

NS7440

User Manual



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1.Preparation for Use

1.1 Abstract

The main task of this chapter is to describe how to perform some basic preparatory work. These tasks include:

Checking the shipping packaging;

Selecting an appropriate location for placing the server;

Checking the power settings switch;Inspecting the power cables;

Installing the equipment;

Connecting peripheral devices;

Powering on the monitor and server;Preparing for the operating system installation.

1.2 Check the Transport Package

NOTE:

The weight of the server may vary depending on its configuration. To avoid potential damage, it is recommended to move the server with multiple people.

Upon unboxing the server, check for any visible damage to the packaging that may have occurred during transport. If the packaging is damaged, take photographs for reference and promptly file a damage report. After removing the server, keep the packaging and packing materials, as they will be needed if you need to transport the server to another location.

Verify that all items listed on the packing list are present and in good condition. If any items are damaged or missing, please contact our sales representative.

1.3 Select a Suitable Location to Place the Server

Conditions Required	Illustration
Three-core power socket	A three-core power socket that complies with local electrical standards. The expected overload current is 220-240Vdc/8.5A-7A, or less than 100-127VAC/15-12A, or less than 220-240VAC/8.5-7A. Note: Ensure that the server power supply is properly grounded.

Meet the specific environmental regulations	The server can work reliably in a normal office environment. Select an environment that meets the following conditions: Clean and low in dust Well-ventilated and far away from the heat source Stay away from environments that may encounter vibration or physical impacts
Isolation from the electromagnetic field and the electrical noise environment	The server should be isolated from strong electromagnetic fields and equipment that produce electrical noise, including elevators, photocopiers, air conditioners, high-power fans, high-power motors, radios. and TV transmitters and high-frequency warning equipment, etc.
Maintain good ventilation And cooling conditions	All sides of the server should ensure good ventilation and cooling conditions. Keep no shelter around the server.
Provide space for easy repair and power off	Keep space for server maintenance. Convinced that there is a convenient way to cut off the AC power from the wall socket or server backplane, because this is the way to safely cut off the power before repairs and product upgrades. Turning off the DC switch on the server panel does not really cut off the AC power to the server.

1.4 The Server Is Installed on the Rack

All rack-type servers are compatible with a 19-inch standard rack, installation procedures are described in the shelf Installation Guide.

1.5 Check the Power Cord

If the supplied AC power cord does not match the model of the place where the server is used, do not continue, replace it with a compliant power cord. The compliant power cord will be described below. When you are ready to join the internal device, do not power the server.

Required Power Cord	Description
Speed rate	The AC current should be rated at 125% of the current required by the server.
Connect to the power socket end connector	The wire must be a earth plug.
Connect to the server-side connector	The server-side power plug must be a positive IEC320 and Sheet C13-type plug.
Power cord length and flexibility	The power cord must be shorter than 4.5m, and it must be a flexible <HAR> line or yes VDE authentication for the line following the server security regulations.

1.6 Add Equipment

Before adding the expansion device in your server, verify that the server is not connected to power.

When you add drives, expansion cards, and memory, or make any internal changes to your server, restore the server chassis.

Note: Observe the warnings and precautions listed here when the chassis cover must be removed and contact the server internal components.

Only qualified professional and technical personnel can perform the above operation.

1.7 Connect Peripheral Devices

Be sure that the server is not connected to the power supply. When connecting the peripheral equipment, confirm that the equipment is not charged, otherwise the equipment may be damaged.

With all internal expansion and recovery chassis installed, connect your keyboard, mouse, display, and other peripherals.

You must first install the monitor and the keyboard to configure the server. Even if your servers work normally without a display or a keyboard as a network server, you still need to install them to configure the server.

If necessary, connect other extension devices such as printer, modem, etc.

1.8 Open the Display and the Server

Warning: The power switch on the front panel does not cut off the AC voltage. To cut off the AC voltage in the server, the AC power cord must be disconnected.

