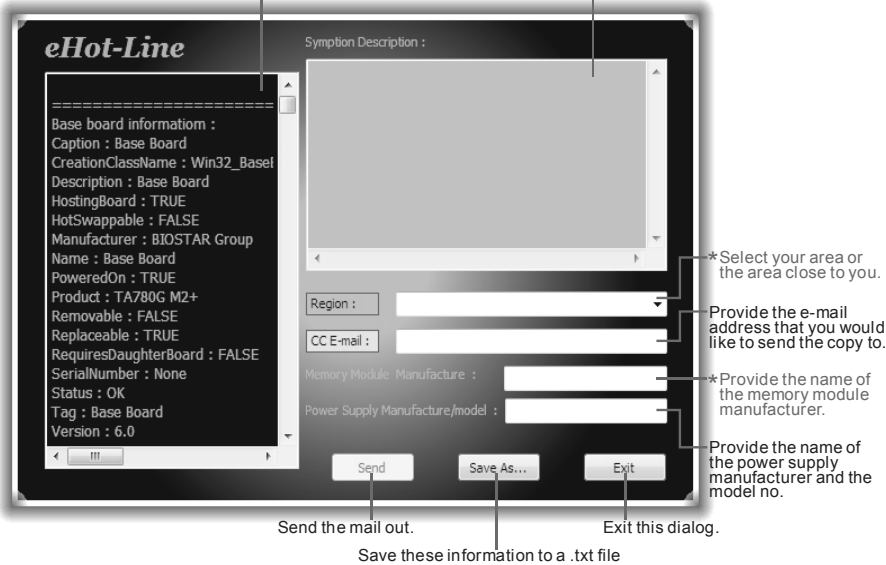
eHot-Line is a convenient utility that helps you to contact with our Tech-Support system. This utility will collect the system information which is useful for analyzing the problem you may have encountered, and then send these information to our tech-support department to help you fix the problem.

**Note:** 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.



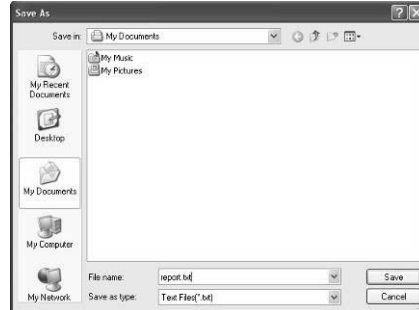
After filling up this information, click “Send” to send the mail out. A warning dialog would appear asking for your confirmation; click “Send” to confirm or “Do Not Send” to cancel.

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.

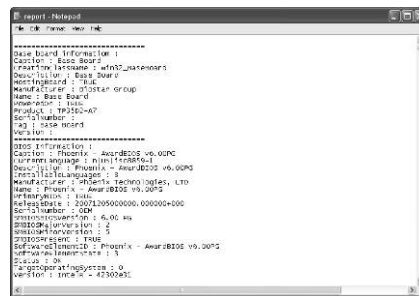


## Motherboard Manual

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.



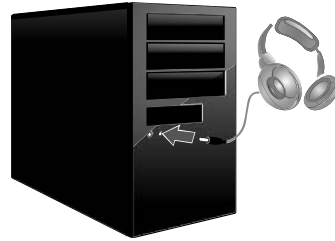
**Note1:** We will not share customer's data with any other third parties, so please feel free to provide your system information while using eHot-Line service.

**Note2:** 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 website <http://www.biostar.com.tw/app/en/about/contact.php> for getting our contact information.

## **Smart EAR**

### **Hi-Fi Audio Requirements:**

1. A chassis with front audio output jacks
2. An earphone or a headphone
3. Windows 7 or Windows 8 operation system

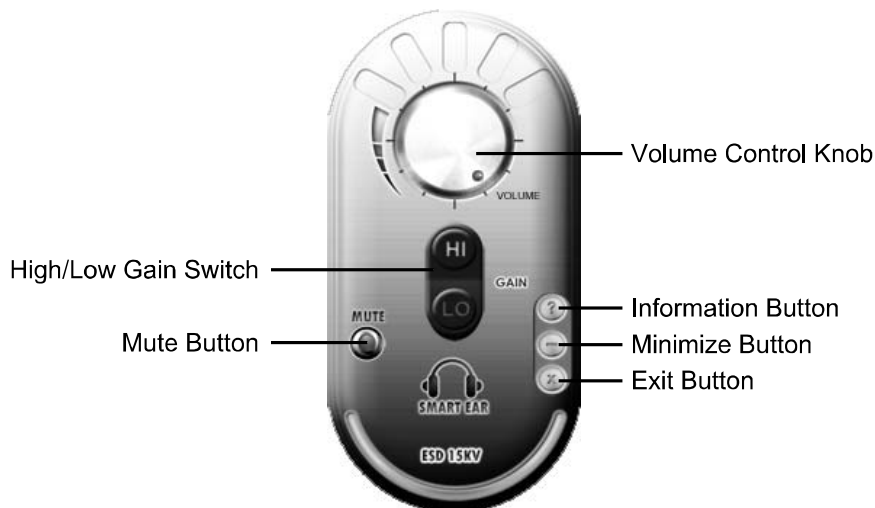


### **Installation Guide:**

1. Make sure the front audio cable of the chassis connected to the front audio header of the motherboard properly.
2. Install the Smart Ear 3D Utility from the driver DVD.
3. Connect the earphone or headphone to the front audio jack of the chassis.

**Note:** If you want to use an AC'97 front audio output cable, please disable the "Front Panel Jack Detection" setting. This setting can be found via O.S. Audio Utility.

### **Smart EAR Utility:**



- **High/Low Gain Switch:** Keep the gain switch to low for low impedance headphone and set to high for high impedance headphone.
- **Mute Button:** To disable system sound
- **Volume Control Knob:** The volume can be finely adjusted by turning the knob either clockwise or anti-clockwise to increase or decrease system volume accordingly.
- **Information Button:** Get information of the application
- **Minimize Button:** Minimize the application window to the taskbar
- **Exit Button:** Exit the application

## Smart Connect Technology

Intel® Smart Connect Technology is designed to update programs by periodically waking your computer from sleep/standby mode for a short time. This function works with applications that automatically get their data from the Internet.

### System Requirement:

- Intel Smart Connect Technology enabled in BIOS Setup
- Set the “ACPI Sleep State” to S3 in BIOS Setup.
- Windows 7 and Windows 8
- Normal internet connection

### Configuring Intel Smart Connect Technology

**Step 1:** After installing the operating system and motherboard drivers, install the Intel Smart Connect Technology application. Restart your computer when completed.

