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Table of Contents

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

- IDE Cable X 1 (optional)
- Serial ATA Cable X 3
- Serial ATA Power Cable X 1
- Rear I/O Panel for ATX Case X 1
- User's Manual X 1
- Fully Setup Driver CD X 1
- FDD Cable X 1 (optional)
- USB 2.0 Cable X1 (optional)
- S/PDIF out Cable X 1 (optional)
- DVI to HDMI Dongle X 1 (optional)

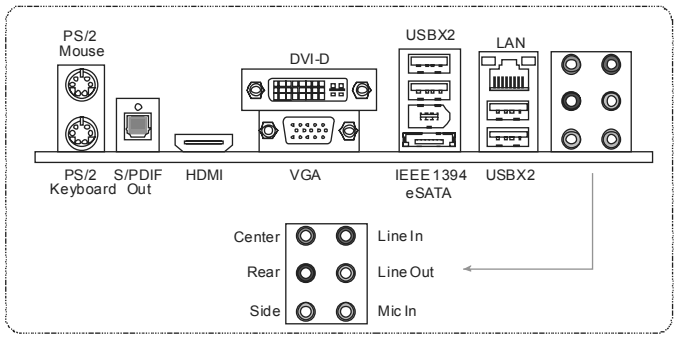
Note: The package contents may be different due to area or your motherboard version.

1.3 MOTHERBOARD FEATURES

	TA890GXE	*TA880GXE*
CPU	Socket AM3 AMD Phenom II / Athlon II / Sempron processors AMD 64 Architecture enables 32 and 64 bit computing Supports Hyper Transport 3.0 and Cool=n=Quiet (Maximum Watt: 140W)	Socket AM3 AMD Phenom II / Athlon II / Sempron processors AMD 64 Architecture enables 32 and 64 bit computing Supports Hyper Transport 3.0 and Cool=n=Quiet (Maximum Watt: 140W)
FSB	Support HyperTransport 3.0 Supports up to 5.2 GT/s (OC) Bandwidth	Support HyperTransport 3.0 Supports up to 5.2 GT/s (OC) Bandwidth
Chipset	AMD 890GX AMD SB850	AMD 880G AMD SB850
Super I/O	ITE 8721 Provides the most commonly used legacy Super I/O functionality Low Pin Count Interface Environment Control initiatives H/W Monitor ITE's "Smart Guardian" function	ITE 8721 Provides the most commonly used legacy Super I/O functionality Low Pin Count Interface Environment Control initiatives H/W Monitor ITE's "Smart Guardian" function
Main Memory	DDR3 DIMM Slots x 4 Max Memory Capacity 16GB Each DIMM supports 512MB/1GB/2GB/ 4GB DDR3 Dual Channel Mode DDR3 memory module Supports DDR3 800 / 1066 / 1333 Supports DDR3 1600 (OC) Registered DIMM and ECC DIMM is not supported	DDR3 DIMM Slots x 4 Max Memory Capacity 16GB Each DIMM supports 512MB/1GB/2GB/ 4GB DDR3 Dual Channel Mode DDR3 memory module Supports DDR3 800 / 1066 / 1333 Supports DDR3 1600 (OC) Registered DIMM and ECC DIMM is not supported
Graphics	Integrated in AMD 890GX Chipset (HD4290) Max Shared Video Memory is 512MB DX10.1 / UVD 2.0 / HYBRID CFX support	Integrated in AMD 880G Chipset (HD4250) Max Shared Video Memory is 512MB DX10.1 / UVD 2.0 / HYBIRD CFX support
IDE	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133 Bus Master Mode supports PIO Mode 0~4,	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133 Bus Master Mode supports PIO Mode 0~4,
SATA III	Integrated Serial ATA Controller Data transfer rates up to 6 Gb/s SATA Version 3.0 specification compliant	Integrated Serial ATA Controller Data transfer rates up to 6 Gb/s SATA Version 3.0 specification compliant
LAN	Realtek RTL 8111DL 10 / 100 /1000 Mb/s auto negotiation Half / Full duplex capability	Realtek RTL 8111DL 10 / 100 /1000 Mb/s auto negotiation Half / Full duplex capability
Sound	ALC892 7.1 channels audio out High Definition Audio	ALC892 7.1 channels audio out High Definition Audio
IEEE 1394	VIA VT6330	VIA VT6330
Slots	PCI Express Gen2 x16 slot x1 PCI Express Gen2 x 1 slot x1 PCI slot x2	PCI Express Gen2 x16 slot x1 PCI Express Gen2 x 1 slot x1 PCI slot x2
On Board Connector	IDE Connector x1 SATA Connector x5 Front Panel Connector x1 Front Audio Connector x1 S/PDIF Out Connector x1 CPU Fan Header x1	IDE Connector x1 SATA Connector x5 Front Panel Connector x1 Front Audio Connector x1 S/PDIF Out Connector x1 CPU Fan Header x1

	TA890GXE		*TA880GXE*	
	System Fan Header	x2	System Fan Header	x2
	CMOS clear Header	x1	CMOS clear Header	x1
	USB Connector	x3	USB Connector	x3
	IEEE 1394 Connector	x1	IEEE 1394 Connector	x1
	Consumer IR Connector	x1	Consumer IR Connector	x1
	Power Connector (24pin)	x1	Power Connector (24pin)	x1
	Power Connector (4pin)	x1	Power Connector (4pin)	x1
	Serial Port Connector	x1	Serial Port Connector	x1
Back Panel I/O	PS/2 Keyboard	x1	PS/2 Keyboard	x1
	PS/2 Mouse	x1	PS/2 Mouse	x1
	S/PDIF Out	x1	S/PDIF Out	x1
	HDMI Port	x1	HDMI Port	x1
	VGA Port	x1	VGA Port	x1
	DVI-D Port	x1	DVI-D Port	x1
	1394 Port	x1	1394 Port	x1
	eSATA2 Port	x1	eSATA2 Port	x1
	LAN port	x1	LAN port	x1
	USB Port	x4	USB Port	x4
	Audio Jack	x6	Audio Jack	x6
Board Size	244 mm(W) x 244 mm(L)		244 mm(W) x 244 mm(L)	
Special Features	RAID 0 / 1 / 5 / 10 support		RAID 0 / 1 / 5 / 10 support	
OS Support	Windows XP / Vista / 7 Biostar reserves the right to add or remove support for any OS With or without notice.		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

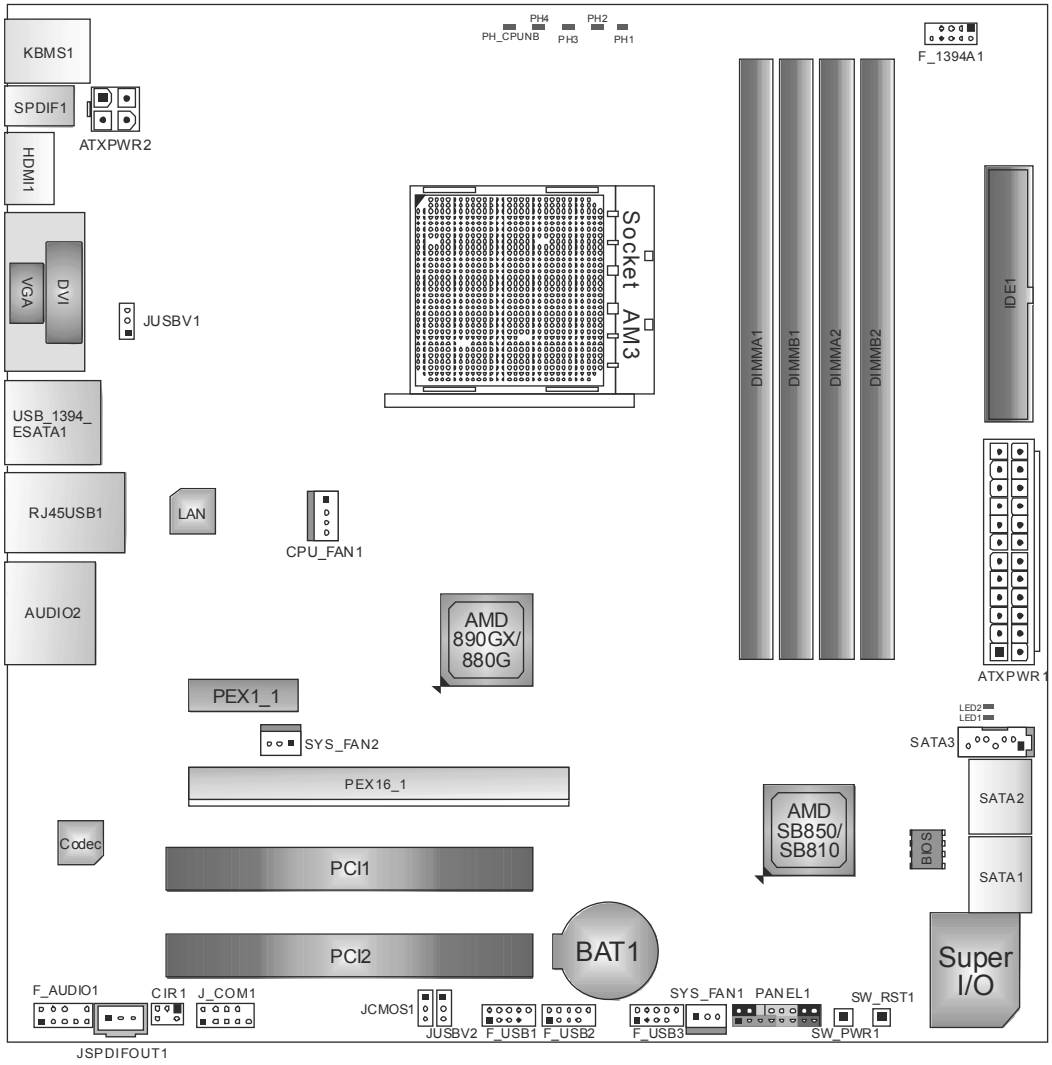


NOTE: Dual Screen:

Display Devices	VGA + HDMI	VGA + DVI-D	HDMI + DVI-D
Enabled	O	O	X

NOTE: For eSATA, Hot Plug is available only under AHCI mode.

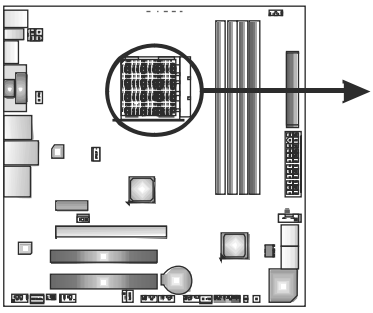
1.5 MOTHERBOARD LAYOUT



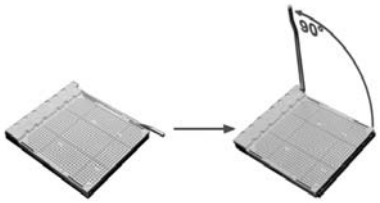
Note: ■ represents the 1st pin.

CHAPTER 2: HARDWARE INSTALLATION

2.1 INSTALLING CENTRAL PROCESSING UNIT (CPU)

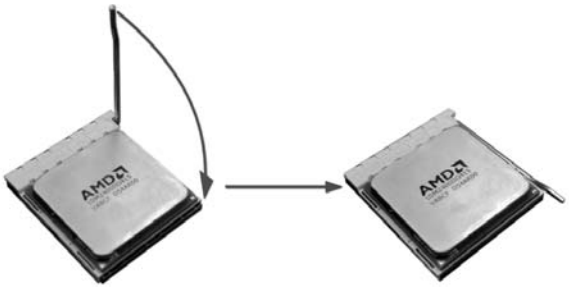


Step 1: Pull the lever toward direction A from the socket and then raise the lever up to a 90-degree angle.



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.

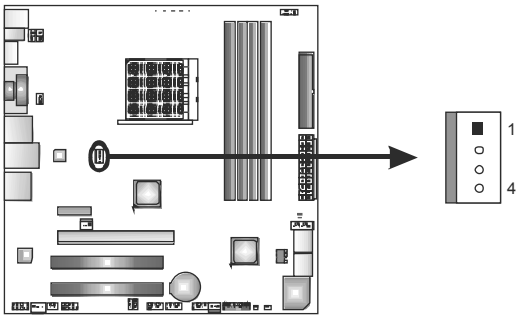


Step 4: Put the CPU Fan on the CPU and buckle it. Connect the CPU FAN power cable to CPU_FAN1 to complete the installation.

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.

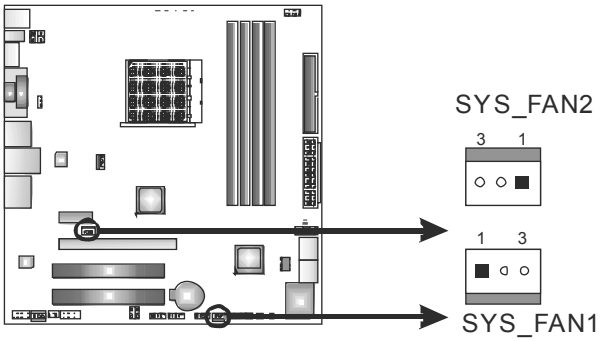
CPU_FAN1: CPU Fan Header



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

SYS_FAN1: NorthBridge Fan Header

SYS_FAN2: System Fan Header



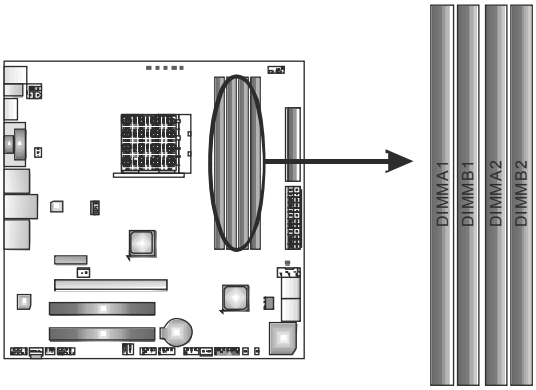
Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate sense

Note:

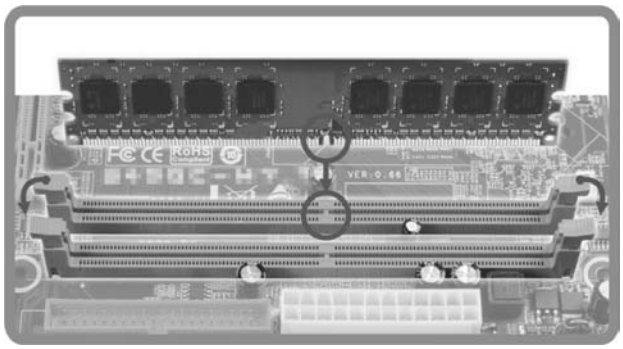
CPU_FAN1, SYS_FAN1/2 support 4-pin and 3-pin head connectors. When connecting with wires onto connectors, please note that the red wire is the positive and should be connected to pin#2, and the black wire is Ground and should be connected to GND.

2.3 INSTALLING SYSTEM MEMORY

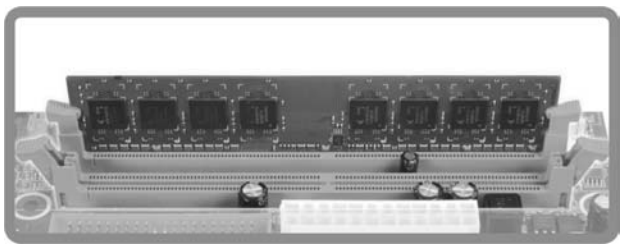
A. DDR3 Modules



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.



