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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.

### **1.2 PACKAGE CHECKLIST**

-  HDD Cable X 1
-  Serial ATA Cable X 2
-  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 Adapter X 1 (optional)

**Note:** The package contents may differ by area or your motherboard version.

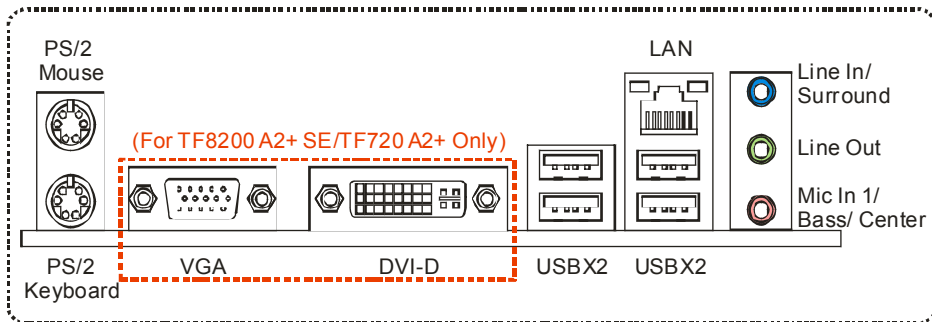
### 1.3 MOTHERBOARD FEATURES

|  | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|--|---|---|
| CPU  | Socket AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 x2 / Sempron / Phenom processors<br>AMD 64 Architecture enables 32 and 64 bit computing<br>Supports Hyper Transport 3.0 and PowerNow  | Socket AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 x2 / Sempron / Phenom processors<br>AMD 64 Architecture enables 32 and 64 bit computing<br>Supports Hyper Transport 3.0 and PowerNow  |
| FSB  | Support HyperTransport 3.0<br>Supports up to 5.2 GT/s Bandwidth   | Support HyperTransport 3.0<br>Supports up to 5.2 GT/s Bandwidth   |
| Chipset  | GeForce 8200  | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)   |
| Super I/O  | ITE 8718F<br>Provides the most commonly used legacy Super I/O functionality.<br>Low Pin Count Interface<br>Environment Control initiatives,<br>H/W Monitor<br>Fan Speed Controller<br>ITE's "Smart Guardian" function                                   | ITE 8718F<br>Provides the most commonly used legacy Super I/O functionality.<br>Low Pin Count Interface<br>Environment Control initiatives,<br>H/W Monitor<br>Fan Speed Controller<br>ITE's "Smart Guardian" function                                   |
| Main Memory  | DIMM Slots x 4<br>Each DIMM supports 256/512MB & 1/2/4GB DDR2<br>Max Memory Capacity 16GB<br>Dual Channel Mode DDR2 memory module<br>Supports DDR2 533 / 667 / 800<br>Supports DDR2 1066 (by AM2+ CPU)<br>Registered DIMM and ECC DIMM is not supported | DIMM Slots x 4<br>Each DIMM supports 256/512MB & 1/2/4GB DDR2<br>Max Memory Capacity 16GB<br>Dual Channel Mode DDR2 memory module<br>Supports DDR2 533 / 667 / 800<br>Supports DDR2 1066 (by AM2+ CPU)<br>Registered DIMM and ECC DIMM is not supported |
| Graphics<br><small>For TF8200A2+ SE / TF720 A2+ Only</small> | Integrated in GeForce 8200 Chipset<br>Max Shared Video Memory is 512MB<br>DX10 / HDCP / PureVideo HD support  | Integrated in GeForce 8100 Chipset<br>Max Shared Video Memory is 512MB<br>DX10 / HDCP / PureVideo support   |
| IDE  | Integrated IDE Controller<br>Ultra DMA 33 / 66 / 100 / 133 Bus Master Mode<br>supports PIO Mode 0~4   | Integrated IDE Controller<br>Ultra DMA 33 / 66 / 100 / 133 Bus Master Mode<br>supports PIO Mode 0~4   |
| SATA II  | Integrated Serial ATA Controller<br>Data transfer rates up to 3 Gb/s.<br>SATA Version 2.0 specification compliant.  | Integrated Serial ATA Controller<br>Data transfer rates up to 3 Gb/s.<br>SATA Version 2.0 specification compliant.  |
| LAN  | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s auto negotiation<br>Half / Full duplex capability   | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s auto negotiation<br>Half / Full duplex capability   |
| Sound  | ALC662<br>5.1 channels audio out<br>Supports HD Audio   | ALC662<br>5.1 channels audio out<br>Supports HD Audio   |

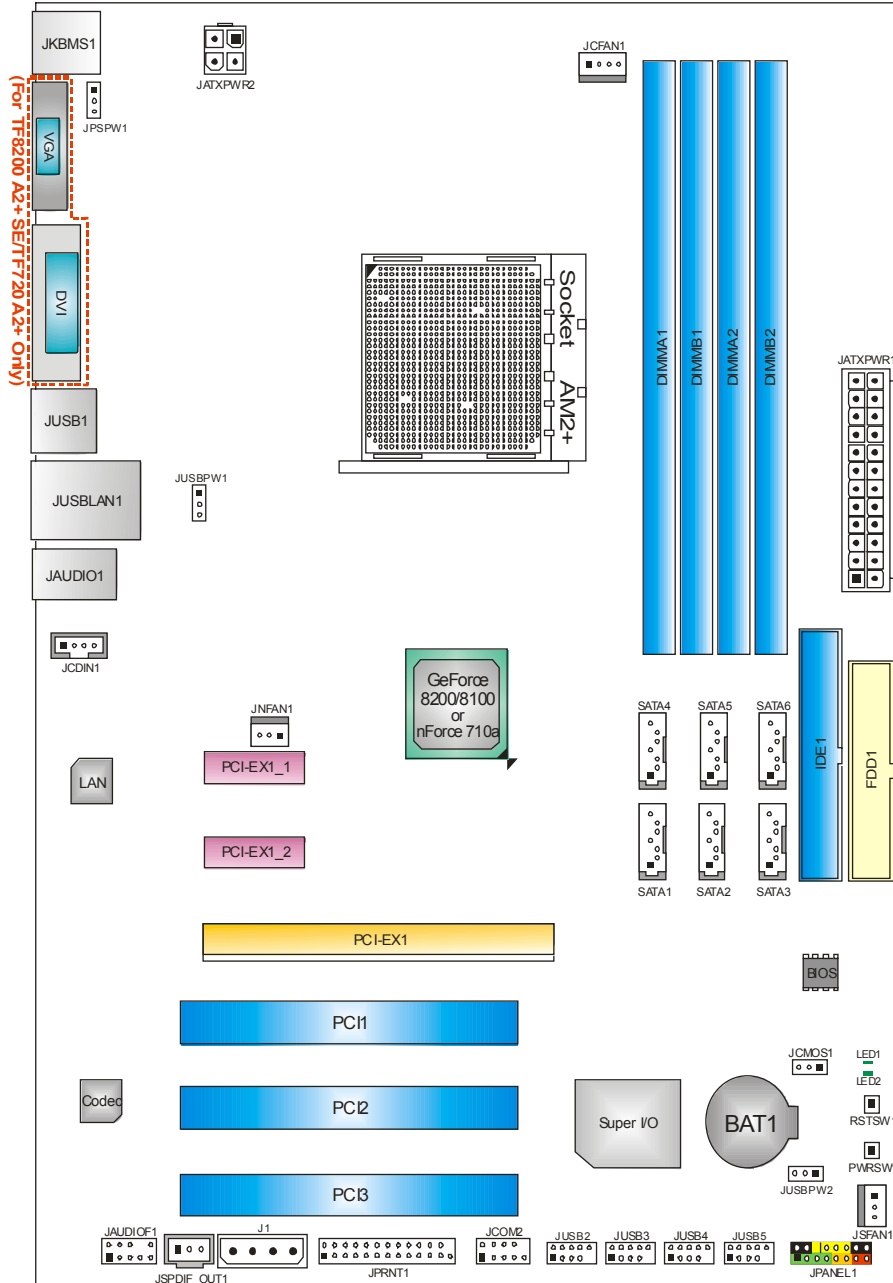
## TF8200 A2+ SE/TF720 A2+/TF710 A2+

|                        | TF8200 A2+ SE  |                        | TF720 A2+/TF710 A2+  |    |
|------------------------|--|------------------------|--|----|
| Slots                  | PCI slot   | x3                     | PCI slot   | x3 |
|                        | PCI Express Gen2 x16 slot  | x1                     | PCI Express Gen2 x16 slot  | x1 |
|                        | PCI Express x1 slot  | x2                     | PCI Express x1 slot  | x2 |
| On Board Connector     | Floppy connector   | x1                     | Floppy connector   | x1 |
|                        | Printer Port connector   | x1                     | Printer Port connector   | x1 |
|                        | IDE Connector  | x1                     | IDE Connector  | x1 |
|                        | SATA Connector   | x6                     | SATA Connector   | x6 |
|                        | Front Panel Connector  | x1                     | Front Panel Connector  | x1 |
|                        | Front Audio Connector  | x1                     | Front Audio Connector  | x1 |
|                        | CD-in Connector  | x1                     | CD-in Connector  | x1 |
|                        | S/PDIF out connector   | x1                     | S/PDIF out connector   | x1 |
|                        | CPU Fan header   | x1                     | CPU Fan header   | x1 |
|                        | System Fan header  | x2                     | System Fan header  | x2 |
|                        | CMOS clear header  | x1                     | CMOS clear header  | x1 |
|                        | USB connector  | x4                     | USB connector  | x4 |
|                        | Serial port Connector  | x1                     | Serial port Connector  | x1 |
|                        | Power Connector (24pin)  | x1                     | Power Connector (24pin)  | x1 |
| Power Connector (4pin) | x2   | Power Connector (4pin) | x2   |    |
| Back Panel I/O         | PS/2 Keyboard  | x1                     | PS/2 Keyboard  | x1 |
|                        | PS/2 Mouse   | x1                     | PS/2 Mouse   | x1 |
|                        | LAN port   | x1                     | LAN port   | x1 |
|                        | USB Port   | x4                     | USB Port   | x4 |
|                        | Audio Jack   | x3                     | Audio Jack   | x3 |
|                        | DVI port   | x1                     | DVI port (for TF720 A2+)   | x1 |
|                        | VGA port   | x1                     | VGA port (for TF720 A2+)   | x1 |
| Board Size             | 220 mm (W) x 305 mm (L)  |                        | 220 mm (W) x 305 mm (L)  |    |
| Special Features       | RAID 0 / 1 / 5 / 0+1 support<br>Hybrid SLI support (by nVIDIA driver)  |                        | RAID 0 / 1 / 5 / 0+1 support<br>Hybrid SLI support (by nVIDIA driver) (for TF720 A2+)                        |    |
| OS Support             | Windows XP / VISTA<br>Biostar Reserves the right to add or remove support for any OS With or without notice. |                        | Windows XP / VISTA<br>Biostar Reserves the right to add or remove support for any OS With or without notice. |    |

### 1.4 REAR PANEL CONNECTORS



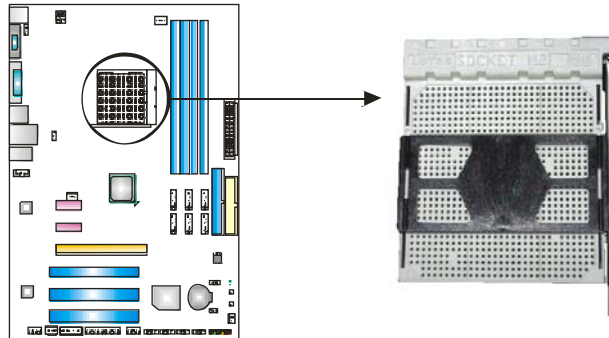
## 1.5 MOTHERBOARD LAYOUT



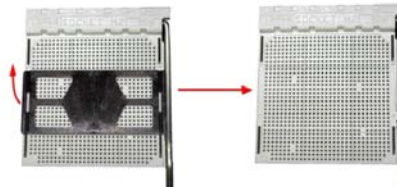
**Note:** ■ represents the 1<sup>st</sup> pin.

## CHAPTER 2: HARDWARE INSTALLATION

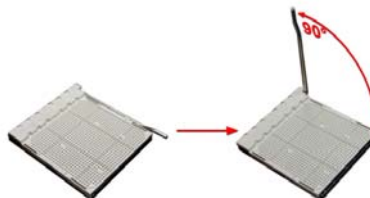
### 2.1 INSTALLING CENTRAL PROCESSING UNIT (CPU)



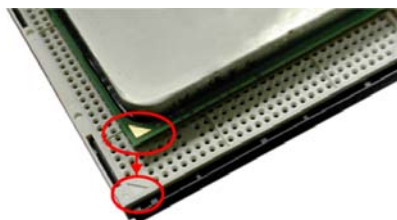
**Step 1:** Remove the socket protection cap.



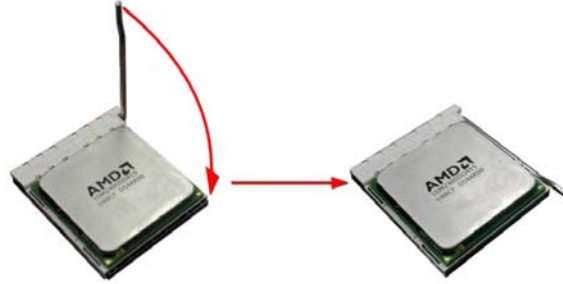
**Step 2:** Pull the lever toward direction A from the socket and then raise the lever up to a 90-degree angle.



**Step 3:** 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 4:** Hold the CPU down firmly, and then close the lever toward direct B to complete the installation.



**Step 5:** Put the CPU Fan on the CPU and buckle it. Connect the CPU FAN power cable to the JCFAN1. This completes the installation.

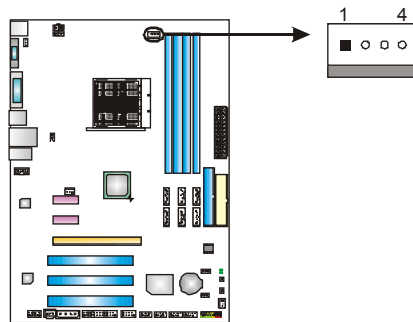
**Note:** Please update the BIOS to the latest version while using AM2+ CPUs. Due to the latest CPU transition, you may encounter the situation that the new system failed to boot while using new AM2+ CPUs. In this case, please install one standard AM2 CPU to boot your system, and update the latest BIOS from our website for AM2+ CPUs support.



## 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.

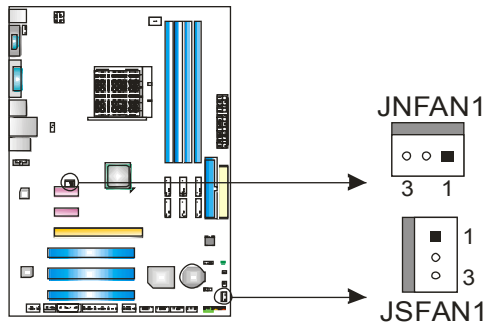
### JCFAN1: CPU Fan Header



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

### JSFAN1: System Fan Header

### JNFAN1: Chipset Fan Header



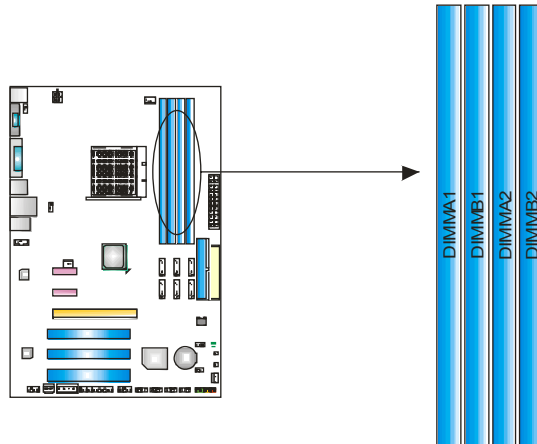
| Pin | Assignment         |
|-----|--------------------|
| 1   | Ground             |
| 2   | +12V               |
| 3   | FAN RPM rate sense |

**Note:**

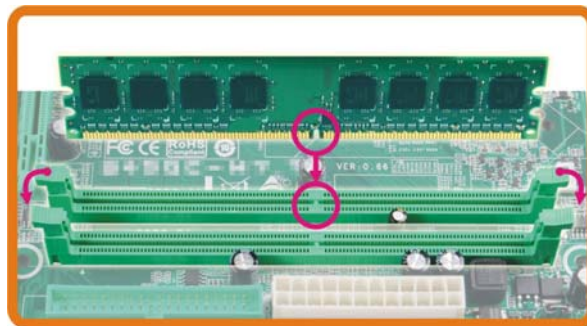
The JCFAN1 and JSFAN1/JNFAN1 support 4-pin and 3-pin head connectors. When connecting with wires onto connectors, please note that the red wire is the positive and should be connected to pin#2, and the black wire is Ground and should be connected to pin#1.

