# GA-6UASV3

LGA1155 socket motherboard for Intel® E3® series processors

User's Manual

Rev. 1001

## Copyright

## Disclaimer

## Documentation Classifications

In order to assist in the use of this product, GIGABYTE provides the following types of documentations:

- ■ For quick set-up of the product, read the Quick Installation Guide included with the product.
- ■ For detailed product information, carefully read the User's Manual.

For product-related information, check on our website at:

http://www.gigabyte.com

# Table of Contents

# Box Contents

☑ GA-6UASV3 motherboard
☑ Driver CD
☑ Two SATA cables
☑ I/O Shield

• The box contents above are for reference only and the actual items shall depend on the product package you obtain. The box contents are subject to change without notice.
• The motherboard image is for reference only.

# GA-6UASV3 Motherboard Layout
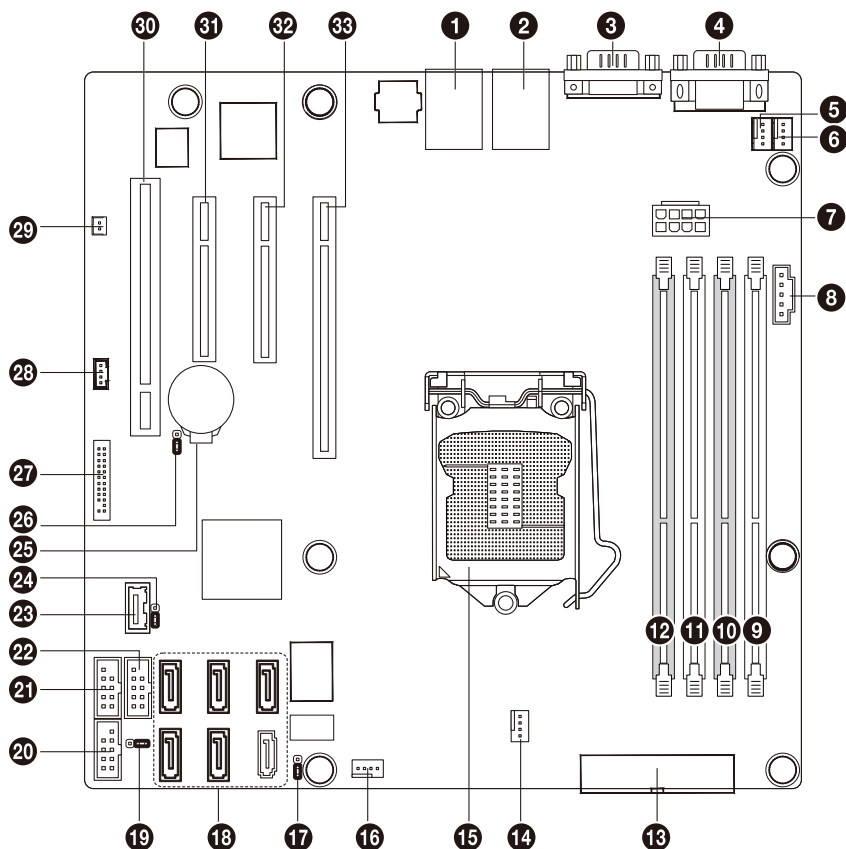
| Item | Code | Description |
|------|------|-------------|
| 1 | USB_LAN1 | USB connectors and LAN connector |
| 2 | USB_LAN2 | USB connectors and LAN connector |
| 3 | VGA1 | VGA port |
| 4 | COM1 | Serial port |
| 5 | SYS_FAN3 | System fan cable connector |
| 6 | CPU_FAN | CPU fan cable connector |
| 7 | PWR2 | 8 pin power connector |
| 8 | PWR_PMB | IPMB connector |
| 9 | DIMMB2 | DIMM slot (channel B-2 ) |
| 10 | DIMMB1 | DIMM slot (channel B-1 ) |
| 11 | DIMMA2 | DIMM slot (channel A-2 ) |
| 12 | DIMMA1 | DIMM slot (channel A-1 ) |
| 13 | PWR1 | 24 pin power connector |
| 14 | SYS_FAN2 | System fan cable connector |
| 15 | CPU1 | Intel LGA1155 socket |
| 16 | SYS_FAN1 | System fan cable connector |
| 17 | CLR_CMOS | Clear CMOS jumper |
| 18 | SATA0~5 | SATA cable connectors |
| 19 | MFGJMPR | ME recovery jumper |
| 20 | COM2 | Serial cable connector |
| 21 | USB1 | USB connector |
| 22 | USB2 | USB connector |
| 23 | USB_A1 | Type A USB connector |
| 24 | CLR_PWD | Clear passwoed jumper |
| 25 | BAT | Battery socket |
| 26 | BIOS_RVCR | BIOS recovery jumper |
| 27 | F_PANEL | Front panel cable connector |
| 28 | SGPIO | SGPIO connector |
| 29 | HDD_LED | HDD LED connector |
| 30 | PCI_SLOT1 | PCI slot (32bit/33MHz) |
| 31 | PCIE_SLOT2 | PCI-E slot 2 (x8 slot) |
| 32 | PCIE_SLOT3 | PCI-E slot 3 (x8 slot) |
| 33 | PCIE_SLOT4 | PCI-E slot 4 (x16 slot) |

# Chapter 1    Hardware Installation

## 1-1    Installation Precautions

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Prior to installation, carefully read the user's manual and follow these procedures:

- Prior to installation, do not remove or break motherboard S/N (Serial Number) sticker or warranty sticker provided by your dealer. These stickers are required for warranty validation.
- Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components.
- When connecting hardware components to the internal connectors on the motherboard, make sure they are connected tightly and securely.
- When handling the motherboard, avoid touching any metal leads or connectors.
- It is best to wear an electrostatic discharge (ESD) wrist strap when handling electronic components such as a motherboard, CPU or memory. If you do not have an ESD wrist strap, keep your hands dry and first touch a metal object to eliminate static electricity.
- Prior to installing the motherboard, please have it on top of an antistatic pad or within an electrostatic shielding container.
- Before unplugging the power supply cable from the motherboard, make sure the power supply has been turned off.
- Before turning on the power, make sure the power supply voltage has been set according to the local voltage standard.
- Before using the product, please verify that all cables and power connectors of your hardware components are connected.
- To prevent damage to the motherboard, do not allow screws to come in contact with the motherboard circuit or its components.
- Make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
- Do not place the computer system on an uneven surface.
- Do not place the computer system in a high-temperature environment.
- Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
- If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

# 1-2    Product Specifications

| | | |
|---|---|---|
| CPU | ◆ | Support for Intel® Xeon® E3 series processors in the LGA1155 package |
| | ◆ | L3 cache varies with CPU |
| Chipset | ◆ | Intel® BD82C202 (Cougar Point) PCH |
| Memory | ◆ | 4 x 1.5V DDR3 DIMM sockets supporting up to 32 GB of system memory |
| | |     * Due to Windows 32-bit operating system limitation, when more than 4 GB of physical memory is installed, the actual memory size displayed will be less than 4 GB. |
| | ◆ | Dual channel memory architecture |
| | ◆ | Support for DDR3 1333/1066 MHz memory modules |
| | ◆ | Support for ECC memory modules |
| LAN | ◆ | 1 x Intel® 82579LM  supports 10/100/1000 Mbps |
| | ◆ | 1 x Intel® 82574L supports 10/100/1000 Mbps  (for iKVM server management) |
| Expansion Slots | ◆ | 1 x PCI Express x16 slot, running at x8 (PCIE_SLOT4) |
| | |     * For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot. |
| | ◆ | 1 x PCI Express x8 slot, running at x8 (PCIE_SLOT3) |
| | ◆ | 1 x PCI Express x8 slot, running at x4 (PCIE_SLOT2) |
| | ◆ | 1 x PCI slot 32-Bit/33MHz |
| Onboard Graphics | ◆ | ASPEED AST2150 supports 32MB VRAM |
| Storage Interface | ◆ | 6 x SATA 3Gb/s connectors |
| | ◆ | Support for Intel IRST SATA RAID 0, RAID 1, RAID 10 |
| USB | ◆ | Up to 8 USB 2.0/1.1 ports (4 on the back panel, 4 via the USB brackets connected to the internal USB headers) |
| | ◆ | 1 x Type A USB connector |
| Internal Connectors | ◆ | 1 x 24-pin ATX main power connector |
| | ◆ | 1 x 8-pin ATX 12V power connector |
| | ◆ | 6 x SATA 3Gb/s connectors |
| | ◆ | 1 x PSMI header |
| | ◆ | 1 x CPU fan header |
| | ◆ | 3 x System fan header |
| | ◆ | 1 x front panel header |
| | ◆ | 4 x USB 2.0/1.1 headers |
| | ◆ | 1 x Type A USB connector |
| | ◆ | 1 x serial port header |
| | ◆ | 1 x SPGIO header |
| | ◆ | 1 x HDD LED header |

| | | |
|---|---|---|
| Back Panel Connectors | ◆ | 4 x USB 2.0/1.1 ports |
| | ◆ | 2 x RJ-45 port |
| | ◆ | 1 x COM port |
| | ◆ | 1 x VGA port |
| I/O Controller | ◆ | iTE IT8728 chip |
| Hardware Monitor | ◆ | System voltage detection |
| | ◆ | CPU/System temperature detection |
| | ◆ | CPU/System/Power fan speed detection |
| | ◆ | CPU overheating warning |
| | ◆ | CPU/System/Power fan fail warning |
| | ◆ | CPU/System fan speed control |
| | | * Whether the CPU/system fan speed control function is supported will depend on the CPU/system cooler you install. |
| BIOS | ◆ | 1 x 64 Mbit flash |
| | ◆ | AMI BIOS |
| Form Factor | ◆ | Micro ATX Form Factor; 9.6 inch x 9.6 inch |

\* GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice.

## 1-3 Installing the CPU and CPU Cooler

Read the following guidelines before you begin to install the CPU:

• Make sure that the motherboard supports the CPU.