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



B. Memory Capacity

DIMM Socket Location	DDR3 Module	Total Memory Size
DIMMA1	512MB/1GB/2GB/4GB	Max is 16GB.
DIMMB1	512MB/1GB/2GB/4GB	
DIMMA2	512MB/1GB/2GB/4GB	
DIMMB2	512MB/1GB/2GB/4GB	

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	DIMMA1	DIMMB1	DIMMA2	DIMMB2
Enabled	O	O	X	X
Enabled	X	X	O	O
Enabled	O	O	O	O

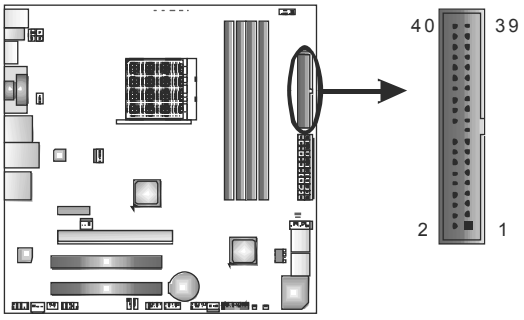
(O means memory installed, X means memory not installed.)

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

CONNECTORS AND SLOTS

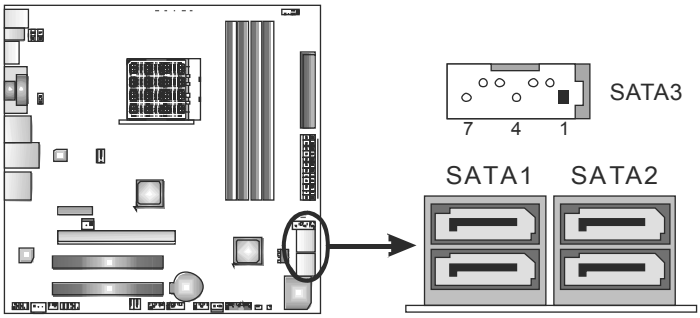
IDE1: IDE/ATAPI Connector

The motherboard has a 32-bit Enhanced IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33/66/100/133 functionality.



SATA1~SATA3: Serial ATA Connectors

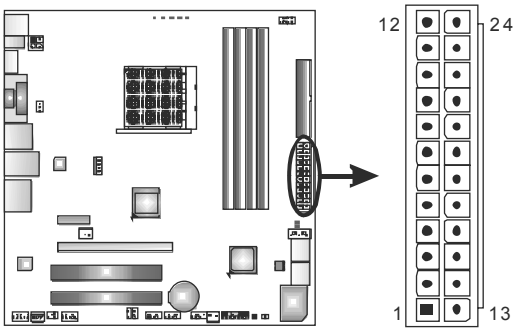
The motherboard has a PCI to SATA Controller with 5 channels SATA interface, it satisfies the SATA 3.0 spec and with transfer rate of 6.0Gb/s.



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

ATXPWR1: ATX Power Source Connector

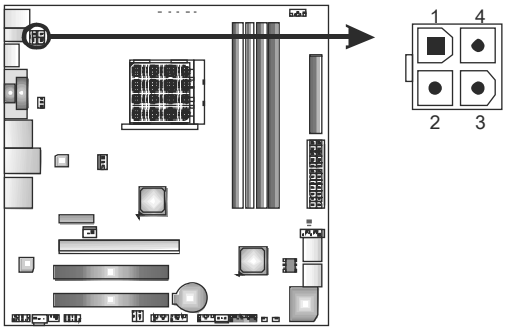
This connector allows user to connect 24-pin power connector on the ATX power supply.



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

ATXPWR2: ATX Power Source Connector

Connecting this connector will provide +12V to CPU power circuit.



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

Note:

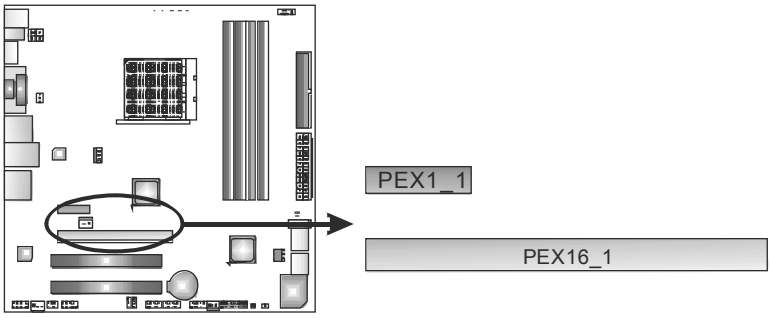
Before power on the system, please make sure that both ATXPWR1 and ATXPWR2 connectors have been plugged-in.

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.

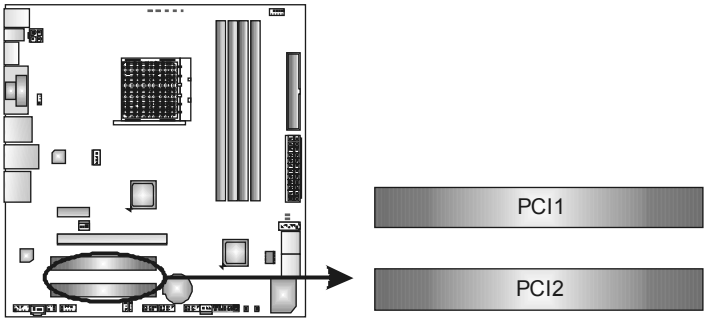
PEX1_1: PCI-Express Gen 2 x1 Slot

- PCI-Express 2.0 compliant.
- Data transfer bandwidth up to 250MB/s per direction; 500MB/s in total.
- PCI-Express Gen2 supports a raw bit-rate of 2.5Gb/s on the data pins.



PCI1/PCI2: Peripheral Component Interconnect Slots

This motherboard is equipped with 2 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designated as 32 bits.



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”.

Pin opened

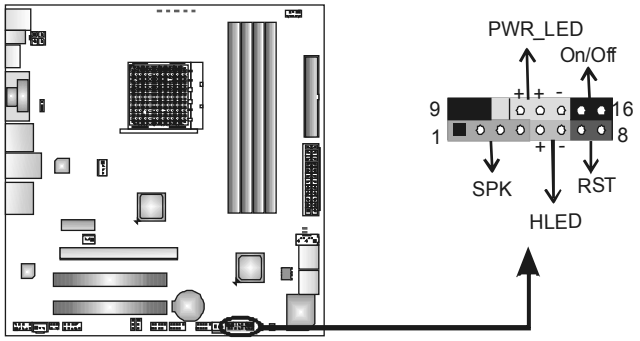
Pin closed

Pin1-2 closed

3.2 Detail Settings

PANEL1: Front Panel Header

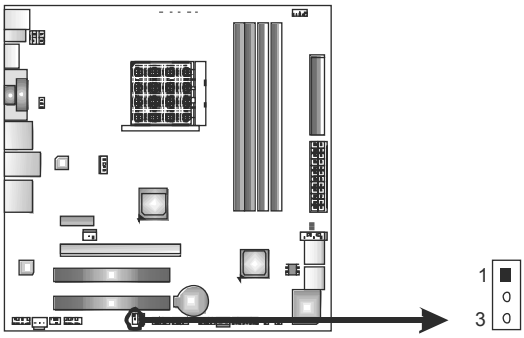
This 16-pin connector includes Power-on, Reset, HDD LED, Power LED, and speaker connection. It allows user to connect the PC case’s front panel switch functions.



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	N/A
4	Speaker		12	Power LED (+)	Power LED
5	HDD LED (+)	Hard drive 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.



Pin 1-2 Close:
Normal Operation (default).

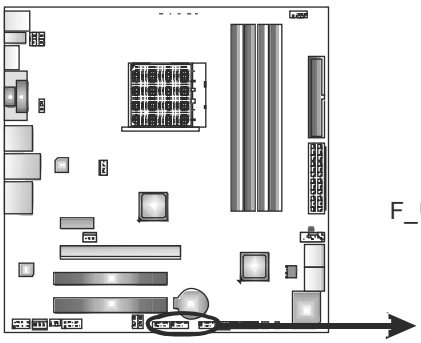
Pin 2-3 Close:
Clear CMOS data.

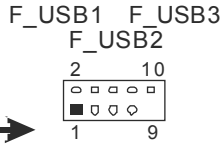
※ Clear CMOS Procedures:

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. Reset your desired password or clear the CMOS data.

F_USB1/F_USB2/F_USB3: 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.





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

JUSBV1/JUSBV2: Power Source Headers for USB Ports

Pin 1-2 Close:

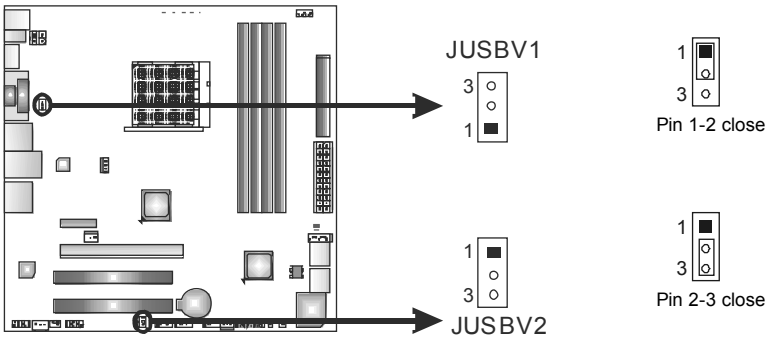
JUSBV1: +5V for USB ports at USB_1394_ESATA1/RJ45USB1.

JUSBV2: +5V for USB ports at F_USB1/F_USB2/F_USB3.

Pin 2-3 Close:

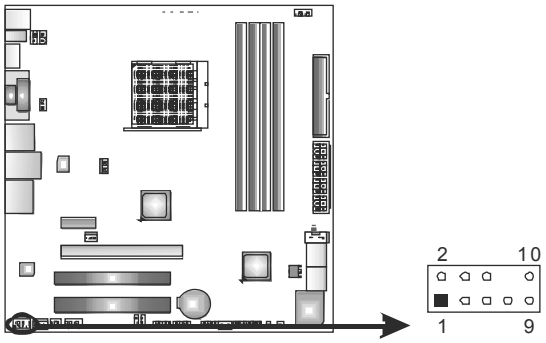
JUSBV1: +5V STB for USB ports at USB_1394_ESATA1/RJ45USB1.

JUSBV2: +5V STB for USB ports at F_USB1/F_USB2/F_USB3.



F_AUDIO1: Front Panel Audio Header

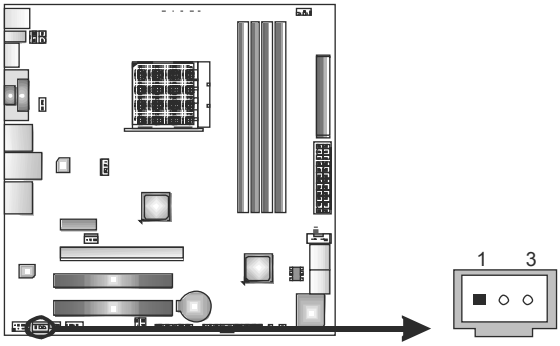
This header allows user to connect the front audio output cable with the PC front panel. This header allows only HD audio front panel connector; AC'97 connector is not acceptable.



Pin	Assignment
1	Mic Left in
2	Ground
3	Mic Right in
4	GPIO
5	Right line in
6	Jack Sense
7	Front Sense
8	Key
9	Left line in
10	Jack Sense

JSPDIFOUT1: Digital Audio-out Connector

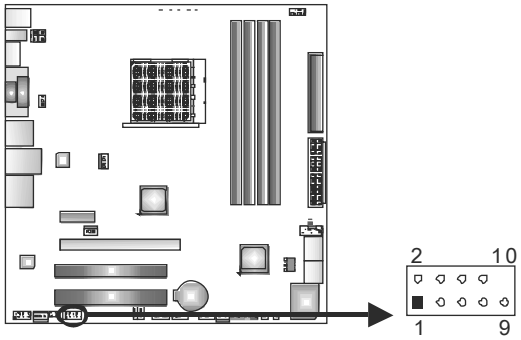
This connector allows user to connect the PCI bracket SPDIF output header.



Pin	Assignment
1	+5V
2	SPDIF_OUT
3	Ground

J_COM1: Serial Port Connector

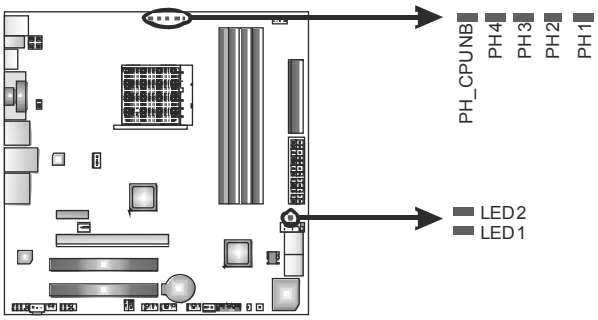
The motherboard has a Serial Port Connector for connecting RS-232 Port.



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

On-Board LED Indicators

There are 7 LED indicators showing system status.



LED1 & LED2: Debug Indicators

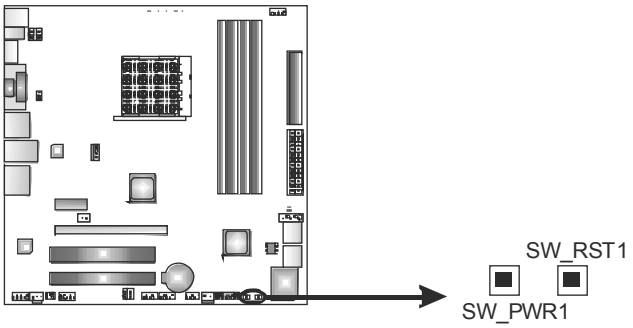
PH_CPUNB/ PH1 ~ PH4: Power Status Indicators
Please refer to the tables below for specific messages:

LED1	LED2	Message
ON	ON	Normal
ON	OFF	Memory Error
OFF	ON	VGA Error
OFF	OFF	Abnormal: CPU / Chipset error.

PH_CPUNB/PH1~PH4	Phase Indicator
ON	Phase Active
OFF	Phase Disable

On-Board Buttons

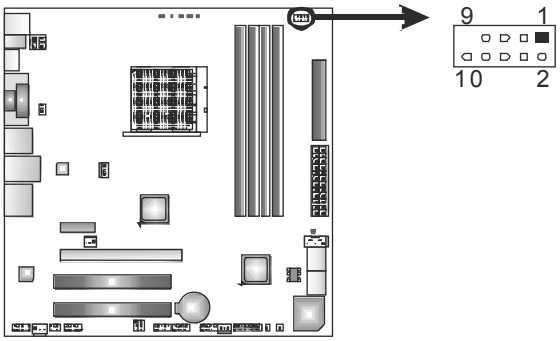
There are 2 on-board buttons.



SW_RST1: Reset button.
SW_PWR1: Power Switch button.

F_1394A1: IEEE 1394 Header

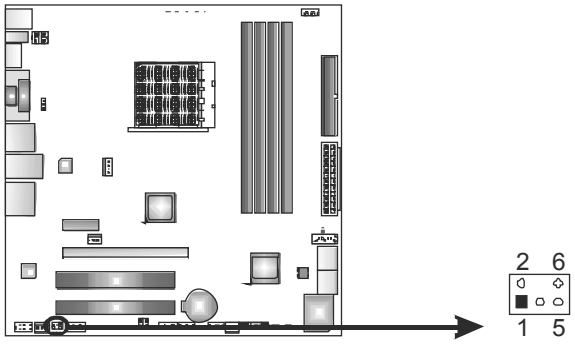
This header allows user to connect IEEE 1394 device.



Pin	Assignment
1	TPA1+
2	TPA1-
3	GND
4	GND
5	TPB1+
6	TPB1-
7	VCC
8	VCC
9	N/A
10	KEY

CIR1: Consumer IR Connector

This header is for infrared remote control and communication. This function is available only in Windows 7, Windows Vista, and Windows MCE.