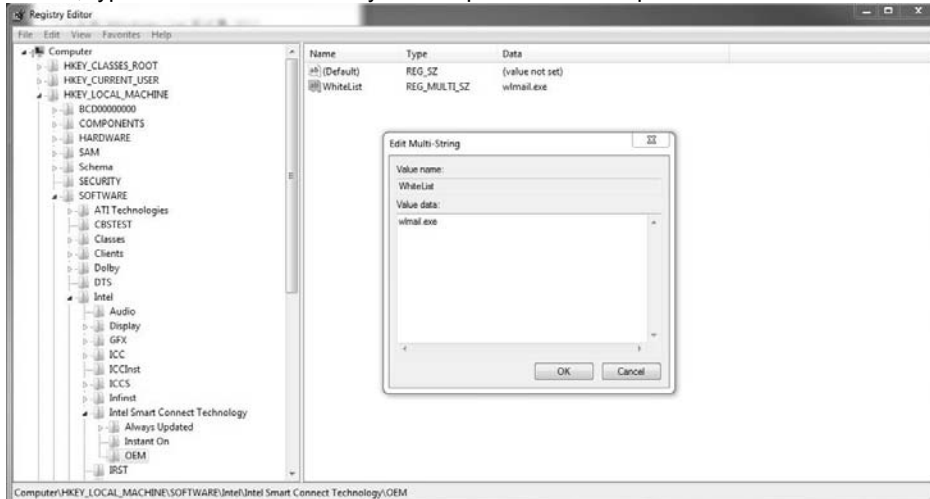
**Step 2:** Click on start menu and input "regedit" in the search bar. Press enter to open the registry editor. Look for the following directory in the registry editor:

*Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\Intel\Intel Smart Connect Technology*

Right-click on *Intel Smart Connect Technology* and select *New > Key*. Type “OEM”.

**Note:** Intel Smart Connect Technology is for S3 mode only. During the updating process, the monitor will not light up and no sound will be output from the speaker.

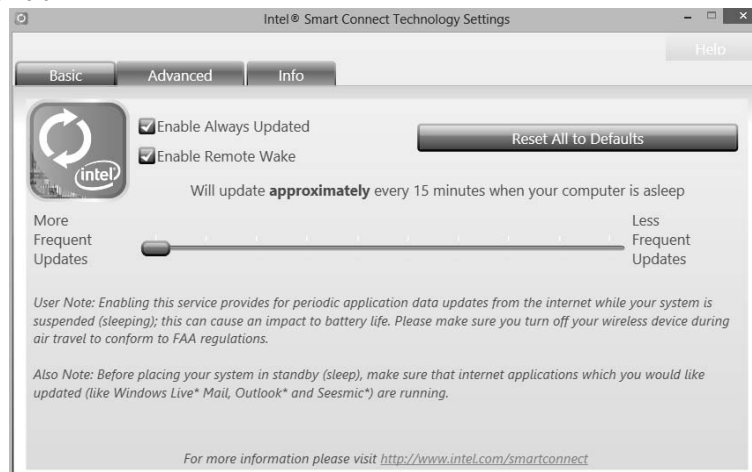
**Step 3:** As shown in the screenshot below, right-click on OEM, select *New > Multi-String Value*, and type “WhiteList”. Double-click *WhiteList* and type the application name to be added in *Edit Multi-String*. For example, to add Microsoft Live Mail, type “wmail.exe”. Restart your computer when completed.



**Step 4:** After completing the steps above, go to *Start\All Programs\Intel* and launch *Intel(R) Smart Connect Technology*.

## Basic and advanced settings

### Basic Tab



**Update Frequency slider:** This slider bar sets the amount of time the feature waits to wake your computer and update your applications. Move the slider in the user interface to change the frequency. The slider bar can be set to wake and update your computer from every 15 to 60 minutes. The longer the time between updates the less power the feature consumes.

**Reset All to Defaults button:** This button is designed to reset Intel® Smart Connect Technology back to the original factory setting for wake frequency.

### Advanced Tab



**Extended Power Savings:** You can set a time for Intel Smart Connect Technology to work in Extended Power Savings mode. This night time mode updates your computer every two hours, saving power for the times you are not using your computer.

### **Rapid Start Technology**

Intel® Rapid Start technology enables your system to get up and running faster from even the deepest sleep, saving time and power consumption. Feel secure knowing that your system will still resume to working conditions in the event of unexpected power loss while in sleep mode.

#### **System Requirement:**

- An Intel® SATA SSD (SATA Gen2 or Gen3. Preferably Gen3, and 80 GB or larger)
- Windows 7 and Windows 8

**Note1:** Please visit below webpage for more details about operating systems supporting [http://www.intel.com/p/en\\_US/support](http://www.intel.com/p/en_US/support)

**Note2:** The Rapid Start Technology is NOT supported by H81 chipset.

#### **Installing Intel® RST:**

##### **Step 1: BIOS Setting**

**1-1** Go to [Advanced Menu] > [ACPI Settings], and set [ACPI Sleep State] to S3 (Suspend to RAM)

**1-2** Go to [Advanced Menu] > [SATA Configuration], and set [SATA Mode Selection] to AHCI

**1-3** Go to [Advanced Menu] and set [Intel(R) Rapid Start Technology] to Enabled

**1-4** Save your changes, and then exit the BIOS Setup.

##### **Step 2: Operating System Installation**

##### **Step 3: Installing Intel® Rapid Start Application**

**3-1** Insert the setup Driver DVD into your optical drive. Click “Intel Rapid Start Technology” to launch the program.

**3-2** Below window will pop-out, then click “Create Disk” to start disk partition. After disk partition finished, please click “OK” then system will reboot automatically.






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## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

**3-3** After rebooting, the system will setup Intel® Rapid Start Technology automatically. We recommend you restart the system after this installation is complete,



### Step 4: Configuring Intel® Rapid Start Application

Launch the Intel® Rapid Start Technology Manager application from [Start] > [All Programs] > [Intel] or click the icon  in the notification area.



### **Intel® Small Business Advantage**

Intel Small Business Advantage (Intel SBA) provides an out-of-the-box hardware-based security and productivity suite designed for the small business user.

#### **Software Monitor**

Software Monitor helps keep critical security software running by monitoring it at the hardware level and alerting the business if there has been an attack. The Software Monitor also maintains an event log that shows status information and any errors generated, so businesses can know what happened.

#### **Data Backup and Restore**

Data Backup and Restore provides reliable after-hours backup of critical data using the local maintenance timer to power on the computer. Data can be backed up to a designated location.

#### **USB Blocker**

The optional USB Blocker lets businesses control access to their infrastructure, preventing unauthorized USB devices or file imports or exports on company computers.

#### **PC Health Center**

PC Health Center can schedule and do PC maintenance tasks after hours, without interrupting employee work time. Tasks such as updating the operating system, deleting temporary internet files, and running disk defragmentation can be done at night. PC Health Center works even if the computer is powered-down, as long as it is plugged in.

#### **Energy Saver**

With the optional Energy Saver, businesses can save energy by scheduling PCs to power-down at the end of the day and turn on before the work day begins - ready for employees as they arrive in the morning.

#### **Supported Operating Systems:**

Windows 7 and Windows 8

**Note1:** Please visit below webpage for more details about operating systems supporting [http://www.intel.com/p/en\\_US/support](http://www.intel.com/p/en_US/support)

**Note2:** The Intel® Small Business Advantage is only supported by H87 & B85 chipsets.

## Installing Intel SBA

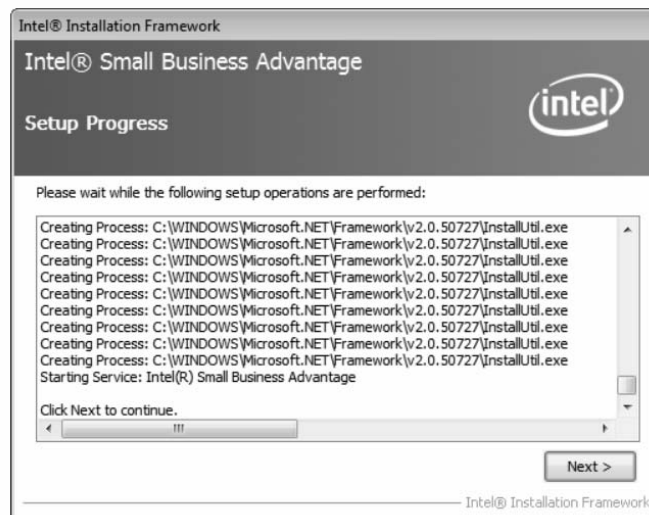
This procedure describes how to install Intel SBA.