   (Go to GIGABYTE's website for the latest CPU support list.)

• Always turn off the computer and unplug the power cord from the power outlet before installing the CPU to prevent hardware damage.

• Locate the pin one of the CPU. The CPU cannot be inserted if oriented incorrectly. (Or you may locate the notches on both sides of the CPU and alignment keys on the CPU socket.)

• Apply an even and thin layer of thermal grease on the surface of the CPU.

• Do not turn on the computer if the CPU cooler is not installed, otherwise overheating and damage of the CPU may occur.

• Set the CPU host frequency in accordance with the CPU specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the standard requirements for the peripherals. If you wish to set the frequency beyond the standard specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc.

### 1-3-1 Installing the CPU

A. Locate the alignment keys on the motherboard CPU socket and the notches on the CPU.



LGA1155 CPU Socket

Alignment Key          Alignment Key

Pin One Corner of the CPU Socket

LGA1155 CPU

Notch          Notch

Triangle Pin One Marking on the CPU
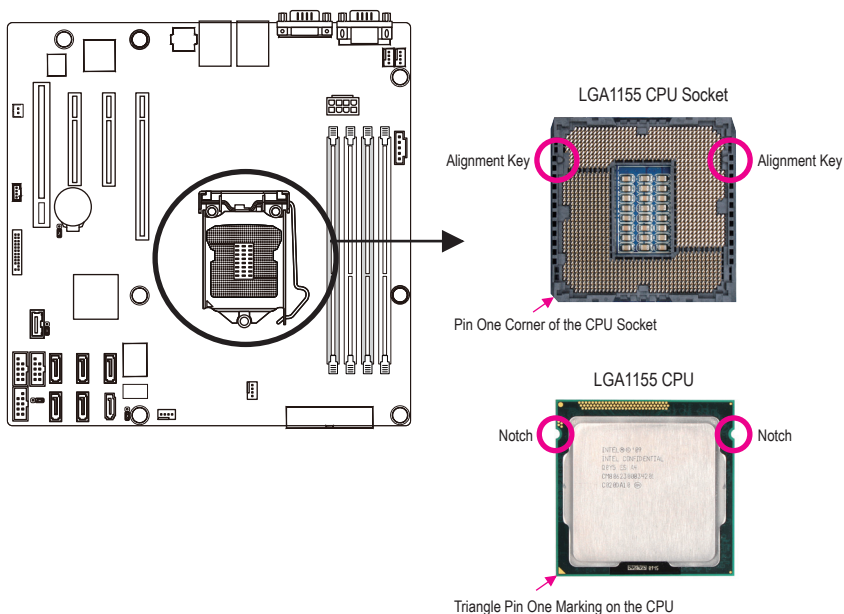
B.   Follow the steps below to correctly install the CPU into the motherboard CPU socket.

⚠️ **Before installing the CPU, make sure to turn off the computer and unplug the power cord from the power outlet power plug to prevent any damage to prevent damage to the CPU.**
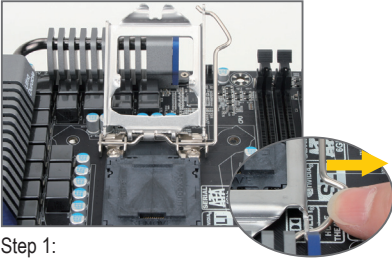


Step 1:
Gently press the CPU socket lever handle down and away from the socket with your finger. Then completely lift the CPU socket lever and the metal load plate will be lifted as well.
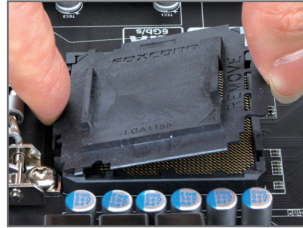


Step 2:
Remove the CPU socket cover as shown. Hold your index finger down on the rear grip of the socket cover and use your thumb to lift up the front edge (next to the "REMOVE" mark) and then remove the cover. (DO NOT touch socket contacts. To protect the CPU socket, always re-place the protective socket cover when the CPU is not installed.)
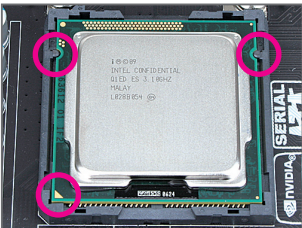


Step 3:
Hold the CPU with your thumb and index fingers. Align the CPU pin one marking (triangle) with the pin one corner of the CPU socket (or you may align the CPU notches with the socket alignment keys) and gently insert the CPU into position.



Step 4:
Once the CPU is properly inserted, use one hand to hold the socket lever and use the other to lightly replace the load plate. When replacing the load plate, make sure the front end of the load plate is under the shoulder screw.



Step 5:
Push the CPU socket lever back into its locked position.
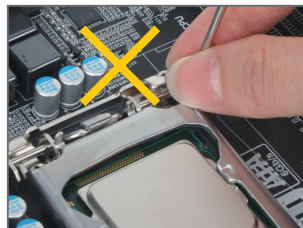


**NOTE:**
Hold the CPU socket lever by the handle, not the lever base portion.

## 1-3-2    Installing the CPU Cooler

Follow the steps below to correctly install the CPU cooler on the motherboard. (The following procedure uses Intel® boxed cooler as the example cooler.)
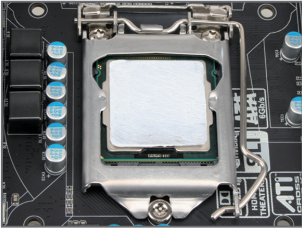


Step 1:
Apply an even and thin layer of thermal paste on the surface of the installed CPU.
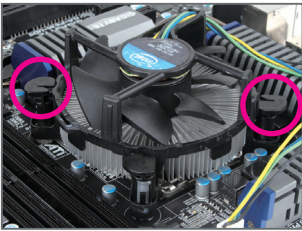


Step 3:
Place the cooler atop the CPU, aligning the four push pins through the pin holes on the motherboard. Push down on the push pins diagonally.
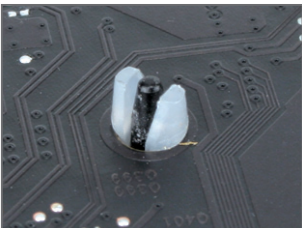


Step 5:
After the installation, check the back of the motherboard. If the push pin is inserted as the picture above shows, the installation is complete.



Male Push Pin
Direction of the Arrow Sign on the Male Push Pin
The Top of Female Push Pin
Female Push Pin
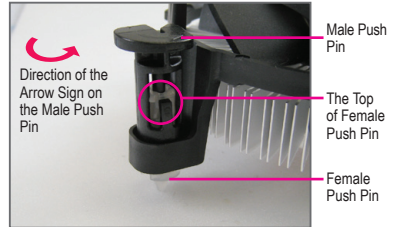
Step 2:
Before installing the cooler, note the direction of the arrow sign ↰ on the male push pin. (Turning the push pin along the direction of the arrow is for removing the cooler, and the opposite direction is for installing it..)
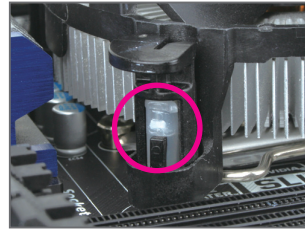


Step 4:
You should hear a "click" when pushing down each push pin. Check that the Male and Female push pins are joined closely. (Refer to your CPU cooler installation manual for instructions on installing the cooler.)
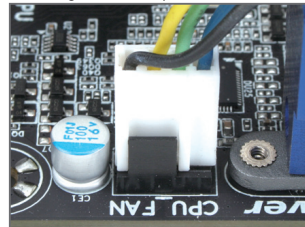


Step 6:
Finally, attach the power connector of the CPU cooler to the CPU fan header (CPU_FAN) on the motherboard.

Use extreme care when removing the CPU cooler because the thermal grease/tape between the CPU cooler and CPU may adhere to the CPU. Inadequately removing the CPU cooler may damage the CPU.

## 1-4 Installing the Memory

Read the following guidelines before you begin to install the memory:

• Make sure that the motherboard supports the memory. It is recommended that memory of the same capacity, brand, speed, and chips be used.
(Go to GIGABYTE's website for the latest supported memory speeds and memory modules.)

• Always turn off the computer and unplug the power cord from the power outlet before installing the memory to prevent hardware damage.

• Memory modules have a foolproof design. A memory module can be installed in only one direction. If you are unable to insert the memory, switch the direction.

### 1-4-1 Dual Channel Memory Configuration

This motherboard provides four DDR3 memory sockets and supports Dual Channel Technology. After the memory is installed, the BIOS will automatically detect the specifications and capacity of the memory. Enabling Dual Channel memory mode will double the original memory bandwidth.

The four DDR3 memory sockets are divided into two channels and each channel has two memory sockets as following:

Channel A: DIMM1A, DIMM2A
Channel B: DIMM1B, DIMM2B
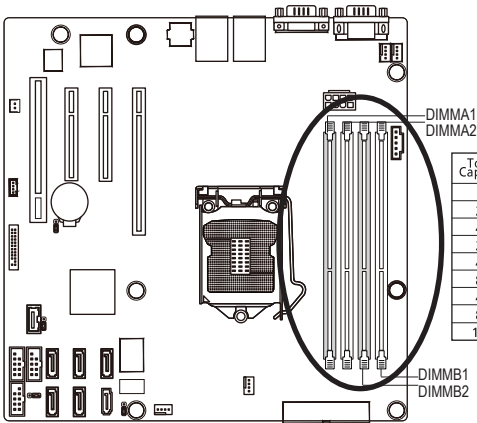


| Total Capacity | DIMMB1 | DIMMA1 | DIMMB2 | DIMMA2 |
|---|---|---|---|---|
| 1G | | 1G | | |
| 2G | | 1G | | 1G |
| 4G | 1G | 1G | 1G | 1G |
| 2G | | 2G | | |
| 4G | | 2G | | 2G |
| 8G | 2G | 2G | 2G | 2G |
| 4G | | 4G | | |
| 8G | | 4G | | 4G |
| 16G | 4G | 4G | 4G | 4G |

Due to CPU limitations, read the following guidelines before installing the memory in Dual Channel mode.