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

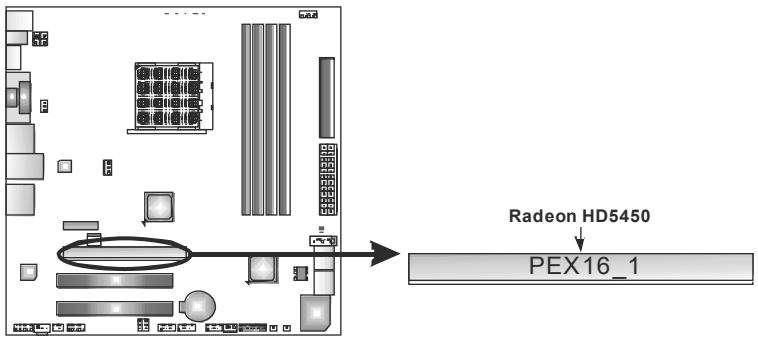
CHAPTER 4: HYBRID CROSSFIREX FUNCTION

4.1 HYBRID CROSSFIREX REQUIREMENTS

- A graphics card with **Radeon HD5450** GPU.
- The graphics card driver should support Hybrid CrossFireX technology.
- The power supply unit must provide at least the minimum power required by the system, or the system will be unstable. A power supply above 450W is recommended under Hybrid CrossFireX mode.

4.2 HYBRID CROSSFIREX INSTALLATION

Step 1: Insert the Hybrid CrossFireX-Ready graphics card into PEX16_1.



Notice: Make sure the graphics card is seated into slot completely.

Step 2: In the graphics card configuration program, choose "Hybrid CrossFireX" function. Installation completes.

NOTE

For more detail information of Hybrid CrossFireX function, please visit following web-sites:

http://game.amd.com/us-en/crossfirex_hybrid.aspx

http://ati.amd.com/technology/hybridgraphics/index.html

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.

RAID 5: RAID 5 provides fault tolerance and better utilization of disk capacity.

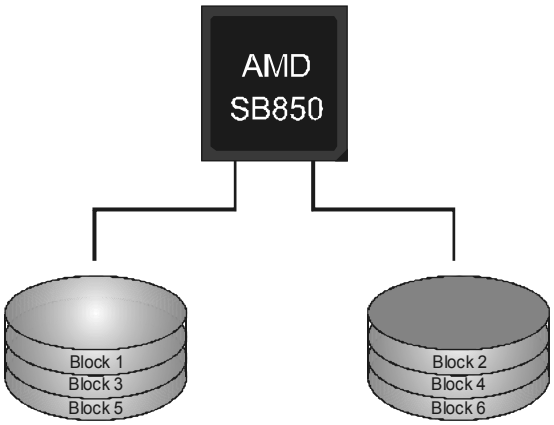
5.3 How RAID Works

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.



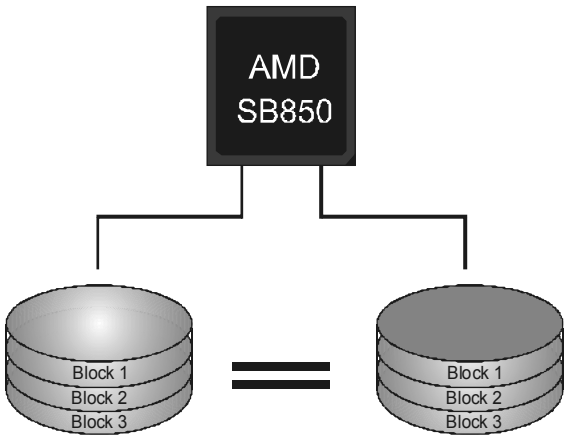
RAID 1:

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.

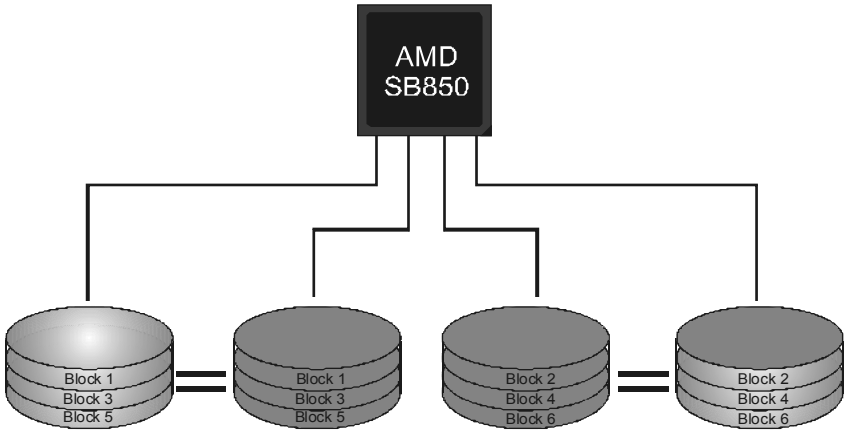


RAID 10:

RAID 1 drives can be stripped 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.

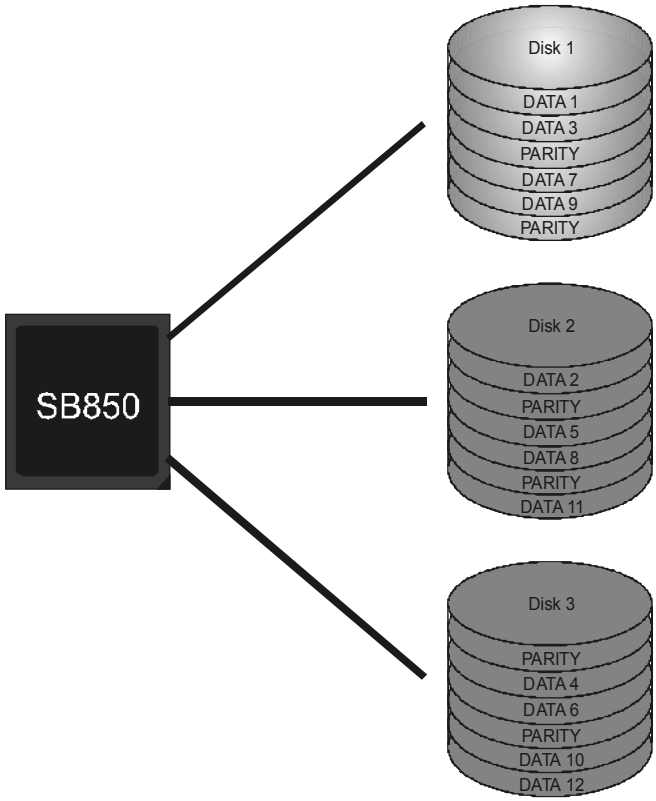


RAID 5:

RAID 5 stripes both data and parity information across three or more drives. It writes data and parity blocks across all the drives in the array. Fault tolerance is maintained by ensuring that the parity information for any given block of data is placed on a different drive from those used to store the data itself.

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.



CHAPTER 6: T-SERIES BIOS & SOFTWARE

6.1 T-SERIES BIOS

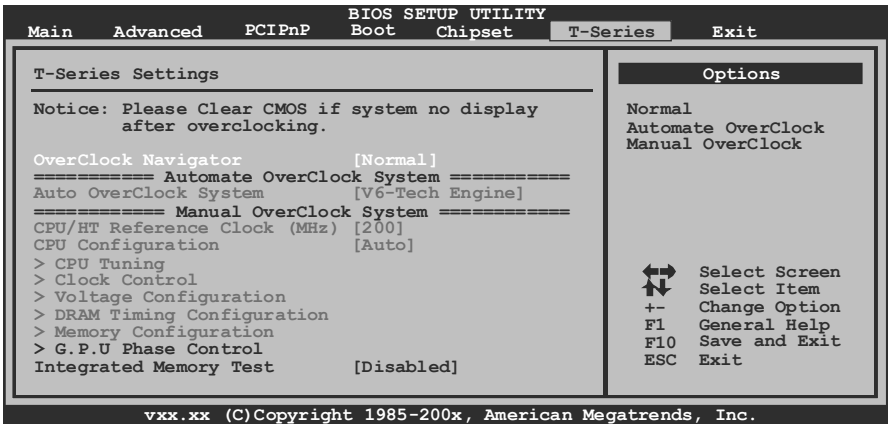
T-Series BIOS Features

- Overclocking Navigator Engine (O.N.E.)
- Memory Integration Test (M.I.T., under Overclock Navigator Engine)
- BIO-Flasher: Update BIOS file from USB Flash Drive or FDD
- Self Recovery System (S.R.S)
- Smart Fan Function
- CMOS Reloading Program

> *!! WARNING !!*
>
> For better system performance, the BIOS firmware is being continuously updated. The BIOS information described below in this manual is for your reference only and the actual BIOS information and settings on board may be different from this manual. For further information of setting up the BIOS, please refer to the BIOS Manual in the Setup CD.

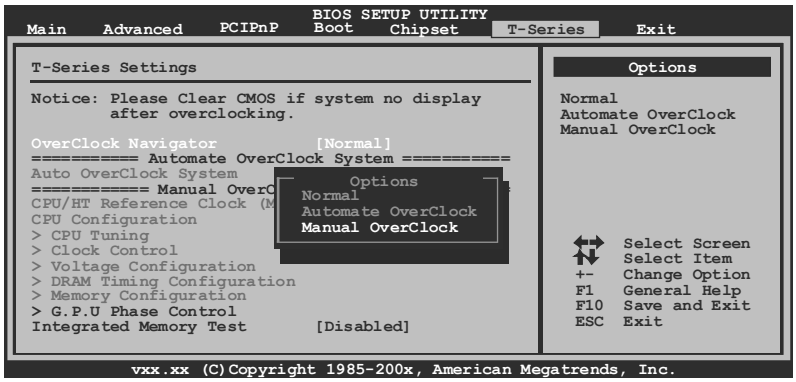
A. Overclocking Navigator Engine (O.N.E.)

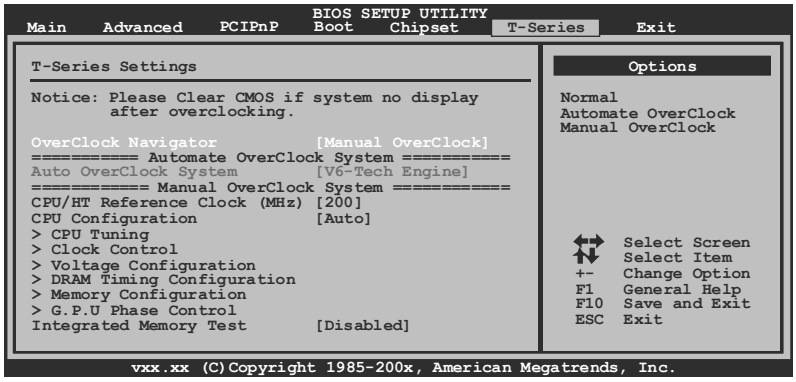
ONE provides two powerful overclocking engines: MOS and AOS for both Elite and Casual overclockers.



Manual Overclock System (M.O.S.)

MOS is designed for experienced overclock users.
It allows users to customize personal overclock settings.





CPU/HT Reference Clock (MHz)

CPU Frequency is directly in proportion to system performance. To maintain the system stability, CPU voltage needs to be increased also when raising CPU frequency.

CPU Configuration

This item provides several fixed modes of CPU configuration.

CPU Tuning

Enter this function for more advanced CPU settings.

Clock Control

Enter this function for more clock settings.

Voltage Configuration

Enter this function for more advanced voltage settings.

DRAM Timing Configuration

Enter this function for more advanced DRAM clock settings.

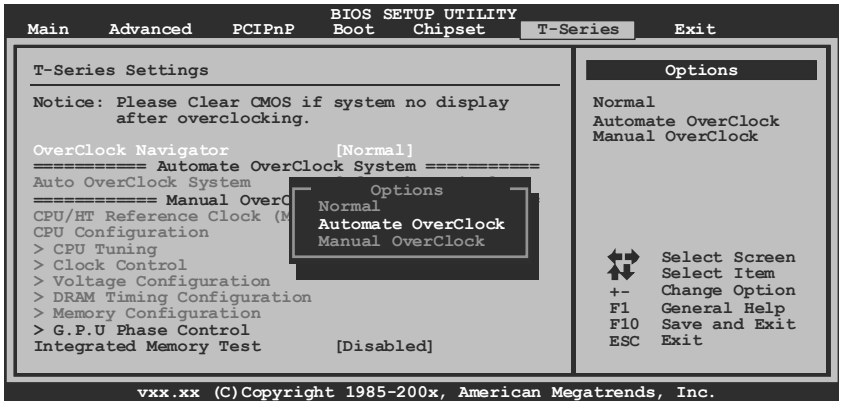
Memory Configuration

Enter this function for more advanced memory settings.

> ***NOTE***
>
> Overclock is an optional process, but not a "must-do" process; it is not recommended for inexperienced users. Therefore, we will not be responsible for any hardware damage which may be caused by overclocking. We also would not guarantee any overclocking performance.

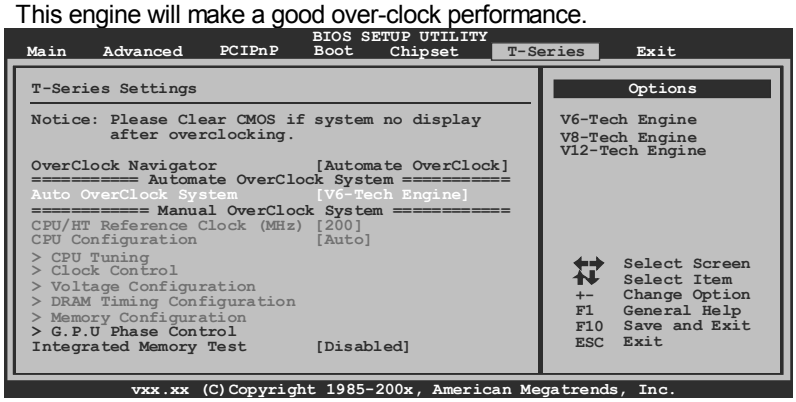
Automatic Overclock System (A.O.S.)

For beginners in overclock field, BET had developed an easy, fast, and powerful feature to increase the system performance, named A.O.S. Based on many tests and experiments, A.O.S. provides 3 ideal overclock configurations that are able to raise the system performance in a single step.



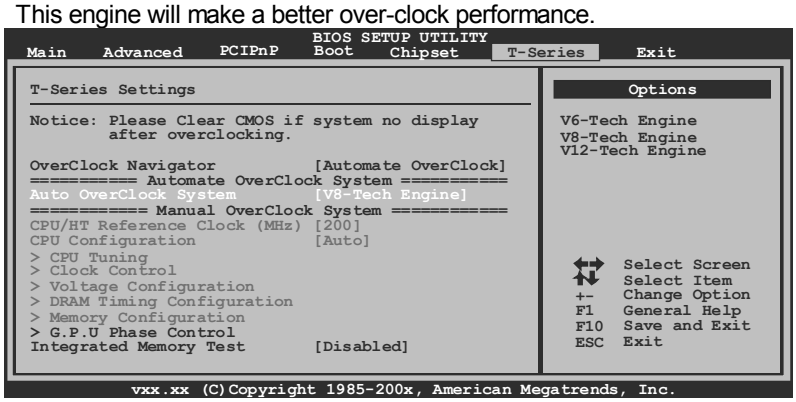
V6 Tech Engine

This engine will make a good over-clock performance.