## 2.3 INSTALLING SYSTEM MEMORY

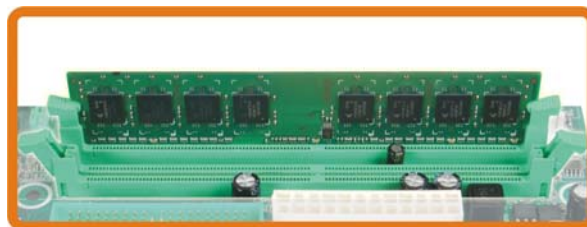
### A. Memory Modules



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 | DDR2 Module             | Total Memory Size |
|----------------------|-------------------------|-------------------|
| DIMMA1               | 256MB/512MB/1GB/2GB/4GB | Max is 16GB.      |
| DIMMB1               | 256MB/512MB/1GB/2GB/4GB |                   |
| DIMMA2               | 256MB/512MB/1GB/2GB/4GB |                   |
| DIMMB2               | 256MB/512MB/1GB/2GB/4GB |                   |

**C. Dual Channel Memory installation**

To trigger the Dual Channel function of the motherboard, the memory module must meet the following requirements:

Install memory module of the same density in pairs, shown in the following table.

| Dual Channel Status | DIMMA1 | DIMMB1 | DIMMA2 | DIMMB2 |
|---------------------|--------|--------|--------|--------|
| Enabled             | O      | O      | X      | X      |
| Enabled             | X      | X      | O      | O      |
| Enabled             | O      | O      | O      | O      |

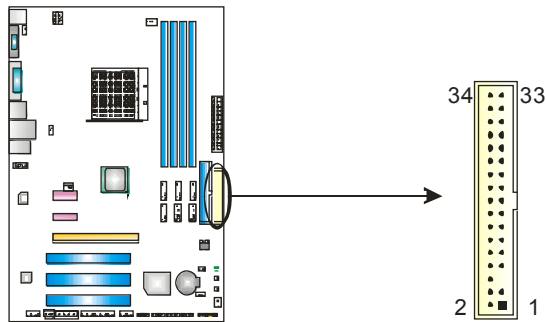
(O means memory installed, X means memory not installed.)

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

## 2.4 CONNECTORS AND SLOTS

### FDD1: Floppy Disk Connector

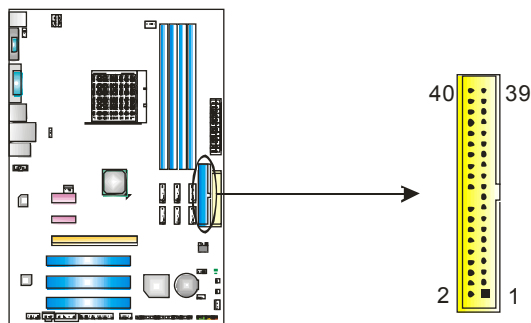
The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.



### IDE1: Hard Disk 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.

The IDE connector can connect a master and a slave drive, so you can connect up to two hard disk drives.

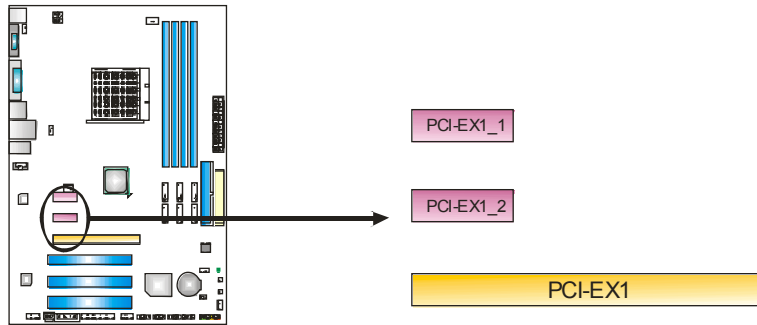


**PCI-EX1: PCI-Express Gen2 x16 Slot**

- 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.

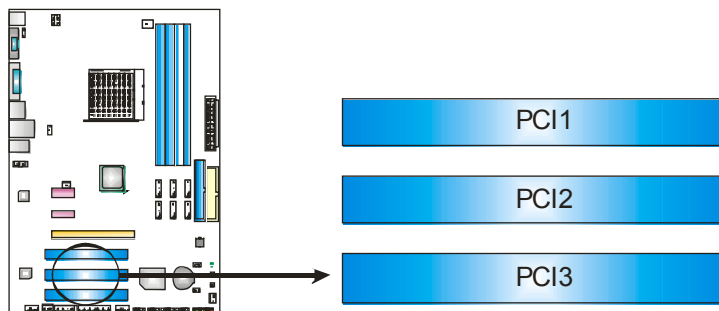
**PCI-EX1\_1/PCI-EX1\_2: PCI-Express x1 Slots**

- PCI-Express 1.1 compliant.
- Data transfer bandwidth up to 250MB/s per direction; 500MB/s in total.
- PCI-Express supports a raw bit-rate of 2.5Gb/s on the data pins.
- 2X bandwidth over the PCI architecture.



**PCI1~PCI3: Peripheral Component Interconnect Slots**

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



## CHAPTER 3: HEADERS & JUMPERS SETUP

### 3.1 HOW TO SETUP JUMPERS

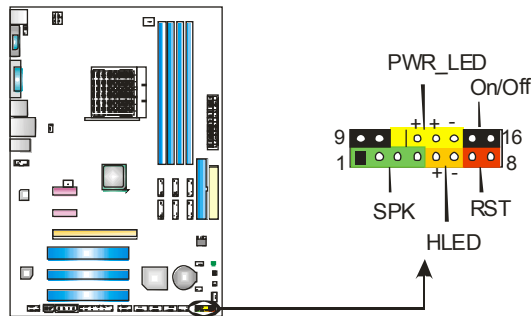
The illustration shows how to set up jumpers. When the jumper cap is placed on pins, the jumper is “close”, if not, that means the jumper is “open”.



### 3.2 DETAIL SETTINGS

#### JPANEL1: Front Panel Header

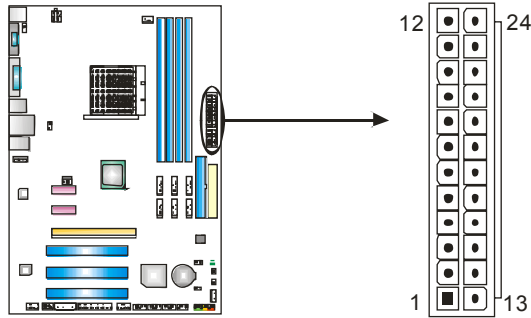
This 16-pin connector includes Power-on, Reset, HDD LED, Power LED, and speaker connection. It allows user to connect the PC case’s front panel switch functions.



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

### JATXPWR1: ATX Power Source Connector

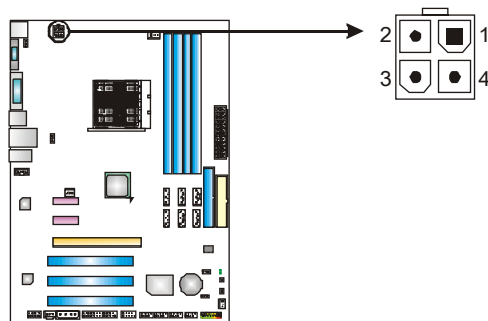
This connector allows user to connect 24-pin power connector on the ATX power supply.



| 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              |

### JATXPWR2: ATX Power Source Connector

By connecting this connector, it will provide +12V to CPU power circuit.



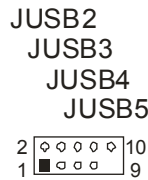
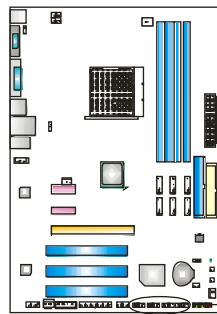
| Pin | Assignment |
|-----|------------|
| 1   | +12V       |
| 2   | +12V       |
| 3   | Ground     |
| 4   | Ground     |

**Note:**

Before power on the system, please make sure that both JATXPWR1 and JATXPWR2 connectors have been plugged-in.

### JUSB2~JUSB5: Headers for USB 2.0 Ports at Front Panel

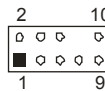
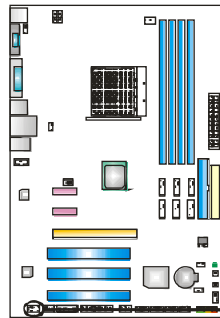
This header allows user to connect additional USB cable on the PC front panel, and also can be connected with internal USB devices, like USB card reader.



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

### JAUDIOF1: 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.

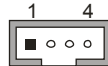
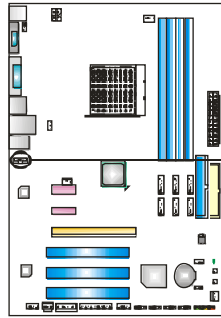


| Pin | Assignment    |
|-----|---------------|
| 1   | Mic Left in   |
| 2   | Ground        |
| 3   | Mic Right in  |
| 4   | GPIO          |
| 5   | Right line in |
| 6   | Jack Sense    |
| 7   | Front Sense   |
| 8   | Key           |
| 9   | Left line in  |
| 10  | Jack Sense    |



### JCDIN1: CD-ROM Audio-in Connector

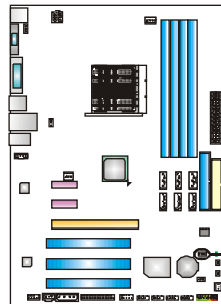
This connector allows user to connect the audio source from the variety devices, like CD-ROM, DVD-ROM, PCI sound card, PCI TV turner card etc.



| Pin | Assignment          |
|-----|---------------------|
| 1   | Left Channel Input  |
| 2   | Ground              |
| 3   | Ground              |
| 4   | Right Channel Input |

### JCMOS1: Clear CMOS Header

By 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.



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



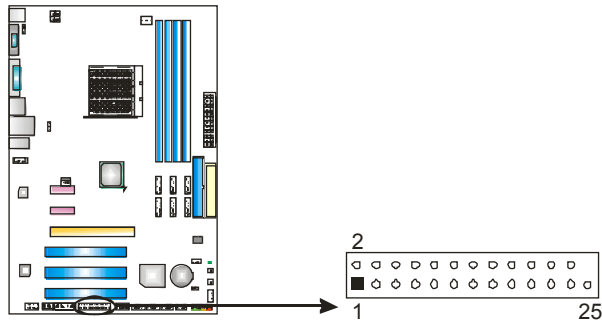
**Pin 2-3 Close:**  
Clear CMOS data.

### ※ 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.

### JPRNT1: Printer Port Connector

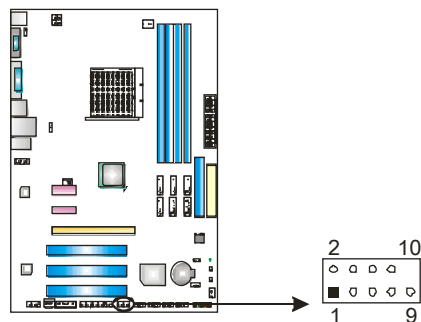
This header allows you to connector printer on the PC.



| Pin | Assignment | Pin | Assignment |
|-----|------------|-----|------------|
| 1   | -Strobe    | 14  | Ground     |
| 2   | -ALF       | 15  | Data 6     |
| 3   | Data 0     | 16  | Ground     |
| 4   | -Error     | 17  | Data 7     |
| 5   | Data 1     | 18  | Ground     |
| 6   | -Init      | 19  | -ACK       |
| 7   | Data 2     | 20  | Ground     |
| 8   | -Sctlin    | 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        |

### JCOM2: Serial port Connector

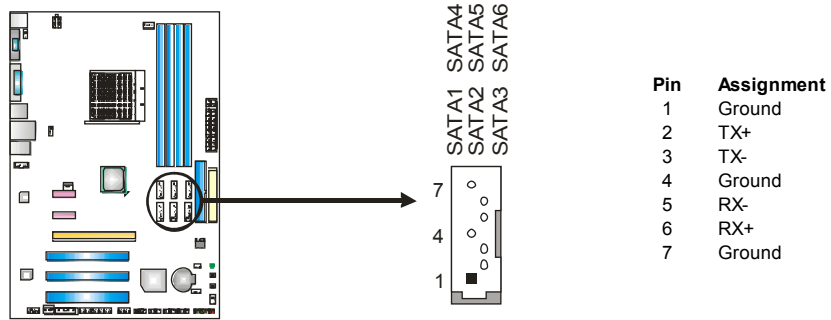
The motherboard has a Serial Port Connector for connecting RS-232 Port.



| 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                  |

### SATA1~SATA6: Serial ATA Connectors

The motherboard has a PCI to SATA Controller with 6 channels SATA interface, it satisfies the SATA 2.0 spec and with transfer rate of 3.0Gb/s.

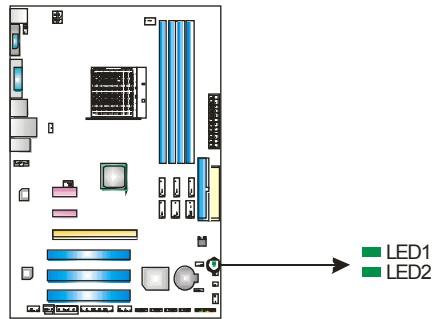


**Note:**

Due to the chipset's specification, SATA5 and SATA6 do not support SATA mode, only support AHCI+RAID mode.

### On-Board LED Indicators

There are 2 LED indicators on the motherboard to show system status.



**LED1 and LED2:**

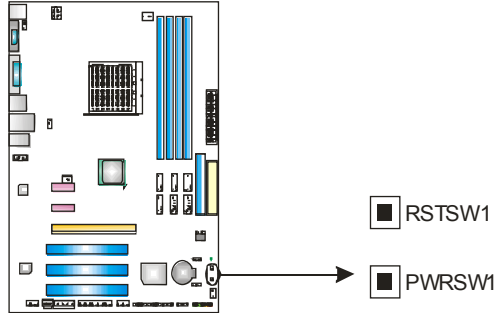
These 2 LED indicate system power on diagnostics.

Please refer to the table below for different messages:

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

### On-Board Buttons

There are 2 on-board buttons.



**PWRW1:**

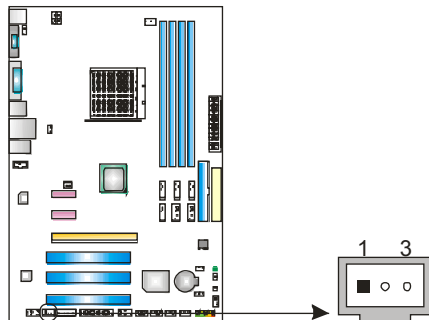
This is an on-board Power Switch button.

**RSTW1:**

This is an on-board Reset button.

### JSPDIF\_OUT1: Digital Audio-out Connector

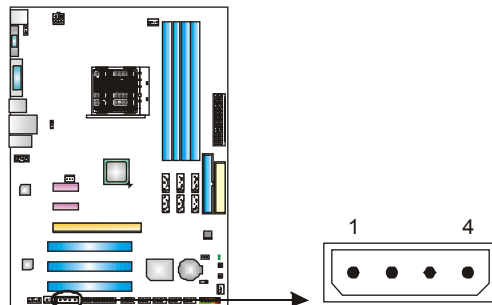
This connector allows user to connect the PCI bracket SPDIF output header.



| Pin | Assignment |
|-----|------------|
| 1   | +5V        |
| 2   | SPDIF_OUT  |
| 3   | Ground     |

### J1: Auxiliary Power for Graphics

This connector is an auxiliary power connection for graphics cards. Exclusive power for the graphics card provides better graphics performance.



| Pin | Assignment |
|-----|------------|
| 1   | +12V       |
| 2   | Ground     |
| 3   | Ground     |
| 4   | VCC        |

### JUSBW1/JUSBW2: Power Source Headers for USB Ports

**Pin 1-2 Close:**

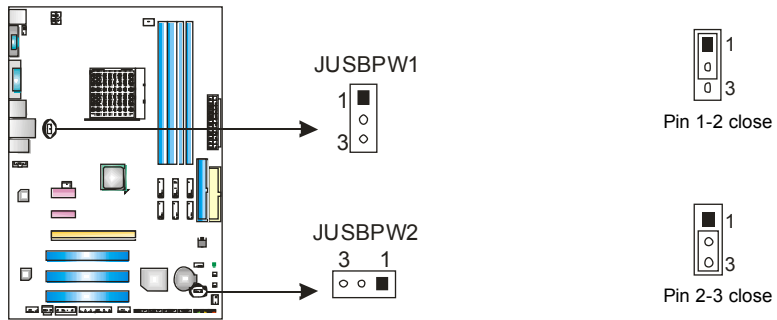
JUSBW1: +5V for USB ports at JUSB1/JUSBLAN1.

JUSBW2: +5V for USB ports at front panel (JUSB2~JUSB5).

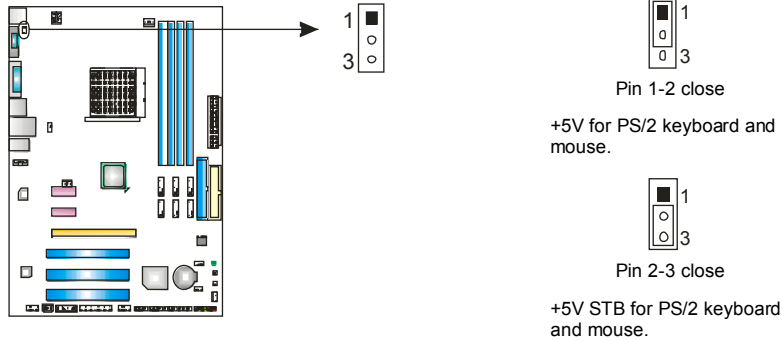
**Pin 2-3 Close:**

JUSBW1: +5V STB for USB ports at JUSB1/JUSBLAN1.

JUSBW2: +5V STB for USB ports at front panel (JUSB2~JUSB5).



### JPSPW1: Power Source Header for PS/2 Keyboard and Mouse



## CHAPTER 4: NVIDIA RAID FUNCTIONS

### 4.1 OPERATION SYSTEM

Supports Windows XP and Windows VISTA.

### 4.2 RAID ARRAYS

NVRAID 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 0+1:** RAID 0+1 combines the techniques used in RAID 0 and RAID 1.