1. Logon to the computer with a user that has administrator privileges.
2. Copy the Setup.exe file to the computer.
3. Double-click Setup.exe.

The Welcome to the Setup Program window opens.



4. Click Next. The installer starts the installation and the Setup Progress window opens showing the progress of the installation. When installation is complete, the installer starts the Intel SBA service and the Next button is enabled.



5. Click Next. The Setup Is Complete window opens.
6. Click Finish. The installer closes.

## CHAPTER 4: USEFUL HELP

### 4.1 Driver Installation

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.

#### 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 manuals.

**Note1:** 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.

**Note2:** You will need Acrobat Reader to open the manual file. Please download the latest version of Acrobat Reader software from <http://get.adobe.com/reader/>

## 4.2 AMI BIOS Beep Code

### Boot Block Beep Codes

Number of Beeps	Description
Continuing	Memory sizing error or Memory module not found

### POST BIOS Beep Codes

Number of Beeps	Description
1	Success booting.
8	Display memory error (system video adapter)

## 4.3 Troubleshooting

Probable	Solution
<ol style="list-style-type: none"> <li>There is no power in the system. Power LED does not shine; the fan of the power supply does not work</li> <li>Indicator light on keyboard does not shine.</li> </ol>	<ol style="list-style-type: none"> <li>Make sure power cable is securely plugged in.</li> <li>Replace cable.</li> <li>Contact technical support.</li> </ol>
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"> <li>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.</li> <li>Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.</li> </ol>
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"> <li>Back up data and applications files.</li> <li>Reformat the hard drive. Re-install applications and data using backup disks.</li> </ol>
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"> <li>Set master/slave jumpers correctly.</li> <li>Run SETUP program and select correct drive types. Call the drive manufacturers for compatibility with other drives.</li> </ol>

### **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.

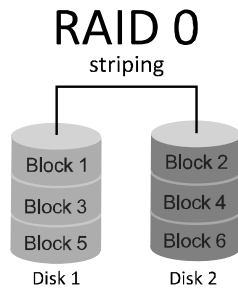
Or you can:

1. Clear the CMOS data.
2. Wait for seconds.
3. Power on the system again.

## 4.4 RAID Functions

### RAID Definitions

#### RAID 0:

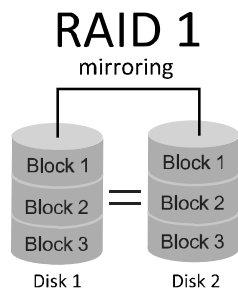


In a RAID 0 system data are split up in blocks that get written across all the drives in the array. By using multiple disks (at least 2) at the same time, this offers superior I/O performance. This performance can be enhanced further by using multiple controllers, ideally one controller per disk.

#### 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.
- **Total Capacity:** (Minimal. HDD Capacity) x (Connected HDDs Amount)

#### RAID 1:

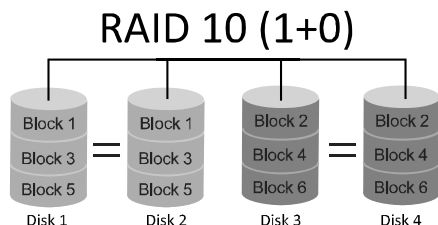


Data are stored twice by writing them to both the data disk (or set of data disks) and a mirror disk (or set of disks). If a disk fails, the controller uses either the data drive or the mirror drive for data recovery and continues operation. You need at least 2 disks for a RAID 1 array.

#### 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:**

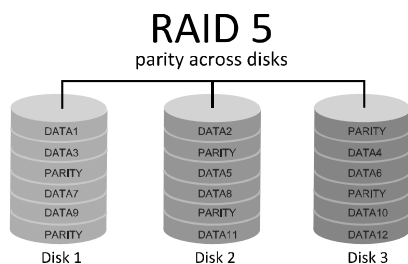


RAID 10 combines the advantages (and disadvantages) of RAID 0 and RAID 1 in one single system. It provides security by mirroring all data on a secondary set of disks (disk 3 and 4 in the drawing below) while using striping across each set of disks to speed up data transfers.

**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.

**RAID 5:**



A RAID 5 array can withstand a single disk failure without losing data or access to data. Although RAID 5 can be achieved in software, a hardware controller is recommended. Often extra cache memory is used on these controllers to improve the write performance.

**Features and Benefits**

- **Drives:** Minimum 3.
- **Uses:** RAID 5 is recommended for transaction processing and general purpose service.
- **Benefits:** An ideal combination of good performance, good fault tolerance, and high capacity and storage efficiency.
- **Drawbacks:** Individual block data transfer rate same as a single disk. Write performance can be CPU intensive.
- **Fault Tolerance:** Yes.

**Note1:** The RAID 0,1,10 and 5 functions are only supported by Z87 & H87 chipsets.  
**Note2:** For more details settings about Intel® Rapid Storage Technology (Intel® RST), please visit [http://www.intel.com/p/en\\_US/support/highlights/chpsts/ims](http://www.intel.com/p/en_US/support/highlights/chpsts/ims)



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**Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2**

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**APPENDIX: Specifications in Other Languages****Arabic**