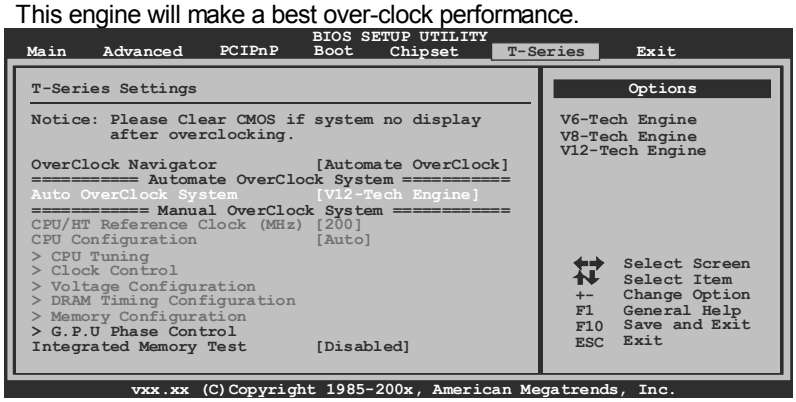
V8 Tech Engine

This engine will make a better over-clock performance.



V12 Tech Engine

This engine will make a best over-clock performance.



Notices:

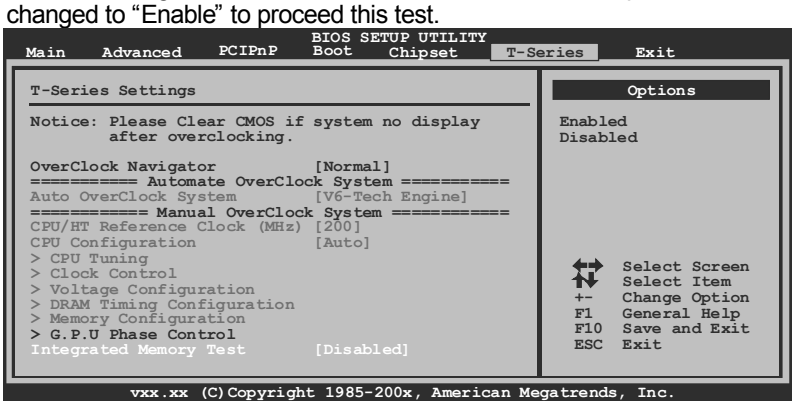
Not all types of AMD CPU perform above overclock setting ideally; the difference will be based on the selected CPU model.

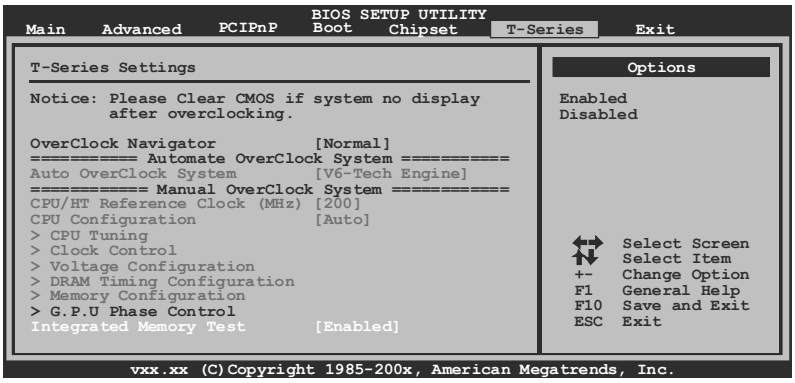
B. Memory Integration Test (M.I.T.)

This function is under "Overclocking Navigator Engine" item.
MIT allows users to test memory compatibilities, and no extra devices or software are needed.

Step 1

The default setting under this item is "Disabled"; the condition parameter should be changed to "Enable" to proceed this test.





Step 2

Save and Exit from CMOS setup and reboot the system to activate this test.
Run this test for 5 minutes (minimum) to ensure the memory stability.

Step 3

When the process is done, change the setting back from "Enable" to "Disable" to complete the test.

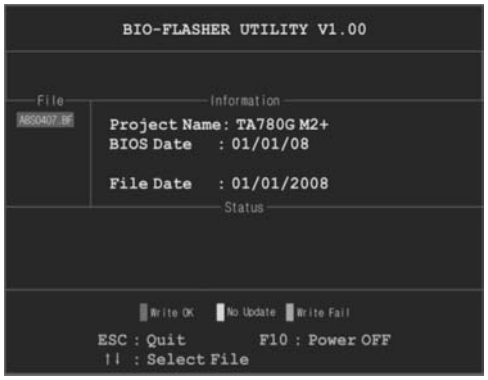
C. BIO-Flasher

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.

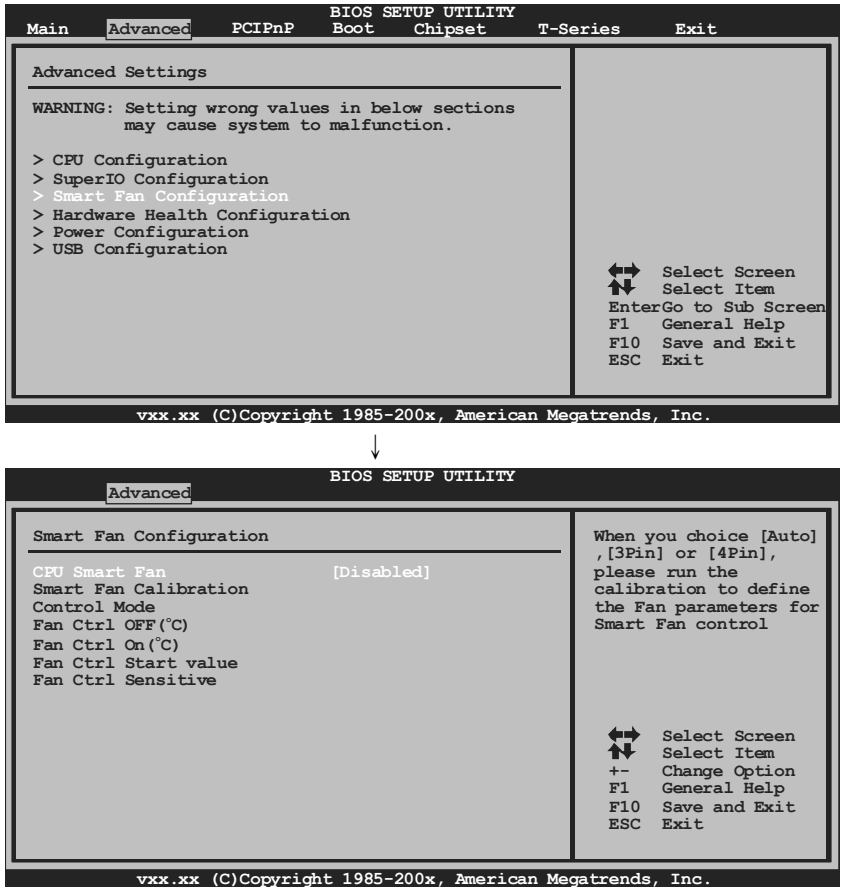
- This utility only allows storage device with FAT32/16 format and single partition.
- Shutting down or resetting the system while updating the BIOS will lead to system boot failure.

D. Self Recovery System (S.R.S.)

This function can't be seen under BIOS setup; and is always on whenever the system starts up.
However, it can prevent system hang-up due to inappropriate overclock actions.
When the system hangs up, S.R.S. will automatically log in the default BIOS setting, and all overclock settings will be re-configured.

E. Smart Fan Function

Smart Fan Function is under "Smart Fan Configuration" in "Advanced Menu".
This is a brilliant feature to control CPU/System Temperature vs. Fan speed.
When enabling Smart Fan function, Fan speed is controlled automatically by CPU/System temperature.
This function will protect CPU/System from overheat problem and maintain the system temperature at a safe level.



Smart Fan Calibration

Choose this item and then the BIOS will automatically test and detect the CPU/System fan functions and show CPU/System fan speed.

Control Mode

This item provides several operation modes of the fan.

Fan Ctrl OFF(℃)

If the CPU/System temperature is lower than the set value, the CPU/ System fan will turn off. The range is from 0~127, with an interval of 1.

Fan Ctrl On(℃)

The CPU/System fan starts to work when CPU/System temperature arrives to this set value. The range is from 0~127, with an interval of 1.

Fan Ctrl Start Value

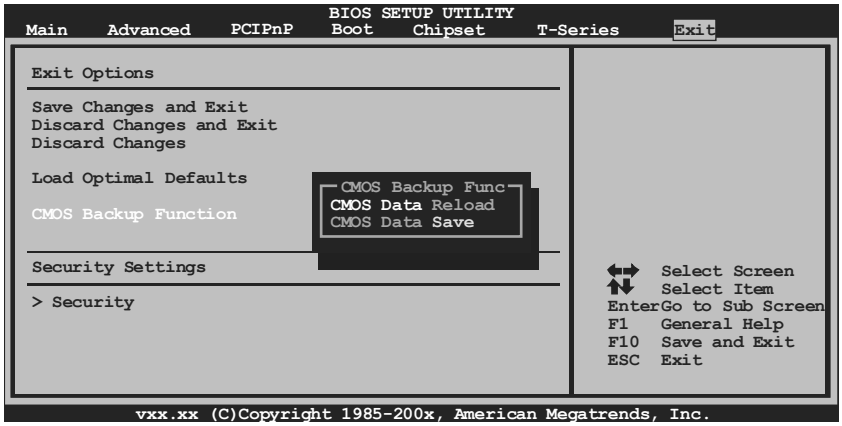
When CPU/System temperature arrives to the set value, the CPU/System fan will work under Smart Fan Function mode. The range is from 0~127, with an interval of 1.

Fan Ctrl Sensitive

Increasing the value of slope PWM will raise the speed of CPU/System fan. The range is from 1~127, with an interval of 1.

F. CMOS Reloading Program

It allows users to save different CMOS settings into BIOS-ROM.
Users are able to reload any saved CMOS setting for customizing system configurations. Moreover, users are able to save an ideal overclock setting during overclock operation.
There are 10 sets of record addresses in total, and users are able to name the CMOS data according to personal preference.



6.2 T-SERIES SOFTWARE

Installing T-Series Software

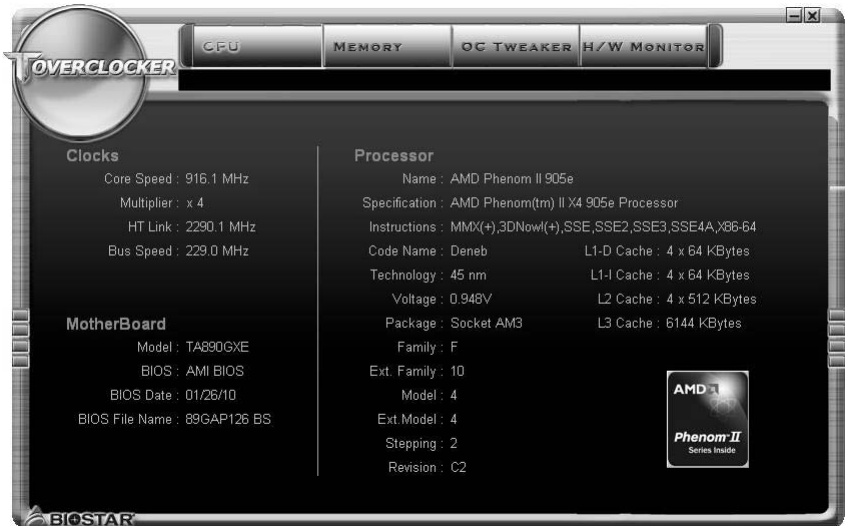
1. Insert the Setup CD to the optical drive. The drivers installation program would appear if the Auto-run function has been enabled.
2. Select **Software Installation**, and then click on the respective software title.
3. Follow the on-screen instructions to complete the installation.

Launching T-Series Software

After the installation process is completed, you will see the software icon showing on the desktop. Double-click the icon to launch it.

TOverclocker

TOverclocker presents a simple Windows-based system performance enhancement and manageability utility. It features several powerful and easy to use tools such as Overclocking for enhancing system performance, also for special enhancement on CPU and Memory. Smart-Fan management and PC health are for monitoring system status.This utility also allows you to make overclocking profiles saving unlimitedly, and pre-set OC modes are for easy OC. (The illustration below is for reference only)



The **CPU** tab provides information on the CPU and motherboard.

The **Memory** tab provides information on the memory module(s).

You can select memory module on a specific slot to see its information.

The **OC Tweaker** tab allows you to change system clock settings and voltages settings. It also provides six pre-set modes for you:

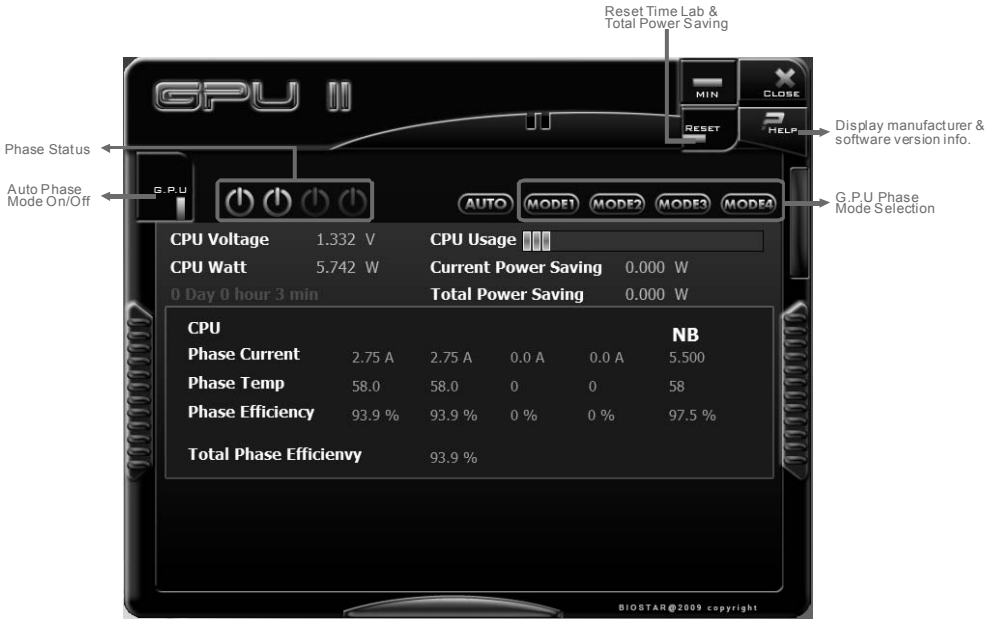
Six Pre-set Modes: V3, V6, V9, V12, V15, AUTO for different overclocking experience.

The **HW Monitor** tab allows you to monitor hardware voltage, fan speed, and temperature. Besides, you also can set related values for CPU Smart Fan.

Pressing **TOVERCLOCKER** logo will display information about manufacturer and software version. You can update currnet version by clicking the button “Live Update.”

Green Power II Utility

BIOSTAR G.P.U II (Green Power Utility) is a new function. The utility enhances energy efficiency by disabling extra phases while CPU is on light loading; it features 4+1 power phases, current power saving, and toal power saving. This tool integrates a friendly GUI to monitor your CPU Usage, CPU Watt, and CPU Temperature. Moreover, it optimizes power saving and best power efficiency on your system. (The illustration below is for reference only)



G.P.U Mode Setting

This utility provides five modes to improve system performance or to save power consumption upon your requirement.

Note: Even if the modes which save more power consumption are chosen, the system still can keep excellent performance.

- **Auto Phase Mode**
  System switches mode1 to mode 4 automatically according to current system loading condition.

- **MODE 1: Max-Energy Mode**
  This is the best system performance mode.

- **MODE 2: Medium Mode**
  This is the standard system power saving mode.