1. Dual Channel mode cannot be enabled if only one DDR3 memory module is installed.

2. When enabling Dual Channel mode with two or four memory modules, it is recommended that memory of the same capacity, brand, speed, and chips be used for optimum performance.

## 1-4-2 Installing a Memory

⚠️ **Before installing a memory module, make sure to turn off the computer and unplug the power cord from the power outlet to prevent damage to the memory module.**
**Be sure to install DDR3 DIMMs on this motherboard.**

**Installation Step:**
Step 1.    Insert the DIMM memory module vertically into the DIMM slot, and push it  down.
Step 2.    Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.
Note:       For dual-channel operation, DIMMs must be installed in matched pairs.
Step 3.    Reverse the installation steps when you wish to remove the DIMM module.
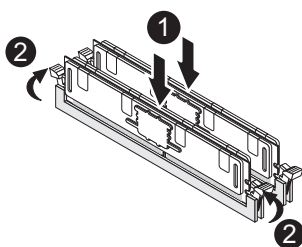
# 1-5    Back Panel Connectors
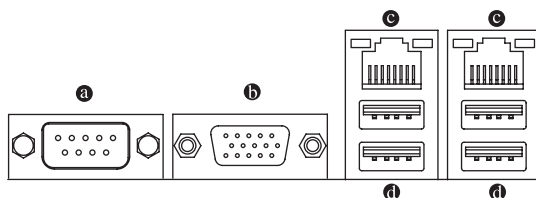


ⓐ **Serial Port**

Connects to serial-based mouse or data processing devices.

ⓑ **Video Port**

The video in port allows connect to video in, which can also apply to video loop thru function.

ⓒ **RJ-45 LAN Port**

The Gigabit Ethernet LAN port provides Internet connection at up to 1 Gbps data rate. The following describes the states of the LAN port LEDs.

ⓓ **USB 2.0/1.1 Port**

The USB port supports the USB 2.0/1.1 specification. Use this port for USB devices such as a USB key-board/mouse, USB printer, USB flash drive and etc.
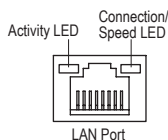


Connection/Speed LED:

| State | Description |
|-------|-------------|
| Orange | 1 Gbps data rate |
| Green | 100 Mbps data rate |
| Off | 10 Mbps data rate |

Activity LED:

| State | Description |
|-------|-------------|
| Blinking | Data transmission or receiving is occurring |
| Off | No data transmission or receiving is occurring |

• When removing the cable connected to a back panel connector, first remove the cable from your device and then remove it from the motherboard.

• When removing the cable, pull it straight out from the connector. Do not rock it side to side to prevent an electrical short inside the cable connector.

# 1-6    Internal Connectors
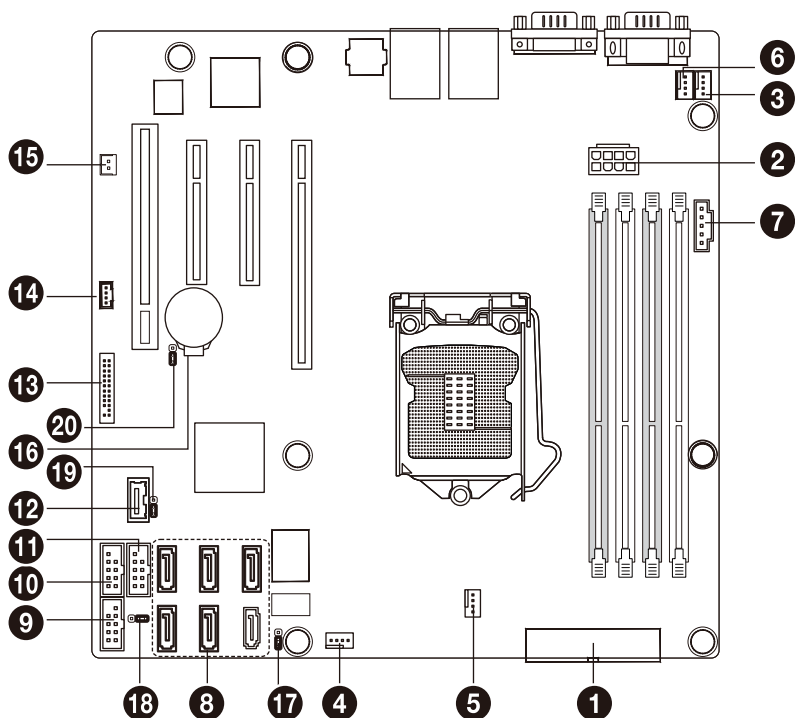


| 1) | PWR1 | 11) | USB2 |
|----|------|-----|------|
| 2) | PWR2 | 12) | USB_A1 |
| 3) | CPU_FAN (CPU Fan) | 13) | F_PANEL |
| 4) | SYS_FAN1 (System Fan) | 14) | SGPIO |
| 5) | SYS_FAN2 (System Fan) | 15) | HD_LED |
| 6) | SYS_FAN3 (System Fan) | 16) | BAT |
| 7) | PWR_IPMB | 17) | CLR_CMOS |
| 8) | SATA0/1/2/3/4/5 | 18) | MFGJMPR |
| 9) | COM2 | 19) | CLR_PWD |
| 10) | USB1 | 20) | BIOS_RVCR |

Read the following guidelines before connecting external devices:

• First make sure your devices are compliant with the connectors you wish to connect.

• Before installing the devices, be sure to turn off the devices and your computer. Unplug the power cord from the power outlet to prevent damage to the devices.

• After installing the device and before turning on the computer, make sure the device cable has been securely attached to the connector on the motherboard.

## 1/2) PWR1/PWR2 (2x4 12V Power Connector and 2x12 Main Power Connector)

With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, first make sure the power supply is turned off and all devices are properly installed. The power connector possesses a foolproof design. Connect the power supply cable to the power connector in the correct orientation. The 12V power connector mainly supplies power to the CPU. If the 12V power connector is not connected, the computer will not start.

To meet expansion requirements, it is recommended that a power supply that can withstand high power consumption be used (500W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable or unbootable system.
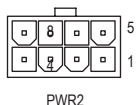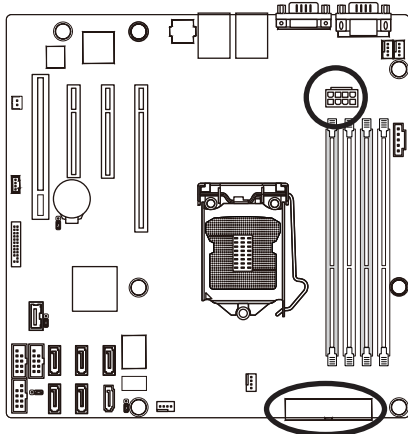
PWR2

PWR2:

| Pin No. | Definition |
|---------|-----------|
| 1 | GND (Only for 2x4-pin 12V) |
| 2 | GND (Only for 2x4-pin 12V) |
| 3 | GND |
| 4 | GND |
| 5 | +12V (Only for 2x4-pin 12V) |
| 6 | +12V (Only for 2x4-pin 12V) |
| 7 | +12V |
| 8 | +12V |
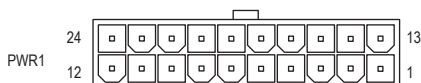
PWR1

PWR1:

| Pin No. | Definition | Pin No. | Definition |
|---------|-----------|---------|-----------|
| 1 | 3.3V | 13 | 3.3V |
| 2 | 3.3V | 14 | -12V |
| 3 | GND | 15 | GND |
| 4 | +5V | 16 | PS_ON (soft On/Off) |
| 5 | GND | 17 | GND |
| 6 | +5V | 18 | GND |
| 7 | GND | 19 | GND |
| 8 | Power Good | 20 | -5V |
| 9 | 5VSB (stand by +5V) | 21 | +5V |
| 10 | +12V | 22 | +5V |
| 11 | +12V (Only for 2x12-pin ATX) | 23 | +5V (Only for 2x12-pin ATX) |
| 12 | 3.3V (Only for 2x12-pin ATX) | 24 | GND (Only for 2x12-pin ATX) |

### 3/4/5/6) CPU_FAN/SYS_FAN1/SYS_FAN2/SYS_FAN3 (CPU Fan/System Fan Headers)

The motherboard has a 4-pin CPU fan header (FAN1), a 4-pin (FAN4) system fan headers. Most fan headers possess a foolproof insertion design. When connecting a fan cable, be sure to connect it in the correct orientation (the black connector wire is the ground wire). The motherboard supports CPU fan speed control, which requires the use of a CPU fan with fan speed control design. For optimum heat dissipation, it is recommended that a system fan be installed inside the chassis.
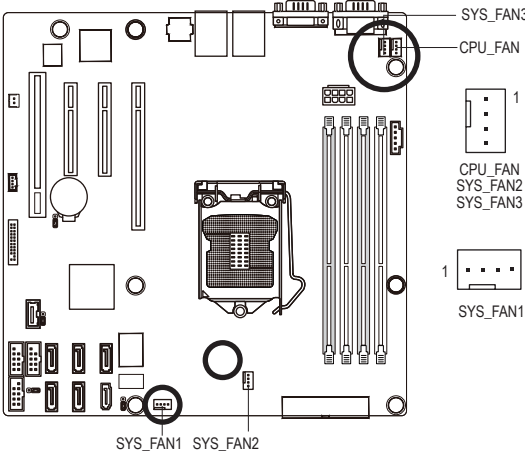


FAN1 (CPU Fan):

| Pin No. | Definition |
| --- | --- |
| 1 | GND |
| 2 | +12V / Speed Control |
| 3 | Sense |
| 4 | Speed Control |

FAN4 (System Fan):

| Pin No. | Definition |
| --- | --- |
| 1 | GND |
| 2 | +12V / Speed Control |
| 3 | Sense |
| 4 | Reserve |

- Be sure to connect fan cables to the fan headers to prevent your CPU and system from overheating. Overheating may result in damage to the CPU or the system may hang.
- These fan headers are not configuration jumper blocks. Do not place a jumper cap on the headers.