المواصفات		
المأخذ 1150 لمعالج ايه إم دي Intel® Core i7 / i5 / i3 / Pentium / Celeron الحد الأقصى للطاقة الحرارية في تصميم المعالج (TDP – thermal design power): 95 واط. * يرجى الرجوع إلى الموقع <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> لقائمة دعم المعالج CPU.	قاعدة وحدة المعالجة المركزية	
INTEL® B85 (Hi-Fi B85S2) INTEL® Z87 (Hi-Fi Z87S2) INTEL® H87 (Hi-Fi H87S2)	مجموعة الشرائح	
DDR3 1066/ 1333/ 1600 تدعم قناة مزدوجة دي. دي. ار. DDR3 1800(OC) / 1866(OC) / 2133(OC) / 2200(OC) / 2400(OC) / 2600(OC) (Hi-Fi Z87S2) 2x دي. دي. ار. DDR3 فتحات الذاكرة المزدوجة DIMM، تتحمل كحد أقصى 16 جيجابايت ذاكرة كل فتحة مزدوجة DIMM تتحمل دون ECC 512 ميجا بايت / 8/4/2/1 جيجابايت دي. دي. ار. DDR3 لقائمة دعم الذاكرة. * <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> يرجى الرجوع إلى الموقع	الذاكرة	
INTEL® B85 وصلة 4x ساتا SATA 6 جيجا بايت / الثانية وصلة 2x ساتا SATA 3 جيجا بايت / الثانية تتحمّل رايد AHCI	INTEL® Z87 & H87 وصلة 6x ساتا SATA 6 جيجا بايت / الثانية تتحمّل رايد RAID 10 / 5 / 1 / 0 SRT, تتحمّل رايد AHCI,	التخزين
ريالتيك رت ل REALTEK RTL 8111 F 1000 / 100 / 10 ميجابايت / الثانية ، تحديد تلقائي ، النصف / القدرة القصوى المزدوجة	شبكة محلية LAN	
ALC892 7.1 قنوات عالية الدقة، Biostar Hi-Fi	الترميز الصوتي	
منافذ 4 x ناقل متسلسل عام USB 3.0 (2 في المداخل والمخارج الخلفية و 2 من خلال الموزع الداخلي) منافذ 6 x ناقل متسلسل عام USB 2.0 (2 في المداخل والمخارج الخلفية و 4 من خلال الموزع الداخلي)	ناقل متسلسل عام USB	
2 x فتحة منفذ الملحقات الإضافية PCI 2 x فتحة منفذ الملحقات الإضافية PCIe 2.0 x 1 1 x فتحة منفذ الملحقات الإضافية PCIe 2.0 x (x4) 1 x فتحة منفذ الملحقات الإضافية PCIe 3.0 x (x16)	فتحات التوسع	
1 x PS/2 الفارة 1 x PS/2 لوحة المفاتيح للكمبيوتر فتحة توصيل عدد 1 x HDMI وسيط متعدد العالوي الوضوح فتحة توصيل عدد 1 x منظومة العرض المرئي VGA فتحة توصيل عدد 1 x واجهة مرئية رقمية DVI فتحة لتوصيل عدد 1 x الشبكة المحلية LAN فتحة توصيل عدد 2 x ناقل متسلسل عام USB 2.0 فتحة توصيل عدد 2 x ناقل متسلسل عام USB 3.0 فتحة توصيل عدد 3 x جاك للصوت	المداخل والمخارج الخلفية	

## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

المواصفات		
Hi-Fi B85S2	Hi-Fi Z87S2 & Hi-Fi H87S2	
وصلة 4 x SATA 6 جيجابايت / الثانية	وصلة 6 x SATA 6 جيجابايت / الثانية	
وصلة 2 x SATA 3 جيجابايت / الثانية	موزع 2 x ناقل متسلسل عام USB 2.0 ( كل موزع يتحمل فئتين ناقل متسلسل عام USB 2.0 )	
موزع 2 x ناقل متسلسل عام USB 2.0 ( كل موزع يتحمل فئتين ناقل متسلسل عام USB 2.0 )	موزع 1 x ناقل متسلسل عام USB 3.0 ( كل موزع يتحمل فئتين ناقل متسلسل عام USB 3.0 )	
موزع 1 x ناقل متسلسل عام USB 3.0 ( كل موزع يتحمل فئتين ناقل متسلسل عام USB 3.0 )	وصلة للطاقة 1 x 4 دبابيس	
وصلة للطاقة 1 x 4 دبابيس	وصلة للطاقة 1 x 24 دبوس	
وصلة للطاقة 1 x 24 دبوس	وصلة 1 x مروحة تبريد وحدة المعالجة المركزية	
وصلة 1 x مروحة تبريد وحدة المعالجة المركزية	وصلة 2 x مراوح تبريد المنظومة	المدخل والمخارج الداخلية
وصلة 2 x مراوح تبريد المنظومة	موزع 1 x اللوحة الأمامية	
موزع 1 x اللوحة الأمامية	موزع 1 x الصوت الأمامي	
موزع 1 x الصوت الأمامي	موزع 1 x سيموس مباشر	
موزع 1 x سيموس مباشر	موزع 1 x مستهلك IR	
موزع 1 x مستهلك IR	موزع 1 x فتحة تسلسلية	
موزع 1 x فتحة تسلسلية	وصلة 1 x خارجية S/PDIF سوني فيليبس الواجهة	
وصلة 1 x خارجية S/PDIF سوني فيليبس الواجهة	الرقمية	
الرقمية	موزع 1 x فتحة للطابعة	
موزع 1 x فتحة للطابعة		
عامل شكل مدد التكنولوجيا المتقدمة ATX ، 305مم x 210 مم		عامل الشكل
	ويندوز 7 / ويندوز 8	أنظمة التشغيل المدعومة
	بيوستار BIOSTAR تحتفظ بحق إضافة أو إزالة الدعم لأي نظام تشغيل مع أو بدون أنظار.	

## French

Spécifications									
Support Unité Centrale	Socket 1150 Processeurs Intel® Core i7 / i5 / i3 / Pentium / Celeron Enveloppe thermique Unité Centrale maximum : 95Watt * Veuillez vous reporter à <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> pour la liste des supports modèles d'Unité Centrale.								
Jeu de puces	INTEL® Z87 (Hi-Fi Z87S2)                                  INTEL® B85 (Hi-Fi B85S2) INTEL® H87 (Hi-Fi H87S2)								
Mémoire	Supporte mémoire DDR3 double canal 1066/ 1333/ 1600 Supporte mémoire DDR3 double canal 1800(OC) / 1866(OC) / 2133(OC) / 2200(OC) / 2400(OC) / 2600(OC) (Hi-Fi Z87S2 ) Banc de mémoire 2 x DDR3 DIMM, Supporte max. jusqu'à une mémoire de 16 GB Chaque module DIMM supporte module DDR3 non-ECC 512MB/ 1/ 2/ 4/ 8 GB * Veuillez vous reporter à <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> pour la liste des soutien de la mémoire.								
Stockage	<table border="0"> <tr> <td>INTEL® Z87 &amp; H87:</td> <td>INTEL® B85:</td> </tr> <tr> <td>Connecteur 6 x SATA 6Gb/s</td> <td>Connecteur 4 x SATA 6Gb/s</td> </tr> <tr> <td>Supporte système RAID 0,1,10,5, SRT &amp; AHCI</td> <td>Connecteur 2 x SATA 3Gb/s</td> </tr> <tr> <td></td> <td>Supporte système AHCI</td> </tr> </table>	INTEL® Z87 & H87:	INTEL® B85:	Connecteur 6 x SATA 6Gb/s	Connecteur 4 x SATA 6Gb/s	Supporte système RAID 0,1,10,5, SRT & AHCI	Connecteur 2 x SATA 3Gb/s		Supporte système AHCI
INTEL® Z87 & H87:	INTEL® B85:								
Connecteur 6 x SATA 6Gb/s	Connecteur 4 x SATA 6Gb/s								
Supporte système RAID 0,1,10,5, SRT & AHCI	Connecteur 2 x SATA 3Gb/s								
	Supporte système AHCI								
Réseau local	Realtek RTL 8111F 10/ 100/ 1000 Mb/s auto négociation, capacité bidirectionnelle à l'alternat / bidirectionnelle simultanée								
Codec audio	ALC892 Canaux 7.1, écoute audio de haute définition, Biostar Hi-Fi								
USB	Port 4x USB 3.0 (2 sur les I/O arrières et 2 en interne) Port 6x USB 2.0 (2 sur les I/O arrières et 4 en interne)								
Connecteur d'extension	2x PCI Fente 2x PCIe 2.0 x1 Fente 1x PCIe 2.0 x16 Fente (x4) 1x PCIe 3.0 x16 Fente (x16)								
I/O arrières	1x PS/2 Souris 1x PS/2 Clavier 1x Port HDMI 1x Port VGA 1x Port DVI 1x port LAN 2x Port USB 2.0 2x Port USB 3.0 3x entrées audio								

## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

<b>Spécifications</b>		
I/O en interne	Hi-Fi Z87S2 & Hi-Fi H87S2	Hi-Fi B85S2
	6x Connecteur SATA 6.0Gb/s	4x Connecteur SATA 6.0Gb/s
	2x embases USB 2.0 (chaque embase supporte 2 Ports USB 2.0)	2x Connecteur SATA 3.0Gb/s
	1x embase USB 3.0 (chaque embase supporte 2 Ports USB 3.0)	2x embases USB 2.0 (chaque embase supporte 2 Ports USB 2.0)
	1x 4-Broche de carte	1x embase USB 3.0 (chaque embase supporte 2 Ports USB 3.0)
	1x 24-Broche de carte	1x 4-Broche de carte
	1x Connecteur ventilateur unité centrale	1x 24-Broche de carte
	2x Connecteur ventilateur système	1x Connecteur ventilateur unité centrale
	1x Fiche panneau avant	2x Connecteur ventilateur système
	1x Fiche audio avant	1x Fiche panneau avant
	1x Fiche mémoire CMOS vide	1x Fiche audio avant
	1x Fiche Registre d'état Consommateur	1x Fiche mémoire CMOS vide
	1x Embase port série	1x Fiche Registre d'état Consommateur
	1x Connecteur sortie S/PDIF	1x Embase port série
	1x Embase port imprimante	1x Connecteur sortie S/PDIF
		1x Embase port imprimante
Facteur d'encombrement	Facteur d'encombrement ATX, 305 mm x 210 mm	
Support SE	Windows 7/ 8 Biostar se réserve le droit d'ajouter ou d'enlever le support pour toute SE avec ou sans préavis.	



## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Spezifikationen		
	Hi-Fi Z87S2 & Hi-Fi H87S2	Hi-Fi B85S2
Interne I/Os	6x SATA 6.0Gb/s-Verbindung	4x SATA 6.0Gb/s-Verbindung
	2x USB 2.0-Header (jeder Header unterstützt 2 USB 2.0-Ports)	2x SATA 3.0Gb/s-Verbindung
	1x USB 3.0-Header (jeder Header unterstützt 2 USB 3.0-Ports)	2x USB 2.0-Header (jeder Header unterstützt 2 USB 2.0-Ports)
	1x 4-Pin-Stromverbindung	1x USB 3.0-Header (jeder Header unterstützt 2 USB 3.0-Ports)
	1x 24-Pin-Stromverbindung	1x 4-Pin-Stromverbindung
	1x CPU-Ventilatorverbindung	1x 24-Pin-Stromverbindung
	2x System-Ventilatorverbindung	1x CPU-Ventilatorverbindung
	1x Header für Frontpanel	2x System-Ventilatorverbindung
	1x Header für Frontaudio	1x Header für Frontpanel
	1x Header für klares CMOS	1x Header für Frontaudio
	1x Consumer IR-Header	1x Header für klares CMOS
	1x Serieller Port-Header	1x Consumer IR-Header
	1x S/PDI-Auswurfsverbindung	1x Serieller Port-Header
	1x Header für Druckeranschluss	1x S/PDI-Auswurfsverbindung
		1x Header für Druckeranschluss
	Formfaktor	ATX Formfaktor, 305 mm x 210 mm
OS-Unterstützung	Windows 7/ 8 Biostar reserves the right to add or remove support for any OS with or without notice.	

## Italian

Specificazioni	
Supporto processore	Slot 1150 per processore Intel® Core i7 / i5 / i3 / Pentium / Celeron Alimentazione di Proiezione Termico (TDP – Thermal Design Power): 95Watt * Si prega di consultare <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> per la lista di supporto del processore.
Tipo scheda	INTEL® Z87 (Hi-Fi Z87S2)                      INTEL® B85 (Hi-Fi B85S2) INTEL® H87 (Hi-Fi H87S2)
Memoria	Supporta DDR3 1066/ 1333/ 1600 Doppio Canale Supporta DDR3 1800(OC) / 1866(OC) / 2133(OC) / 2200(OC) / 2400(OC) / 2600(OC) Doppio Canale (Hi-Fi Z87S2) 2 x DDR3 DIMM Slot di Memoria Supporta fino a 16 GB Memoria Ogni DIMM supporta non-ECC 512MB/ 1/ 2/ 4/ 8 GB DDR3 moduli * Si prega di consultare <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> per la lista di supporto del memoria.
Memorizzazione	INTEL® Z87 & H87:                      INTEL® B85: Connettore 6x SATA 6Gb/s                      Connettore 4x SATA 6Gb/s Supporta RAID 0,1,10,5, SRT & AHCI                      Connettore 2x SATA 3Gb/s Supporta AHCI
Catena	Realtek RTL 8111F 10/ 100/ 1000 Mb auto negoziazione, capacita di duplex Meta / Completo
Codec Audio	ALC892 Canali Audio di Alta Definizione 7.1, Biostar Hi-Fi
USB	Slot 4x USB 3.0 (2 nei ingressi/ uscite posteriore e 2 da distributori interni) Slot 6x USB 2.0 (2 nei ingressi/ uscite posteriore e 4 da distributori interni)
Slot di espansione	Slot 2x PCI Slot 2x PCIe 2.0 x1 Slot 1x PCIe 2.0 x16 (x4) Slot 1x PCIe 3.0 x16 (x16)
Ingressi/ Uscite Posteriore	Mouse 1x PS/2 Tastiera 1x PS/2 Slot 1x HDMI Slot 1x VGA Slot 1x DVI Slot 1x LAN Slot 2x USB 2.0 Slot 2x USB 3.0 Jack audio 3x



## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Specificazioni			
Ingressi/ Uscite Interni	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;">                     Hi-Fi Z87S2 &amp; Hi-Fi H87S2                      Connettore 6x SATA 6.0Gb/s                      Distributore 2x USB 2.0                      (ogni distributore supporta 2 slot USB 2.0)                      Distributore 1x USB 3.0                      (ogni distributore supporta 2 slot USB 3.0)                      Connettore con 4 pin x1                      Connettore con 24 pin x1                      Connettore Ventilatore processore x1                      Connettore Ventilatore Sistema x2                      Distributore Pannello Frontale x1                      Distributore Audio Frontale x1                      Distributore CMOS Diretto x1                      Distributore Consumabile IR x1                      Distributore Slot Serie x1                      Connettore esterno S/PDIF x1                      Distributore Slot Stampante x1                 </td> <td style="width: 50%; vertical-align: top;">                     Hi-Fi B85S2                      Connettore 4x SATA 6.0Gb/s                      Connettore 2x SATA 3.0Gb/s                      Distributore 2x USB 2.0                      (ogni distributore supporta 2 slot USB 2.0)                      Distributore 1x USB 3.0                      (ogni distributore supporta 2 slot USB 3.0)                      Connettore con 4 pin x1                      Connettore con 24 pin x1                      Connettore Ventilatore processore x1                      Connettore Ventilatore Sistema x2                      Distributore Pannello Frontale x1                      Distributore Audio Frontale x1                      Distributore CMOS Diretto x1                      Distributore Consumabile IR x1                      Distributore Slot Serie x1                      Connettore esterno S/PDIF x1                      Distributore Slot Stampante x1                 </td> </tr> </table>	Hi-Fi Z87S2 & Hi-Fi H87S2 Connettore 6x SATA 6.0Gb/s Distributore 2x USB 2.0 (ogni distributore supporta 2 slot USB 2.0) Distributore 1x USB 3.0 (ogni distributore supporta 2 slot USB 3.0) Connettore con 4 pin x1 Connettore con 24 pin x1 Connettore Ventilatore processore x1 Connettore Ventilatore Sistema x2 Distributore Pannello Frontale x1 Distributore Audio Frontale x1 Distributore CMOS Diretto x1 Distributore Consumabile IR x1 Distributore Slot Serie x1 Connettore esterno S/PDIF x1 Distributore Slot Stampante x1	Hi-Fi B85S2 Connettore 4x SATA 6.0Gb/s Connettore 2x SATA 3.0Gb/s Distributore 2x USB 2.0 (ogni distributore supporta 2 slot USB 2.0) Distributore 1x USB 3.0 (ogni distributore supporta 2 slot USB 3.0) Connettore con 4 pin x1 Connettore con 24 pin x1 Connettore Ventilatore processore x1 Connettore Ventilatore Sistema x2 Distributore Pannello Frontale x1 Distributore Audio Frontale x1 Distributore CMOS Diretto x1 Distributore Consumabile IR x1 Distributore Slot Serie x1 Connettore esterno S/PDIF x1 Distributore Slot Stampante x1
	Hi-Fi Z87S2 & Hi-Fi H87S2 Connettore 6x SATA 6.0Gb/s Distributore 2x USB 2.0 (ogni distributore supporta 2 slot USB 2.0) Distributore 1x USB 3.0 (ogni distributore supporta 2 slot USB 3.0) Connettore con 4 pin x1 Connettore con 24 pin x1 Connettore Ventilatore processore x1 Connettore Ventilatore Sistema x2 Distributore Pannello Frontale x1 Distributore Audio Frontale x1 Distributore CMOS Diretto x1 Distributore Consumabile IR x1 Distributore Slot Serie x1 Connettore esterno S/PDIF x1 Distributore Slot Stampante x1	Hi-Fi B85S2 Connettore 4x SATA 6.0Gb/s Connettore 2x SATA 3.0Gb/s Distributore 2x USB 2.0 (ogni distributore supporta 2 slot USB 2.0) Distributore 1x USB 3.0 (ogni distributore supporta 2 slot USB 3.0) Connettore con 4 pin x1 Connettore con 24 pin x1 Connettore Ventilatore processore x1 Connettore Ventilatore Sistema x2 Distributore Pannello Frontale x1 Distributore Audio Frontale x1 Distributore CMOS Diretto x1 Distributore Consumabile IR x1 Distributore Slot Serie x1 Connettore esterno S/PDIF x1 Distributore Slot Stampante x1	
	Fattore di Forma	Fattore di Forma ATX, 305 mm x 210 mm	
	Supporto SO	Windows 7/ 8 Biostar si riserva il diritto di aggiungere o ritirare il supporto per qualsiasi SO con o senza preavviso.	



## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

仕様			
内蔵 I/O	Hi-Fi Z87S2 & Hi-Fi H87S2	Hi-Fi B85S2	
	6x SATA 6.0Gb/s コネクタ	4x SATA 6.0Gb/s コネクタ	
	2x USB 2.0 ヘッダー (各ヘッダーは、2つの USB 2.0 ポートをサポートしています)	2x SATA 3.0Gb/s コネクタ 2x USB 2.0 ヘッダー (各ヘッダーは、2つの USB 2.0 ポートをサポートしています)	
	1x USB 3.0 ヘッダー (各ヘッダーは、2つの USB 3.0 ポートをサポートしています)	1x USB 3.0 ヘッダー (各ヘッダーは、2つの USB 3.0 ポートをサポートしています)	
	1x 4-Pin パワー コネクタ	1x 4-Pin パワー コネクタ	
	1x 24-Pin パワー コネクタ	1x 24-Pin パワー コネクタ	
	1x CPU ファン コネクタ	1x CPU ファン コネクタ	
	2x システム ファン コネクタ	2x システム ファン コネクタ	
	1x フロント パネル ヘッダー	1x フロント パネル ヘッダー	
	1x フロント オーディオ ヘッダー	1x フロント オーディオ ヘッダー	
	1x クリア CMOS ヘッダー	1x クリア CMOS ヘッダー	
	1x コンシューマー IR ヘッダー	1x コンシューマー IR ヘッダー	
	1x シリアル ポート ヘッダー	1x シリアル ポート ヘッダー	
	1x S/PDIF アウト コネクタ	1x S/PDIF アウト コネクタ	
	1x プリンター ポート ヘッダー	1x プリンター ポート ヘッダー	
	フォーム ファクタ	ATX フォーム ファクタ、305 mm x 210 mm	
	サポート OS	Windows 7/8 Biostar には、通知なしでサポート OS を変更する権限があります。	

**Polish**

Specyfikacje techniczne	
Obsługa procesora	Gniazdo procesora (Socket) 1150 dla procesorów Intel® Core i7 / i5 / i3 / Pentium / Celeron Moc Wydzielanego Ciepła (TDP - Thermal Design Power): 95Watt * Proszę sprawdzić listę obsługiwanych procesorów na stronie internetowej <a href="http://www.biostar.com.tw">www.biostar.com.tw</a>
Rodzaj płyty	INTEL® Z87 (Hi-Fi Z87S2)    INTEL® B85 (Hi-Fi B85S2) INTEL® H87 (Hi-Fi H87S2)
Pamięć	Obsługa pamięci DDR3 1066/ 1333/ 1600 Dwukanałowa Obsługa pamięci DDR3 1800(OC) / 1866(OC) / 2133(OC) / 2200(OC) / 2400(OC) / 2600(OC) Dwukanałowa (Hi-Fi Z87S2) 2 x DDR3 DIMM Pamięć Gniazda procesora (Slot), Maksymalna wielkość pamięci 16 GB Każdy DIMM obsługuje jeden moduł non-ECC 512MB/ 1/ 2/ 4/ 8 GB DDR3 * Proszę sprawdzić listę obsługiwanych pamięć na stronie internetowej <a href="http://www.biostar.com.tw">www.biostar.com.tw</a>
Przechowywanie	INTEL® Z87 & H87:    INTEL® B85: Złącze 6x SATA 6Gb/s    Złącze 4x SATA 6Gb/s Obsługa RAID 0,1,10,5, SRT & AHCI    Złącze 2x SATA 3Gb/s Obsługa AHCI
LAN	Układ RTL 8111F 10/ 100/ 1000 Mb auto negocjacja, pojemność duplex Połowe / Pełny
Codec Audio	ALC892 Kanały Audio wysokiej Definicji 7.1, Biostar Hi-Fi
USB	4 x złącza USB 3.0 (2 przez tylne porty wejścia/ wyjścia oraz 2 przez wewnętrzne porty) 6 x złącza USB 2.0 (2 przez tylne porty wejścia/ wyjścia oraz 4 przez wewnętrzne porty)
Złącza rozszerzeń	złącze 2x PCI (Slot) złącze 2x PCIe 2.0 x1 (Slot) złącza 1x PCIe 2.0 x16 (Slot) (x4) złącza 1x PCIe 3.0 x16 (Slot) (x16)
Tylne porty wejścia/ wyjścia	Myszka 1x PS/2 Klawiatura 1x PS/2 Port 1x HDMI (gniazdo) Port 1x VGA Port 1x DVI Port 1x LAN Porty 2x USB 2.0 Porty 2x USB 3.0 Porty audio 3x

## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Specyfikacje techniczne		
Wewnętrzne porty wejścia/ wyjścia	Hi-Fi Z87S2 & Hi-Fi H87S2 Złącza 6x SATA 6.0Gb/s Złącza 2x USB 2.0 (każde złącze obsługuje dodatkowe 2 porty USB 2.0) Złącze 1x USB 3.0 (każde złącze obsługuje dodatkowe 2 porty USB 3.0) Złącza 4 pionowe x 1 Złącza 24 pionowe x 1 Złącze wentylatora CPU x 1 Złącze wentylatora obudowy x 2 Złącze przedniego panelu x1 Złącze audio przedniego panelu x1 Złącze bezpośrednie CMOS x1 Złącze konsument IR x1 Port szeregowy x1 Port zewnętrzny S/PDIF x1 Złącze port drukarki x1	Hi-Fi B85S2 Złącza 4x SATA 6.0Gb/s Złącza 2x SATA 3.0Gb/s Złącza 2x USB 2.0 (każde złącze obsługuje dodatkowe 2 porty USB 2.0) Złącze 1x USB 3.0 (każde złącze obsługuje dodatkowe 2 porty USB 3.0) Złącza 4 pionowe x 1 Złącza 24 pionowe x 1 Złącze wentylatora CPU x 1 Złącze wentylatora obudowy x 2 Złącze przedniego panelu x1 Złącze audio przedniego panelu x1 Złącze bezpośrednie CMOS x1 Złącze konsument IR x1 Port szeregowy x1 Port zewnętrzny S/PDIF x1 Złącze port drukarki x1
Obudowa	Obudowa ATX, 305 mm x 210 mm	
Obsługa OS	Windows 7/ 8 Biostar zastrzega sobie prawo do dodania lub wycofania obsługi dla OS, z wypowiedzeniem lub bez wypowiedzenia.	

## Portuguese

Especificações	
Suporte Processador	Porta 1150 para processador Intel® Core i7 / i5 / i3 / Pentium / Celeron Alimentação de Design Térmico (TDP – Thermal Design Power): 95Watt * Por favor consulte <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> para obter uma lista de suporte do processador.
Tipo Placa Mãe	INTEL® Z87 (Hi-Fi Z87S2) INTEL® B85 (Hi-Fi B85S2) INTEL® H87 (Hi-Fi H87S2)
Memória	Suporta DDR3 1066/ 1333/ 1600 Canal Duplo Suporta DDR3 1800(OC) / 1866(OC) / 2133(OC) / 2200(OC) / 2400(OC) / 2600(OC) Canal Duplo (Hi-Fi Z87S2) 2 x DDR3 DIMM Slot de memória Suporta até 16 GB Memória Cada DIMM suporta non-ECC 512MB/ 1/ 2/ 4/ 8 GB DDR3 módulo * Por favor consulte <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> para obter uma lista de suporte do memória.
Armazenamento	INTEL® Z87 & H87: INTEL® B85: Conector 6x SATA 6Gb/s Conector 4x SATA 6Gb/s Suporta RAID 0,1,10, 5, SRT & AHCI Conector 2x SATA 3Gb/s Suporta AHCI
LAN	Realtek RTL 8111F 10/ 100/ 1000 Mb auto negociação, capacidade duplex Metade / Cheio
Codec de Audio	ALC892 Canais de Áudio de Alta Definição 7.1, Biostar Hi-Fi
USB	Porta 4x USB 3.0 (2 nas entradas/saídas traseiras e 2 pelos Dispositivos internos) Porta 6x USB 2.0 (2 nas entradas/saídas traseiras e 4 pelos Dispositivos internos)
Slots de expansão	Porta 2x PCI Porta 2x PCIe 2.0 x1 Porta 1x PCIe 2.0 x16 (x4) Porta 1x PCIe 3.0 x16 (x16)
Entradas/Saídas no painel traseiro	Mouse 1x PS/2 Teclado 1x PS/2 Porta 1x HDMI Porta 1x VGA Porta 1x DVI Porta 1x LAN Porta 2x USB 2.0 Porta 2x USB 3.0 Soquete audio 3x

## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Especificações			
Conectores na placa	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;">                     Hi-Fi Z87S2 &amp; Hi-Fi H87S2                      Conector 6x SATA 6.0Gb/s                      Dispositivo 2x USB 2.0 (cada Dispositivo suporta 2 portas USB 2.0)                      Dispositivo 1x USB 3.0 (cada Dispositivo suporta 2 portas USB 3.0)                      Conector de 4 pinos x1                      Conector de 24 pinos x1                      Conector de Ventoinha processador x1                      Conector de Ventoinha Sistema x2                      Dispositivo Painel Frontal x1                      Dispositivo de Audio Frontal x1                      Dispositivo CMOS Direct x1                      Dispositivo Consumível IR x1                      Dispositivo Porta Série x1                      Conector Externo S/PDIF x1                      Dispositivo Porta Impressora x1                 </td> <td style="width: 50%; vertical-align: top;">                     Hi-Fi B85S2                      Conector 4x SATA 6.0Gb/s                      Conector 2x SATA 3.0Gb/s                      Dispositivo 2x USB 2.0 (cada Dispositivo suporta 2 portas USB 2.0)                      Dispositivo 1x USB 3.0 (cada Dispositivo suporta 2 portas USB 3.0)                      Conector de 4 pinos x1                      Conector de 24 pinos x1                      Conector de Ventoinha processador x1                      Conector de Ventoinha Sistema x2                      Dispositivo Painel Frontal x1                      Dispositivo de Audio Frontal x1                      Dispositivo CMOS Direct x1                      Dispositivo Consumível IR x1                      Dispositivo Porta Série x1                      Conector Externo S/PDIF x1                      Dispositivo Porta Impressora x1                 </td> </tr> </table>	Hi-Fi Z87S2 & Hi-Fi H87S2 Conector 6x SATA 6.0Gb/s Dispositivo 2x USB 2.0 (cada Dispositivo suporta 2 portas USB 2.0) Dispositivo 1x USB 3.0 (cada Dispositivo suporta 2 portas USB 3.0) Conector de 4 pinos x1 Conector de 24 pinos x1 Conector de Ventoinha processador x1 Conector de Ventoinha Sistema x2 Dispositivo Painel Frontal x1 Dispositivo de Audio Frontal x1 Dispositivo CMOS Direct x1 Dispositivo Consumível IR x1 Dispositivo Porta Série x1 Conector Externo S/PDIF x1 Dispositivo Porta Impressora x1	Hi-Fi B85S2 Conector 4x SATA 6.0Gb/s Conector 2x SATA 3.0Gb/s Dispositivo 2x USB 2.0 (cada Dispositivo suporta 2 portas USB 2.0) Dispositivo 1x USB 3.0 (cada Dispositivo suporta 2 portas USB 3.0) Conector de 4 pinos x1 Conector de 24 pinos x1 Conector de Ventoinha processador x1 Conector de Ventoinha Sistema x2 Dispositivo Painel Frontal x1 Dispositivo de Audio Frontal x1 Dispositivo CMOS Direct x1 Dispositivo Consumível IR x1 Dispositivo Porta Série x1 Conector Externo S/PDIF x1 Dispositivo Porta Impressora x1
	Hi-Fi Z87S2 & Hi-Fi H87S2 Conector 6x SATA 6.0Gb/s Dispositivo 2x USB 2.0 (cada Dispositivo suporta 2 portas USB 2.0) Dispositivo 1x USB 3.0 (cada Dispositivo suporta 2 portas USB 3.0) Conector de 4 pinos x1 Conector de 24 pinos x1 Conector de Ventoinha processador x1 Conector de Ventoinha Sistema x2 Dispositivo Painel Frontal x1 Dispositivo de Audio Frontal x1 Dispositivo CMOS Direct x1 Dispositivo Consumível IR x1 Dispositivo Porta Série x1 Conector Externo S/PDIF x1 Dispositivo Porta Impressora x1	Hi-Fi B85S2 Conector 4x SATA 6.0Gb/s Conector 2x SATA 3.0Gb/s Dispositivo 2x USB 2.0 (cada Dispositivo suporta 2 portas USB 2.0) Dispositivo 1x USB 3.0 (cada Dispositivo suporta 2 portas USB 3.0) Conector de 4 pinos x1 Conector de 24 pinos x1 Conector de Ventoinha processador x1 Conector de Ventoinha Sistema x2 Dispositivo Painel Frontal x1 Dispositivo de Audio Frontal x1 Dispositivo CMOS Direct x1 Dispositivo Consumível IR x1 Dispositivo Porta Série x1 Conector Externo S/PDIF x1 Dispositivo Porta Impressora x1	
	Fator de Fôrma	Fator de Fôrma ATX, 305 mm x 210 mm	
	Suporte OS	Windows 7/ 8 Biostar reserva seu direito de adicionar ou retirar o suporte para qualquer OS com ou sem notificação.	





## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Спецификации		
Внутр. Плата ввода-вывода	Hi-Fi Z87S2 & Hi-Fi H87S2	Hi-Fi B85S2
	<p>Соединитель 6x SATA 6 Гб/с</p> <p>2 контакта USB 2.0 (каждый контакт поддерживает 2 порта USB 2.0)</p> <p>1 контакт USB 3.0 (каждый контакт поддерживает 2 порта USB 3.0)</p> <p>1 4-выводный разъем питания</p> <p>1 24-выводный разъем питания</p> <p>1 разъем вентилятора ЦП</p> <p>2 разъема вентилятора системы</p> <p>1 контакт передней панели</p> <p>1 контакт передней аудиопанели</p> <p>1 контакт микросхемы Clear CMOS</p> <p>1 инфракрасный пользовательский контакт</p> <p>1 контакт последовательного порта</p> <p>1 соединитель S/PDIF-Out</p> <p>1 контакт порта принтера</p>	<p>Соединитель 4x SATA 6 Гб/с</p> <p>Соединитель 2x SATA 3 Гб/с</p> <p>2 контакта USB 2.0 (каждый контакт поддерживает 2 порта USB 2.0)</p> <p>1 контакт USB 3.0 (каждый контакт поддерживает 2 порта USB 3.0)</p> <p>1 4-выводный разъем питания</p> <p>1 24-выводный разъем питания</p> <p>1 разъем вентилятора ЦП</p> <p>2 разъема вентилятора системы</p> <p>1 контакт передней панели</p> <p>1 контакт передней аудиопанели</p> <p>1 контакт микросхемы Clear CMOS</p> <p>1 инфракрасный пользовательский контакт</p> <p>1 контакт последовательного порта</p> <p>1 соединитель S/PDIF-Out</p> <p>1 контакт порта принтера</p>
Конструктив	Форм-фактор ATX, 305 мм x 210 мм	
Поддержка ОС	<p>Windows 7/ 8</p> <p>Biostar оставляет за собой право добавлять или удалять поддержку любой ОС, с уведомлением или без.</p>	



## Hi-Fi Z87S2/Hi-Fi H87S2/Hi-Fi B85S2

Especificaciones			
Conectores en placa	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;">                     Hi-Fi Z87S2 &amp; Hi-Fi H87S2                      Conector 6x SATA 6Gb's                      Distribuidor 2x USB 2.0 (cada distribuidor soporta 2 ranuras USB 2.0)                      Distribuidor 1x USB 3.0 (cada distribuidor soporta 2 ranuras USB 3.0)                      Conector con 4 patillas x1                      Conector con 24 patillas x1                      Conector Ventilador procesador x1                      Conector Ventilador Sistema x2                      Distribuidor Panel Frontal x1                      Distribuidor Audio Frontal x1                      Distribuidor CMOS Directo x1                      Distribuidor Consumible IR x1                      Distribuidor Ranura Serie x1                      Conector Externo S/PDIF x1                      Distribuidor Ranura Impresora x1                 </td> <td style="width: 50%; vertical-align: top;">                     Hi-Fi B85S2                      Conector 4x SATA 6Gb's                      Conector 2x SATA 3Gb's                      Distribuidor 2x USB 2.0 (cada distribuidor soporta 2 ranuras USB 2.0)                      Distribuidor 1x USB 3.0 (cada distribuidor soporta 2 ranuras USB 3.0)                      Conector con 4 patillas x1                      Conector con 24 patillas x1                      Conector Ventilador procesador x1                      Conector Ventilador Sistema x2                      Distribuidor Panel Frontal x1                      Distribuidor Audio Frontal x1                      Distribuidor CMOS Directo x1                      Distribuidor Consumible IR x1                      Distribuidor Ranura Serie x1                      Conector Externo S/PDIF x1                      Distribuidor Ranura Impresora x1                 </td> </tr> </table>	Hi-Fi Z87S2 & Hi-Fi H87S2 Conector 6x SATA 6Gb's Distribuidor 2x USB 2.0 (cada distribuidor soporta 2 ranuras USB 2.0) Distribuidor 1x USB 3.0 (cada distribuidor soporta 2 ranuras USB 3.0) Conector con 4 patillas x1 Conector con 24 patillas x1 Conector Ventilador procesador x1 Conector Ventilador Sistema x2 Distribuidor Panel Frontal x1 Distribuidor Audio Frontal x1 Distribuidor CMOS Directo x1 Distribuidor Consumible IR x1 Distribuidor Ranura Serie x1 Conector Externo S/PDIF x1 Distribuidor Ranura Impresora x1	Hi-Fi B85S2 Conector 4x SATA 6Gb's Conector 2x SATA 3Gb's Distribuidor 2x USB 2.0 (cada distribuidor soporta 2 ranuras USB 2.0) Distribuidor 1x USB 3.0 (cada distribuidor soporta 2 ranuras USB 3.0) Conector con 4 patillas x1 Conector con 24 patillas x1 Conector Ventilador procesador x1 Conector Ventilador Sistema x2 Distribuidor Panel Frontal x1 Distribuidor Audio Frontal x1 Distribuidor CMOS Directo x1 Distribuidor Consumible IR x1 Distribuidor Ranura Serie x1 Conector Externo S/PDIF x1 Distribuidor Ranura Impresora x1
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Factor de Forma	Factor de Forma ATX, 305 mm x 210 mm		
Soporte OS	Windows 7/ 8 Biostar reserva su derecho de añadir o retirar el soporte para cada OS con o sin notificación.		

2013/06/14