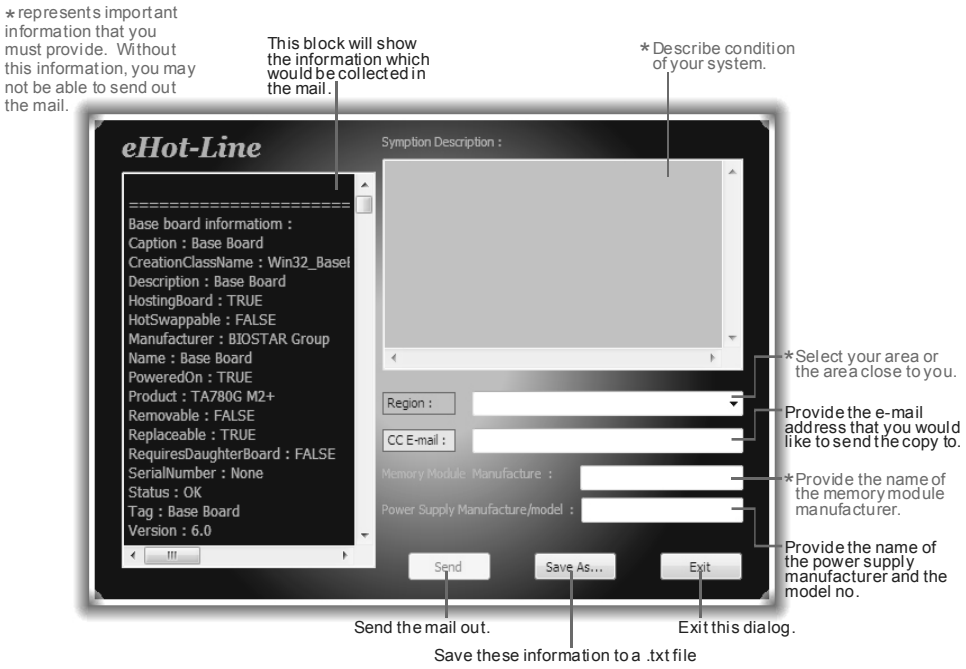
- **MODE 3: Typical Mode**
  Compared with that in Performance Mode, energy consumption in this mode is a little bit more.

- **MODE 4: Performance Mode**
  This is the mode saving power consumption most. Least energy will be used in the system.

eHot-Line (Optional)

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

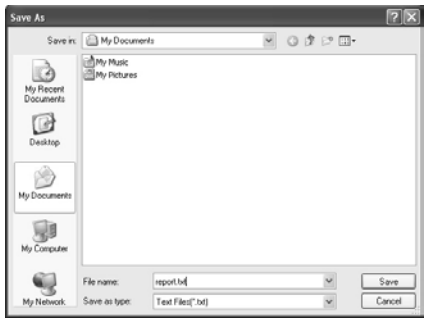
Before you use this utility, please set Outlook Express as your default e-mail client application program.



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.



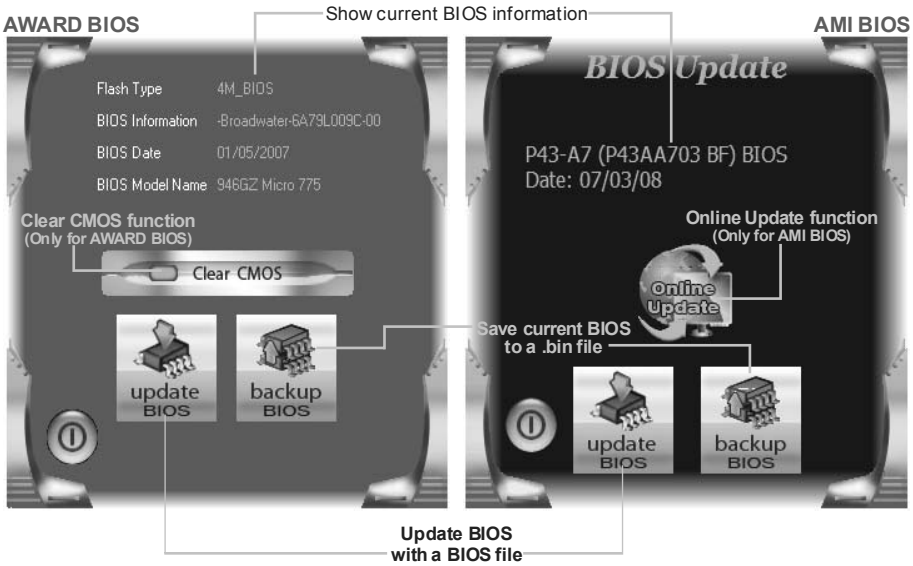
Open the saved .txt file, you will see your system information including motherboard/BIOS/CPU/video/ device/OS information. This information is also concluded in the sent mail.

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.

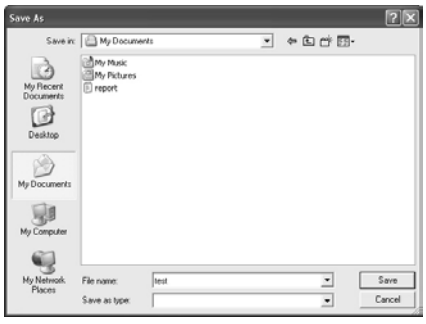
BIOS Update

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



<Backup BIOS>

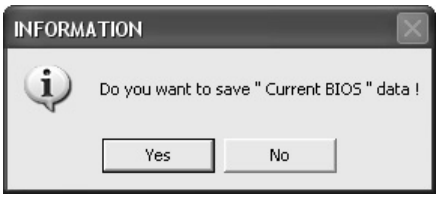
Once click on this button, the saving dialog will show. Choose the position to save file and enter file name. (We recommend that the file name should be English/number and no longer than 7 characters.) Then click **Save**.



<Update BIOS>

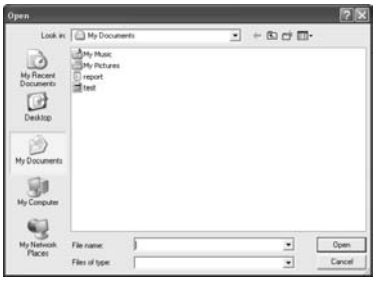
Before doing this, please download the proper BIOS file from the website.

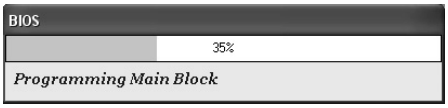
For AWARD BIOS, update BIOS procedure should be run with Clear CMOS function, so please check on Clear CMOS first.



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.

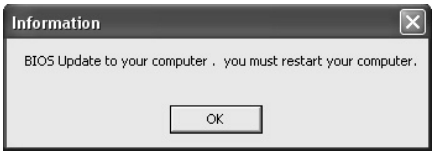
After the BIOS Backup procedure, the open dialog will show for requesting the BIOS file which is going to be updated. Please choose the proper BIOS file for updating, then click on **Open**.





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 

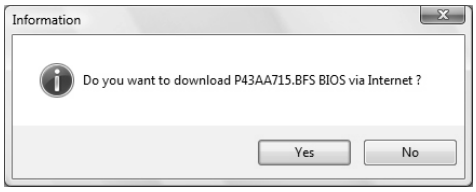
<Delete> key to enter BIOS setup.

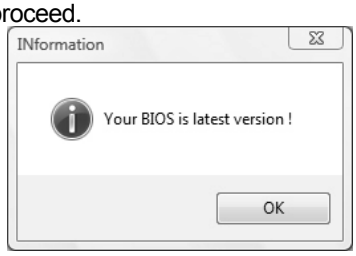
In the BIOS setup, use the **Load Optimized Defaults** function and then **Save and Exit Setup** to exit BIOS setup. BIOS Update is completed.

<Online Update> ***(for AMI BIOS only)***

Automatically download and update the latest BIOS via internet; **make sure that the computer is connected to the internet before using this function.**

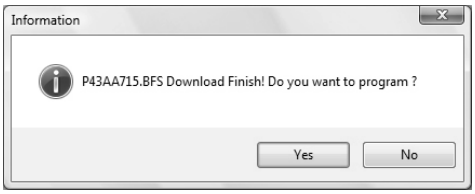
After clicking on the **Onlinr Update** button, the utility will search for the latest BIOS from internet. If there is a new BIOS version, the utility will ask you to download it. Click **Yes** to proceed.



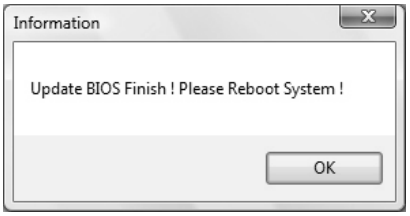


If there is no other newer BIOS version, the utility will also tell you that your BIOS has been the latest version.

Download completes; the utility will ask you to program (update) the BIOS. Click **Yes** to proceed.



The programing procedure may take minutes, **please do not make any operation during the programing process.**



After the updating process, the utility will ask you to reboot the system. Click **OK** to reboot.

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. Online Update is completed.

All the information and content above about the T-Series 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.

CHAPTER 7: USEFUL HELP

7.1 DRIVER INSTALLATION NOTE

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

You will see the following window after you insert the CD

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

> ***Note:***
> If this window didn't show up after you insert the Driver CD, 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 CD. 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***

7.2 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.

7.3 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	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. ● 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.

7.4 TROUBLESHOOTING

Probable	Solution
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.	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.	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.	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.	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

	TA890GXE	*TA880GXE*
CPU	Sockel AM3 AMD Phenom II / Athlon II / Sempron Prozessoren Die AMD 64-Architektur unterstützt eine 32-Bit- und 64-Bit-Datenverarbeitung Unterstützt Hyper Transport 3.0 und Cool'n'Quiet (Maximales Watt: 140W)	Sockel AM3 AMD Phenom II / Athlon II / Sempron Prozessoren Die AMD 64-Architektur unterstützt eine 32-Bit- und 64-Bit-Datenverarbeitung Unterstützt Hyper Transport 3.0 und Cool'n'Quiet (Maximales Watt: 140W)
FSB	Unterstützt HyperTransport 3.0 mit einer Bandbreite von bis zu 5.2 GT/s (OC)	Unterstützt HyperTransport 3.0 mit einer Bandbreite von bis zu 5.2 GT/s (OC)
Chipsatz	AMD 890GX AMD SB850	AMD 880G AMD SB850
Super E/A	ITE8721 Bietet die häufig verwendeten alten Super E/A-Funktionen. Low Pin Count-Schnittstelle Umgebungskontrolle, Hardware-Überwachung "Smart Guardian"-Funktion von ITE	ITE8721 Bietet die häufig verwendeten alten Super E/A-Funktionen. Low Pin Count-Schnittstelle Umgebungskontrolle, Hardware-Überwachung "Smart Guardian"-Funktion von ITE
Arbeitsspeicher	DDR3 DIMM-Steckplätze x 4 Max. 16GB Arbeitsspeicher Jeder DIMM unterstützt 512MB/ 1GB/2GB/ 4GB DDR3. Dual-Kanal DDR3 Speichermodul Unterstützt DDR3 800 / 1066 / 1333 Unterstützt DDR3 1600 (OC) registrierte DIMMs. ECC DIMMs werden nicht unterstützt.	DDR3 DIMM-Steckplätze x 4 Max. 16GB Arbeitsspeicher Jeder DIMM unterstützt 512MB/ 1GB/2GB/ 4GB DDR3. Dual-Kanal DDR3 Speichermodul Unterstützt DDR3 800 / 1066 / 1333 Unterstützt DDR3 1600 (OC) registrierte DIMMs. ECC DIMMs werden nicht unterstützt.
Grafik	Integrierter AMD 890GX-Chipsatz (HD4290) Max. 512MB gemeinsam benutzter Videospeicher Unterstützt DX10.1 / UVD 2.0 / HYBRID CFX	Integrierter AMD 880G-Chipsatz (HD4250) Max. 512MB gemeinsam benutzter Videospeicher Unterstützt DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133 Bus Master-Modus Unterstützt PIO-Modus 0~4,	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133 Bus Master-Modus Unterstützt PIO-Modus 0~4,
SATA III	Integrierter Serial ATA-Controller Datentransferrate bis zu 6 Gb/s Konform mit der SATA-Spezifikation Version 3.0.	Integrierter Serial ATA-Controller Datentransferrate bis zu 6 Gb/s Konform mit der SATA-Spezifikation Version 3.0.
LAN	Realtek RTL 8111DL 10 / 100 / 1000 Mb/s Auto-Negotiation Halb-/ Vollduplex-Funktion	Realtek RTL 8111DL 10 / 100 / 1000 Mb/s Auto-Negotiation Halb-/ Vollduplex-Funktion

	TA890GXE		***TA880GXE***	
HD Audio-Unterstützung	ALC892 7.1-Kanal-Audioausgabe Unterstützt High-Definition Audio		ALC892 7.1-Kanal-Audioausgabe Unterstützt High-Definition Audio	
IEEE 1394	VIA VT6330		VIA VT6330	
Steckplätze	PCI Express Gen2 x16 Steckplatz PCI Express Gen2 x 1-Steckplatz PCI-Steckplatz	x1 x1 x2	PCI Express Gen2 x16 Steckplatz PCI Express Gen2 x 1-Steckplatz PCI-Steckplatz	x1 x1 x2
Onboard-Anschluss	IDE-Anschluss SATA-Anschluss Fronttafelanschluss Front-Audioanschluss S/PDIF- Ausgangsanschluss CPU-Lüfter-Sockel System-Lüfter-Sockel "CMOS löschen"-Sockel USB-Anschluss IEEE 1394-Anschluss Verbraucher-IR Anschluss Stromanschluss (24-polig) Stromanschluss (4-polig) Serieller Anschluss	x1 x5 x1 x1 x1 x1 x2 x1 x3 x1 x1 x1 x1 x1	IDE-Anschluss SATA-Anschluss Fronttafelanschluss Front-Audioanschluss S/PDIF- Ausgangsanschluss CPU-Lüfter-Sockel System-Lüfter-Sockel "CMOS löschen"-Sockel USB-Anschluss IEEE 1394-Anschluss Verbraucher-IR Anschluss Stromanschluss (24-polig) Stromanschluss (4-polig) Serieller Anschluss	x1 x5 x1 x1 x1 x1 x2 x1 x3 x1 x1 x1 x1 x1
Rückseiten-E/A	PS/2-Tastatur PS/2-Maus S/PDIF Heraus HDMI-Anschluss VGA-Anschluss DVI-D-Anschluss 1394-Anschluss eSATA2 Anschluss LAN-Anschluss USB-Anschluss Audioanschluss	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6	PS/2-Tastatur PS/2-Maus S/PDIF Heraus HDMI-Anschluss VGA-Anschluss DVI-D-Anschluss 1394-Anschluss eSATA2 Anschluss LAN-Anschluss USB-Anschluss Audioanschluss	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6
Platinengröße	244 mm (B) X 244 mm (L)		244 mm (B) X 244 mm (L)	
Sonderfunktionen	Unterstützt RAID 0 / 1 / 5 / 10		Unterstützt RAID 0 / 1 / 5 / 10	
OS-Unterstützung	Windows XP / Vista / 7 Biostar behält sich das Recht vor, ohne Ankündigung die Unterstützung für ein Betriebssystem hinzuzufügen oder zu entfernen.		Windows XP / Vista / 7 Biostar behält sich das Recht vor, ohne Ankündigung die Unterstützung für ein Betriebssystem hinzuzufügen oder zu entfernen.	