### 7) PWR_IPMB (Power management connector)
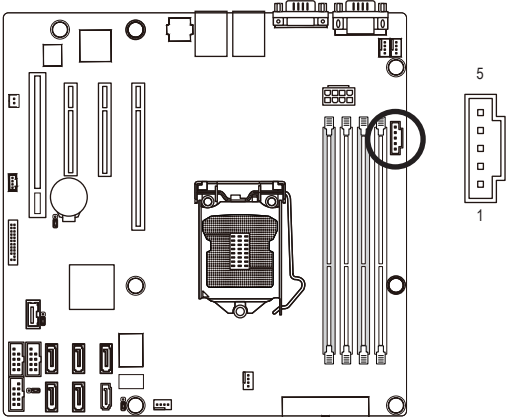


| Pin No. | Definition |
| --- | --- |
| 1 | SMB CLK |
| 2 | SMB DATA |
| 3 | SMB Alert |
| 4 | GND |
| 5 | 3.3V Sense |

## 8) SATA0/1/2/3/4/5 (SATA 3Gb/s Connectors)

The SATA connectors conform to SATA 3Gb/s standard and are compatible with SATA 1.5Gb/s standard. Each SATA connector supports a single SATA device.



| Pin No. | Definition |
|---------|------------|
| 1 | GND |
| 2 | TXP |
| 3 | TXN |
| 4 | GND |
| 5 | RXN |
| 6 | RXP |
| 7 | GND |
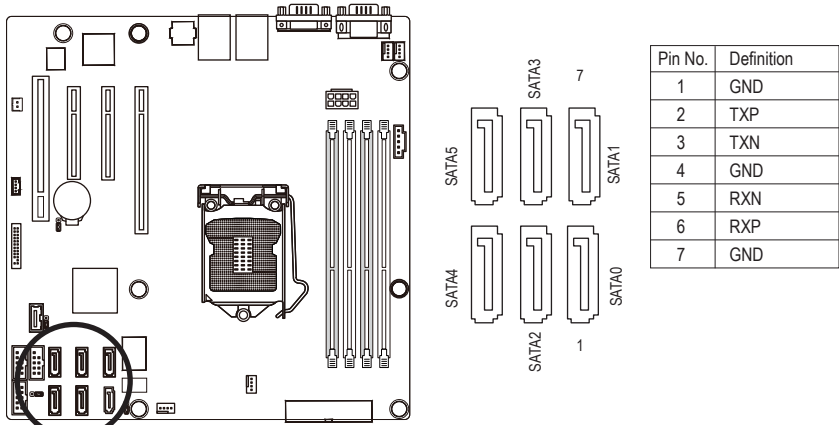
- A RAID 0 or RAID 1 configuration requires at least two hard drives. If more than two hard drives are configured, the total number of hard drives must be an even number.
- A RAID 5 configuration requires at least three hard drives. (The total number of hard drives does not have to be an even number.)
- A RAID 10 configuration requires four hard drives.

(Note)    When a RAID configuration is built across the SATA 3Gb/s channels, the system performance of the RAID configuration may vary depends on the devices are connected.

## 9) COM2 (Serial Port Header)

The COM header can provide one serial port via an optional COM port cable. For purchasing the optional COM port cable, please contact the local dealer.



| Pin No. | Definition |
|---------|------------|
| 1 | NDCD- |
| 2 | NSIN |
| 3 | NSOUT |
| 4 | NDTR- |
| 5 | GND |
| 6 | NDSR- |
| 7 | NRTS- |
| 8 | NCTS- |
| 9 | NRI- |
| 10 | No Pin |
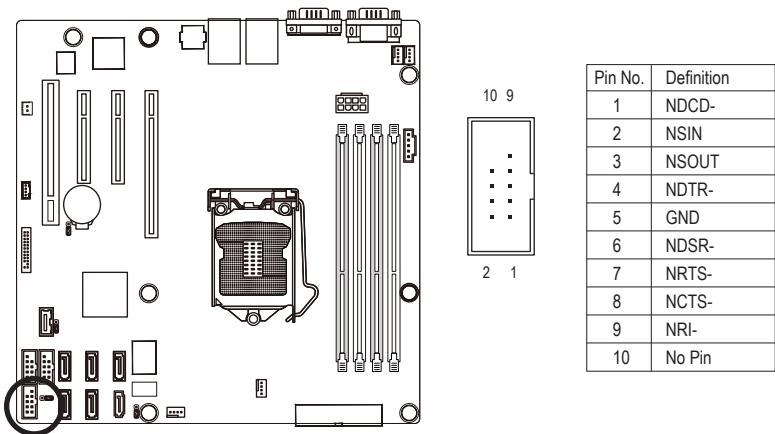
### 10/11)  USB1/USB2 (USB Headers)

The headers conform to USB 2.0/1.1 specification. Each USB header can provide two USB ports via an optional USB bracket. For purchasing the optional USB bracket, please contact the local dealer.
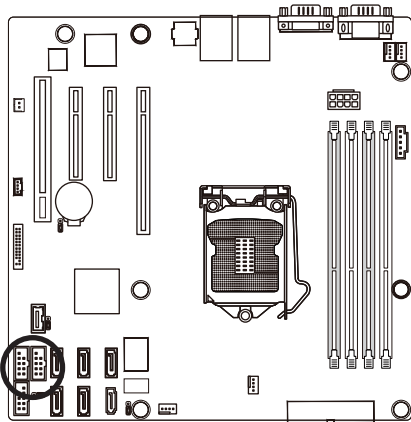


| Pin No. | Definition |
|---------|------------|
| 1 | Power (5V) |
| 2 | Power (5V) |
| 3 | USB DX- |
| 4 | USB DY- |
| 5 | USB DX+ |
| 6 | USB DY+ |
| 7 | GND |
| 8 | GND |
| 9 | No Pin |
| 10 | NC |

When the system is in S4/S5 mode, only the USB ports routed to the F_USB1 header can support the ON/OFF Charge function.

### 12)  USB_A1 (Type A USB Headers)
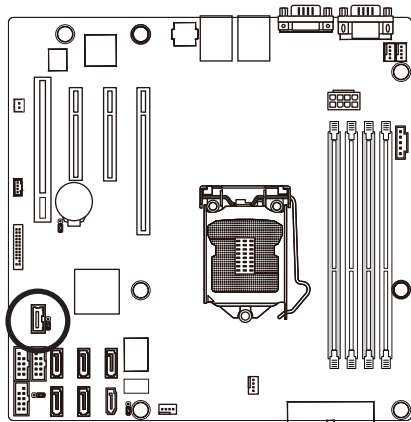
## 13) F_PANEL (Front Panel Header)

Connect the power switch, reset switch, speaker, chassis intrusion switch/sensor and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.
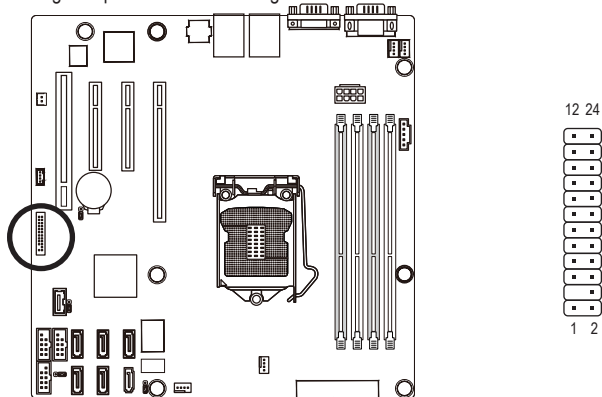


| Pin No. | Signal Name | Definition |
|---------|-------------|------------|
| 1 | PWLED+ | Power LED Signal anode (+) |
| 2 | 5VSB | 5V Stanndby Power |
| 3 | NC | No Connect |
| 4 | ID_LED+ | No Connect |
| 5 | PWLED- | Power LED Signal cathode(-) |
| 6 | ID_LED- | No Connect |
| 7 | HD+ | Hard Disk LED Signal anode (+) |
| 8 | F_SYSRDY | System Front board LED Signal |
| 9 | HD- | Hard Disk LED Signal cathode(-) |
| 10 | SYS_STATUS- | System Status LED Signal cathode(-) |
| 11 | PWB+ | Power Button Signal anode (+) |
| 12 | L1_ACT | LAN1 active LED Signal |
| 13 | PWB+_GND | Ground |
| 14 | L1_LINK- | LAN1 Link LED Signal cathode(-) |
| 15 | RST_BTN- | Reset button Signal cathode(-) |
| 16 | SENSOR_SDA | SMBus Data Signal |
| 17 | RST_BTN_GND | Ground |
| 18 | SENSOR_SCL | SMBus Clock Signal |
| 19 | ID_SW+ | No Connect |
| 20 | CASE_OPEN- | No Connect |
| 21 | ID_SW_GND | Ground |
| 22 | L2_ACT | LAN2 active LED Signal |
| 23 | NMI_SW- | NMI switch Signal cathode(-) |
| 24 | L2_LINK- | LAN2 Link LED Signal cathode(-) |

The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

## 14) SGPIO (SGPIO Header)

SGPIO is stands for Serial General Purpose Input/Output which is a 4-signal (or 4-wire) bus used between a Host Bus Adapter (HBA) and a backplane. Out of the 4 signals, 3 are driven by the HBA and 1 is driven by the backplane. Typically, the HBA is a storage controller located inside a server, desktop, rack or workstation computer that interfaces with Hard disk drives (HDDs) to store and retrieve data.
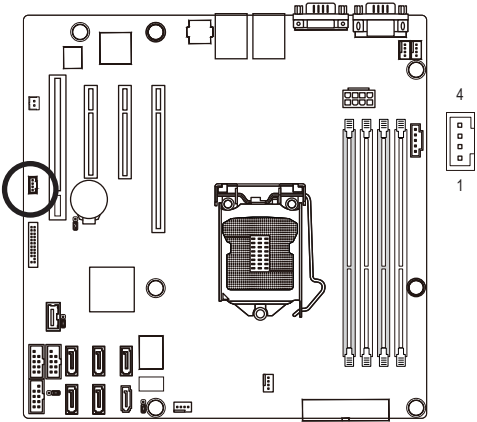


| Pin No. | Definition |
|---------|------------|
| 1 | Load |
| 2 | Clock |
| 3 | Data 0 |
| 4 | NC |