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

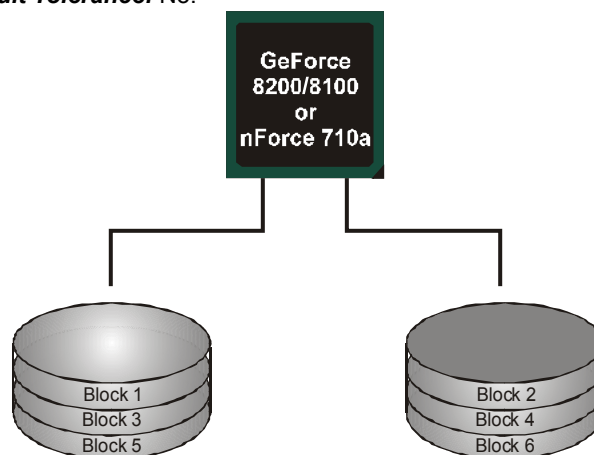
### 4.3 How RAID WORKS

#### **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.

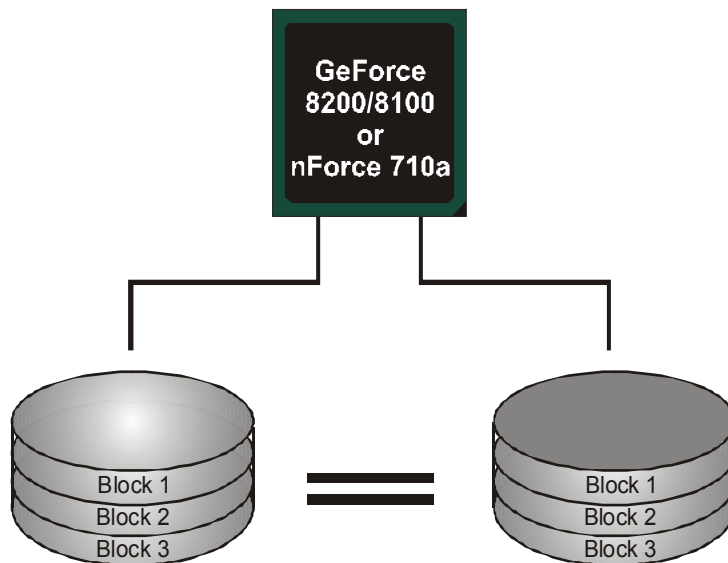


**RAID 1:**

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.

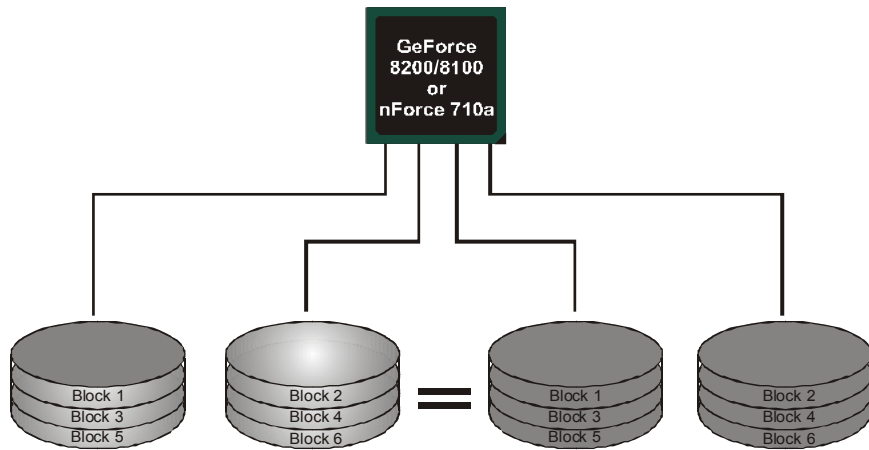


**RAID 0+1:**

RAID 0 drives can be mirrored using RAID 1 techniques. Resulting in a RAID 0+1 solution for improved performance plus resiliency.

**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.



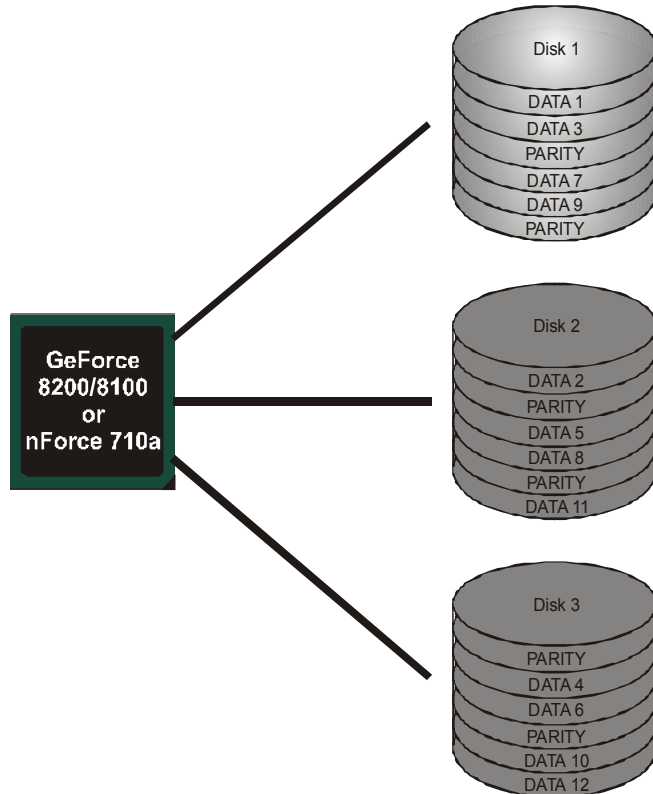


**RAID 5:**

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.



※ For more detailed setup information, please refer to the Driver CD, or go to [http://www.nvidia.com/object/IO\\_28159.html](http://www.nvidia.com/object/IO_28159.html) to download the NVIDIA RAID User's Guide.

## CHAPTER 5: T-SERIES BIOS & SOFTWARE

### 5.1 T-SERIES BIOS

#### T-Series BIOS Features

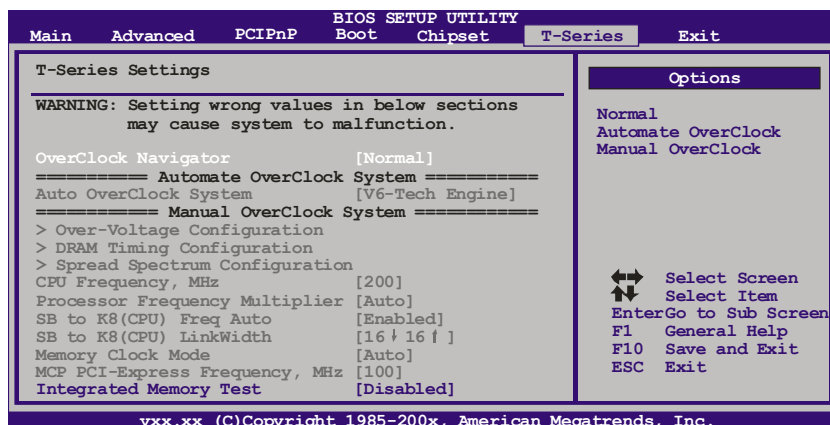
- Overclocking Navigator Engine (O.N.E.)
- Memory Integration Test (M.I.T., under Overclock Navigator Engine)
- BIO-Flasher: Update BIOS file from USB Flash Drive or FDD
- Self Recovery System (S.R.S)
- Smart Fan Function
- CMOS Reloading Program

#### **!! 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.

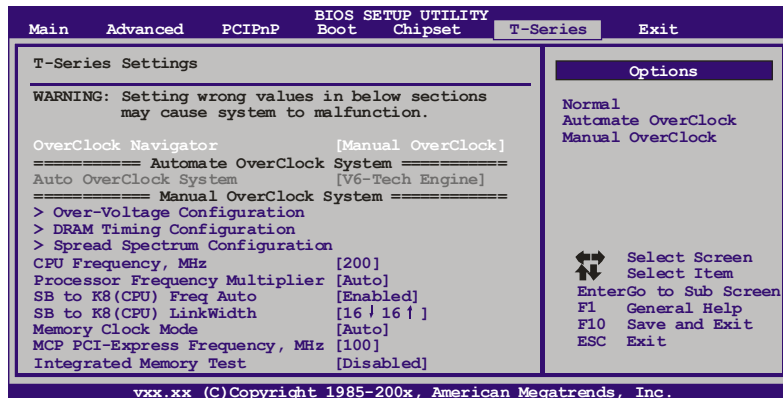
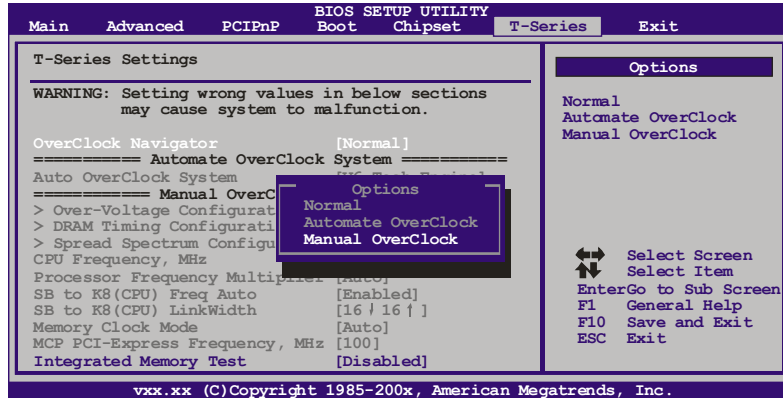
#### A. Overclocking Navigator Engine (O.N.E.)

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.



### Over-Voltage Configuration

Enter this function for advanced CPU/chipset/memory/Hyper Transport over-voltage settings.

### DRAM Timing Configuration

Enter this function for more advanced DRAM clock settings.

### Spread Spectrum Configuration

Enter this function for more advanced spread spectrum settings.

### CPU Frequency, 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.

**Processor Frequency Multiplier**

This function allows you to adjust the frequency ratio of CPU.

**SB to K8(CPU) Freq Auto**

This function allows you to set the SB to K8 frequency.

**SB to K8(CPU) Link Width**

This function allows you to choose the SB to K8 link width.

**Memory Clock Mode**

This function allows you to control the Memory Clock.

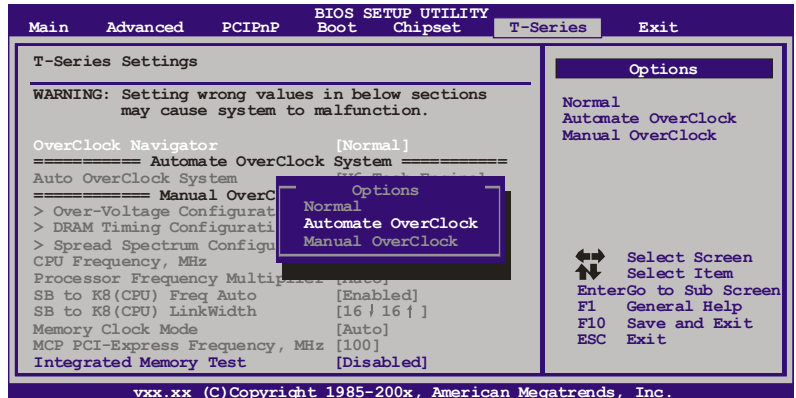
**MCP PCI-Express Frequency, MHz**

It helps to increase VGA card performance.

**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.

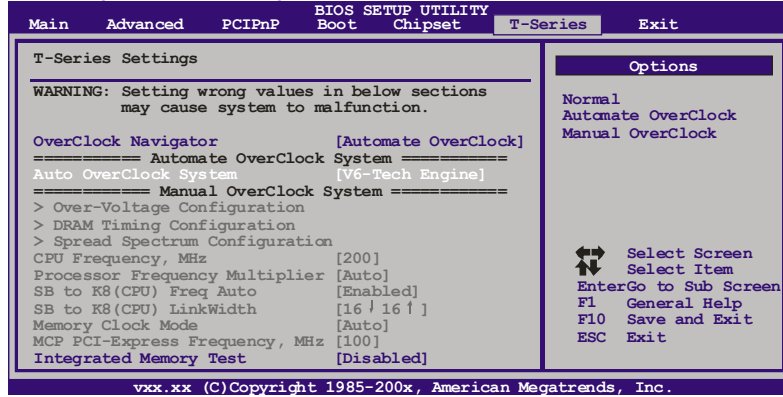
**Automatic Overclock System (A.O.S.)**

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.



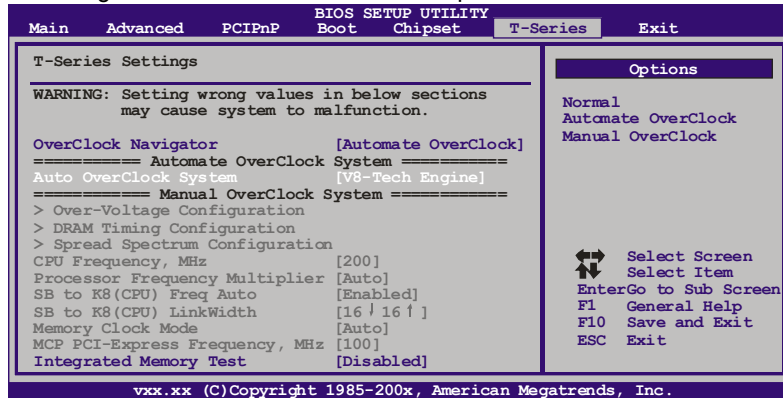
### V6 Tech Engine

This engine will make a good over-clock performance.



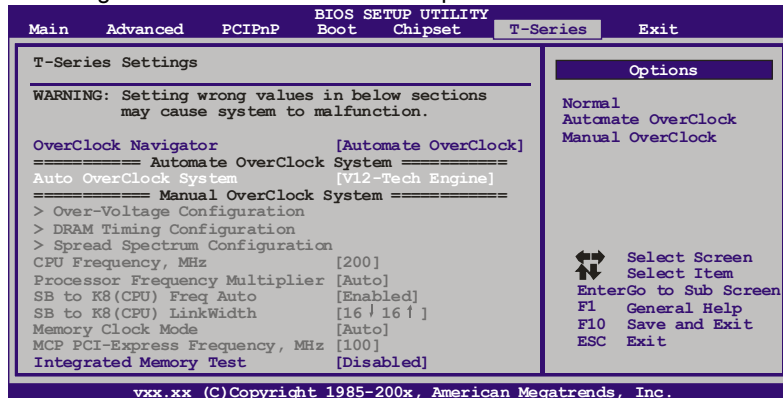
### V8 Tech Engine

This engine will make a better over-clock performance.



### V12 Tech Engine

This engine will make a best over-clock performance.



**Notices:**

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

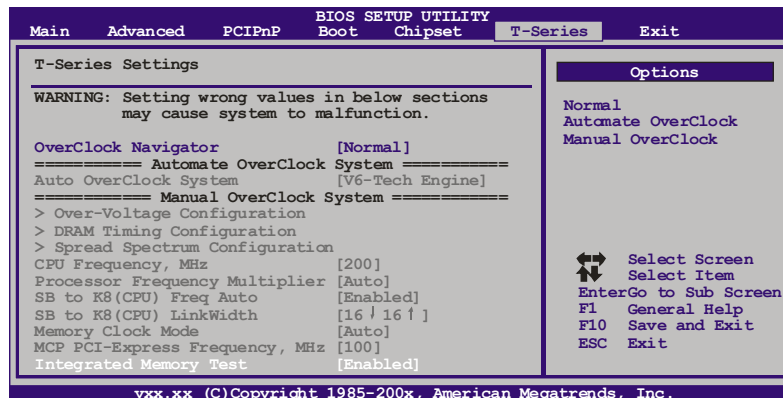
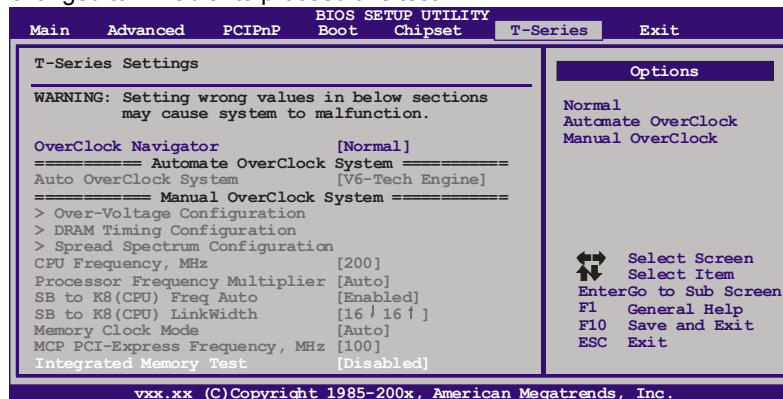
**B. Memory Integration Test (M.I.T.)**

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.

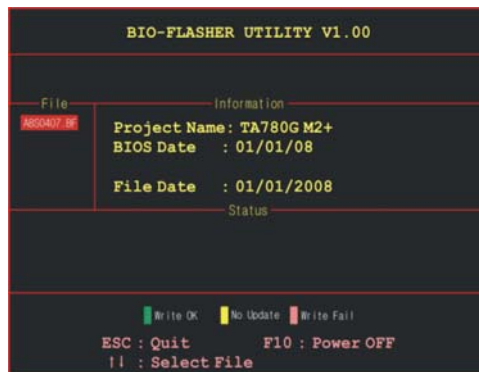
### C. BIO-Flasher

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.