FRENCH

	TA890GXE	*TA880GXE*
UC	Socket AM3 Processeurs AMD Phenom II / Athlon II / Sempron L'architecture AMD 64 permet le calcul 32 et 64 bits Prend en charge Hyper Transport 3.0 et Cool'n'Quiet (Watt maximum : 140W)	Socket AM3 Processeurs AMD Phenom II / Athlon II / Sempron L'architecture AMD 64 permet le calcul 32 et 64 bits Prend en charge Hyper Transport 3.0 et Cool'n'Quiet (Watt maximum : 140W)
Bus frontal	Prend en charge Hyper Transport 3.0 jusqu'à une bande passante de 5.2 GT/s (OC)	Prend en charge Hyper Transport 3.0 jusqu'à une bande passante de 5.2 GT/s (OC)
Chipset	AMD 890GX AMD SB850	AMD 880G AMD SB850
Super E/S	ITE 8721 Fournit la fonctionnalité de Super E/S patrimoniales la plus utilisée. Interface à faible compte de broches Initiatives de contrôle environnementales, Moniteur de matériel Fonction "Gardien intelligent" de l'ITE	ITE 8721 Fournit la fonctionnalité de Super E/S patrimoniales la plus utilisée. Interface à faible compte de broches Initiatives de contrôle environnementales, Moniteur de matériel Fonction "Gardien intelligent" de l'ITE
Mémoire principale	Fentes DDR3 DIMM x 4 Capacité mémoire maximale de 16 Go Chaque DIMM prend en charge des DDR3 de 512 Mo et 1Go/2Go/4Go Module de mémoire DDR3 à mode à double voie Prend en charge la DDR3 800 / 1066 / 1333 Prend en charge la DDR3 1600 (OC) Les DIMM à registres et DIMM avec code correcteurs d'erreurs ne sont pas prises en charge	Fentes DDR3 DIMM x 4 Capacité mémoire maximale de 16 Go Chaque DIMM prend en charge des DDR3 de 512 Mo et 1Go/2Go/4Go Module de mémoire DDR3 à mode à double voie Prend en charge la DDR3 800 / 1066 / 1333 Prend en charge la DDR3 1600 (OC) Les DIMM à registres et DIMM avec code correcteurs d'erreurs ne sont pas prises en charge
Graphiques	Integré dans la chipset AMD 890GX (HD4290) Mémoire vidéo partagée maximale de 512 Mo Prise en charge DX10.1 / UVD 2.0 / HYBRID CFX	Integré dans la chipset AMD 880G (HD4250) Mémoire vidéo partagée maximale de 512 Mo Prise en charge DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Mode principale de Bus Ultra DMA 33 / 66 / 100 / 133 Prend en charge le mode PIO 0~4,	VIA VT6330 Mode principale de Bus Ultra DMA 33 / 66 / 100 / 133 Prend en charge le mode PIO 0~4,
SATA III	Contrôleur Serial ATA intégré Taux de transfert jusqu'à 6 Go/s. Conforme à la spécification SATA Version 3.0	Contrôleur Serial ATA intégré Taux de transfert jusqu'à 6 Go/s. Conforme à la spécification SATA Version 3.0
LAN	Realtek RTL 8111DL 10 / 100 / 1000 Mb/s négociation automatique Half / Full duplex capability	Realtek RTL 8111DL 10 / 100 / 1000 Mb/s négociation automatique Half / Full duplex capability

	TA890GXE		***TA880GXE***	
Prise en charge audio HD	ALC892 Sortie audio à 7.1 voies Prise en charge de l'audio haute définition		ALC892 Sortie audio à 7.1 voies Prise en charge de l'audio haute définition	
IEEE 1394	VIA VT6330		VIA VT6330	
Fentes	Fente PCI Express Gen2 x16 Fente PCI Express Gen2 x1 Fente PCI	x1 x1 x2	Fente PCI Express Gen2 x16 Fente PCI Express Gen2 x1 Fente PCI	x1 x1 x2
Connecteur embarqué	Connecteur IDE Connecteur SATA Connecteur du panneau avant Connecteur Audio du panneau avant Connecteur de sortie S/PDIF Embase de ventilateur UC Embase de ventilateur système Embase d'effacement CMOS Connecteur USB Connecteur IEEE 1394 Connecteur de IR du consommateur Connecteur d'alimentation (24 broches) Connecteur d'alimentation (4 broches) Connecteur de Port série	x1 x5 x1 x1 x1 x1 x2 x1 x3 x1 x1 x1 x1 x1	Connecteur IDE Connecteur SATA Connecteur du panneau avant Connecteur Audio du panneau avant Connecteur de sortie S/PDIF Embase de ventilateur UC Embase de ventilateur système Embase d'effacement CMOS Connecteur USB Connecteur IEEE 1394 Connecteur de IR du consommateur Connecteur d'alimentation (24 broches) Connecteur d'alimentation (4 broches) Connecteur de Port série	x1 x5 x1 x1 x1 x1 x2 x1 x3 x1 x1 x1 x1 x1
E/S du panneau arrière	Clavier PS/2 Souris PS/2 Sortie S/PDIF Port HDMI Port VGA Port DVI-D Port 1394 Port eSATA2 Port LAN Port USB Fiche audio	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6	Clavier PS/2 Souris PS/2 Sortie S/PDIF Port HDMI Port VGA Port DVI-D Port 1394 Port eSATA2 Port LAN Port USB Fiche audio	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6
Dimensions de la carte	244 mm (l) X 244 mm (H)		244 mm (l) X 244 mm (H)	
Fonctionnalités spéciales	Prise en charge RAID 0 / 1 / 5 / 10		Prise en charge RAID 0 / 1 / 5 / 10	
Support SE	Windows XP / Vista / 7 Biostar se réserve le droit d'ajouter ou de supprimer le support de SE avec ou sans préavis.		Windows XP / Vista / 7 Biostar se réserve le droit d'ajouter ou de supprimer le support de SE avec ou sans préavis.	

ITALIAN

	TA890GXE	*TA880GXE*
CPU	Socket AM3 Processori AMD Phenom II / Athlon II / Sempron L'architettura AMD 64 abilita la computazione 32 e 64 bit Supporto di Hyper Transport 3.0 e Cool'n'Quiet (Watt massimo: 140W)	Socket AM3 Processori AMD Phenom II / Athlon II / Sempron L'architettura AMD 64 abilita la computazione 32 e 64 bit Supporto di Hyper Transport 3.0 e Cool'n'Quiet (Watt massimo: 140W)
FSB	Supporto di HyperTransport 3.0 fino a 5.2 GT/s (OC) di larghezza di banda	Supporto di HyperTransport 3.0 fino a 5.2 GT/s (OC) di larghezza di banda
Chipset	AMD 890GX AMD SB850	AMD 880G AMD SB850
Super I/O	ITE 8721 Fornisce le funzionalità legacy Super I/O usate più comunemente. Interfaccia LPC (Low Pin Count) Funzioni di controllo dell'ambiente: Monitoraggio hardware Funzione "Smart Guardian" di ITE	ITE 8721 Fornisce le funzionalità legacy Super I/O usate più comunemente. Interfaccia LPC (Low Pin Count) Funzioni di controllo dell'ambiente: Monitoraggio hardware Funzione "Smart Guardian" di ITE
Memoria principale	Alloggi DIMM DDR3 x 4 Capacità massima della memoria 16GB Ciascun DIMM supporta DDR3 512MB e 1GB/2GB/4GB Modulo di memoria DDR3 a canale doppio Supporto di DDR3 800 / 1066 / 1333 Supporto di DDR3 1600 (OC) DIMM registrati e DIMM ECC non sono supportati	Alloggi DIMM DDR3 x 4 Capacità massima della memoria 16GB Ciascun DIMM supporta DDR3 512MB e 1GB/2GB/4GB Modulo di memoria DDR3 a canale doppio Supporto di DDR3 800 / 1066 / 1333 Supporto di DDR3 1600 (OC) DIMM registrati e DIMM ECC non sono supportati
Grafica	Integrata nel Chipset AMD 890GX (HD4290) La memoria video condivisa massima è di 512 MB Supporto DX10.1 / UVD 2.0 / HYBRID CFX	Integrata nel Chipset AMD 880G (HD4250) La memoria video condivisa massima è di 512 MB Supporto DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Modalità Bus Master Ultra DMA 33 / 66 / 100 / 133 Supporto modalità PIO Mode 0-4	VIA VT6330 Modalità Bus Master Ultra DMA 33 / 66 / 100 / 133 Supporto modalità PIO Mode 0-4
SATA III	Controller Serial ATA integrato Velocità di trasferimento dei dati fino a 6 Gb/s. Compatibile specifiche SATA Versione 3.0.	Controller Serial ATA integrato Velocità di trasferimento dei dati fino a 6 Gb/s. Compatibile specifiche SATA Versione 3.0.
LAN	Realtek RTL 8111DL Negoziazione automatica 10 / 100 / 1000 Mb/s Capacità Half / Full Duplex	Realtek RTL 8111DL Negoziazione automatica 10 / 100 / 1000 Mb/s Capacità Half / Full Duplex

	TA890GXE	***TA880GXE***
Supporto audio HD	ALC892 Uscita audio 7.1 canali Supporto audio High-Definition (HD)	ALC892 Uscita audio 7.1 canali Supporto audio High-Definition (HD)
IEEE 1394	VIA VT6330	VIA VT6330
Alloggi	Alloggio PCI Express Gen2 x16 x1 Alloggio PCI Express Gen2 x1 x1 Alloggio PCI x2	Alloggio PCI Express Gen2 x16 x1 Alloggio PCI Express Gen2 x1 x1 Alloggio PCI x2
Connettori su scheda	Connettore IDE x1 Connettore SATA x5 Connettore pannello frontale x1 Connettore audio frontale x1 Connettore output SPDIF x1 Collettore ventolina CPU x1 Collettore ventolina sistema x2 Collettore cancellazione CMOS x1 Connettore USB x3 Connettore IEEE 1394 x1 Connettore IR del consumatore x1 Connettore alimentazione (24 pin) x1 Connettore alimentazione (4 pin) x1 Connettore Porta seriale x1	Connettore IDE x1 Connettore SATA x5 Connettore pannello frontale x1 Connettore audio frontale x1 Connettore output SPDIF x1 Collettore ventolina CPU x1 Collettore ventolina sistema x2 Collettore cancellazione CMOS x1 Connettore USB x3 Connettore IEEE 1394 x1 Connettore IR del consumatore x1 Connettore alimentazione (24 pin) x1 Connettore alimentazione (4 pin) x1 Connettore Porta seriale x1
I/O pannello posteriore	Tastiera PS/2 x1 Mouse PS/2 x1 S/PDIF Fuori x1 Porta HDMI x1 Porta VGA x1 Porta DVI-D x1 Porta 1394 x1 Porta eSATA2 x1 Porta LAN x1 Porta USB x4 Connettore audio x6	Tastiera PS/2 x1 Mouse PS/2 x1 S/PDIF Fuori x1 Porta HDMI x1 Porta VGA x1 Porta DVI-D x1 Porta 1394 x1 Porta eSATA2 x1 Porta LAN x1 Porta USB x4 Connettore audio x6
Dimensioni scheda	244 mm (larghezza) x 244 mm (altezza)	244 mm (larghezza) x 244 mm (altezza)
Caratteristiche speciali	Supporto RAID 0 / 1 / 5 / 10	Supporto RAID 0 / 1 / 5 / 10
Sistemi operativi supportati	Windows XP / Vista / 7 Biostar si riserva il diritto di aggiungere o rimuovere il supporto di qualsiasi sistema operativo senza preavviso.	Windows XP / Vista / 7 Biostar si riserva il diritto di aggiungere o rimuovere il supporto di qualsiasi sistema operativo senza preavviso.

SPANISH

	TA890GXE	*TA880GXE*
CPU	Conector AM3 Procesadores AMD Phenom II / Athlon II / Sempron La arquitectura AMD 64 permite el procesado de 32 y 64 bits Soporta las tecnologías Hyper Transport 3.0 y Cool'n'Quiet (Vatio máximo: 140W)	Conector AM3 Procesadores AMD Phenom II / Athlon II / Sempron La arquitectura AMD 64 permite el procesado de 32 y 64 bits Soporta las tecnologías Hyper Transport 3.0 y Cool'n'Quiet (Vatio máximo: 140W)
FSB	Admite HyperTransport 3.0 con un ancho de banda de hasta 5.2 GT/s (OC)	Admite HyperTransport 3.0 con un ancho de banda de hasta 5.2 GT/s (OC)
Conjunto de chips	AMD 890GX AMD SB850	AMD 880G AMD SB850
Súper E/S	ITE 8721 Le ofrece las funcionalidades heredadas de uso más común Súper E/S. Interfaz de cuenta Low Pin Iniciativas de control de entorno, Monitor hardware Función "Guardia inteligente" de ITE	ITE 8721 Le ofrece las funcionalidades heredadas de uso más común Súper E/S. Interfaz de cuenta Low Pin Iniciativas de control de entorno, Monitor hardware Función "Guardia inteligente" de ITE
Memoria principal	Ranuras DIMM DDR3 x 4 Capacidad máxima de memoria de 16GB Cada DIMM admite DDR de 512MB y 1GB/2GB/4GB Módulo de memoria DDR3 de canal Doble Admite DDR3 de 800 / 1066 / 1333 Admite DDR3 de 1600 (OC) No admite DIMM registrados o DIMM compatibles con ECC	Ranuras DIMM DDR3 x 4 Capacidad máxima de memoria de 16GB Cada DIMM admite DDR de 512MB y 1GB/2GB/4GB Módulo de memoria DDR3 de canal Doble Admite DDR3 de 800 / 1066 / 1333 Admite DDR3 de 1600 (OC) No admite DIMM registrados o DIMM compatibles con ECC
Gráficos	Integrados en el conjunto de chips AMD 890GX (HD4290) Memoria máxima de vídeo compartida de 512 MB Admite DX10.1 / UVD 2.0 / HYBRID CFX	Integrados en el conjunto de chips AMD 880G (HD4250) Memoria máxima de vídeo compartida de 512 MB Admite DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Modo bus maestro Ultra DMA 33 / 66 / 100 / 133 Soporte los Modos PIO 0~4,	VIA VT6330 Modo bus maestro Ultra DMA 33 / 66 / 100 / 133 Soporte los Modos PIO 0~4,
SATA III	Controlador ATA Serie Integrado Tasas de transferencia de hasta 6 Gb/s. Compatible con la versión SATA 3.0.	Controlador ATA Serie Integrado Tasas de transferencia de hasta 6 Gb/s. Compatible con la versión SATA 3.0.
Red Local	Realtek RTL 8111DL Negociación de 10 / 100 / 1000 Mb/s Funciones Half / Full dúplex	Realtek RTL 8111DL Negociación de 10 / 100 / 1000 Mb/s Funciones Half / Full dúplex

	TA890GXE		***TA880GXE***	
Soporte de sonido HD	ALC892 Salida de sonido de 7.1 canales Soporte de sonido Alta Definición		ALC892 Salida de sonido de 7.1 canales Soporte de sonido Alta Definición	
IEEE 1394	VIA VT6330		VIA VT6330	
Ranuras	Ranura PCI Express Gen2 x16 Ranura PCI Express Gen2 x 1 Ranura PCI	X1 X1 X2	Ranura PCI Express Gen2 x16 Ranura PCI Express Gen2 x 1 Ranura PCI	X1 X1 X2
Conectores en placa	Conector IDE Conector SATA Conector de panel frontal Conector de sonido frontal Conector de salida S/PDIF Cabecera de ventilador de CPU Cabecera de ventilador de sistema Cabecera de borrado de CMOS Conector USB Cabecera IEEE 1394 Conector de IR del consumidor Conector de alimentación (24 patillas) Conector de alimentación (4 patillas) Conector Puerto serie	X1 X5 X1 X1 X1 X1 X2 X1 X3 x1 X1 X1 X1 X1	Conector IDE Conector SATA Conector de panel frontal Conector de sonido frontal Conector de salida S/PDIF Cabecera de ventilador de CPU Cabecera de ventilador de sistema Cabecera de borrado de CMOS Conector USB Cabecera IEEE 1394 Conector de IR del consumidor Conector de alimentación (24 patillas) Conector de alimentación (4 patillas) Conector Puerto serie	X1 X5 X1 X1 X1 X1 X2 X1 X3 x1 X1 X1 X1 X1
Panel trasero de E/S	Teclado PS/2 Ratón PS/2 Salida S/PDIF Ratón HDMI Puerto VGA Puerto DVI-D Puerto 1394 Puerto eSATA2 Puerto de red local Puerto USB Conector de sonido	X1 X1 x1 X1 X1 X1 x1 X1 X1 X4 X6	Teclado PS/2 Ratón PS/2 Salida S/PDIF Ratón HDMI Puerto VGA Puerto DVI-D Puerto 1394 Puerto eSATA2 Puerto de red local Puerto USB Conector de sonido	X1 X1 x1 X1 X1 X1 x1 X1 X1 X4 X6
Tamaño de la placa	244 mm. (A) X 244 Mm. (H)		244 mm. (A) X 244 Mm. (H)	
Funciones especiales	Admite RAID 0 / 1 / 5 / 10		Admite RAID 0 / 1 / 5 / 10	
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.		Windows XP / Vista / 7 Biostar se reserva el derecho de añadir o retirar el soporte de cualquier SO con o sin aviso previo.	