## 15) HD_LED

Attach the connector cable from the IDE device LED to the 2-pin header. The HDD lights up whenever IDE device is active.
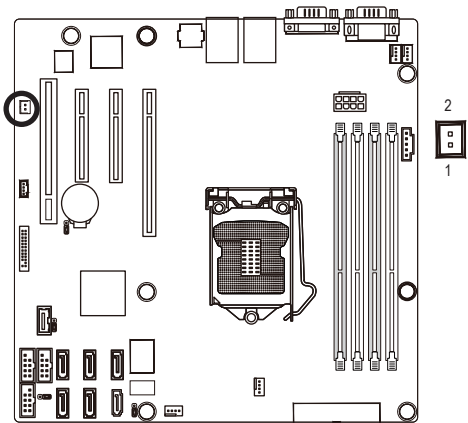


| Pin No. | Definition |
|---------|------------|
| 1 | LED Active |
| 2 | NC |

## 16) BAT (Battery)

The battery provides power to keep the values (such as BIOS configurations, date, and time information) in the CMOS when the computer is turned off. Replace the battery when the battery voltage drops to a low level, or the CMOS values may not be accurate or may be lost.
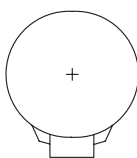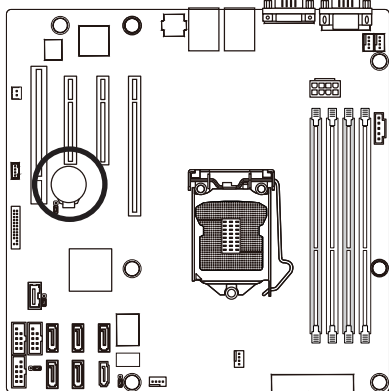


You may clear the CMOS values by removing the battery:
1. Turn off your computer and unplug the power cord.
2. Gently remove the battery from the battery holder and wait for one minute. (Or use a metal object like a screwdriver to touch the positive and negative terminals of the battery holder, making them short for 5 seconds.)
3. Replace the battery.
4. Plug in the power cord and restart your computer.

> • Always turn off your computer and unplug the power cord before replacing the battery.
> • Replace the battery with an equivalent one. Danger of explosion if the battery is replaced with an incorrect model.
> • Contact the place of purchase or local dealer if you are not able to replace the battery by yourself or uncertain about the battery model.
> • When installing the battery, note the orientation of the positive side (+) and the negative side (-) of the battery (the positive side should face up).
> • Used batteries must be handled in accordance with local environmental regulations.

## 17) MFGJMPR (ME Recovery Jumper)
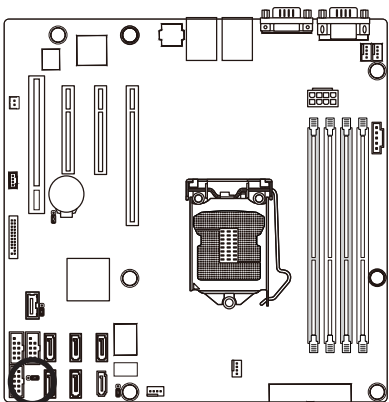


1  1-2 Close: Enable ME recovery. (Default setting)

1  2-3 Close: Disable ME recovery.

## 18) CLR_CMOS (Clearing CMOS Jumper)

Use this jumper to clear the CMOS values (e.g. date information and BIOS configurations) and reset the CMOS values to factory defaults. To clear the CMOS values, place a jumper cap on the two pins to temporarily short the two pins or use a metal object like a screwdriver to touch the two pins for a few seconds.
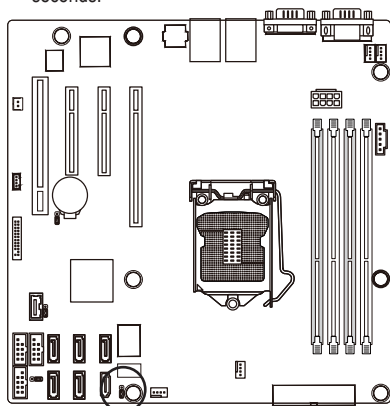


1-2 Close: Normal operation (Default setting)

2-3 Close: Clear CMOS data

• Always turn off your computer and unplug the power cord from the power outlet before clearing the CMOS values.
• After clearing the CMOS values and before turning on your computer, be sure to remove the jumper cap from the jumper. Failure to do so may cause damage to the motherboard.
• After system restart, go to BIOS Setup Exit menu and load factory defaults (select **Load User Default Values**) or manually

  configure the BIOS settings (refer to Chapter 2, "BIOS Setup," for BIOS configurations).

## 19) CLR_PWD (Clearing Supervisor Password Jumper)
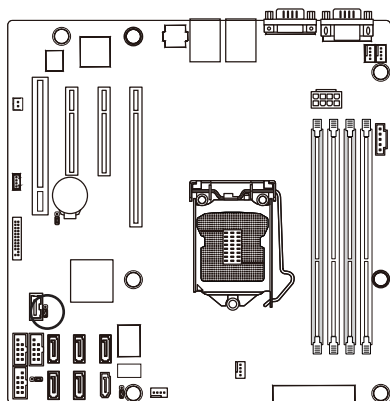


1-2 Close: Normal operation. (Default setting)

2-3 Close: Clear supervisor password.

## 20) BIOS_RVCR (BIOS Recovery Jumper)
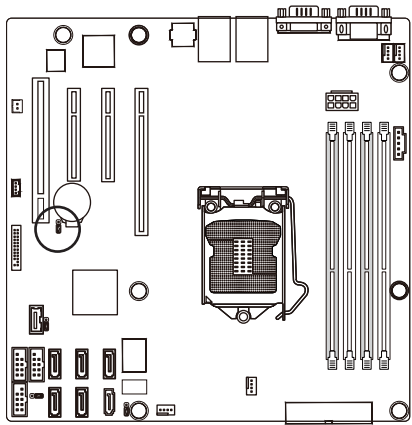


1-2 Close: Normal operation. (Default setting)

2-3 Close: BIOS recovery mode.

# Chapter 2   BIOS Setup

BIOS (Basic Input and Output System) records hardware parameters of the system in the NVRM on the motherboard. Its major functions include conducting the Power-On Self-Test (POST) during system startup, saving system parameters and loading operating system, etc. BIOS includes a BIOS Setup program that allows the user to modify basic system configuration settings or to activate certain system features.

To access the BIOS Setup program, press the <F2> key during the POST when the power is turned on. To see more advanced BIOS Setup menu options, you can press <Ctrl> + <F1> in the main menu of the BIOS Setup program.

⚠ • BIOS flashing is potentially risky, if you do not encounter problems of using the current BIOS version, it is recommended that you don't flash the BIOS. To flash the BIOS, do it with caution. Inadequate BIOS flashing may result in system malfunction.
   • It is recommended that you not alter the default settings (unless you need to) to prevent system instability or other unexpected results. Inadequately altering the settings may result in system's failure to boot. If this occurs, try to clear the CMOS values and reset the board to default values. (Refer to the "Load Optimized Defaults" section in this chapter or introductions of the battery/ clearing CMOS jumper in Chapter 1 for how to clear the CMOS values.)

## BIOS Setup Program Function Keys

| | |
|---|---|
| <↑><↓><←><→> | Move the selection bar to select an item |
| <Enter> | Execute command or enter the submenu |
| <Esc> | Main Menu: Exit the BIOS Setup program |
| | Submenus: Exit current submenu |
| <Page Up> | Increase the numeric value or make changes |
| <Page Down> | Decrease the numeric value or make changes |
| <F1> | Show descriptions of the function keys |
| <F3> | Load previous value |
| <F9> | Load Optimized Defaults |
| <F10> | Save all the changes and exit the BIOS Setup program |

■ **Main**

This setup page includes all the items in standard compatible BIOS.

■ **Advanced**

This setup page includes all the items of AMI BIOS special enhanced features.

(ex: Automatically configure hard disk parameters.)

■ **Security**

Change, set, or disable supervisor and user password. Configuration supervisor password allows you to restrict access to the system and BIOS Setup.

A supervisor password allows you to make changes in BIOS Setup.

A user password only allows you to view the BIOS settings but not to make changes.

■ **Server Management**

Server additional features enabled/disabled setup menus.

■ **Boot Options**

This setup page provides items for configuration of  boot sequence.

■ **Boot Manager**

This setup page provides configuration of boot up devices.

■ **Exit**

Save all the changes made in the BIOS Setup program to the NVRM and exit BIOS Setup. (Pressing <F10> can also carry out this task.)

Abandon all changes and the previous settings remain in effect. Pressing <Y> to the confirmation message will exit BIOS Setup. (Pressing <Esc> can also carry out this task.)

## 2-1    The Main Menu

Once you enter the BIOS Setup program, the Main Menu (as shown below) appears on the screen. Use arrow keys to move among the items and press <Enter> to accept or enter other sub-menu.

**Main Menu Help**

The on-screen description of a highlighted setup option is displayed on the bottom line of the Main Menu.

**Submenu Help**

While in a submenu, press <F1> to display a help screen (General Help) of function keys available for the menu. Press <Esc> to exit the help screen. Help for each item is in the Item Help block on the right side of the submenu.