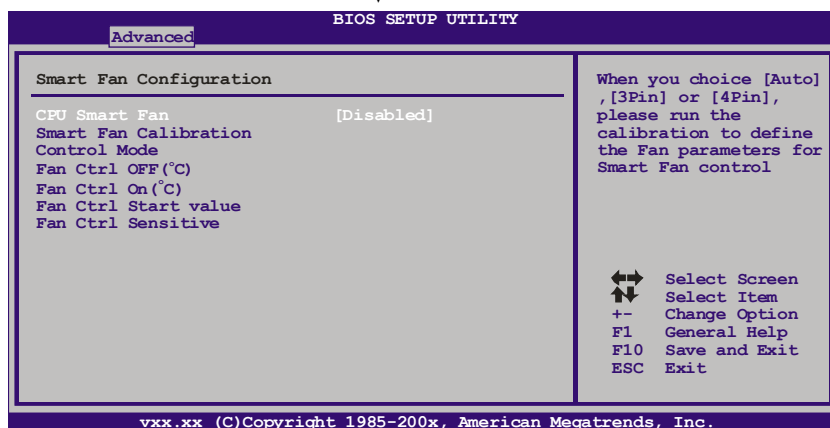
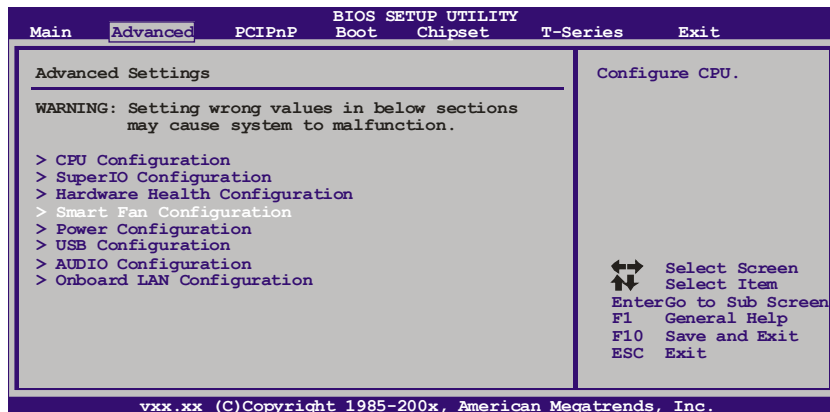
### E. Smart Fan Function

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(°C)**

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(°C)**

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**

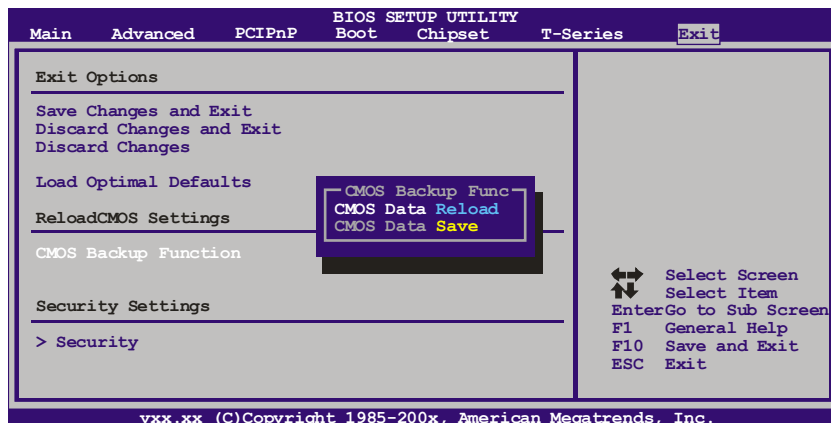
When CPU/System temperature arrives to the set value, the CPU/System fan will work under Smart Fan Function mode. The range is from 0~127, with an interval of 1.

**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.



## 5.2 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.

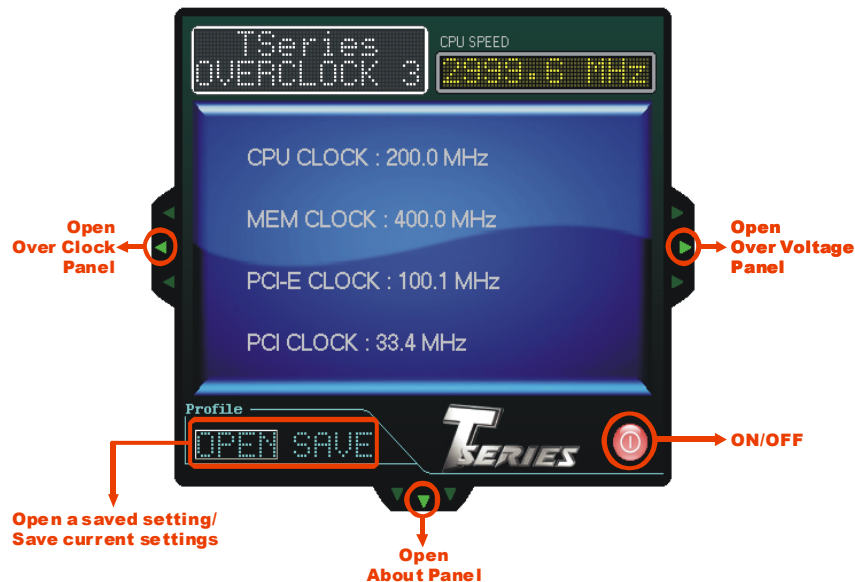
### Launching T-Series Software

After the installation process, you will see the software icon “T-Utility OverClock III” / “HW Monitor” / “eHOT Line” / “Tseries BIOS Update” appears on the desktop. Double-click the icon to launch T-Series utility.

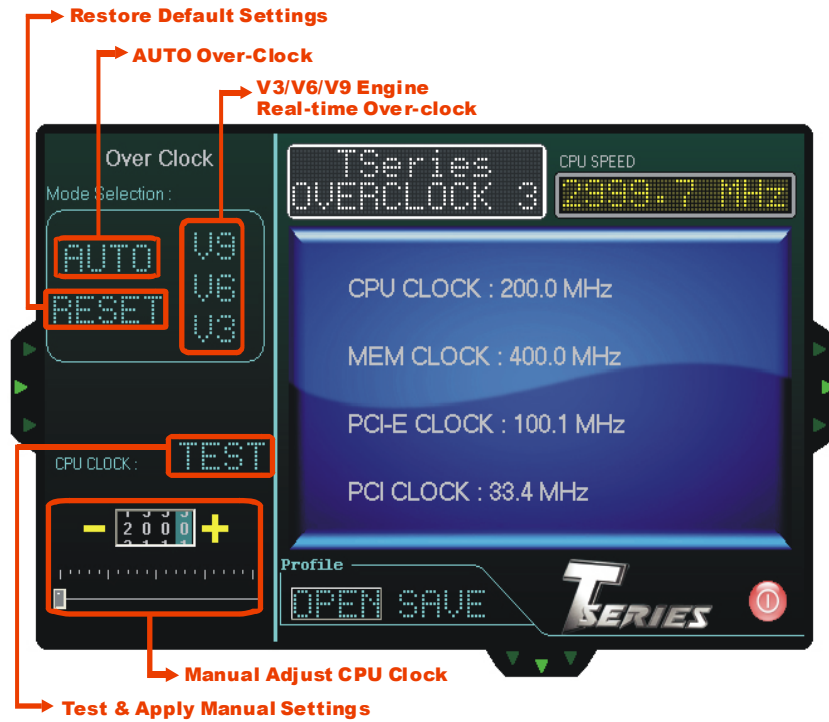
### OverClock 3

OverClock 3 is equipped with friendly interface and solid over-clock features, and it will help you easily do over-clocking under windows environment.

Double-click the desktop icon, OverClock 3 will be launched; the first window you will see is **Main Panel**. In this panel you will see current CPU Speed and CPU/Memory/PCI-E/PCI Clock.

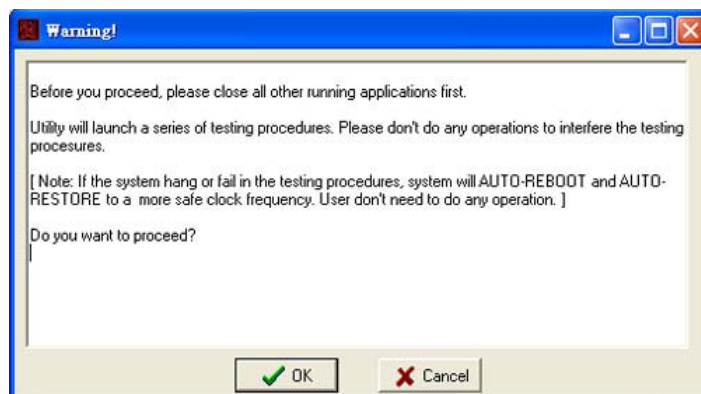


## Over Clock Panel



### AUTO

User can click this button and the utility will set the best and stable performance and frequency automatically. A warning dialog as below will show up to notify you that the system may become unstable, click on "OK" to continue.



Then the utility will execute a series of testing until system fail. Then system will do fail-safe reboot by using Watchdog function. After reboot, launch the utility again and the utility will load the previously verified best and stable frequency.

### V3 / V6 / V9

Provide user the ability to do real-time over-clock adjustment. For beginners in over-clock field, this is a powerful feature to increase system performance.

- **V3 Engine**  
This engine will make a good over-clock performance.
- **V6 Engine**  
This engine will make a better over-clock performance.
- **V9 Engine**  
This engine will make a best over-clock performance.

### TEST

*You can also manually adjust CPU clock by pressing +/- button or moving the level bar.* After manually adjust the CPU clock, you should click TEST button and the utility will proceed a testing for current frequency. If the testing is ok, then the current frequency will be saved into system registry. If the testing fails, system will do a fail-safe rebooting. After reboot, the utility will restore to the hardware default setting.

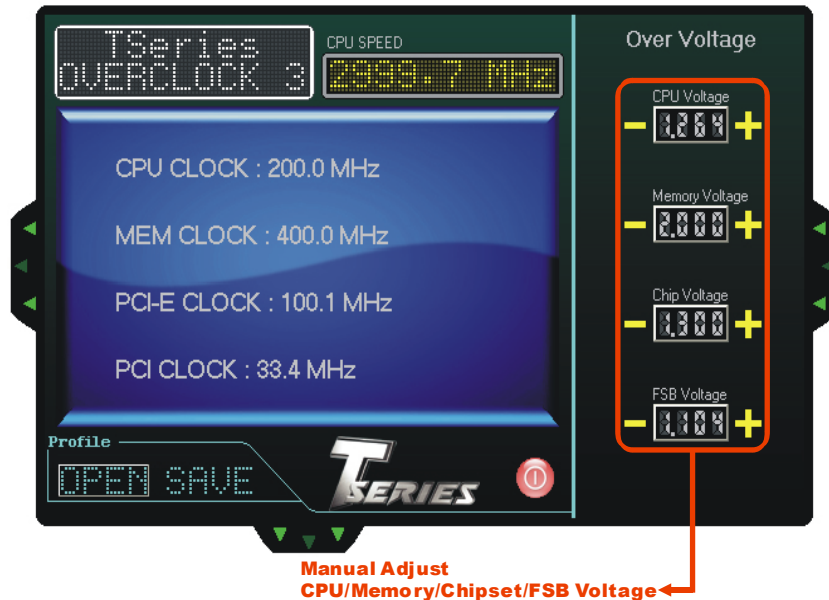
#### **Warning**

Manually over-clock is potentially dangerous, especially when the over-clocking percentage is over 110 %. We strongly recommend you test every speed you over-clock by click the TEST button. Or, you can just click AUTO over-clock button and let the Utility automatically get the best result for you.

### RESET

Click this button and the utility will restore all values to the hardware default setting.

## Over Voltage Panel



### CPU Voltage

This function allows user to adjust CPU voltage. Click on “+” to increase or “-” to decrease the CPU voltage.

### Memory Voltage

This function allows user to adjust Memory voltage. Click on “+” to increase or “-” to decrease the Memory voltage.

### Chip Voltage

This function allows user to adjust Chipset voltage. Click on “+” to increase or “-” to decrease the Chipset voltage.

### FSB Voltage

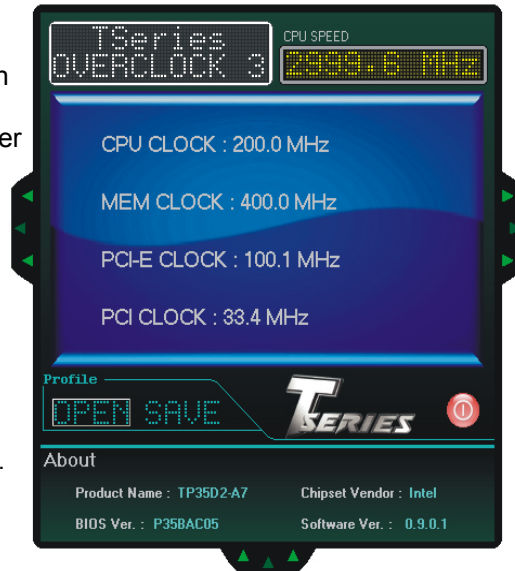
This function allows user to adjust FSB voltage. Click on “+” to increase or “-” to decrease the FSB voltage.

### About Panel

In this panel, you can get model name and other system information that may related to over-clocking. You can also get the version number of this software.

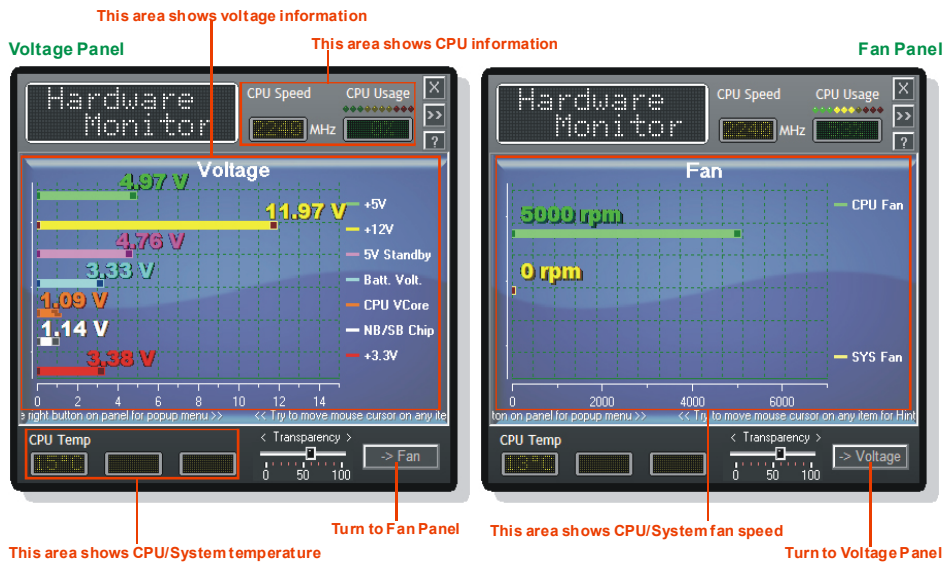
**Note**

Because the Over Clock and Over Voltage features are controlled by several separate chipset, the utility divides these features to separate panels. If one chipset is not on board, the correlative button in Main panel will be disabled, but it will not interfere with other panels' functions. This property can make the utility more robust.



### Hardware Monitor

HW Monitor is a monitor utility that helps you to maintain the health of the PC. It provides real-time information of CPU/GPU/System temperature, fan speed, and voltage.



### eHot-Line (Optional)

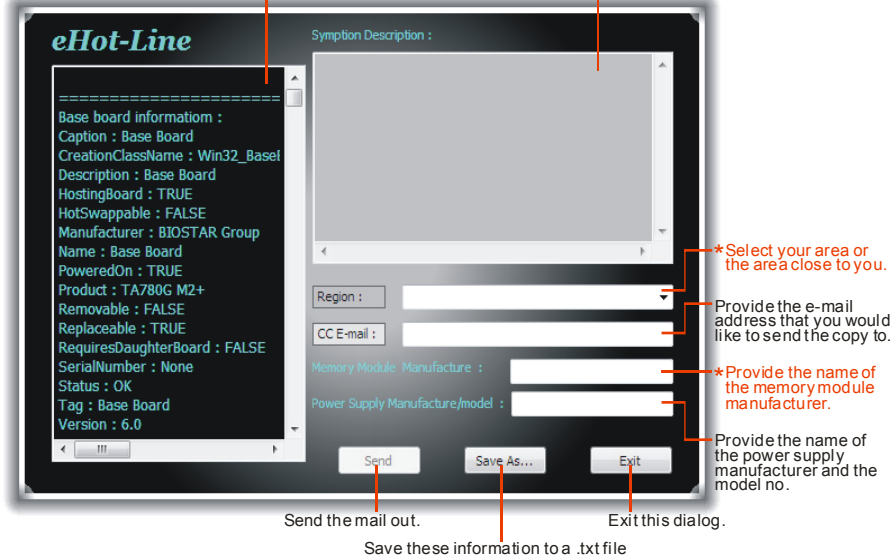
eHot-Line is a convenient utility that helps you to contact with our Tech-Support system. This utility will collect the system information which is useful for analyzing the problem you may have encountered, and then send these information to our tech-support department to help you fix the problem.

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

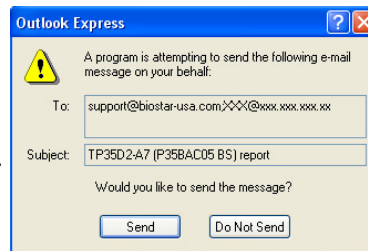
\* represents important information that you must provide. Without this information, you may not be able to send out the mail.

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

\* Describe condition of your system.