Verify that all peripheral devices, such as a monitor, keyboard, and mouse, are connected;

Remove the drive protection card from the disk drive (if present);

Open the display;

Connect one end of the AC power cord to the power interface of the server backplane;

Connect the other end of the AC power cord to a three-core socket on the wall (or ground);

When the server is not start when the AC power is connected, press the on / off switch on the lower panel;

The power lamp on the confirmation panel is shining. After a few seconds, the server starts running the POST program (boot-up self-test). The front panel hard disk indicator will shine.

when the hard disk receives an access signal. If the fault occurs, record the error message displayed on the screen and hear the sound code. See the System troubleshooting chapter.

2. Description of the System Structure

2.1 Structural Characteristics



Figure2-1 NS7440 front view



Figure 2-2 NS7440 rear view

2.2 Diagram of System Nodes and Hard Disk Distribution

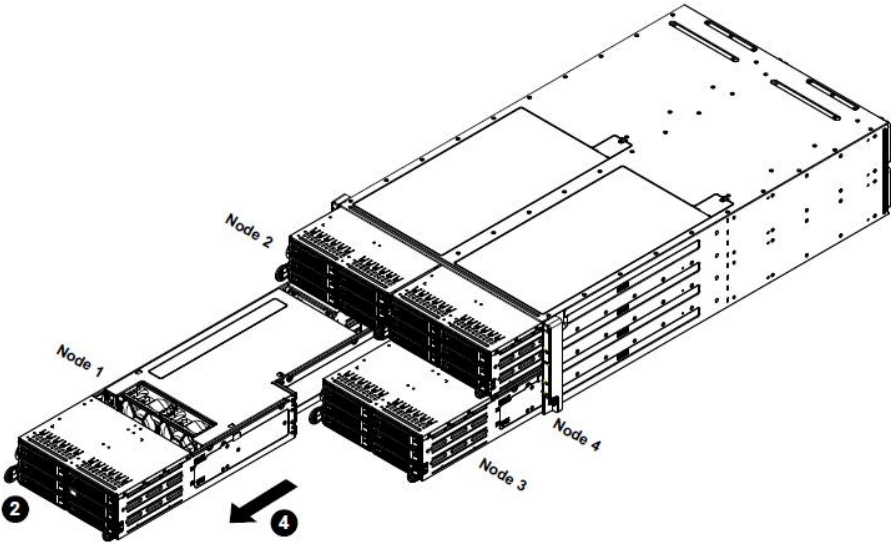


Figure 2-3: Node and Hard Disk Distribution Diagram

The translation of the table is as follows:

Node	Enclosure
Node 1	Controls 8 x 3.5" hard disks, A1-A8
Node 2	Controls 8 x 3.5" hard disks, B1-B8
Node 3	Controls 8 x 3.5" hard disks, C1-C8
Node 4	Controls 8 x 3.5" hard disks, D1-D8

Indicator light information is shown in the following list:

Definition	Color	Flashing Mode	Device Behavior
Activity Indicator Light	Blue	Steady Bright	Installed SAS/NVMe drive
	Blue	Flashing	I/O Activity
Status Indicator Light	Red	Steady Bright	Supports RSTe drive failure
	Red	Flashing at 1 Hz	Assisting RSTe in rebuilding the drive
	Red	Flashing twice, flashing once, frequency 1 Hz	Hot spare drive with RSTe support (VMD mode not supported)
	Red	Turned on for five seconds, then off	Powering up a drive with RSTe support
	Red	Flashing at 4 Hz	Identifying a drive with RSTe support
	Green	Steady Bright	Safe to remove NVMe device (VMD mode not supported)
	Amber	Flashing at 1 Hz	Attention status - do not remove NVMe device (VMD mode not supported)