- If you do not find the settings you want in the Main Menu or a submenu, press <F1> to access more advanced options.
- When the system is not stable as usual, select the **Load User Default Values** item to set your system to its defaults.
- The BIOS Setup menus described in this chapter are for reference only and may differ by BIOS version.

```
                          BIOS Setup Utility
    Main  Advanced  Security  Server Management  Boot Options  Boot Manager  Exit

    System BIOS                                        Set the date. Use <Tab> to
      Version                  F04                     switch between data
      Build Date               07/18/2011              elements.

    Processor
      Intel(R) Xeon(R) CPU E31235 @ 3.20GHz
      Core Frequency           3.20 GHz
      Count                    1

    Memory
      Size                     2048 MB (DDR3 1333)

    System Date                [Fri 07/22/2011]
    System Time                [15:33:25]              →←: Select Screen
                                                       ↑↓: Select Item
                                                       Enter: Select
                                                       +/-: Change Opt.
                                                       F1: General Help
                                                       F3: Previous Values
                                                       F9: Optimized Defaults
                                                       F10: Save  ESC: Exit


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```

&#9741; **BIOS Version**

Display version number of the BIOS setup utility.

&#9741; **BIOS Build Date**

Displays the date when the BIOS setup utility was created.

&#9741; **Processor Information:**

**CPU Type / CPU Core Frequency / CPU Count**

Displays the technical specifications for the installed processor.

&#9741; **Memory**

Determines how much total memory is present during the POST.

&#9741; **System Date**

Set the date following the weekday-month-day- year format.

&#9741; **System Time**

Set the system time following the hour-minute- second format.

## 2-2 Advanced Menu

The Advanced menu display submenu options for configuring the function of various hardware components. Select a submenu item, then press Enter to access the related submenu screen.

```
                          BIOS Setup Utility
    Main  Advanced  Security  Server Management  Boot Options  Boot Manager  Exit

  ▶ Processor Configuration                          Set processor
  ▶ Memory Configuration                             configuration parameters.
  ▶ Chipset Configuration
  ▶ SATA Configuration
  ▶ PCI Configuration
  ▶ USB Configuration
  ▶ Console Redirection Configuration


                                                   _____
                                                   ↔: Select Screen
                                                   ↑↓: Select Item
                                                   Enter: Select
                                                   +/-: Change Opt.
                                                   F1: General Help
                                                   F3: Previous Values
                                                   F9: Optimized Defaults
                                                   F10: Save  ESC: Exit




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```

BIOS Setup

## 2-2-1    Processor Configuration

```
                              BIOS Setup Utility
          Advanced

    Intel Hyper-Threading Technology      [Enabled]         ▲  Enable/Disable Intel
    Active Processor Cores                [All]                Hyper-Threading Technology.
    Intel Virtualization Technology       [Enabled]
    Intel EIST Technology                 [Enabled]
    P-State Coordination                  [HW_ALL]
    Intel Turbo Boost Technology          [Enabled]
    C1E Support                           [Enabled]
    CPU C3 Report                         [ACPI C2]
    CPU C6 Report                         [Disabled]
    Package C State Limit                 [No Limit]
    Hardware Prefetcher                   [Enabled]
    Adjacent Cache Line Prefetch          [Enabled]

    Processor 1 Information                                ⁺⁺: Select Screen
      Intel(R) Xeon(R) CPU E31235 @                       ↑↓: Select Item
    3.20GHz                                               Enter: Select
      EMT64                               Supported        +/-: Change Opt.
      Frequency                           3.20 GHz         F1: General Help
      Core Count                          4                F3: Previous Values
      CPU Stepping                        206a7            F9: Optimized Defaults
      Microcode Revision                  12               F10: Save  ESC: Exit
      Intel HT Technology                 Supported

    Cache Information
      L2 Cache per Core                   256 KB         ▼

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```

```
                              BIOS Setup Utility
          Advanced

    Active Processor Cores                [All]             ▲  Adjacent Cache Line
    Intel Virtualization Technology       [Enabled]           Prefetch
    Intel EIST Technology                 [Enabled]
    P-State Coordination                  [HW_ALL]
    Intel Turbo Boost Technology          [Enabled]
    C1E Support                           [Enabled]
    CPU C3 Report                         [ACPI C2]
    CPU C6 Report                         [Disabled]
    Package C State Limit                 [No Limit]
    Hardware Prefetcher                   [Enabled]
    Adjacent Cache Line Prefetch          [Enabled]

    Processor 1 Information                                ⁺⁺: Select Screen
      Intel(R) Xeon(R) CPU E31235 @                       ↑↓: Select Item
    3.20GHz                                               Enter: Select
      EMT64                               Supported        +/-: Change Opt.
      Frequency                           3.20 GHz         F1: General Help
      Core Count                          4                F3: Previous Values
      CPU Stepping                        206a7            F9: Optimized Defaults
      Microcode Revision                  12               F10: Save  ESC: Exit
      Intel HT Technology                 Supported

    Cache Information
      L2 Cache per Core                   256 KB
      Total L3 Cache per Socket           8 MB           ▼

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```

**Intel Hyper Threading Technology**

The Intel Hyper Threading Technology allows a single processor to execute two or more separate threads concurrently. When hyper-threading is enabled, multi-threaded software applications can execute their threads, thereby improving performance.
Options available: Enabled/Disabled. Default setting is **Enabled**.

**Active Processor Cores** (Note)

Allows you to determine whether to enable all CPU cores.
Options available: All/1/2/3. Default setting is **All**.

**Intel Virtualization Technology**

Select whether to enable the Intel Virtualization Technology function. VT allows a single platform to run multiple operating systems in independent partitions.
Options available: Enabled/Disabled. Default setting is **Enabled**.

**Intel EIST Support (Enhanced Intel SpeedStep Technology)**

Conventional Intel SpeedStep Technology switches both voltage and frequency in tandem between high and low levels in response to processor load.
Options available: Enabled/Disabled. Default setting is **Enabled**.

**P-State Coordination**

In HW_ALL mode, the processor hardware is responsible for coordinating the P-state among logical processors dependencies. The OS is responsible for keeping the P-state request up to date on all logical processors.
In SW_ALL mode, the OS Power Manager is responsible for coordinating the P-state among logical processors with dependencies and must initiate the transition on all of those Logical Processors.
In SW_ANY mode, the OS Power Manager is responsible for coordinating the P-state among logical processors with dependencies and may initiate the transition on any of those Logical Processors.
Options available: HW_ALL/SW_ALL/SW_ANY. Default setting is **HW_ALL**.

**Intel Turbo Boost Technology**

When this feature is enabled, the processor can dynamically overclock one or two of its four processing cores to improve performance with applications that are not multi-threaded or optimized for quad-core processors.
Options available: Enabled/Disabled. Default setting is **Enabled**.

**C1E Support (CPU Enhanced Halt)** (Note)

Enables or disables Intel CPU Enhanced Halt (C1E) function, a CPU power-saving function in system halt state. When enabled, the CPU core frequency and voltage will be reduced during system halt state to decrease power consumption.
Options available: Enabled/Disabled. Default setting is **Enabled**.

**CPU C3/C6 Support** (Note)

Allows you to determine whether to let the CPU enter C3/C6 mode in system halt state. When enabled, the CPU core frequency and voltage will be reduced during system halt state to decrease power consumption. The C3/C6 state is a more enhanced power-saving state than C1. **Auto** lets the BIOS automatically configure this setting.
Options available for CPU C3 Report: ACPI C2/ACPI C3/Disabled. Default setting is **ACPI C2**.
Options available for CPU C6 Report: Enabled/Disabled. Default setting is **Enabled**.

**Package C State Limit**

Configure state for the C-State package limit.
Options available: C0/C1/C6/C7/No Limit. Default setting is **No Limit**.

&#9741; **Hardware Prefetcher**

Select whether to enable the speculative prefetch unit of the processor.

Options available: Enabled/Disabled. Default setting is **Enabled**.

&#9741; **Adjacent Cache Line Prefetch**

When enabled, cache lines are fetched in pairs. When disabled, only the required cache line is fetched.

Options available: Enabled/Disabled. Default setting is **Enabled**.

&#9741; **Processor Information**

&#9741; **CPU Speed**

The processor speed is the speed at which a microprocessor executes instructions. Clock speeds are expressed in megahertz (MHz), with 1 MHz being equal to 1 million cycles per second. The faster the clock, the more instructions the CPU can execute per second.

&#9741; **EMT64**

Displays Processor EMT64 support status.

&#9741; **Frequency**

Displays Processor frequency information.

&#9741; **Core Count**

Displays Processor core count information.

&#9741; **CPU Stepping**

Display processor stepping information.

&#9741; **Microcode Revision**

Display Microcode Revision.

&#9741; **Intel HT Technology**

Display Intel Hyper Threading Technology function support information.

&#9741; **Cache Information**

&#9741; **L2 Cache per Core**

Display the information of L2 Cache per Core.

&#9741; **Total L3 Cache per socket**

Display the information of total L3 Cache per socket.

(Note)     This item is present only if you install a CPU that supports this feature. For more information about Intel CPUs' unique features, please visit Intel's website.

## 2-2-2 Memory Configuration

```
                              BIOS Setup Utility
       Advanced

    Available Memory                  2048 MB
    Memory Type                       DDR3 1333

    Memory Reset                      [No]

    DIMM Information
      DIMM A1                         Not Installed
      DIMM A2                         2048 MB, 1333 MHz
      DIMM B1                         Not Installed
      DIMM B2                         Not Installed

                                                          →←: Select Screen
                                                          ↑↓: Select Item
                                                          Enter: Select
                                                          +/-: Change Opt.
                                                          F1: General Help
                                                          F3: Previous Values
                                                          F9: Optimized Defaults
                                                          F10: Save  ESC: Exit

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```

☞ **Available Memory**

Total size of system memory detected during POST.

☞ **Memory Type**

Display information of installed memory type.

☞ **Memory Reset**

Select whether to delete the historical memory data log. System memory will be retested on the next boot-up.

Options available: Yes/No. Default setting is **No**.

☞ **DIMM Group #A1/A2/B1/B2 Status**

The size of memory installed on each of the DDR3 slots.

## 2-2-3 Advanced Chipset Configuration

```
                              BIOS Setup Utility
         Advanced

Intel VT-d Technology            [Disabled]              Enable/Disable Intel VT-d
Intel TXT Technology             [Disabled]              technology.