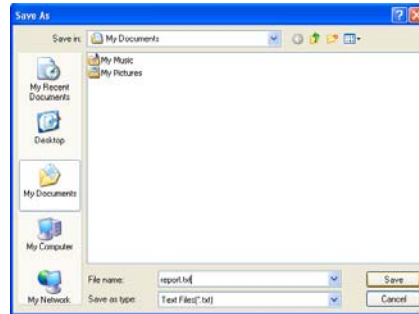


After filling up this information, click **“Send”** to send the mail out. A warning dialog would appear asking for your confirmation; click **“Send”** to confirm or **“Do Not Send”** to cancel.



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 included 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.

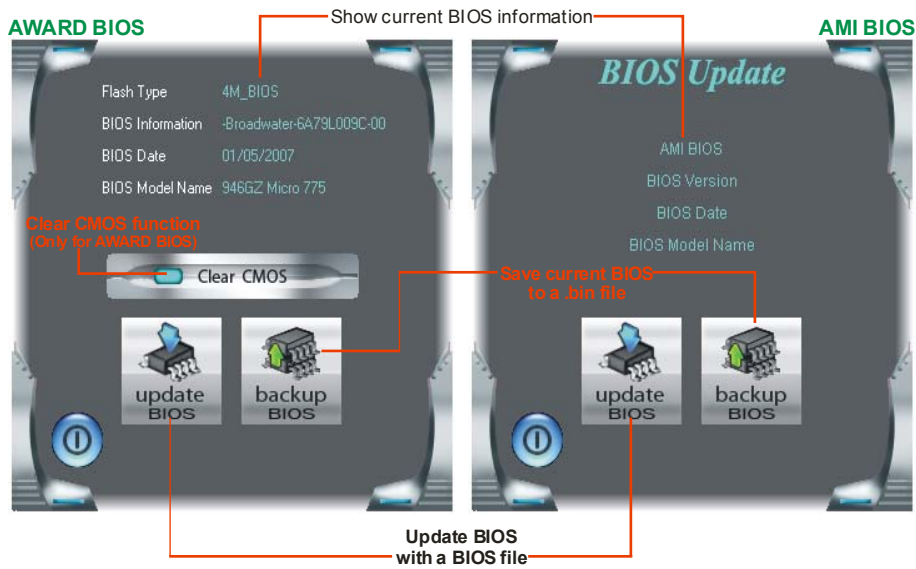


If you are not using Outlook Express as your default e-mail client application, you may need to save the system information to a .txt file and send the file to our tech support with other e-mail application. Go to the following web <http://www.biostar.com.tw/app/en-us/about/contact.php> for getting our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



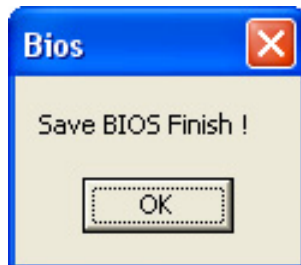
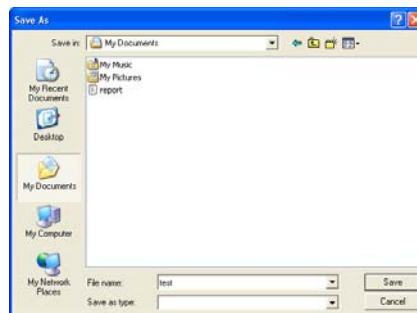
## BIOS Update

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**.

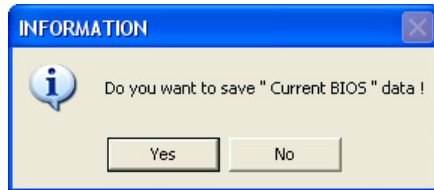


After the saving process, finish dialog will show. Click on **OK** to complete the BIOS Backup procedure.

<Update BIOS>

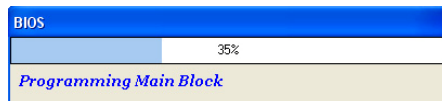
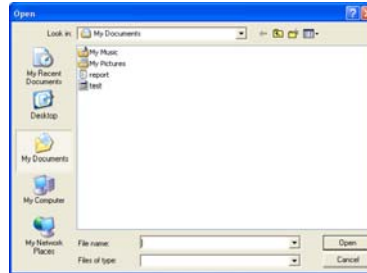
Before doing this, please download the proper BIOS file from the website.

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



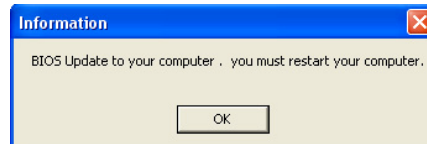
Then click Update BIOS button, a dialog will show for asking you backup current BIOS. Click **Yes** for BIOS backup and refer to the Backup BIOS procedure; or click **No** to skip this procedure.


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



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

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



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

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



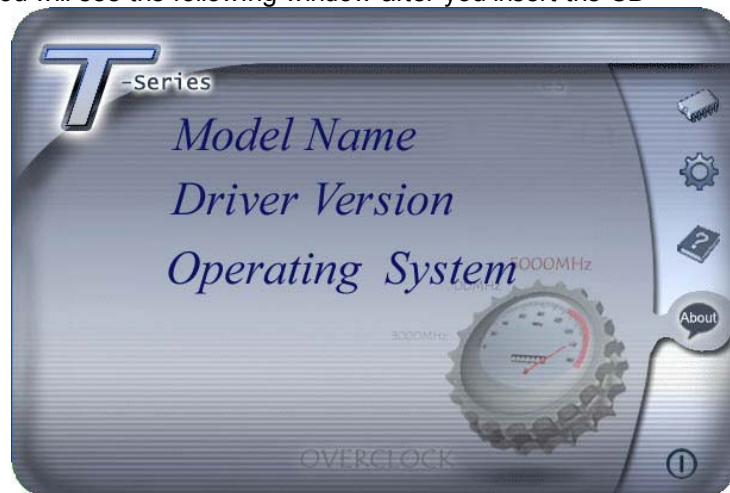
All the information and content above about the T-Series software are subject to be changed without notice. For better performance, the software is being continuously updated. The information and pictures described above are for your reference only. The actual information and settings on board may be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

## CHAPTER 6: USEFUL HELP

### 6.1 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>

## 6.2 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.

## 6.3 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            | <p>Fatal error indicating a serious problem with the system. Consult your system manufacturer. Before declaring the motherboard beyond all hope, eliminate the possibility of interference by a malfunctioning add-in card. Remove all expansion cards except the video adapter.</p> <ul style="list-style-type: none"> <li>● If beep codes are generated when all other expansion cards are absent, consult your system manufacturer's technical support.</li> <li>● 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.</li> </ul> |
| 8               | If the system video adapter is an add-in card, replace or reseat the video adapter. If the video adapter is an integrated part of the system board, the board may be faulty.   |

## 6.4 TROUBLESHOOTING

| Probable  | Solution  |
|---|---|
| <ol style="list-style-type: none"> <li>1. No power to the system at all. Power light don't illuminate, fan inside power supply does not turn on.</li> <li>2. Indicator light on keyboard does not turn on.</li> </ol> | <ol style="list-style-type: none"> <li>1. Make sure power cable is securely plugged in.</li> <li>2. Replace cable.</li> <li>3. Contact technical support.</li> </ol>  |
| <p>System inoperative. Keyboard lights are on, power indicator lights are lit, and hard drive is spinning.</p>  | <p>Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.</p>   |
| <p>System does not boot from hard disk drive, can be booted from optical drive.</p>   | <ol style="list-style-type: none"> <li>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.</li> <li>2. Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.</li> </ol> |
| <p>System only boots from optical drive. Hard disk can be read and applications can be used but booting from hard disk is impossible.</p>   | <ol style="list-style-type: none"> <li>1. Back up data and applications files.</li> <li>2. Reformat the hard drive. Re-install applications and data using backup disks.</li> </ol>   |
| <p>Screen message says "Invalid Configuration" or "CMOS Failure."</p>   | <p>Review system's equipment. Make sure correct information is in setup.</p>  |
| <p>Cannot boot system after installing second hard drive.</p>   | <ol style="list-style-type: none"> <li>1. Set master/slave jumpers correctly.</li> <li>2. Run SETUP program and select correct drive types. Call the drive manufacturers for compatibility with other drives.</li> </ol>  |

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**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

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**APPENDENCIES: SPEC IN OTHER LANGUAGE****GERMAN**

|  | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|--|---|---|
| CPU  | Sockel AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom Prozessoren<br>Die AMD 64-Architektur unterstützt eine 32-Bit- und 64-Bit-Datenverarbeitung<br>Unterstützt Hyper Transport 3.0 und PowerNow   | Sockel AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom Prozessoren<br>Die AMD 64-Architektur unterstützt eine 32-Bit- und 64-Bit-Datenverarbeitung<br>Unterstützt Hyper Transport 3.0 und PowerNow   |
| FSB  | Unterstützt HyperTransport 3.0 mit einer Bandbreite von bis zu 5.2 GT/s   | Unterstützt HyperTransport 3.0 mit einer Bandbreite von bis zu 5.2 GT/s   |
| Chipsatz   | GeForce 8200  | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)   |
| Super E/A  | ITE 8718F<br>Bietet die häufig verwendeten alten Super E/A-Funktionen.<br>Low Pin Count-Schnittstelle<br>Umgebungskontrolle,<br>Hardware-Überwachung<br>Lüfterdrehzahl-Controller<br>"Smart Guardian"-Funktion von ITE  | ITE 8718F<br>Bietet die häufig verwendeten alten Super E/A-Funktionen.<br>Low Pin Count-Schnittstelle<br>Umgebungskontrolle,<br>Hardware-Überwachung<br>Lüfterdrehzahl-Controller<br>"Smart Guardian"-Funktion von ITE  |
| Arbeitsspeicher  | DDR2 DIMM-Steckplätze x 4<br>Jeder DIMM unterstützt 256MB/512MB/1GB/2GB/4GB DDR2.<br>Max. 16GB Arbeitsspeicher<br>Dual-Kanal DDR2 Speichermodul<br>Unterstützt DDR2 533 / 667 / 800<br>Unterstützt DDR2 1066 (by AM2+ CPU)<br>registrierte DIMMs. ECC DIMMs werden nicht unterstützt. | DDR2 DIMM-Steckplätze x 4<br>Jeder DIMM unterstützt 256MB/512MB/1GB/2GB/4GB DDR2.<br>Max. 16GB Arbeitsspeicher<br>Dual-Kanal DDR2 Speichermodul<br>Unterstützt DDR2 533 / 667 / 800<br>Unterstützt DDR2 1066 (by AM2+ CPU)<br>registrierte DIMMs. ECC DIMMs werden nicht unterstützt. |
| Grafik<br><small>For TF8200A2+ SE / TF720 A2+ Only</small> | Integrierter GeForce 8200 –Chipsatz<br>Max. 512MB gemeinsam benutzter Videospeicher<br>Unterstützt DX10 / HDCP / PureVideo HD   | Integrierter GeForce 8100 –Chipsatz<br>Max. 512MB gemeinsam benutzter Videospeicher<br>Unterstützt DX10 / HDCP / PureVideo  |
| IDE  | Integrierter IDE-Controller<br>Ultra DMA 33 / 66 / 100 / 133 Bus<br>Master-Modus<br>Unterstützt PIO-Modus 0~4   | Integrierter IDE-Controller<br>Ultra DMA 33 / 66 / 100 / 133 Bus<br>Master-Modus<br>Unterstützt PIO-Modus 0~4   |
| SATA II  | Integrierter Serial ATA-Controller<br>Datentransferate bis zu 3Gb/s<br>Konform mit der SATA-Spezifikation Version 2.0.  | Integrierter Serial ATA-Controller<br>Datentransferate bis zu 3Gb/s<br>Konform mit der SATA-Spezifikation Version 2.0.  |



**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|                   | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|-------------------|---|---|
| LAN               | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s Auto-Negotiation<br>Halb-/ Vollduplex-Funktion  | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s Auto-Negotiation<br>Halb-/ Vollduplex-Funktion  |
| Audio-Codec       | ALC662<br>5.1-Kanal-Audioausgabe<br>Unterstützt High-Definition Audio   | ALC662<br>5.1-Kanal-Audioausgabe<br>Unterstützt High-Definition Audio   |
| Steckplätze       | PCI-Steckplatz x3<br>PCI Express Gen2 x16 Steckplatz x1<br>PCI Express x1 Steckplatz x2   | PCI-Steckplatz x3<br>PCI Express Gen2 x16 Steckplatz x1<br>PCI Express x1 Steckplatz x2   |
| Onboard-Anschluss | Diskettenlaufwerkanschluss x1<br>Druckeranschluss Anschluss x1<br>IDE-Anschluss x1<br>SATA-Anschluss x6<br>Fronttafelanschluss x1<br>Front-Audioanschluss x1<br>CD-IN-Anschluss x1<br>S/PDIF Ausgangsanschluss x1<br>CPU-Lüfter-Sockel x1<br>System-Lüfter-Sockel x2<br>"CMOS löschen"-Sockel x1<br>USB-Anschluss x4<br>Serieller Anschluss x1<br>Stromanschluss (24-polig) x1<br>Stromanschluss (4-polig) x2 | Diskettenlaufwerkanschluss x1<br>Druckeranschluss Anschluss x1<br>IDE-Anschluss x1<br>SATA-Anschluss x6<br>Fronttafelanschluss x1<br>Front-Audioanschluss x1<br>CD-IN-Anschluss x1<br>S/PDIF Ausgangsanschluss x1<br>CPU-Lüfter-Sockel x1<br>System-Lüfter-Sockel x2<br>"CMOS löschen"-Sockel x1<br>USB-Anschluss x4<br>Serieller Anschluss x1<br>Stromanschluss (24-polig) x1<br>Stromanschluss (4-polig) x2 |
| Rückseiten-E/A    | PS/2-Tastatur x1<br>PS/2-Maus x1<br>LAN-Anschluss x1<br>USB-Anschluss x4<br>Audioanschluss x3<br>DVI-Anschluss x1<br>VGA-Anschluss x1   | PS/2-Tastatur x1<br>PS/2-Maus x1<br>LAN-Anschluss x1<br>USB-Anschluss x4<br>Audioanschluss x3<br>DVI-Anschluss (for TF720 A2+) x1<br>VGA-Anschluss (for TF720 A2+) x1   |
| Platinengröße     | 220 mm (B) X 305 mm (L)   | 220 mm (B) X 305 mm (L)   |
| Sonderfunktionen  | Unterstützt RAID 0 / 1 / 5 / 0+1<br>Unterstützt Hybrid SLI (by nVIDIA driver)   | Unterstützt RAID 0 / 1 / 5 / 0+1<br>Unterstützt Hybrid SLI (by nVIDIA driver) (for TF720 A2+)   |
| OS-Unterstützung  | Windows XP / VISTA<br>Biostar behält sich das Recht vor, ohne Ankündigung die Unterstützung für ein Betriebssystem hinzuzufügen oder zu entfernen.  | Windows XP / VISTA<br>Biostar behält sich das Recht vor, ohne Ankündigung die Unterstützung für ein Betriebssystem hinzuzufügen oder zu entfernen.  |

**FRANCE**

|                    | <b>TF8200 A2+ SE</b>   | <b>TF720 A2+/TF710 A2+</b>   |
|--------------------|--|--|
| UC                 | Socket AM2+<br>Processeurs AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>L'architecture AMD 64 permet le calcul 32 et 64 bits<br>Prend en charge Hyper Transport 3.0 et PowerNow   | Socket AM2+<br>Processeurs AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>L'architecture AMD 64 permet le calcul 32 et 64 bits<br>Prend en charge Hyper Transport 3.0 et PowerNow   |
| Bus frontal        | Prend en charge Hyper Transport 3.0 jusqu'à une bande passante de 5.2 GT/s   | Prend en charge Hyper Transport 3.0 jusqu'à une bande passante de 5.2 GT/s   |
| Chipset            | GeForce 8200   | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)  |
| Super E/S          | ITE 8718F<br>Fournit la fonctionnalité de Super E/S patrimoniales la plus utilisée.<br>Interface à faible compte de broches<br>Initiatives de contrôle environnementales, Moniteur de matériel<br>Contrôleur de vitesse de ventilateur<br>Fonction "Gardien intelligent" de l'ITE  | ITE 8718F<br>Fournit la fonctionnalité de Super E/S patrimoniales la plus utilisée.<br>Interface à faible compte de broches<br>Initiatives de contrôle environnementales, Moniteur de matériel<br>Contrôleur de vitesse de ventilateur<br>Fonction "Gardien intelligent" de l'ITE  |
| Mémoire principale | Fentes DDR2 DIMM x 4<br>Chaque DIMM prend en charge des DDR2 de 256 Mo /512 Mo/1 Go/2 Go/4 Go<br>Capacité mémoire maximale de 16 Go<br>Module de mémoire DDR2 à mode à double voie<br>Prend en charge la DDR2 533 / 667 / 800<br>Prend en charge la DDR2 1066 (by AM2+ CPU)<br>Les DIMM à registres et DIMM avec code correcteurs d'erreurs ne sont pas prises en charge | Fentes DDR2 DIMM x 4<br>Chaque DIMM prend en charge des DDR2 de 256 Mo /512 Mo/1 Go/2 Go/4 Go<br>Capacité mémoire maximale de 16 Go<br>Module de mémoire DDR2 à mode à double voie<br>Prend en charge la DDR2 533 / 667 / 800<br>Prend en charge la DDR2 1066 (by AM2+ CPU)<br>Les DIMM à registres et DIMM avec code correcteurs d'erreurs ne sont pas prises en charge |
| Graphiques         | Intégré dans la chipset GeForce 8200<br>Mémoire vidéo partagée maximale de 512 Mo<br>Prise en charge DX10 / HDCP / PureVideo HD<br><i>For TF8200A2+ SE / TF720 A2+ Only</i>  | Intégré dans la chipset GeForce 8100<br>Mémoire vidéo partagée maximale de 512 Mo<br>Prise en charge DX10 / HDCP / PureVideo   |
| IDE                | Contrôleur IDE integer<br>Mode principale de Bus Ultra DMA 33 / 66 / 100 / 133<br>Prend en charge le mode PIO 0~4  | Contrôleur IDE integer<br>Mode principale de Bus Ultra DMA 33 / 66 / 100 / 133<br>Prend en charge le mode PIO 0~4  |
| SATA II            | Contrôleur Serial ATA intégré<br>Taux de transfert jusqu'à 3 Go/s.<br>Conforme à la spécification SATA Version 2.0   | Contrôleur Serial ATA intégré<br>Taux de transfert jusqu'à 3 Go/s.<br>Conforme à la spécification SATA Version 2.0   |