PORTUGUESE

	TA890GXE	*TA880GXE*
CPU	Socket AM3 Processadores AMD Phenom II / Athlon II / Sempron A arquitectura AMD 64 permite uma computação de 32 e 64 bits Suporta as tecnologias Hyper Transport 3.0 e Cool'n'Quiet (Watt máximo: 140W)	Socket AM3 Processadores AMD Phenom II / Athlon II / Sempron A arquitectura AMD 64 permite uma computação de 32 e 64 bits Suporta as tecnologias Hyper Transport 3.0 e Cool'n'Quiet (Watt máximo: 140W)
FSB	Suporta a tecnologia HyperTransport 3.0 com uma largura de banda até 5.2 GT/s (OC)	Suporta a tecnologia HyperTransport 3.0 com uma largura de banda até 5.2 GT/s (OC)
Chipset	AMD 890GX AMD SB850	AMD 880G AMD SB850
Especificação Super I/O	ITE 8721 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 Função "Smart Guardian" da ITE	ITE 8721 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 Função "Smart Guardian" da ITE
Memória principal	Ranhuras DIMM DDR3 x 4 Capacidade máxima de memória: 16 GB Cada módulo DIMM suporta uma memória DDR3 de 512 MB & 1 GB/2 GB/4 GB Módulo de memória DDR3 de canal duplo Suporta módulos DDR3 800 / 1066 / 1333 Suporta módulos DDR3 1600 (OC) Os módulos DIMM registados e os DIMM ECC não são suportados	Ranhuras DIMM DDR3 x 4 Capacidade máxima de memória: 16 GB Cada módulo DIMM suporta uma memória DDR3 de 512 MB & 1 GB/2 GB/4 GB Módulo de memória DDR3 de canal duplo Suporta módulos DDR3 800 / 1066 / 1333 Suporta módulos DDR3 1600 (OC) Os módulos DIMM registados e os DIMM ECC não são suportados
Placa gráfica	Integrada no chipset AMD 890GX (HD4290) Memória de vídeo máxima partilhada: 512 MB Suporta as funções DX10.1 / UVD 2.0 / HYBRID CFX	Integrada no chipset AMD 880G (HD4250) Memória de vídeo máxima partilhada: 512 MB Suporta as funções DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Modo Bus master Ultra DMA 33 / 66 / 100 / 133 Suporta o modo PIO 0~4,	VIA VT6330 Modo Bus master Ultra DMA 33 / 66 / 100 / 133 Suporta o modo PIO 0~4,
SATA III	Controlador Serial ATA integrado Velocidades de transmissão de dados até 6 Gb/s. Compatibilidade com a especificação SATA versão 3.0.	Controlador Serial ATA integrado Velocidades de transmissão de dados até 6 Gb/s. Compatibilidade com a especificação SATA versão 3.0.
LAN	Realtek RTL 8111DL Auto negociação de 10 / 100 / 1000 Mb/s Capacidade semi/full-duplex	Realtek RTL 8111DL Auto negociação de 10 / 100 / 1000 Mb/s Capacidade semi/full-duplex

	TA890GXE		*TA880GXE*	
Suporte para áudio de alta definição	ALC892 Saída de áudio de 7.1 canais Suporta a especificação High-Definition Audio		ALC892 Saída de áudio de 7.1 canais Suporta a especificação High-Definition Audio	
IEEE 1394	VIA VT6330		VIA VT6330	
Ranhuras	Ranhura PCI Express Gen2 x16 Ranhura PCI Express Gen2 x 1 Ranhura PCI	x1 x1 x2	Ranhura PCI Express Gen2 x16 Ranhura PCI Express Gen2 x 1 Ranhura PCI	x1 x1 x2
Conectores na placa	Conector IDE Conector SATA Conector do painel frontal Conector de áudio frontal Conector de saída S/PDIF Conector da ventoinha da CPU Conector da ventoinha do sistema Conector para limpeza do CMOS Conector USB Conector IEEE 1394 Conector de IR do consumidor Conector de alimentação (24 pinos) Conector de alimentação (4 pinos) Conector da Porta série	x1 x5 x1 x1 x1 x1 x2 x1 x3 x1 x1 x1 x1 x1	Conector IDE Conector SATA Conector do painel frontal Conector de áudio frontal Conector de saída S/PDIF Conector da ventoinha da CPU Conector da ventoinha do sistema Conector para limpeza do CMOS Conector USB Conector IEEE 1394 Conector de IR do consumidor Conector de alimentação (24 pinos) Conector de alimentação (4 pinos) Conector da Porta série	x1 x5 x1 x1 x1 x1 x2 x1 x3 x1 x1 x1 x1 x1
Entradas/Saídas no painel traseiro	Teclado PS/2 Rato PS/2 Saída S/PDIF Porta HDMI Porta VGA Porta DVI-D Porta 1394 Porta eSATA2 Porta LAN Porta USB Tomada de áudio	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6	Teclado PS/2 Rato PS/2 Saída S/PDIF Porta HDMI Porta VGA Porta DVI-D Porta 1394 Porta eSATA2 Porta LAN Porta USB Tomada de áudio	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6
Tamanho da placa	244 mm (L) X 244 mm (A)		244 mm (L) X 244 mm (A)	
Características especiais	Suporta as funções RAID 0 / 1 / 5 / 10		Suporta as funções RAID 0 / 1 / 5 / 10	
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.		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

	TA890GXE	*TA880GXE*
Procesor	Socket AM3 AMD Phenom II / Athlon II / Sempron Procesory Architektura AMD 64 umożliwia przetwarzanie 32 i 64 bitowe Obsługa Hyper Transport 3.0 oraz Cool'n'Quiet (Maksymalny Watt: 140W)	Socket AM3 AMD Phenom II / Athlon II / Sempron Procesory Architektura AMD 64 umożliwia przetwarzanie 32 i 64 bitowe Obsługa Hyper Transport 3.0 oraz Cool'n'Quiet (Maksymalny Watt: 140W)
FSB	Obsługa HyperTransport 3.0 o szerokości pasma do 5.2 GT/s (OC)	Obsługa HyperTransport 3.0 o szerokości pasma do 5.2 GT/s (OC)
Chipset	AMD 890GX AMD SB850	AMD 880G AMD SB850
Pamięć główna	Gniazda DDR3 DIMM x 4 Maks. wielkość pamięci 16GB Każde gniazdo DIMM obsługuje moduły 512MB oraz 1GB/2GB/4GB DDR3 Moduł pamięci DDR3 z trybem podwójnego kanału Obsługa DDR3 800 / 1066 / 1333 Obsługa DDR3 1600 (OC) Brak obsługi Registered DIMM oraz ECC DIMM	Gniazda DDR3 DIMM x 4 Maks. wielkość pamięci 16GB Każde gniazdo DIMM obsługuje moduły 512MB oraz 1GB/2GB/4GB DDR3 Moduł pamięci DDR3 z trybem podwójnego kanału Obsługa DDR3 800 / 1066 / 1333 Obsługa DDR3 1600 (OC) Brak obsługi Registered DIMM oraz ECC DIMM
Super I/O	ITE 8721 Zapewnia najbardziej powszechne funkcje Super I/O. Interfejs Low Pin Count Funkcje kontroli warunków pracy, Monitor H/W Funkcja ITE "Smart Guardian"	ITE 8721 Zapewnia najbardziej powszechne funkcje Super I/O. Interfejs Low Pin Count Funkcje kontroli warunków pracy, Monitor H/W Funkcja ITE "Smart Guardian"
Grafika	Zintegrowana w chipsecie AMD 890GX (HD4290) Maks. wielkość współdzielonej pamięci video wynosi 512 MB Obsługa DX10.1 / UVD 2.0 / HYBRID CFX	Zintegrowana w chipsecie AMD 880G (HD4250) Maks. wielkość współdzielonej pamięci video wynosi 512 MB Obsługa DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133 Tryb Bus Master obsługa PIO tryb 0~4,	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133 Tryb Bus Master obsługa PIO tryb 0~4,
SATA III	Zintegrowany kontroler Serial ATA Transfer danych do 6 Gb/s. Zgodność ze specyfikacją SATA w wersji 3.0.	Zintegrowany kontroler Serial ATA Transfer danych do 6 Gb/s. Zgodność ze specyfikacją SATA w wersji 3.0.
LAN	Realtek RTL 8111DL 110 / 100 / 1000 Mb/s z automatyczną negocjacją szybkości Działanie w trybie połowicznego / pełnego dupleksu	Realtek RTL 8111DL 10 / 100 / 1000 Mb/s z automatyczną negocjacją szybkości Działanie w trybie połowicznego / pełnego dupleksu

	TA890GXE		***TA880GXE***	
Obsługa audio HD	ALC892 7.1 kanałowe wyjście audio Obsługa High-Definition Audio		ALC892 7.1 kanałowe wyjście audio Obsługa High-Definition Audio	
IEEE 1394	VIA VT6330		VIA VT6330	
Gniazda	Gniazdo PCI Express Gen2 x16 Gniazdo PCI Express Gen2 x 1 Gniazdo PCI	x1 x1 x2	Gniazdo PCI Express Gen2 x16 Gniazdo PCI Express Gen2 x 1 Gniazdo PCI	x1 x1 x2
Złącza wbudowane	Złącze IDE Złącze SATA Złącze panela przedniego Przednie złącze audio Złącze wyjścia S/PDIF Złącze główkowe wentylatora procesora x1 Złącze główkowe wentylatora systemowego x2 Złącze główkowe kasowania CMOS Złącze USB Złącze IEEE 1394 Złącze Konsument IR Złącze zasilania (24 pinowe) Złącze zasilania (4 pinowe) Złącze Port szeregowy	x1 x5 x1 x1 x1 x1 x3 x1 x1 x1 x1 x1	Złącze IDE Złącze SATA Złącze panela przedniego Przednie złącze audio Złącze wyjścia S/PDIF Złącze główkowe wentylatora procesora x1 Złącze główkowe wentylatora systemowego x2 Złącze główkowe kasowania CMOS Złącze USB Złącze IEEE 1394 Złącze Konsument IR Złącze zasilania (24 pinowe) Złącze zasilania (4 pinowe) Złącze Port szeregowy	x1 x5 x1 x1 x1 x1 x3 x1 x1 x1 x1 x1
Back Panel I/O	Klawiatura PS/2 Mysz PS/2 Wyjścia S/PDIF Port HDMI Port VGA Port DVI-D Port 1394 Port eSATA2 Port LAN Port USB Gniazdo audio	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6	Klawiatura PS/2 Mysz PS/2 Wyjścia S/PDIF Port HDMI Port VGA Port DVI-D Port 1394 Port eSATA2 Port LAN Port USB Gniazdo audio	x1 x1 x1 x1 x1 x1 x1 x1 x1 x4 x6
Wymiary płyty	244 mm (S) X 244 mm (W)		244 mm (S) X 244 mm (W)	
Funkcje specjalne	Obsługa RAID 0 / 1 / 5 / 10		Obsługa RAID 0 / 1 / 5 / 10	
Obsługa systemu operacyjnego	Windows XP / Vista / 7 Biostar zastrzega sobie prawo dodawania lub odwoływania obsługi dowolnego systemu operacyjnego bez powiadomienia.		Windows XP / Vista / 7 Biostar zastrzega sobie prawo dodawania lub odwoływania obsługi dowolnego systemu operacyjnego bez powiadomienia.	

RUSSIAN

	TA890GXE	*TA880GXE*
CPU (центральный процессор)	Гнездо AM3 Процессоры AMD Phenom II / Athlon II / Sempron Архитектура AMD 64 разрешать обработка данных на 32 и 64 бит Поддержка Hyper Transport 3.0 и Cool'n'Quiet (Максимальный ватт: 140W)	Гнездо AM3 Процессоры AMD Phenom II / Athlon II / Sempron Архитектура AMD 64 разрешать обработка данных на 32 и 64 бит Поддержка Hyper Transport 3.0 и Cool'n'Quiet (Максимальный ватт: 140W)
FSB	Поддержка HyperTransport 3.0 с пропускной способностью до 5.2 GT/s (OC)	Поддержка HyperTransport 3.0 с пропускной способностью до 5.2 GT/s (OC)
Набор микросхем	AMD 890GX AMD SB850	AMD 880G AMD SB850
Основная память	Слоты DDR3 DIMM x 4 Максимальная ёмкость памяти 16 ГБ Каждый модуль DIMM поддерживает 512МБ & 1ГБ/2ГБ/4ГБ DDR3 Модуль памяти с двухканальным режимом DDR3 Поддержка DDR3 800 / 1066 / 1333 Поддержка DDR3 1600 (OC) Не поддерживает зарегистрированные модули DIMM and ECC DIMM	Слоты DDR3 DIMM x 4 Максимальная ёмкость памяти 16 ГБ Каждый модуль DIMM поддерживает 512МБ & 1ГБ/2ГБ/4ГБ DDR3 Модуль памяти с двухканальным режимом DDR3 Поддержка DDR3 800 / 1066 / 1333 Поддержка DDR3 1600 (OC) Не поддерживает зарегистрированные модули DIMM and ECC DIMM
Super I/O	ITE 8721 Обеспечивает наиболее используемые действующие функциональные возможности Super I/O. Интерфейс с низким количеством выводов Инициативы по охране окружающей среды, Аппаратный монитор Функция ITE "Smart Guardian" (Интеллектуальная защита)	ITE 8721 Обеспечивает наиболее используемые действующие функциональные возможности Super I/O. Интерфейс с низким количеством выводов Инициативы по охране окружающей среды, Аппаратный монитор Функция ITE "Smart Guardian" (Интеллектуальная защита)
Графика	Встроенная в набор микросхем AMD 890GX (HD4290) Максимальная совместно используемая видео память составляет 512 МБ Поддержка DX10.1 / UVD 2.0 / HYBRID CFX	Встроенная в набор микросхем AMD 880G (HD4250) Максимальная совместно используемая видео память составляет 512 МБ Поддержка DX10.1 / UVD 2.0 / HYBIRD CFX
IDE	VIA VT6330 Режим "хозяина" шины Ultra DMA 33 / 66 / 100 / 133 Поддержка режима PIO 0~4,	VIA VT6330 Режим "хозяина" шины Ultra DMA 33 / 66 / 100 / 133 Поддержка режима PIO 0~4,
SATA III	Встроенное последовательное устройство управления ATA скорость передачи данных до 6 гигабит/с. Соответствие спецификации SATA версия 3.0.	Встроенное последовательное устройство управления ATA скорость передачи данных до 6 гигабит/с. Соответствие спецификации SATA версия 3.0.
Локальная сеть	Realtek RTL 8111DL Автоматическое согласование 10 / 100 / 1000 Мб/с Частичная / полная дуплексная способность	Realtek RTL 8111DL Автоматическое согласование 10 / 100 / 1000 Мб/с Частичная / полная дуплексная способность