Serial Port 1                    [Enabled]
Device Settings                  IO=3F8h; IRQ=4;
Change Settings                  [Auto]

Serial Port 2                    [Enabled]
Device Settings                  IO=2F8h; IRQ=3;
Change Settings                  [Auto]

Power on by RTC Alarm            [Disabled]
Restore on AC Power Loss         [Last State]
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F3: Previous Values
                                                         F9: Optimized Defaults
                                                         F10: Save  ESC: Exit



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```

& **Intel VD-d Technology**

Enable/Disable Intel VD-d Technology function.

Options available: Enabled/Disabled. Default setting is **Disabled**.

& **Intel TXT Technology**

Enable/Disable Intel TXT Technology function.

Options available: Enabled/Disabled. Default setting is **Disabled**.

& **Serial Port 1/2**

When enabled allows you to configure the serial port settings. When set to Disabled, displays no con-figuration for the serial port.

Options available: Enabled/Disabled. Default setting is **Enabled**.

& **Device Settings**

Displays Serial Port 1/2 device configuration information.

& **Change Settings**

Change Serial Port 1/2 device settings. When set to Auto allows the server's BIOS or OS to select a configuration.

Options available: Auto/IO=3F8; IRQ=4/IO=3F8h; IRQ=3,4,5,6,7,10,11,12/

IO=2F8h; IRQ=3,4,5,6,7,10,11,12 /IO=3E8h; IRQ=3,4,5,6,7,10,11,12/IO=2E8h; IRQ=3,4,5,6,7,10,11,12.

& **Power On by RTC Alarm**

Select whether to wake up the system when an RTC alarm is detected.

Options available: Enabled/Disabled. Default setting is **Disabled**.

☞ **Restore on AC Power Loss**

Defines the power state to resume to after a sys- tem shutdown that is due to an interruption in AC power. When set to Last State, the system will return to the active power state prior to shutdown. When set to Stay Off, the system remains off after power shutdown.

Options available: Last State/Stay Off/Power On. Default setting is **Last State**.

## 2-2-4 SATA Configuration

```
                          BIOS Setup Utility
         Advanced

   SATA Mode                      [AHCI Mode]           (1) IDE Mode. (2) AHCI
                                                        Mode. (3) RAID Mode.
 ▶ SATA Port0: Not Installed
 ▶ SATA Port1: WDC WD3000BLFS-01YBU0
 ▶ SATA Port2: Not Installed
 ▶ SATA Port3: Not Installed
 ▶ SATA Port4: Not Installed
 ▶ SATA Port5: Not Installed

                                                        ⇄: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F3: Previous Values
                                                        F9: Optimized Defaults
                                                        F10: Save  ESC: Exit


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```

  ✐ **SATA Mode**

Select the on chip SATA type.

IDE Mode: When set to IDE, the SATA controller disables its RAID and AHCI functions and runs in the IDE emulation mode. This is not allowed to access RAID setup utility.

RAID Mode: When set to RAID, the SATA controllerenables both its RAID and AHCI functions. You will be allows access the RAID setup utility at boot time.

ACHI Mode: When set to AHCI,the SATA controller enables its AHCI functionality. Then the RAID function is disabled and cannot be access the RAID setup utility at boot time.

Options available: IDE/RAID/ACHI. Default setting is **ACHI Mode**.

  ✐ **SATA Port 0/1/2/3/4/5**

Press [Enter] to view the installed HDD devices.

## 2-2-5 PCI Configuration

```
                              BIOS Setup Utility
      Advanced

 Onboard Graphics Controller        [Enabled]          Enable/Disable onboard
 Primary Graphics                   [Add-On]           graphics controller.
 Onboard LAN1 I/O ROM               [Enabled]
 Onboard LAN2 I/O ROM               [Enabled]

 PCI ROM Priority                   [Legacy ROM]




                                                       →←: Select Screen
                                                       ↑↓: Select Item
                                                       Enter: Select
                                                       +/-: Change Opt.
                                                       F1: General Help
                                                       F3: Previous Values
                                                       F9: Optimized Defaults
                                                       F10: Save  ESC: Exit



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```

&#8734; **Onboard Graphics Controller**

When enabled, the graphic controller will function normally.

Options available: enabled/Disabled. Default setting is **Enabled**.

&#8734; **Primary Graphics**

Select the primary video device that that the BIOS will use for output.

Options available: Add-On/Onboard. Default setting is **Add-On**.

&#8734; **Onboard LAN1/2 I/O ROM**

Select whether to enable the selected onboard LAN device. When enabled, device expansion ROM will be initialized.

Options available: Enabled/Disabled. Default setting is **Enabled**.

&#8734; **PCI ROM Priority**

In case of multiple Option ROMs (Legacy and EFI Compatible) specifies what PCI option ROM to launch.

Options available: Legacy ROM/EFI Compatible ROM. Default setting is **Legacy ROM**.

## 2-2-6 USB Configuration

```
                           BIOS Setup Utility
        Advanced

 USB Controller                    [Enabled]              Enable/Disable USB
 Legacy USB Support                [Enabled]              controller.
 Port 60/64 Emulation              [Enabled]

 Mass Storage Emulaton
 SanDisk Cruzer 8.02                    [Auto]




                                                          ↔: Select Screen
                                                          ↑↓: Select Item
                                                          Enter: Select
                                                          +/-: Change Opt.
                                                          F1: General Help
                                                          F3: Previous Values
                                                          F9: Optimized Defaults
                                                          F10: Save  ESC: Exit




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```

☞ **USB Controller**

When enabled, the USB controller will function normally.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **Legacy USB Support**

Enables or disables support for legacy USB devices.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **Port 60/64 Emulation**

Enable I/O port 60h/64h emulation support. This should be enabled for the complete USB Keyboard Legacy support for non-USB aware OS.

Options available: Enabled/Disabled. Default setting is **Disabled**.

☞ **Mass Storage Emulation**

Mass storage device emulation type. 'Auto' option enumerates devices according to their media format. Optical drives are emulated as 'CD-ROM', drives with no media will be emulated according to a drive type.

Options available: Auto/Floppy/Forced FDD/ Hard Disk/CD-ROM.. Default setting is **Auto**.

## 2-2-7 Console Redirection

```
                          BIOS Setup Utility
        Advanced

    Console Redirection          [Serial Port 1]       The settings specify how
    Terminal Type                [ANSI]                the host computer and the
    Bits per Second              [115200]              remote computer (which the
    Data Bits                    [8]                   user is using) will
    Parity                       [None]                exchange data. Both
    Stop Bits                    [1]                   computers should have the
    Flow Control                 [None]                same or compatible
    Recorder Mode                [Disabled]            settings.
    Resolution 100x31            [Disabled]
    Legacy OS Redirection Resolution [80x24]


                                                       ↔: Select Screen
                                                       ↑↓: Select Item
                                                       Enter: Select
                                                       +/-: Change Opt.
                                                       F1: General Help
                                                       F3: Previous Values
                                                       F9: Optimized Defaults
                                                       F10: Save  ESC: Exit



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```

☞ **Console Redirection** [(Note)]

Select whether to enable console redirection. Console redirection enables users to manage the system from a remote location.

Options available: Serial Port1/Serial Port2/Disabled. Default setting is **Disabled**.

☞ **Terminal Type**

Select a terminal type to be used for console redirection.
Options available: VT100/VT100+/ANSI /VT-UTF8.

☞ **Bits per second**

Select the baud rate for console redirection.
Options available: 9600/19200/57600/115200.

☞ **Parity**

A parity bit can be sent with the data bits to detect some transmission errors.
Even: parity bi is 0 if the num of 1's in the data bits is even.
Odd: parity bit is0if num of 1's the data bits is odd.
Mark: parity bit is always 1. Space: Parity bit is always 0.
Mark and Space Parity do not allow for error detection.
Options available: None/Even/Odd/Mark/Space.

☞ **Stop Bits**

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.
Options available: 1/2.

(Note)    Advanced items prompt when this item is defined.

&#x261E; **Flow Control**

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.
Options available: None/Hardware RTS/CTS.

&#x261E; **Recorder Mode**

When this mode enabled, only text will be send. This is to capture Terminal data.
Options available: Enabled/Disabled.

&#x261E; **Resolution 100x31**

Enables or disables extended terminal resolution.
Options available: Enabled/Disabled.

&#x261E; **Legacy OS Redirection Resolution**

On Legacy OS, the number of Rows and Columns supported redirection.
Options available: 80x24/80X25.

## 2-3 Security Menu

The Security menu allows you to safeguard and protect the system from unauthorized use by setting up access passwords.

```
                              BIOS Setup Utility
   Main   Advanced   Security   Server Management   Boot Options   Boot Manager   Exit

   Administrator Password Status        Not Installed      Valid Keys:
   User Password Status                 Not Installed      (1) a-z (A-Z)
                                                           (2)0~9
   Set Administrator Password                              (3)11 special keys:
                                                           -=[];,./
                                                           (4)key pad: 0-9 support
   Current Status Information                              and 5 special keys
     NO Security Hardware Installed




                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F3: Previous Values
                                                           F9: Optimized Defaults
                                                           F10: Save  ESC: Exit



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```

There are two types of passwords that you can set:

- • Administrator Password

    Entering this password will allow the user to access and change all settings in the Setup Utility.

- • User Password

    Entering this password will restrict a user's access to the Setup menus. To enable or disable this field, a Administrator Password must first be set. A user can only access and modify the System Time, System Date, and Set User Password fields.

☞ **Administrator Password Status**

This parameter indicates whether a Administrator Password has been assigned.

☞ **User Password Status**

This parameter indicates whether a user pass- word has been assigned.
To clear the password, press <Enter> on the password item and when requested for the password, press <Enter> again. The message "PASSWORD DISABLED" will appear, indicating the password has been cancelled.

☞ **Set Administrator Password**

Press Enter to configure the Administrator password.

☞ **Set User Password**

Press Enter to configure the user password.

## 2-4 Server Management Menu

```
                        BIOS Setup Utility
    Main  Advanced  Security  Server Management  Boot Options  Boot Manager  Exit