**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|                           | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|---------------------------|---|---|
| LAN                       | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s négociation automatique<br>Half / Full duplex capability  | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s négociation automatique<br>Half / Full duplex capability  |
| Codec audio               | ALC662<br>Sortie audio à 5.1 voies<br>Prise en charge de l'audio haute définition   | ALC662<br>Sortie audio à 5.1 voies<br>Prise en charge de l'audio haute définition   |
| Fentes                    | Fente PCI x3<br>Slot PCI Express Gen2 x16 x1<br>Slot PCI Express x1 x2  | Fente PCI x3<br>Slot PCI Express Gen2 x16 x1<br>Slot PCI Express x1 x2  |
| Connecteur embarqué       | Connecteur de disquette x1<br>Connecteur de Port d'imprimante x1<br>Connecteur IDE x1<br>Connecteur SATA x6<br>Connecteur du panneau avant x1<br>Connecteur Audio du panneau avant x1<br>Connecteur d'entrée CD x1<br>Connecteur de sortie S/PDIF x1<br>Embase de ventilateur UC x1<br>Embase de ventilateur système x2<br>Embase d'effacement CMOS x1<br>Connecteur USB x4<br>Connecteur de Port série x1<br>Connecteur d'alimentation (24 broches) x1<br>Connecteur d'alimentation (4 broches) x2 | Connecteur de disquette x1<br>Connecteur de Port d'imprimante x1<br>Connecteur IDE x1<br>Connecteur SATA x6<br>Connecteur du panneau avant x1<br>Connecteur Audio du panneau avant x1<br>Connecteur d'entrée CD x1<br>Connecteur de sortie S/PDIF x1<br>Embase de ventilateur UC x1<br>Embase de ventilateur système x2<br>Embase d'effacement CMOS x1<br>Connecteur USB x4<br>Connecteur de Port série x1<br>Connecteur d'alimentation (24 broches) x1<br>Connecteur d'alimentation (4 broches) x2 |
| E/S du panneau arrière    | Clavier PS/2 x1<br>Souris PS/2 x1<br>Port LAN x1<br>Port USB x4<br>Fiche audio x3<br>Port DVI x1<br>Port VGA x1   | Clavier PS/2 x1<br>Souris PS/2 x1<br>Port LAN x1<br>Port USB x4<br>Fiche audio x3<br>Port DVI (for TF720 A2+) x1<br>Port VGA (for TF720 A2+) x1   |
| Dimensions de la carte    | 220 mm (l) X 305 mm (H)   | 220 mm (l) X 305 mm (H)   |
| Fonctionnalités spéciales | Prise en charge RAID 0 / 1 / 5 / 0+1<br>Prise en charge Hybrid SLI (by nVIDIA driver)   | Prise en charge RAID 0 / 1 / 5 / 0+1<br>Prise en charge Hybrid SLI (by nVIDIA driver)<br>(for TF720 A2+)  |
| Support SE                | Windows XP / VISTA<br>Biostar se réserve le droit d'ajouter ou de supprimer le support de SE avec ou sans préavis.  | Windows XP / VISTA<br>Biostar se réserve le droit d'ajouter ou de supprimer le support de SE avec ou sans préavis.  |

**ITALIAN**

|                    | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|--------------------|---|---|
| CPU                | Socket AM2+<br>Processori AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>L'architettura AMD 64 abilita la computazione 32 e 64 bit<br>Supporto di Hyper Transport 3.0 e PowerNow   | Socket AM2+<br>Processori AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>L'architettura AMD 64 abilita la computazione 32 e 64 bit<br>Supporto di Hyper Transport 3.0 e PowerNow   |
| FSB                | Supporto di HyperTransport 3.0 fino a 5.2 GT/s di larghezza di banda  | Supporto di HyperTransport 3.0 fino a 5.2 GT/s di larghezza di banda  |
| Chipset            | GeForce 8200  | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)   |
| Super I/O          | ITE 8718F<br>Fornisce le funzionalità legacy Super I/O usate più comunemente.<br>Interfaccia LPC (Low Pin Count)<br>Funzioni di controllo dell'ambiente:<br>Monitoraggio hardware<br>Controller velocità ventolina<br>Funzione "Smart Guardian" di ITE                                    | ITE 8718F<br>Fornisce le funzionalità legacy Super I/O usate più comunemente.<br>Interfaccia LPC (Low Pin Count)<br>Funzioni di controllo dell'ambiente:<br>Monitoraggio hardware<br>Controller velocità ventolina<br>Funzione "Smart Guardian" di ITE                                    |
| Memoria principale | Alloggi DIMM DDR2 x 4<br>Ciascun DIMM supporta DDR2 256MB/512MB/1GB/2GB/4GB<br>Capacità massima della memoria 16GB<br>Modulo di memoria DDR2 a canale doppio<br>Supporto di DDR2 533 / 667 / 800<br>Supporto di DDR2 1066 (by AM2+ CPU)<br>DIMM registrati e DIMM ECC non sono supportati | Alloggi DIMM DDR2 x 4<br>Ciascun DIMM supporta DDR2 256MB/512MB/1GB/2GB/4GB<br>Capacità massima della memoria 16GB<br>Modulo di memoria DDR2 a canale doppio<br>Supporto di DDR2 533 / 667 / 800<br>Supporto di DDR2 1066 (by AM2+ CPU)<br>DIMM registrati e DIMM ECC non sono supportati |
| Grafica            | Integrata nel Chipset GeForce 8200<br>La memoria video condivisa massima è di 512 MB<br><small>For TF8200A2+ SE / TF720A2+ Only</small><br>Supporto DX10 / HDCP / PureVideo HD  | Integrata nel Chipset GeForce 8100<br>La memoria video condivisa massima è di 512 MB<br>Supporto DX10 / HDCP / PureVideo  |
| IDE                | Controller IDE integrato<br>Modalità Bus Master Ultra DMA 33 / 66 / 100 / 133<br>Supporto modalità PIO Mode 0-4   | Controller IDE integrato<br>Modalità Bus Master Ultra DMA 33 / 66 / 100 / 133<br>Supporto modalità PIO Mode 0-4   |
| SATA II            | Controller Serial ATA integrato<br>Velocità di trasferimento dei dati fino a 3 Gb/s.<br>Compatibile specifiche SATA Versione 2.0.   | Controller Serial ATA integrato<br>Velocità di trasferimento dei dati fino a 3 Gb/s.<br>Compatibile specifiche SATA Versione 2.0.   |

**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|                              | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|------------------------------|---|---|
| LAN                          | Realtek RTL 8111C<br>Negoziazione automatica 10 / 100 / 1000 Mb/s<br>Capacità Half / Full Duplex  | Realtek RTL 8111C<br>Negoziazione automatica 10 / 100 / 1000 Mb/s<br>Capacità Half / Full Duplex  |
| Codec audio                  | ALC662<br>Uscita audio 5.1 canali<br>Supporto audio High-Definition (HD)  | ALC662<br>Uscita audio 5.1 canali<br>Supporto audio High-Definition (HD)  |
| Alloggi                      | Alloggio PCI x3<br>Alloggio PCI Express Gen2 x16 x1<br>Alloggio PCI Express x1 x2   | Alloggio PCI x3<br>Alloggio PCI Express Gen2 x16 x1<br>Alloggio PCI Express x1 x2   |
| Connettori su scheda         | Connettore floppy x1<br>Connettore Porta stampante x1<br>Connettore IDE x1<br>Connettore SATA x6<br>Connettore pannello frontale x1<br>Connettore audio frontale x1<br>Connettore CD-in x1<br>Connettore output SPDIF x1<br>Collettore ventolina CPU x1<br>Collettore ventolina sistema x2<br>Collettore cancellazione CMOS x1<br>Connettore USB x4<br>Connettore Porta seriale x1<br>Connettore alimentazione (24 pin) x1<br>Connettore alimentazione (4 pin) x2 | Connettore floppy x1<br>Connettore Porta stampante x1<br>Connettore IDE x1<br>Connettore SATA x6<br>Connettore pannello frontale x1<br>Connettore audio frontale x1<br>Connettore CD-in x1<br>Connettore output SPDIF x1<br>Collettore ventolina CPU x1<br>Collettore ventolina sistema x2<br>Collettore cancellazione CMOS x1<br>Connettore USB x4<br>Connettore Porta seriale x1<br>Connettore alimentazione (24 pin) x1<br>Connettore alimentazione (4 pin) x2 |
| I/O pannello posteriore      | Tastiera PS/2 x1<br>Mouse PS/2 x1<br>Porta LAN x1<br>Porta USB x4<br>Connettore audio x3<br>Porta DVI x1<br>Porta VGA x1  | Tastiera PS/2 x1<br>Mouse PS/2 x1<br>Porta LAN x1<br>Porta USB x4<br>Connettore audio x3<br>Porta DVI (for TF720 A2+) x1<br>Porta VGA (for TF720 A2+) x1  |
| Dimensioni scheda            | 220 mm (larghezza) x 305 mm (altezza)   | 220 mm (larghezza) x 305 mm (altezza)   |
| Caratteristiche speciali     | Supporto RAID 0 / 1 / 5 / 0+1<br>Supporto Hybrid SLI (by nVIDIA driver)   | Supporto RAID 0 / 1 / 5 / 0+1<br>Supporto Hybrid SLI (by nVIDIA driver) (for TF720 A2+)   |
| Sistemi operativi supportati | Windows XP / VISTA<br>Biostar si riserva il diritto di aggiungere o rimuovere il supporto di qualsiasi sistema operativo senza preavviso.   | Windows XP / VISTA<br>Biostar si riserva il diritto di aggiungere o rimuovere il supporto di qualsiasi sistema operativo senza preavviso.   |

**SPANISH**

|                   | <b>TF8200 A2+ SE</b>   | <b>TF720 A2+/TF710 A2+</b>   |
|-------------------|--|--|
| CPU               | Conector AM2+<br>Procesadores AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>La arquitectura AMD 64 permite el procesado de 32 y 64 bits<br>Soporta las tecnologías Hyper Transport 3.0 y PowerNow  | Conector AM2+<br>Procesadores AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>La arquitectura AMD 64 permite el procesado de 32 y 64 bits<br>Soporta las tecnologías Hyper Transport 3.0 y PowerNow  |
| FSB               | Admite HyperTransport 3.0 con un ancho de banda de hasta 5.2 GT/s  | Admite HyperTransport 3.0 con un ancho de banda de hasta 5.2 GT/s  |
| Conjunto de chips | GeForce 8200   | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)  |
| Súper E/S         | ITE 8718F<br>Le ofrece las funcionalidades heredadas de uso más común Súper E/S.<br>Interfaz de cuenta Low Pin<br>Iniciativas de control de entorno,<br>Monitor hardware<br>Controlador de velocidad de ventilador<br>Función "Guardia inteligente" de ITE                               | ITE 8718F<br>Le ofrece las funcionalidades heredadas de uso más común Súper E/S.<br>Interfaz de cuenta Low Pin<br>Iniciativas de control de entorno,<br>Monitor hardware<br>Controlador de velocidad de ventilador<br>Función "Guardia inteligente" de ITE                               |
| Memoria principal | Ranuras DIMM DDR2 x 4<br>Cada DIMM admite DDR de 256MB/512MB/1GB/2GB/4GB<br>Capacidad máxima de memoria de 16GB<br>Módulo de memoria DDR2 de canal Doble<br>Admite DDR2 de 533 / 667 / 800<br>Admite DDR2 de 1066 (by AM2+ CPU)<br>No admite DIMM registrados o DIMM compatibles con ECC | Ranuras DIMM DDR2 x 4<br>Cada DIMM admite DDR de 256MB/512MB/1GB/2GB/4GB<br>Capacidad máxima de memoria de 16GB<br>Módulo de memoria DDR2 de canal Doble<br>Admite DDR2 de 533 / 667 / 800<br>Admite DDR2 de 1066 (by AM2+ CPU)<br>No admite DIMM registrados o DIMM compatibles con ECC |
| Gráficos          | Integrados en el conjunto de chips GeForce 8200<br>For TF8200A2+ SE / TF720 A2+ Only<br>Memoria máxima de vídeo compartida de 512 MB<br>Admite DX10 / HDCP / PureVideo HD  | Integrados en el conjunto de chips GeForce 8100<br>Memoria máxima de vídeo compartida de 512 MB<br>Admite DX10 / HDCP / PureVideo  |
| IDE               | Controlador IDE integrado<br>Modo bus maestro Ultra DMA 33 / 66 / 100 / 133<br>Soporte los Modos PIO 0~4   | Controlador IDE integrado<br>Modo bus maestro Ultra DMA 33 / 66 / 100 / 133<br>Soporte los Modos PIO 0~4   |
| SATA II           | Controlador ATA Serie Integrado<br>Tasas de transferencia de hasta 3 Gb/s.<br>Compatible con la versión SATA 2.0.  | Controlador ATA Serie Integrado<br>Tasas de transferencia de hasta 3 Gb/s.<br>Compatible con la versión SATA 2.0.  |
| Red Local         | Realtek RTL 8111C<br>Negociación de 10 / 100 / 1000 Mb/s<br>Funciones Half / Full dúplex   | Realtek RTL 8111C<br>Negociación de 10 / 100 / 1000 Mb/s<br>Funciones Half / Full dúplex   |

**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|                              | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|------------------------------|---|---|
| Códecs de sonido             | ALC662<br>Salida de sonido de 5.1 canales<br>Soporte de sonido de Alta Definición   | ALC662<br>Salida de sonido de 5.1 canales<br>Soporte de sonido de Alta Definición   |
| Ranuras                      | Ranura PCI X3<br>Ranura PCI Express Gen2 x16 X1<br>Ranura PCI express x1 X2   | Ranura PCI X3<br>Ranura PCI Express Gen2 x16 X1<br>Ranura PCI express x1 X2   |
| Conectores en placa          | Conector disco flexible X1<br>Conector Puerto de impresora X1<br>Conector IDE X1<br>Conector SATA X6<br>Conector de panel frontal X1<br>Conector de sonido frontal X1<br>Conector de entrada de CD X1<br>Conector de salida S/PDIF X1<br>Cabecera de ventilador de CPU X1<br>Cabecera de ventilador de sistema X2<br>Cabecera de borrado de CMOS X1<br>Conector USB X4<br>Conector Puerto serie X1<br>Conector de alimentación (24 patillas) X1<br>Conector de alimentación (4 patillas) X2 | Conector disco flexible X1<br>Conector Puerto de impresora X1<br>Conector IDE X1<br>Conector SATA X6<br>Conector de panel frontal X1<br>Conector de sonido frontal X1<br>Conector de entrada de CD X1<br>Conector de salida S/PDIF X1<br>Cabecera de ventilador de CPU X1<br>Cabecera de ventilador de sistema X2<br>Cabecera de borrado de CMOS X1<br>Conector USB X4<br>Conector Puerto serie X1<br>Conector de alimentación (24 patillas) X1<br>Conector de alimentación (4 patillas) X2 |
| Panel trasero de E/S         | Teclado PS/2 X1<br>Ratón PS/2 X1<br>Puerto de red local X1<br>Puerto USB X4<br>Conector de sonido X3<br>Puerto DVI X1<br>Puerto VGA X1  | Teclado PS/2 X1<br>Ratón PS/2 X1<br>Puerto de red local X1<br>Puerto USB X4<br>Conector de sonido X3<br>Puerto DVI (for TF720 A2+) X1<br>Puerto VGA (for TF720 A2+) X1  |
| Tamaño de la placa           | 220 mm (A) X 305 mm (H)   | 220 mm (A) X 305 mm (H)   |
| Funciones especiales         | Admite RAID 0 / 1 / 5 / 0+1<br>Admite Hybrid SLI (by nVIDIA driver)   | Admite RAID 0 / 1 / 5 / 0+1<br>Admite Hybrid SLI (by nVIDIA driver) (for TF720 A2+)   |
| Soporte de sistema operativo | Windows XP / VISTA<br>Biostar se reserva el derecho de añadir o retirar el soporte de cualquier SO con o sin aviso previo.  | Windows XP / VISTA<br>Biostar se reserva el derecho de añadir o retirar el soporte de cualquier SO con o sin aviso previo.  |