	TA890GXE	***TA880GXE***
Звуковая поддержка жесткого диска	ALC892 Звуковая поддержка High-Definition 7.1канальный звуковой выход	ALC892 Звуковая поддержка High-Definition 7.1канальный звуковой выход
IEEE 1394	VIA VT6330	VIA VT6330
Слоты	Слот PCI Express Gen2 x16 x1 Слот PCI Express Gen2 x 1 x1 Слот PCI x2	Слот PCI Express Gen2 x16 x1 Слот PCI Express Gen2 x 1 x1 Слот PCI x2
Встроенный разъём	Разъём IDE x1 Разъём SATA x4 Разъём на лицевой панели x1 Входной звуковой разъём x1 Разъём вывода для S/PDIF x1 Контактирующее приспособление вентилятора центрального процессора x1 Контактирующее приспособление вентилятора системы x2 Открытое контактирующее приспособление CMOS x1 USB-разъём x3 IEEE 1394-разъём x1 Разъём едока ИКЫЙ x1 Разъем питания (24 вывод) x1 Разъем питания (4 вывод) x1 Разъём Последовательный порт x1	Разъём IDE x1 Разъём SATA x4 Разъём на лицевой панели x1 Входной звуковой разъём x1 Разъём вывода для S/PDIF x1 Контактирующее приспособление вентилятора центрального процессора x1 Контактирующее приспособление вентилятора системы x2 Открытое контактирующее приспособление CMOS x1 USB-разъём x3 IEEE 1394-разъём x1 Разъём едока ИКЫЙ x1 Разъем питания (24 вывод) x1 Разъем питания (4 вывод) x1 Разъём Последовательный порт x1
Задняя панель средств ввода-вывода	Клавиатура PS/2 x1 Мышь PS/2 x1 вывода для S/PDIF x1 Порт HDMI x1 Порт VGA x1 Порт DVI-D x1 1394-порт x1 eSATA2 порт x1 Порт LAN x1 USB-порт x4 Гнездо для подключения наушников x6	Клавиатура PS/2 x1 Мышь PS/2 x1 вывода для S/PDIF x1 Порт HDMI x1 Порт VGA x1 Порт DVI-D x1 1394-порт x1 eSATA2 порт x1 Порт LAN x1 USB-порт x4 Гнездо для подключения наушников x6
Размер панели	244 мм (Ш) X 244 мм (В)	244 мм (Ш) X 244 мм (В)
Специальные технические характеристики	Поддержка RAID 0 / 1 / 5 / 10	Поддержка RAID 0 / 1 / 5 / 10
Поддержка OS	Windows XP / Vista / 7 Biostar сохраняет за собой право добавлять или удалять средства обеспечения для OS с или без предварительного уведомления.	Windows XP / Vista / 7 Biostar сохраняет за собой право добавлять или удалять средства обеспечения для OS с или без предварительного уведомления.

ARABIC

	TA890GXE	TA880GXE
وحدة المعالجة المركزية	AM3مقبس AMD Phenom II / Athlon II / Sempronمعالجات إجراء العمليات الحلسوبية بسرعة 32 و 64 بتAMD 64تمكن تقنية Cool'n'Quiet و 3.0 Hyper Transportتدعم تقنية (و140 :قصـوى واط)	AM3مقبس AMD Phenom II / Athlon II / Sempronمعالجات إجراء العمليات الحلسوبية بسرعة 32 و 64 بتAMD 64تمكن تقنية Cool'n'Quiet و 3.0 Hyper Transportتدعم تقنية (و140 :قصـوى واط)
الناقل الأمامي الجانبي	5.2 GT/s بتردد يصل إلى3.0 HyperTransportتدعم تقنية (OC)	5.2 GT/s بتردد يصل إلى3.0 HyperTransportتدعم تقنية (OC)
مجموعة الشرائح	AMD 890GX AMD SB850	AMD 880G AMD SB850
Super I/O	ITE 8721 الأكثر استخداماً. Super I/Oتوفر وظيفة Low Pin Count Interfaceتدعم تقنية وسائل التحكم في البيئة: مراقب لمعرفة حالة الأجهزة ITE من "Smart Guardian"وظيفة	ITE 8721 الأكثر استخداماً. Super I/Oتوفر وظيفة Low Pin Count Interfaceتدعم تقنية وسائل التحكم في البيئة: مراقب لمعرفة حالة الأجهزة ITE من "Smart Guardian"وظيفة
الذاكرة الرئيسية	فتحة DDR3 DIMM عدد4 سعة ذاكرة قصوى 16 جيجا بايت ميجا بايت 512سعة DDR3 تدعم ذاكرة من نوع DIMMتدعم كل فتحة و1/و2/و4 جيجا بايت مزدوجة القناةDDR3وحدة ذاكرة سعت 800 / 1066 / 1333 ميجا بايتDDR3تدعم الذاكرة من نوع سعت 1600 (OC) ميجا بايتDDR3تدعم الذاكرة من نوع ECC وتلك التي لا تتوافق مع DIMMلا تدعم رقائق الذاكرة	فتحة DDR3 DIMM عدد4 سعة ذاكرة قصوى 16 جيجا بايت ميجا بايت 512سعة DDR3 تدعم ذاكرة من نوع DIMMتدعم كل فتحة و1/و2/و4 جيجا بايت مزدوجة القناةDDR3وحدة ذاكرة سعت 800 / 1066 / 1333 ميجا بايتDDR3تدعم الذاكرة من نوع سعت 1600 (OC) ميجا بايتDDR3تدعم الذاكرة من نوع ECC وتلك التي لا تتوافق مع DIMMلا تدعم رقائق الذاكرة
بطاقة الرسومات	AMD 890GX (HD4290) مدمجة في رقائق ميجا بايت512أقصى سعة لذاكرة الفيديو المشتركة DX10.1 / UVD 2.0 / Hybrid CFXتدعم تقنية	AMD 880G (HD4250) مدمجة في رقائق ميجا بايت512أقصى سعة لذاكرة الفيديو المشتركة DX10.1 / UVD 2.0 / HYBIRD CFXتدعم تقنية
منفذ IDE	VIA VT6330 وضع رئيسي133 / 100 / 66 / 33 Ultra DMAناقل بتقنية PIO Mode 0~4تدعم وضع	VIA VT6330 وضع رئيسي133 / 100 / 66 / 33 Ultra DMAناقل بتقنية PIO Mode 0~4تدعم وضع
SATA III	متكامل Serial ATAمتحكم جيجابت/ثانية.6نقل البيانات بسرعات تصل إلى 3.0. الإصدار SATAمطابقة لمواصفات	متكامل Serial ATAمتحكم جيجابت/ثانية.6نقل البيانات بسرعات تصل إلى 3.0. الإصدار SATAمطابقة لمواصفات
شبكة داخلية	Realtek RTL 8111DL تفاوض تلقائي 100/10 ميجا بايت / ثانية و1جيجا بت/ثانية إمكانية النقل المزدوج الكامل/النصفي	Realtek RTL 8111DL تفاوض تلقائي 100/10 ميجا بايت / ثانية و1جيجا بت/ثانية إمكانية النقل المزدوج الكامل/النصفي
دعم الصوت عالي التعريف	ALC892 قوات لخرج الصوت7.1 تدعم تقنية الصوت عالي التعريف من	ALC892 قوات لخرج الصوت7.1 تدعم تقنية الصوت عالي التعريف من

	TA890GXE		TA880GXE	
IEEE 1394	VIA VT6330		VIA VT6330	
القحات	فتحة PCI Express Gen2 x16	عدد 1	فتحة PCI Express Gen2 x16	عدد 1
	فتحة PCI Express Gen2 x 1	عدد 1	فتحة PCI Express Gen2 x 1	عدد 1
	فتحة PCI	عدد2	فتحة PCI	عدد2
المنافذ على سطح اللوحة	منفذ IDE	عدد 1	منفذ IDE	عدد 1
	منفذ SATA	عدد5	منفذ SATA	عدد5
	منفذ اللوحة الأمامية	عدد 1	منفذ اللوحة الأمامية	عدد 1
	منفذ الصوت الأمامي	عدد 1	منفذ الصوت الأمامي	عدد 1
	منفذ خرج S/PDIF	عدد 1	منفذ خرج S/PDIF	عدد 1
	وصلة مروحة وحدة المعالجة المركزية	عدد 1	وصلة مروحة وحدة المعالجة المركزية	عدد 1
	وصلة مروحة النظام	عدد 2	وصلة مروحة النظام	عدد 2
	وصلة مسح CMOS	عدد 1	وصلة مسح CMOS	عدد 1
	منفذ USB	عدد 3	منفذ USB	عدد 3
	منفذ IEEE 1394	عدد 1	منفذ IEEE 1394	عدد 1
	منفذ الأحمر تحت مستهلكة	عدد 1	منفذ الأحمر تحت مستهلكة	عدد 1
	منفذ توصيل الطاقة (24ثبوس)	عدد 1	منفذ توصيل الطاقة (24ثبوس)	عدد 1
	منفذ توصيل الطاقة (4ثبوس)	عدد 1	منفذ توصيل الطاقة (4ثبوس)	عدد 1
	منفذ تسلسلي	عدد 1	منفذ تسلسلي	عدد 1
منافذ دخل/خرج اللوحة الخلفية	لوحة مفاتيح PS/2	عدد 1	لوحة مفاتيح PS/2	عدد 1
	ماوس PS/2	عدد 1	ماوس PS/2	عدد 1
	منفذ خرج S/PDIF	عدد 1	منفذ خرج S/PDIF	عدد 1
	منافذ HDMI	عدد 1	منافذ HDMI	عدد 1
	منافذ VGA	عدد 1	منافذ VGA	عدد 1
	منافذ DVI-D	عدد 1	منافذ DVI-D	عدد 1
	منافذ 1394	عدد 1	منافذ 1394	عدد 1
	منفذ eSATA2	عدد1	منفذ eSATA2	عدد1
	منفذ شبكة اتصال محلية	عدد 1	منفذ شبكة اتصال محلية	عدد 1
	منافذ USB	عدد 4	منافذ USB	عدد 4
	مقبس صوت	عدد 6	مقبس صوت	عدد 6
حجم اللوحة	244مم (عرض) X 244 مم (ارتفاع)		244مم (عرض) X 244 مم (ارتفاع)	
مزايا خاصة	RAID 0 / 1 / 5 / 10 تدعم تقنية		RAID 0 / 1 / 5 / 10 تدعم تقنية	
دعم أنظمة التشغيل	Windows XP / Vista / 7 بحقها في إضافة أو إزالة الدعم لأي نظام تشغيل بإخطار أو Biostar تحتفظ بدون إخطار.		Windows XP / Vista / 7 بحقها في إضافة أو إزالة الدعم لأي نظام تشغيل بإخطار أو Biostar تحتفظ بدون إخطار.	

JAPANESE

	TA890GXE	TA880GXE
CPU	Socket AM3 AMD Phenom II / 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 ハイパートランスポート3.0とクールアンドクワイアットをサポートします (最高のワット: 140W)	Socket AM3 AMD Phenom II / 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 ハイパートランスポート3.0とクールアンドクワイアットをサポートします (最高のワット: 140W)
FSB	5.2 GT/s (OC)のバンド幅までハイパートランスポート3.0をサポートします	5.2 GT/s (OC)のバンド幅までハイパートランスポート3.0をサポートします
チップセット	AMD 890GX AMD SB850	AMD 880G AMD SB850
メインメモリ	DDR3 DIMMスロット x 4 最大メモリ容量16GB 各DIMMは 512MB & 1GB/2GB/4GB 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 をサポート DDR3 1600 (OC) をサポート 登録済みDIMMとECC DIMMはサポートされません	DDR3 DIMMスロット x 4 最大メモリ容量16GB 各DIMMは 512MB & 1GB/2GB/4GB 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 をサポート DDR3 1600 (OC) をサポート 登録済みDIMMとECC DIMMはサポートされません
Super I/O	ITE 8721 もっ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ニシアチブ、 H/Wモニター ITEの「スマートガーディアン」機能	ITE 8721 もっ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ニシアチブ、 H/Wモニター ITEの「スマートガーディアン」機能
グラフィックス	AMD 890GXチップセットに統合(HD4290) 最大の共有ビデオメモリは512MBです DX10.1 / UVD 2.0 / HYBRID CFX のサポート	AMD 880Gチップセットに統合(HD4250) 最大の共有ビデオメモリは512MBです DX10.1 / UVD 2.0 / HYBIRD CFX のサポート
IDE	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133バスマスタモード PIO Mode 0~4のサポート、	VIA VT6330 Ultra DMA 33 / 66 / 100 / 133バスマスタモード PIO Mode 0~4のサポート、
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。	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。
LAN	Realtek RTL 8111DL 10 / 100 / 1000 Mb/秒のオートネゴシエーション 半/全二重機能	Realtek RTL 8111DL 10 / 100 / 1000 Mb/秒のオートネゴシエーション 半/全二重機能

	TA890GXE		*TA880GXE*	
HDオーディオのサポート	ALC892 7.1チャンネルオーディオアウト ハイデフィニションオーディオのサポート		ALC892 7.1チャンネルオーディオアウト ハイデフィニションオーディオのサポート	
IEEE 1394	VIA VT6330		VIA VT6330	
スロット	PCI Express Gen2 x16スロット	x1	PCI Express Gen2 x16スロット	x1
	PCI Express Gen2 x1スロット	x1	PCI Express Gen2 x1スロット	x1
	PCIスロット	x2	PCIスロット	x2
オンボードコネクタ	IDEコネクタ	x1	IDEコネクタ	x1
	SATAコネクタ	x5	SATAコネクタ	x5
	フロントパネルコネクタ	x1	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	フロントオーディオコネクタ	x1
	S/PDIFアウトコネクタ	x1	S/PDIFアウトコネクタ	x1
	CPUファンヘッダ	x1	CPUファンヘッダ	x1
	システムファンヘッダ	x2	システムファンヘッダ	x2
	CMOSクリアヘッダ	x1	CMOSクリアヘッダ	x1
	USBコネクタ	x3	USBコネクタ	x3
	IEEE 1394コネクタ	x1	IEEE 1394コネクタ	x1
	消費者IRコネクタ	x1	消費者IRコネクタ	x1
	電源コネクタ(24ピン)	x1	電源コネクタ(24ピン)	x1
	電源コネクタ(4ピン)	x1	電源コネクタ(4ピン)	x1
	シリアルポートコネクタ	x1	シリアルポートコネクタ	x1
背面パネルI/O	PS/2キーボード	x1	PS/2キーボード	x1
	PS/2マウス	x1	PS/2マウス	x1
	S/PDIFアウト	x1	S/PDIFアウト	x1
	HDMIポート	x1	HDMIポート	x1
	VGAポート	x1	VGAポート	x1
	DVI-Dポート	x1	DVI-Dポート	x1
	1394ポート	x1	1394ポート	x1
	eSATA2ポート	x1	eSATA2ポート	x1
	LANポート	x1	LANポート	x1
	USBポート	x4	USBポート	x4
	オーディオジャック	x6	オーディオジャック	x6
ボードサイズ	244 mm (幅) X 244 mm (高さ)		244 mm (幅) X 244 mm (高さ)	
特殊機能	RAID 0 / 1 / 5 / 10 のサポート		RAID 0 / 1 / 5 / 10 のサポート	
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。		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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