 ▶ System Information                              System Information
 ▶ BMC LAN Configuration                           Parameters






                                                  →←: Select Screen
                                                  ↑↓: Select Item
                                                  Enter: Select
                                                  +/-: Change Opt.
                                                  F1: General Help
                                                  F3: Previous Values
                                                  F9: Optimized Defaults
                                                  F10: Save  ESC: Exit



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```
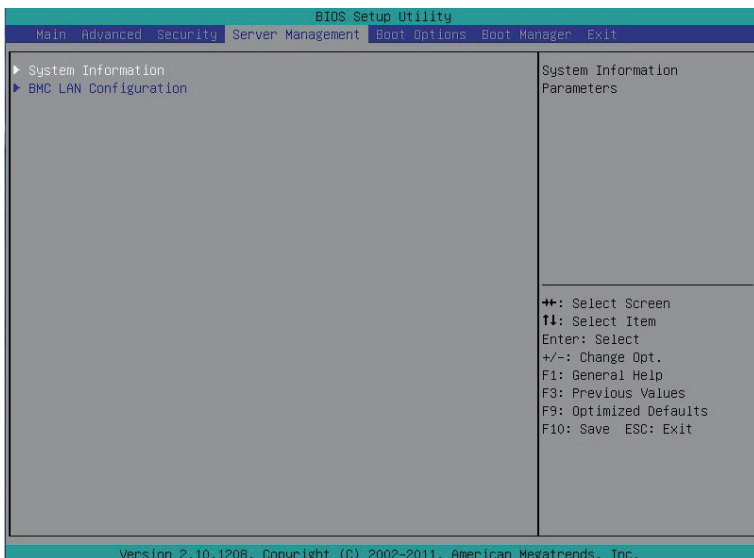
  ☞ **System Information**

     Displays basic system ID information, as well as BIOS version. Press Enter to access the related sub-
     menu.

  ☞ **BMC LAN Configuration**

     BMC LAN Configuration. Press Enter to access the related submenu.

## 2-4-1 System Information

The System Management submenu is a simple display page for basic system ID information, as well as System product information. Items on this window are non-configurable.

```
                          BIOS Setup Utility
                       Server Management

  Machine Type/Model           6UASV3
  System Serial Number         1234567
  UUID                         FFFFFFFFFFFFFFFF
                               FFFFFFFFFFFFFFFF

  ASSET TAG                    FFFFFFFFFFFFFFFF
                               FFFFFFFFFFFFFFFF

  NIC1 MAC Address             1C-6F-65-F9-D5-7C
  NIC2 MAC Address             1C-6F-65-F9-D5-7D

  BMC Information
  BMC Firmware Version         01.03
  SDR Version                  01.02        →←: Select Screen
  FRU Version                  00.01        ↑↓: Select Item
                                            Enter: Select
                                            +/-: Change Opt.
                                            F1: General Help
                                            F3: Previous Values
                                            F9: Optimized Defaults
                                            F10: Save  ESC: Exit



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```

## 2-4-2 BMC LAN Configuration

```
                              BIOS Setup Utility
                         Server Management

  Clear all Event Logs:           [Disabled]              If Enable, the system
                                                          event log will be cleared.
  Lan Channel
  Configuration Source            [Dynamic]
  IP Address                      010.001.111.018
  Subnet Mask                     255.255.255.000
  Default Gateway Address         010.001.111.253




                                                          →←: Select Screen
                                                          ↑↓: Select Item
                                                          Enter: Select
                                                          +/-: Change Opt.
                                                          F1: General Help
                                                          F3: Previous Values
                                                          F9: Optimized Defaults
                                                          F10: Save  ESC: Exit




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```

☞ **Clear all Event Logs**

  Choose options for erasing Smbios Event Log is done prior to any logging activation during reset.

☞ **Configuration Source**

  Select to configure LAN channel parameters statically or dynamically (DHCP). Do nothing option willnot
  modify any BMC network parameters during BIOS phase.

  Options available: Static/Dynamic/Do Nothing.

☞ **IP Address**

  Display IP Address information.

☞ **Subnet Mask**

  Display Subnet Mask information.

☞ **Default Gateway Address**

  Display Default Gateway Address information.

## 2-5 Boot Option Menu

The Boot menu allows you to set the drive priority during system boot-up. BIOS setup will display an error message if the drive(s) specified is not bootable.

```
                              BIOS Setup Utility
     Main   Advanced   Security   Server Management   Boot Options   Boot Manager   Exit

     Boot Option #1                  [UEFI Device]                   Set Boot Priority.
     Boot Option #2                  [Hard Disk Drive:SanDis...]
     Boot Option #3                  [Optical Disk Drive]
     Boot Option #4                  [Removable Device]
     Boot Option #5                  [Network Device:IBA GE ...]

   ▶ UEFI Boot Device Priority
   ▶ Hard Disk Drive Priority
   ▶ Optical Disk Drive priority
   ▶ Removable Device Priority
   ▶ Network Device Priority

     Quiet Boot                      [Enabled]
     Bootup Num-Lock                 [Off]                           ↔: Select Screen
     POST Error Pause                [Enabled]                       ↑↓: Select Item
                                                                     Enter: Select
                                                                     +/-: Change Opt.
                                                                     F1: General Help
                                                                     F3: Previous Values
                                                                     F9: Optimized Defaults
                                                                     F10: Save  ESC: Exit



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```

By default, the server searches for boot devices in the following secquence:

1. Hard drive.
2. UEFI device.
3. Optical disc drive.
4. Removable device.

☞ **UEFI Boot Device Priority**

Press Enter to configure the boot priority.

☞ **Hard Disk Drive Priority**

Press Enter to configure the boot priority.

☞ **Optical Disk Drive Priority**

Press Enter to configure the boot priority.

☞ **Removable Disk Drive Priority**

Press Enter to configure the boot priority.

☞ **Network Device Priority**

Press Enter to configure the boot priority.

☞ **Quiet Boot**

Enables or disables the quick boot function to speed up the system boot-up process to shorten the waiting time for entering the operating system and to deliver greater efficiency for daily use.

Options available: Enabled/Disabled. Default setting is **Enabled**.

&#9697; **Bootup NumLock**

Enable or Disable Bootup NumLock function.

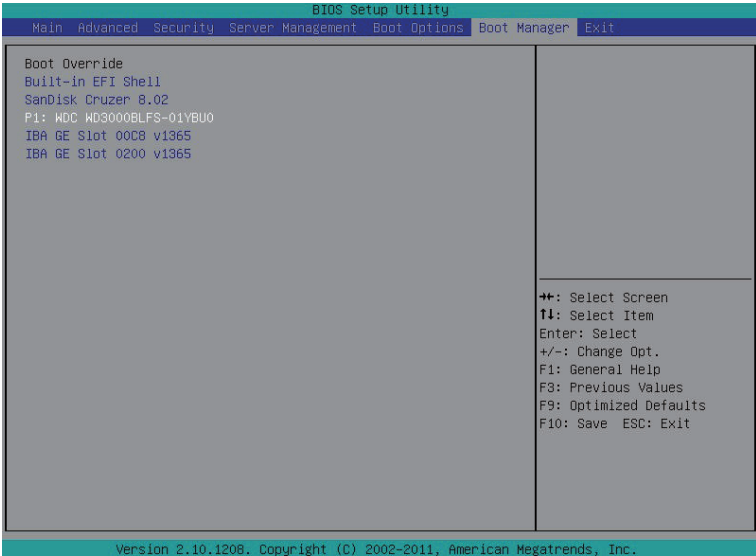Options available: On/Off. Default setting is **On**.

&#9697; **POST Error Pause**

Select whether to pause POST when a boot-up error is detected.

Options available: Enabled/Disabled. Default setting is **Enabled**.

## 2-6 Boot Manager

The Boot manager menu allows you to specify the boot-up drive. BIOS setup will display an error message if the drive(s) specified is not bootable.

```
                         BIOS Setup Utility
    Main  Advanced  Security  Server Management  Boot Options  Boot Manager  Exit

    Boot Override
    Built-in EFI Shell
    SanDisk Cruzer 8.02
    P1: WDC WD3000BLFS-01YBU0
    IBA GE Slot 00C8 v1365
    IBA GE Slot 0200 v1365



                                                    →←: Select Screen
                                                    ↑↓: Select Item
                                                    Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save  ESC: Exit



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```

- **Built-in EFI Shell**

  Press Enter to configure the device as the boot-up drive.

- **IBA GE Slot 00C8 v1365**

  Press Enter to configure the device as the boot-up drive.

- **IBA GE Slot 0200 v1365**

  Press Enter to configure the device as the boot-up drive.

## 2-7    Exit Menu

The Exit menu displays the various options to quit from the BIOS setup. Highlight any of the exit options then press **Enter**.

```
                          BIOS Setup Utility
     Main   Advanced   Security   Server Management   Boot Options   Boot Manager   Exit

  Save Changes and Exit                                  Exit system setup after
  Discard Changes and Exit                               saving the changes.
  Save Changes
  Discard Changes
  Load Default Values
  Save as User Default Values
  Load User Default Values


                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F3: Previous Values
                                                        F9: Optimized Defaults
                                                        F10: Save  ESC: Exit



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```

  ☞ **Save Changes and Exit**

    Saves changes made and close the BIOS setup.
    Options available: Yes/No.

  ☞ **Discard Changes and Exit**

    Discards changes made and close the BIOS setup.
    Options available: Yes/No.

  ☞ **Save Changes**

    Saves changes made in the BIOS setup.
    Options available: Yes/No.

  ☞ **Discard Changes**

    Discards all changes made in the BIOS setup.
    Options available: Yes/No.

  ☞ **Load Default Values**

    Loads the default settings for all BIOS setup parameters. Setup Defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.
    Options available: Yes/No.

  ☞ **Save as User Default Values**

    Saves as user default and close the BIOS setup.
    Options available: Yes/No.

  ☞ **Load User Default Values**

    Loads the user default settings for all BIOS setup parameters.
    Options available: Yes/No.