## PORTUGUESE

|                            | <b>TF8200 A2+ SE</b>   | <b>TF720 A2+/TF710 A2+</b>   |
|----------------------------|--|--|
| CPU                        | Socket AM2+<br>Processadores AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>A arquitetura AMD 64 permite uma computação de 32 e 64 bits<br>Suporta as tecnologias Hyper Transport 3.0 e PowerNow  | Socket AM2+<br>Processadores AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>A arquitetura AMD 64 permite uma computação de 32 e 64 bits<br>Suporta as tecnologias Hyper Transport 3.0 e PowerNow  |
| FSB                        | Suporta a tecnologia HyperTransport 3.0 com uma largura de banda até 5.2 GT/s  | Suporta a tecnologia HyperTransport 3.0 com uma largura de banda até 5.2 GT/s  |
| Chipset                    | GeForce 8200   | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)  |
| Especificação do Super I/O | ITE 8718F<br>Proporciona as funcionalidades mais utilizadas em termos da especificação Super I/O.<br>Interface LPC (Low Pin Count).<br>Iniciativas para controlo do ambiente<br>Monitorização do hardware<br>Controlador da velocidade da ventoinha<br>Função "Smart Guardian" da ITE  | ITE 8718F<br>Proporciona as funcionalidades mais utilizadas em termos da especificação Super I/O.<br>Interface LPC (Low Pin Count).<br>Iniciativas para controlo do ambiente<br>Monitorização do hardware<br>Controlador da velocidade da ventoinha<br>Função "Smart Guardian" da ITE  |
| Memória principal          | Ranuras DIMM DDR2 x 4<br>Cada módulo DIMM suporta uma memória DDR2 de 256MB/512MB/1GB/2GB/4GB<br>Capacidade máxima de memória: 16GB<br>Módulo de memória DDR2 de canal duplo<br>Suporta módulos DDR2 533 / 667 / 800<br>Suporta módulos DDR2 1066 (by AM2+ CPU)<br>Os módulos DIMM registados e os DIMM ECC não são suportados | Ranuras DIMM DDR2 x 4<br>Cada módulo DIMM suporta uma memória DDR2 de 256MB/512MB/1GB/2GB/4GB<br>Capacidade máxima de memória: 16GB<br>Módulo de memória DDR2 de canal duplo<br>Suporta módulos DDR2 533 / 667 / 800<br>Suporta módulos DDR2 1066 (by AM2+ CPU)<br>Os módulos DIMM registados e os DIMM ECC não são suportados |
| Placa gráfica              | Integrada no chipset GeForce 8200<br>For TF8200A2+ SE / TF720 A2+ Only<br>Memória de vídeo máxima partilhada: 512 MB<br>Suporta as funções DX10 / HDCP / PureVideo HD  | Integrada no chipset GeForce 8100<br>Memória de vídeo máxima partilhada: 512 MB<br>Suporta as funções DX10 / HDCP / PureVideo  |
| IDE                        | Controlador IDE integrado<br>Modo Bus master Ultra DMA 33 / 66 / 100 / 133<br>Suporta o modo PIO 0~4   | Controlador IDE integrado<br>Modo Bus master Ultra DMA 33 / 66 / 100 / 133<br>Suporta o modo PIO 0~4   |
| SATA II                    | Controlador Serial ATA integrado<br>Velocidades de transmissão de dados até 3 Gb/s.<br>Compatibilidade com a especificação SATA versão 2.0.  | Controlador Serial ATA integrado<br>Velocidades de transmissão de dados até 3 Gb/s.<br>Compatibilidade com a especificação SATA versão 2.0.  |



**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|                                    | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|------------------------------------|---|---|
| LAN                                | Realtek RTL 8111C<br>Auto negociação de 10 / 100 / 1000 Mb/s<br>Capacidade semi/full-duplex   | Realtek RTL 8111C<br>Auto negociação de 10 / 100 / 1000 Mb/s<br>Capacidade semi/full-duplex   |
| Codec de som                       | ALC662<br>Saída de áudio de 5.1 canais<br>Suporta a especificação High-Definition Audio   | ALC662<br>Saída de áudio de 5.1 canais<br>Suporta a especificação High-Definition Audio   |
| Ranhuradas                         | Ranhura PCI x3<br>Ranhura PCI Express Gen2 x16 x1<br>Ranhura PCI Express x1 x2  | Ranhura PCI x3<br>Ranhura PCI Express Gen2 x16 x1<br>Ranhura PCI Express x1 x2  |
| Conectores na placa                | Conector da unidade de disquetes x1<br>Conector da para impressora x1<br>Conector IDE x1<br>Conector SATA x6<br>Conector do painel frontal x1<br>Conector de áudio frontal x1<br>Conector para entrada de CDs x1<br>Conector de saída S/PDIF x1<br>Conector da ventoinha da CPU x1<br>Conector da ventoinha do sistema x2<br>Conector para limpeza do CMOS x1<br>Conector USB x4<br>Conector da Porta série x1<br>Conector de alimentação (24 pinos) x1<br>Conector de alimentação (4 pinos) x2 | Conector da unidade de disquetes x1<br>Conector da para impressora x1<br>Conector IDE x1<br>Conector SATA x6<br>Conector do painel frontal x1<br>Conector de áudio frontal x1<br>Conector para entrada de CDs x1<br>Conector de saída S/PDIF x1<br>Conector da ventoinha da CPU x1<br>Conector da ventoinha do sistema x2<br>Conector para limpeza do CMOS x1<br>Conector USB x4<br>Conector da Porta série x1<br>Conector de alimentação (24 pinos) x1<br>Conector de alimentação (4 pinos) x2 |
| Entradas/Saídas no painel traseiro | Teclado PS/2 x1<br>Rato PS/2 x1<br>Porta LAN x1<br>Porta USB x4<br>Tomada de áudio x3<br>Porta DVI x1<br>Porta VGA x1   | Teclado PS/2 x1<br>Rato PS/2 x1<br>Porta LAN x1<br>Porta USB x4<br>Tomada de áudio x3<br>Porta DVI (for TF720 A2+) x1<br>Porta VGA (for TF720 A2+) x1   |
| Tamanho da placa                   | 220 mm (L) X 305 mm (A)   | 220 mm (L) X 305 mm (A)   |
| Características especiais          | Suporta as funções RAID 0 / 1 / 5 / 0+1<br>Suporta as funções Hybrid SLI (by nVIDIA driver)   | Suporta as funções RAID 0 / 1 / 5 / 0+1<br>Suporta as funções Hybrid SLI (by nVIDIA driver) (for TF720 A2+)   |
| Sistemas operativos suportados     | Windows XP / VISTA<br>A Biostar reserva-se o direito de adicionar ou remover suporte para qualquer sistema operativo com ou sem aviso prévio.   | Windows XP / VISTA<br>A Biostar reserva-se o direito de adicionar ou remover suporte para qualquer sistema operativo com ou sem aviso prévio.   |

**POLISH**

|               | <b>TF8200 A2+ SE</b>   | <b>TF720 A2+/TF710 A2+</b>   |
|---------------|--|--|
| Procesor      | Socket AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom Procesory<br>Architektura AMD 64 umożliwia przetwarzanie 32 i 64 bitowe<br>Obsługa Hyper Transport 3.0 oraz PowerNow   | Socket AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom Procesory<br>Architektura AMD 64 umożliwia przetwarzanie 32 i 64 bitowe<br>Obsługa Hyper Transport 3.0 oraz PowerNow   |
| FSB           | Obsługa HyperTransport 3.0 o szerokości pasma do 5.2 GT/s  | Obsługa HyperTransport 3.0 o szerokości pasma do 5.2 GT/s  |
| Chipset       | GeForce 8200   | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)  |
| Pamięć główna | Gniazda DDR2 DIMM x 4<br>Każde gniazdo DIMM obsługuje moduły 256MB/512MB/1GB/2GB/4GB DDR2<br>Maks. wielkość pamięci 16GB<br>Moduł pamięci DDR2 z trybem podwójnego kanału<br>Obsługa DDR2 533 / 667 / 800<br>Obsługa DDR2 1066 (by AM2+ CPU)<br>Brak obsługi Registered DIMM oraz ECC DIMM | Gniazda DDR2 DIMM x 4<br>Każde gniazdo DIMM obsługuje moduły 256MB/512MB/1GB/2GB/4GB DDR2<br>Maks. wielkość pamięci 16GB<br>Moduł pamięci DDR2 z trybem podwójnego kanału<br>Obsługa DDR2 533 / 667 / 800<br>Obsługa DDR2 1066 (by AM2+ CPU)<br>Brak obsługi Registered DIMM oraz ECC DIMM |
| Super I/O     | ITE 8718F<br>Zapewnia najbardziej powszechne funkcje Super I/O.<br>Interfejs Low Pin Count<br>Funkcje kontroli warunków pracy, Monitor H/W<br>Kontroler prędkości wentylatora<br>Funkcja ITE "Smart Guardian"  | ITE 8718F<br>Zapewnia najbardziej powszechne funkcje Super I/O.<br>Interfejs Low Pin Count<br>Funkcje kontroli warunków pracy, Monitor H/W<br>Kontroler prędkości wentylatora<br>Funkcja ITE "Smart Guardian"  |
| Grafika       | Zintegrowana w chipsecie GeForce 8200<br>For TF8200A2+ SE / TF720 A2+ Only<br>Maks. wielkość współdzielonej pamięci video wynosi 512 MB<br>Obsługa DX10 / HDCP / PureVideo HD  | Zintegrowana w chipsecie GeForce 8100<br>Maks. wielkość współdzielonej pamięci video wynosi 512 MB<br>Obsługa DX10 / HDCP / PureVideo  |
| IDE           | Zintegrowany kontroler IDE<br>Ultra DMA 33 / 66 / 100 / 133 Tryb Bus Master<br>obsługa PIO tryb 0~4  | Zintegrowany kontroler IDE<br>Ultra DMA 33 / 66 / 100 / 133 Tryb Bus Master<br>obsługa PIO tryb 0~4  |
| SATA II       | Zintegrowany kontroler Serial ATA<br>Transfer danych do 3 Gb/s.<br>Zgodność ze specyfikacją SATA w wersji 2.0.   | Zintegrowany kontroler Serial ATA<br>Transfer danych do 3 Gb/s.<br>Zgodność ze specyfikacją SATA w wersji 2.0.   |
| LAN           | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s z automatyczną negocjacją szybkości<br>Działanie w trybie połowicznego / pełnego duplexu   | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/s z automatyczną negocjacją szybkości<br>Działanie w trybie połowicznego / pełnego duplexu   |

**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|                              | <b>TF8200 A2+ SE</b>   | <b>TF720 A2+/TF710 A2+</b>   |
|------------------------------|--|--|
| Kodek dźwiękowy              | ALC662<br>5.1 kanałowe wyjście audio<br>Obsługa High-Definition Audio  | ALC662<br>5.1 kanałowe wyjście audio<br>Obsługa High-Definition Audio  |
| Gniazda                      | Gniazdo PCI x3<br>Gniazdo PCI Express Gen2 x16 x1<br>Gniazdo PCI Express x1 x2   | Gniazdo PCI x3<br>Gniazdo PCI Express Gen2 x16 x1<br>Gniazdo PCI Express x1 x2   |
| Złącza wbudowane             | Złącze napędu dyskietek x1<br>Złącze Port drukarki x1<br>Złącze IDE x1<br>Złącze SATA x6<br>Złącze panela przedniego x1<br>Przednie złącze audio x1<br>Złącze wejścia CD x1<br>Złącze wyjścia S/PDIF x1<br>Złącze główkowe wentylatora procesora x1<br>Złącze główkowe wentylatora systemowego x2<br>Złącze główkowe kasowania CMOS x1<br>Złącze USB x4<br>Złącze Port szeregowy x1<br>Złącze zasilania (24 pinowe) x1<br>Złącze zasilania (4 pinowe) x2 | Złącze napędu dyskietek x1<br>Złącze Port drukarki x1<br>Złącze IDE x1<br>Złącze SATA x6<br>Złącze panela przedniego x1<br>Przednie złącze audio x1<br>Złącze wejścia CD x1<br>Złącze wyjścia S/PDIF x1<br>Złącze główkowe wentylatora procesora x1<br>Złącze główkowe wentylatora systemowego x2<br>Złącze główkowe kasowania CMOS x1<br>Złącze USB x4<br>Złącze Port szeregowy x1<br>Złącze zasilania (24 pinowe) x1<br>Złącze zasilania (4 pinowe) x2 |
| Back Panel I/O               | Klawiatura PS/2 x1<br>Mysz PS/2 x1<br>Port LAN x1<br>Port USB x4<br>Gniazdo audio x3<br>Port DVI x1<br>Port VGA x1   | Klawiatura PS/2 x1<br>Mysz PS/2 x1<br>Port LAN x1<br>Port USB x4<br>Gniazdo audio x3<br>Port DVI (for TF720 A2+) x1<br>Port VGA (for TF720 A2+) x1   |
| Wymiary płyty                | 220 mm (S) X 305 mm (W)  | 220 mm (S) X 305 mm (W)  |
| Funkcje specjalne            | Obsługa RAID 0 / 1 / 5 / 0+1<br>Obsługa Hybrid SLI (by nVIDIA driver)  | Obsługa RAID 0 / 1 / 5 / 0+1<br>Obsługa Hybrid SLI (by nVIDIA driver) (for TF720 A2+)  |
| Obsługa systemu operacyjnego | Windows XP / VISTA<br>Biostar zastrzega sobie prawo dodawania lub odwoływania obsługi dowolnego systemu operacyjnego bez powiadomienia.  | Windows XP / VISTA<br>Biostar zastrzega sobie prawo dodawania lub odwoływania obsługi dowolnego systemu operacyjnego bez powiadomienia.  |

## RUSSIAN

|   | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|---|---|---|
| CPU<br>(центральный процессор)                              | Гнездо AM2+<br>Процессоры AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>Архитектура AMD 64 разрешать обработка данных на 32 и 64 бит<br>Поддержка Hyper Transport 3.0 и PowerNow  | Гнездо AM2+<br>Процессоры AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom<br>Архитектура AMD 64 разрешать обработка данных на 32 и 64 бит<br>Поддержка Hyper Transport 3.0 и PowerNow  |
| FSB   | Поддержка HyperTransport 3.0 с пропускной способностью до 5.2 GT/s  | Поддержка HyperTransport 3.0 с пропускной способностью до 5.2 GT/s  |
| Набор микросхем   | GeForce 8200  | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)   |
| Основная память   | Слоты DDR2 DIMM x 4<br>Каждый модуль DIMM поддерживает 256МБ/512МБ/1ГБ/2ГБ/4ГБ DDR2<br>Максимальная ёмкость памяти 16ГБ<br>Модуль памяти с двухканальным режимом DDR2<br>Поддержка DDR2 533 / 667 / 800<br>Поддержка DDR2 1066 (by AM2+ CPU)<br>Не поддерживает зарегистрированные модули DIMM and ECC DIMM | Слоты DDR2 DIMM x 4<br>Каждый модуль DIMM поддерживает 256МБ/512МБ/1ГБ/2ГБ/4ГБ DDR2<br>Максимальная ёмкость памяти 16ГБ<br>Модуль памяти с двухканальным режимом DDR2<br>Поддержка DDR2 533 / 667 / 800<br>Поддержка DDR2 1066 (by AM2+ CPU)<br>Не поддерживает зарегистрированные модули DIMM and ECC DIMM |
| Super I/O   | ITE 8718F<br>Обеспечивает наиболее используемые действующие функциональные возможности Super I/O.<br>Интерфейс с низким количеством выводов<br>Инициативы по охране окружающей среды,<br>Аппаратный монитор<br>Регулятор скорости<br>Функция ITE "Smart Guardian"<br>(Интеллектуальная защита)              | ITE 8718F<br>Обеспечивает наиболее используемые действующие функциональные возможности Super I/O.<br>Интерфейс с низким количеством выводов<br>Инициативы по охране окружающей среды,<br>Аппаратный монитор<br>Регулятор скорости<br>Функция ITE "Smart Guardian"<br>(Интеллектуальная защита)              |
| Графика<br><small>For TF8200A2+ SE / TF720 A2+ Only</small> | Встроенная в набор микросхем GeForce 8200<br>Максимальная совместно используемая видео память составляет 512 МБ<br>Поддержка DX10 / HDCP / PureVideo HD   | Встроенная в набор микросхем GeForce 8100<br>Максимальная совместно используемая видео память составляет 512 МБ<br>Поддержка DX10 / HDCP / PureVideo  |
| IDE   | Встроенное устройство управления встроенными интерфейсами устройств<br>Режим "хозяина" шины Ultra DMA 33 / 66 / 100 / 133<br>Поддержка режима PIO 0~4,  | Встроенное устройство управления встроенными интерфейсами устройств<br>Режим "хозяина" шины Ultra DMA 33 / 66 / 100 / 133<br>Поддержка режима PIO 0~4,  |
| SATA II   | Встроенное последовательное устройство управления ATA<br>скорость передачи данных до 3 гигабит/с.<br>Соответствие спецификации SATA версия 2.0.   | Встроенное последовательное устройство управления ATA<br>скорость передачи данных до 3 гигабит/с.<br>Соответствие спецификации SATA версия 2.0.   |

**TF8200 A2+ SE/TF720 A2+/TF710 A2+**

|  | <b>TF8200 A2+ SE</b>  | <b>TF720 A2+/TF710 A2+</b>  |
|--|---|---|
| Локальная сеть                         | Realtek RTL 8111C<br>Автоматическое согласование 10 / 100 / 1000 Мб/с<br>Частичная / полная дуплексная способность  | Realtek RTL 8111C<br>Автоматическое согласование 10 / 100 / 1000 Мб/с<br>Частичная / полная дуплексная способность  |
| Звуковой кодек                         | ALC662<br>Звуковая поддержка High-Definition<br>5.1канальный звуковой выход   | ALC662<br>Звуковая поддержка High-Definition<br>5.1канальный звуковой выход   |
| Слоты                                  | Слот PCI x3<br>Слот PCI Express Gen2 x16 x1<br>Слот PCI Express x1 x2   | Слот PCI x3<br>Слот PCI Express Gen2 x16 x1<br>Слот PCI Express x1 x2   |
| Встроенный разъём                      | Разъём НГМД x1<br>Разъём Порт подключения принтера x1<br>Разъём IDE x1<br>Разъём SATA x6<br>Разъём на лицевой панели x1<br>Входной звуковой разъём x1<br>Разъём ввода для CD x1<br>Разъём вывода для S/PDIF x1<br>Контактирующее приспособление вентилятора центрального процессора x1<br>Контактирующее приспособление вентилятора системы x2<br>Открытое контактирующее приспособление CMOS x1<br>USB-разъём x4<br>Разъём Последовательный порт x1<br>Разъем питания (24 вывод) x1<br>Разъем питания (4 вывод) x2 | Разъём НГМД x1<br>Разъём Порт подключения принтера x1<br>Разъём IDE x1<br>Разъём SATA x6<br>Разъём на лицевой панели x1<br>Входной звуковой разъём x1<br>Разъём ввода для CD x1<br>Разъём вывода для S/PDIF x1<br>Контактирующее приспособление вентилятора центрального процессора x1<br>Контактирующее приспособление вентилятора системы x2<br>Открытое контактирующее приспособление CMOS x1<br>USB-разъём x4<br>Разъём Последовательный порт x1<br>Разъем питания (24 вывод) x1<br>Разъем питания (4 вывод) x2 |
| Задняя панель средств ввода-вывода     | Клавиатура PS/2 x1<br>Мышь PS/2 x1<br>Порт LAN x1<br>USB-порт x4<br>Гнездо для подключения наушников x3<br>Порт DVI x1<br>Порт VGA x1   | Клавиатура PS/2 x1<br>Мышь PS/2 x1<br>Порт LAN x1<br>USB-порт x4<br>Гнездо для подключения наушников x3<br>Порт DVI (for TF720 A2+) x1<br>Порт VGA (for TF720 A2+) x1   |
| Размер панели                          | 220 мм (Ш) X 305 мм (В)   | 220 мм (Ш) X 305 мм (В)   |
| Специальные технические характеристики | Поддержка RAID 0 / 1 / 5 / 0+1<br>Поддержка Hybrid SLI (by nVIDIA driver)   | Поддержка RAID 0 / 1 / 5 / 0+1<br>Поддержка Hybrid SLI (by nVIDIA driver) (for TF720 A2+)   |
| Поддержка OS                           | Windows XP / VISTA<br>Biostar сохраняет за собой право добавлять или удалять средства обеспечения для OS с или без предварительного уведомления.  | Windows XP / VISTA<br>Biostar сохраняет за собой право добавлять или удалять средства обеспечения для OS с или без предварительного уведомления.  |

## ARABIC

| TF720 A2+ / TF710 A2+  | TF8200 A2+ SE  |  |
|--|--|--|
| AM2+ مقبس<br>AMD Athlon 64 / Athlon 64 FX / Sempron / Phenom / Athlon 64 X2<br>إجراء العمليات الحاسوبية بسرعة 32 و 64 بت AMD 64 يمكن تقنية<br>PowerNow و Hyper Transport 3.0 تدعم تقنية  | AM2+ مقبس<br>AMD Athlon 64 / Athlon 64 FX / Sempron / Phenom / Athlon 64 X2<br>إجراء العمليات الحاسوبية بسرعة 32 و 64 بت AMD 64 يمكن تقنية<br>PowerNow و Hyper Transport 3.0 تدعم تقنية  | وحدة المعالجة المركزية                             |
| 5.2 GT/s تردد يصل إلى 3.0 HyperTransport 3.0 تدعم تقنية  | 5.2 GT/s تردد يصل إلى 3.0 HyperTransport 3.0 تدعم تقنية  | النقل الأممي الجانبي                               |
| GeForce 8100 (TF720 A2+) / nForce 710a (TF710 A2+)   | GeForce 8200   | مجموعة الشرائح                                     |
| عدد 4 قحة DDR2 DIMM<br>ميغا 256/512 سعة DDR2 تدعم ذاكرة من نوع DIMM كل قحة<br>بليت 1 و 2 و 4 جيجا بليت<br>سعة ذاكرة قصوى 16 جيجا بليت<br>مزوجة القاعة DDR2 وحدة ذاكرة<br>ميغا بليت 800/667/533 سعات DDR2 تدعم الذاكرة من نوع<br>1066 (By AM2+ CPU) سعات DDR2 تدعم الذاكرة من نوع<br>ميغا بليت<br>ECC وتلك التي لا تتوافق مع DIMM لا تدعم رقائق الذاكرة | عدد 4 قحة DDR2 DIMM<br>ميغا 256/512 سعة DDR2 تدعم ذاكرة من نوع DIMM كل قحة<br>بليت 1 و 2 و 4 جيجا بليت<br>سعة ذاكرة قصوى 16 جيجا بليت<br>مزوجة القاعة DDR2 وحدة ذاكرة<br>ميغا بليت 800/667/533 سعات DDR2 تدعم الذاكرة من نوع<br>1066 (By AM2+ CPU) سعات DDR2 تدعم الذاكرة من نوع<br>ميغا بليت<br>ECC وتلك التي لا تتوافق مع DIMM لا تدعم رقائق الذاكرة | الذاكرة الرئيسية                                   |
| ITE 8718F<br>الأكثر استخداماً، Super I/O ووفر وظيفة<br>Low Pin Count Interface تدعم تقنية<br>وسائل التحكم في البيئة:<br>مراقب لمعرفة حالة الأجهزة<br>مراقب في سرعة المروحة<br>ITE من "Smart Guardian" وظيفة  | ITE 8718F<br>الأكثر استخداماً، Super I/O ووفر وظيفة<br>Low Pin Count Interface تدعم تقنية<br>وسائل التحكم في البيئة:<br>مراقب لمعرفة حالة الأجهزة<br>مراقب في سرعة المروحة<br>ITE من "Smart Guardian" وظيفة  | Super I/O  |
| GeForce 8100 مدمجة في رقائق<br>ميغا بليت 512 أقصى سعة لذاكرة الفيديو المشتركة<br>DX10 / HDCP / PureVideo تدعم تقنية  | GeForce 8200 مدمجة في رقائق<br>ميغا بليت 512 أقصى سعة لذاكرة الفيديو المشتركة<br>DX10 / HDCP / PureVideo HD تدعم تقنية   | بطاقة الرسومات<br>For TF8200A2+ SE / TF720A2+ Only |
| متكامل IDE متحكم<br>Ultra DMA 33 / 66 / 100 / 133 نقل تقنية<br>وضع رئيسي<br>PIO Mode 0 ~ 4 دعم وضع   | متكامل IDE متحكم<br>Ultra DMA 33 / 66 / 100 / 133 نقل تقنية<br>وضع رئيسي<br>PIO Mode 0 ~ 4 دعم وضع   | منفذ IDE   |
| متكامل Serial ATA متحكم<br>نقل البيانات بسرعة تصل إلى 3 جيجابت/ثانية.<br>2.0 الإصدار SATA مطابقة لمواصفات  | متكامل Serial ATA متحكم<br>نقل البيانات بسرعة تصل إلى 3 جيجابت/ثانية.<br>2.0 الإصدار SATA مطابقة لمواصفات  | SATA II  |
| Realtek RTL 8111C<br>تفاوض تلقائي 1000/100/10 ميغا بليت / ثانية<br>إمكانية النقل المزدوج الكامل/القصفي   | Realtek RTL 8111C<br>تفاوض تلقائي 1000/100/10 ميغا بليت / ثانية<br>إمكانية النقل المزدوج الكامل/القصفي   | شبكة داخلية  |

TF8200 A2+ SE/TF720 A2+/TF710 A2+

| TF720 A2+/TF710 A2+   | TF8200 A2+ SE   |                                |
|---|---|--------------------------------|
| ALC662<br>تدعم تقنية الصوت عالي التعريف من<br>قنوات لخرج الصوت 5.1  | ALC662<br>تدعم تقنية الصوت عالي التعريف من<br>قنوات لخرج الصوت 5.1  | كوديك الصوت                    |
| عدد 3 قنحة PCI<br>عدد 1 قنحة PCI Express Gen2 x16<br>عدد 2 قنحة PCI Express x1  | عدد 3 قنحة PCI<br>عدد 1 قنحة PCI Express Gen2 x16<br>عدد 2 قنحة PCI Express x1  | القنحات                        |
| عدد 1 منفذ محرك أقراص مرنة<br>عدد 1 منفذ طابعة<br>عدد 1 منفذ IDE<br>عدد 6 منفذ SATA<br>عدد 1 منفذ اللوحة الأممية<br>عدد 1 منفذ الصوت الأممي<br>عدد 1 منفذ CD-IN<br>عدد 1 منفذ خرج S/PDIF<br>عدد 1 وصلة مروحة وحدة المعالجة المركزية<br>عدد 2 وصلة مروحة النظام<br>عدد 1 وصلة مسح CMOS<br>عدد 4 منفذ USB<br>عدد 1 منفذ تسلسلي<br>عدد 1 منفذ توصيل الطاقة (24دبوس)<br>عدد 2 منفذ توصيل الطاقة (4دبلييس) | عدد 1 منفذ محرك أقراص مرنة<br>عدد 1 منفذ طابعة<br>عدد 1 منفذ IDE<br>عدد 6 منفذ SATA<br>عدد 1 منفذ اللوحة الأممية<br>عدد 1 منفذ الصوت الأممي<br>عدد 1 منفذ CD-IN<br>عدد 1 منفذ خرج S/PDIF<br>عدد 1 وصلة مروحة وحدة المعالجة المركزية<br>عدد 2 وصلة مروحة النظام<br>عدد 1 وصلة مسح CMOS<br>عدد 4 منفذ USB<br>عدد 1 منفذ تسلسلي<br>عدد 1 منفذ توصيل الطاقة (24دبوس)<br>عدد 2 منفذ توصيل الطاقة (4دبلييس) | المنفذ على سطح<br>اللوحة       |
| عدد 1 لوحة مفاتيح PS/2<br>عدد 1 ملوس PS/2<br>عدد 1 منفذ شبكة اتصال محلية<br>عدد 4 منافذ USB<br>عدد 3 مقيس صوت<br>عدد 1 منفذ DVI (for TF720 A2+)<br>عدد 1 منفذ VGA (for TF720 A2+)   | عدد 1 لوحة مفاتيح PS/2<br>عدد 1 ملوس PS/2<br>عدد 1 منفذ شبكة اتصال محلية<br>عدد 4 منافذ USB<br>عدد 3 مقيس صوت<br>عدد 1 منفذ DVI<br>عدد 1 منفذ VGA   | منفذ دخل/خرج<br>اللوحة الخلفية |
| RAID 0 / 1 / 5 / 0+1 تدعم تقنية<br>Hybrid SLI (by nVIDIA driver) (for TF720<br>A2+)   | RAID 0 / 1 / 5 / 0+1 تدعم تقنية<br>Hybrid SLI (by nVIDIA driver)  | مزايا خاصة                     |
| 220 مم (عرض) X 305 مم (الارتفاع)  | 220 مم (عرض) X 305 مم (الارتفاع)  | حجم اللوحة                     |
| Windows XP / VISTA<br>بحقها في إضافة أو إزالة الدعم لأي نظام تشغيل بإخطار أو<br>احتفظ Biostar بدون إخطار .  | Windows XP / VISTA<br>بحقها في إضافة أو إزالة الدعم لأي نظام تشغيل بإخطار أو<br>احتفظ Biostar بدون إخطار .  | دعم أنظمة التشغيل              |

## JAPANESE

|           | TF8200 A2+ SE  | TF720 A2+/TF710 A2+  |
|-----------|--|--|
| CPU       | Socket AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom プロセッサ<br>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<br>ハイバートランスポート3.0とクールアンドクワイエットをサポートします                                     | Socket AM2+<br>AMD Athlon 64 / Athlon 64 FX / Athlon 64 X2 / Sempron / Phenom プロセッサ<br>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<br>ハイバートランスポート3.0とクールアンドクワイエットをサポートします                                     |
| FSB       | 5.2 GT/sのバンド幅までハイバートランスポート3.0をサポートします  | 5.2 GT/sのバンド幅までハイバートランスポート3.0をサポートします  |
| チップセット    | GeForce 8200   | GeForce 8100 (TF720 A2+)<br>nForce 710a (TF710 A2+)  |
| メインメモリ    | DDR2 DIMMスロット x 4<br>各DIMMは 256/512MB & 1GB/2GB/4GB DDR2をサポート<br>最大メモリ容量16GB<br>デュアルチャンネルモードDDR2メモリモジュール<br>DDR2 533 / 667 / 800をサポート<br>DDR2 1066をサポート (by AM2+ CPU)<br>登録済みDIMMとECC DIMMはサポートされません | DDR2 DIMMスロット x 4<br>各DIMMは 256/512MB & 1GB/2GB/4GB DDR2をサポート<br>最大メモリ容量16GB<br>デュアルチャンネルモードDDR2メモリモジュール<br>DDR2 533 / 667 / 800をサポート<br>DDR2 1066をサポート (by AM2+ CPU)<br>登録済みDIMMとECC DIMMはサポートされません |
| Super I/O | ITE 8718F<br>もつとも一般に使用されるレガシーSuper I/O機能を採用しています。<br>低ピンカウントインターフェイス<br>環境コントロールイニシアチブ、<br>H/Wモニター<br>ファン速度コントローラ/ モニター<br>ITEの「スマートガーディアン」機能  | ITE 8718F<br>もつとも一般に使用されるレガシーSuper I/O機能を採用しています。<br>低ピンカウントインターフェイス<br>環境コントロールイニシアチブ、<br>H/Wモニター<br>ファン速度コントローラ/ モニター<br>ITEの「スマートガーディアン」機能  |
| グラフィックス   | GeForce 8200チップセットに統合<br>For TF8200 A2+ SE / TF720 A2+ Only<br>最大の共有ビデオメモリは512MBです<br>DX10 / HDCP / PureVideo HD のサポート   | GeForce 8100チップセットに統合<br>最大の共有ビデオメモリは512MBです<br>DX10 / HDCP / PureVideo のサポート  |
| IDE       | 統合IDEコントローラ<br>Ultra DMA 33 / 66 / 100 / 133 バスマスタモード<br>PIO Mode 0~4のサポート   | 統合IDEコントローラ<br>Ultra DMA 33 / 66 / 100 / 133 バスマスタモード<br>PIO Mode 0~4のサポート   |
| SATA II   | 統合シリアルATAコントローラ<br>最高3 Gb/秒のデータ転送速度<br>SATAバージョン2.0仕様に準拠。  | 統合シリアルATAコントローラ<br>最高3 Gb/秒のデータ転送速度<br>SATAバージョン2.0仕様に準拠。  |
| LAN       | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/秒のオートネゴシエーション<br>半/全二重機能   | Realtek RTL 8111C<br>10 / 100 / 1000 Mb/秒のオートネゴシエーション<br>半/全二重機能   |



TF8200 A2+ SE/TF720 A2+/TF710 A2+

|               | TF8200 A2+ SE   | TF720 A2+/TF710 A2+   |
|---------------|---|---|
| サウンド<br>Codec | ALC662<br>ハイデフィニションオーディオのサポート<br>5.1 チャンネルオーディオアウト  | ALC662<br>ハイデフィニションオーディオのサポート<br>5.1 チャンネルオーディオアウト  |
| スロット          | PCIスロット x3<br>PCI Express Gen2 x16スロット x1<br>PCI Express x1スロット x2  | PCIスロット x3<br>PCI Express Gen2 x16スロット x1<br>PCI Express x1スロット x2  |
| オンボードコ<br>ネクタ | フロッピーコネクタ x1<br>プリンタポートコネクタ x1<br>IDEコネクタ x1<br>SATAコネクタ x6<br>フロントパネルコネクタ x1<br>フロントオーディオコネクタ x1<br>CDインコネクタ x1<br>S/PDIFアウトコネクタ x1<br>CPUファンヘッダ x1<br>システムファンヘッダ x2<br>CMOSクリアヘッダ x1<br>USBコネクタ x4<br>シリアルポートコネクタ x1<br>電源コネクタ(24ピン) x1<br>電源コネクタ(4ピン) x2 | フロッピーコネクタ x1<br>プリンタポートコネクタ x1<br>IDEコネクタ x1<br>SATAコネクタ x6<br>フロントパネルコネクタ x1<br>フロントオーディオコネクタ x1<br>CDインコネクタ x1<br>S/PDIFアウトコネクタ x1<br>CPUファンヘッダ x1<br>システムファンヘッダ x2<br>CMOSクリアヘッダ x1<br>USBコネクタ x4<br>シリアルポートコネクタ x1<br>電源コネクタ(24ピン) x1<br>電源コネクタ(4ピン) x2 |
| 背面パネル<br>I/O  | PS/2キーボード x1<br>PS/2マウス x1<br>LANポート x1<br>USBポート x4<br>オーディオジャック x3<br>DVIポート x1<br>VGAポート x1  | PS/2キーボード x1<br>PS/2マウス x1<br>LANポート x1<br>USBポート x4<br>オーディオジャック x3<br>DVIポート(for TF720 A2+) x1<br>VGAポート(for TF720 A2+) x1  |
| ボードサイズ        | 220 mm (幅) X 305 mm (高さ)  | 220 mm (幅) X 305 mm (高さ)  |
| 特殊機能          | RAID 0 / 1 / 5 / 0+1 のサポート<br>Hybrid SLI のサポート(by nVIDIA driver)  | RAID 0 / 1 / 5 / 0+1 のサポート<br>Hybrid SLI のサポート(by nVIDIA driver) (for TF720 A2+)  |
| OSサポート        | Windows XP / VISTA<br>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<br>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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