2.3 NS7440 Server Power Control Panel Diagram: Description

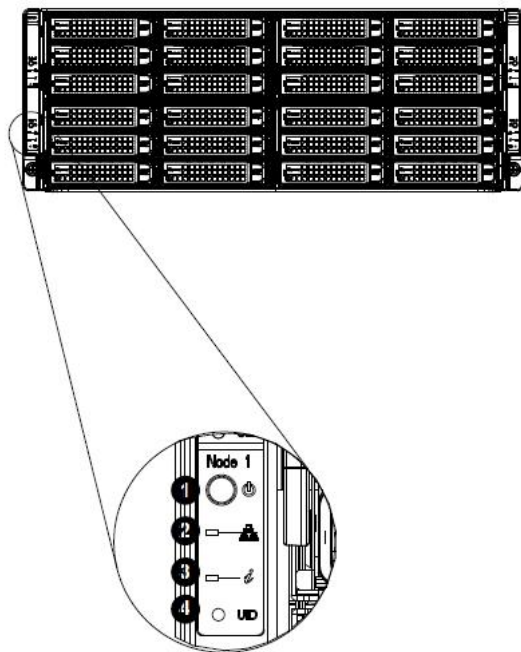


Figure 2-4: PR4740TP Server Power Control Panel

Item	Function Description
1	System Power Control and Indicator Light
2	Network Status Indicator Light
3	System Status Indicator Light
4	System ID Button and Indicator Light

Control Panel Functions		
Item	Function	Description
1	Power Button	The four power buttons on each control panel are used for powering on or off the system. Each system in the machine can be powered on or off using the corresponding button on the control panel. This button allows you to turn off the main power supply, but it only affects the system connected to that button. Therefore, it is essential to maintain the power supply of the system. When the power is turned on, the LED will light up green.
2	Network Card	The flashing indicator shows the network activity on LAN1 or LAN2.
3	Status Indicator Light	For details regarding the information LED, please refer to the documentation.
4	UID Light	The UID button on the server control panel is used to turn on the UID indicator. It indicates that the server is supported by the UID LED. When the UID button is pressed, the LED on the front of the server panel will light up, making it easier to locate the server in a rack or server room.

2.4 NS7440 Description of System Indicator Lights

Name	Color	Status	Description
Power Indicator Light	Green	Steady Bright	Power Supply is in Normal State, System is Powered On
	Green	Steady Bright	System is in Standby State
	—	Off	System is Not Connected/System is in Power Off State
ID Indicator Light	Blue	Steady Bright	Pressing the Front Panel ID Button, the Front Panel ID Indicator Light
Network Indicator Light	Green	Steady Bright	Network Connection, No Data Communication
	Green	Flashing	Network is in Communication State
	—	Flashing	Network is Disconnected
System Status Indicator Light	Red	Steady Bright	Indicates that the system is overheating; at this time, check for
	Red	Flashing	Flashes once every second, non-critical warning, fan failure.
	Red	Flashing	Flashes once every four seconds, non-critical warning, power
	—	Off	System is not powered on/System node is not installed.

2.5 Diagram of the System Front and Rear Panels:

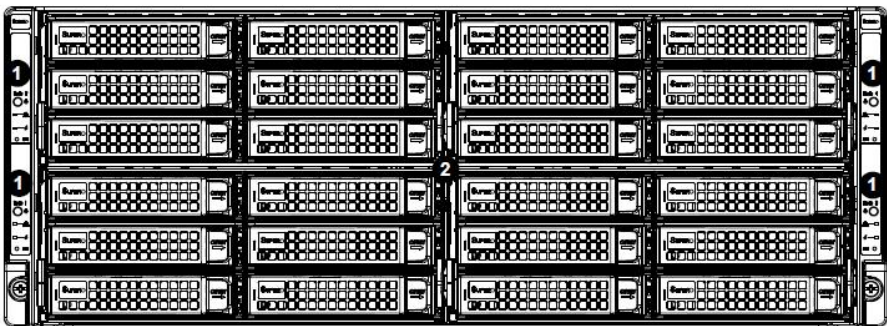


Figure 2-5 (Description of the Functions of Various Ports on the Rear Panel as Shown in the Diagram)

Item	Function	Description
1	Power Panel	Front control panel with LED and buttons (see 2.3, 2.4)
2	Drive Chassis	Each node's front has six (6) slots for 3.5-inch HDD/SSD/NVMe drives.

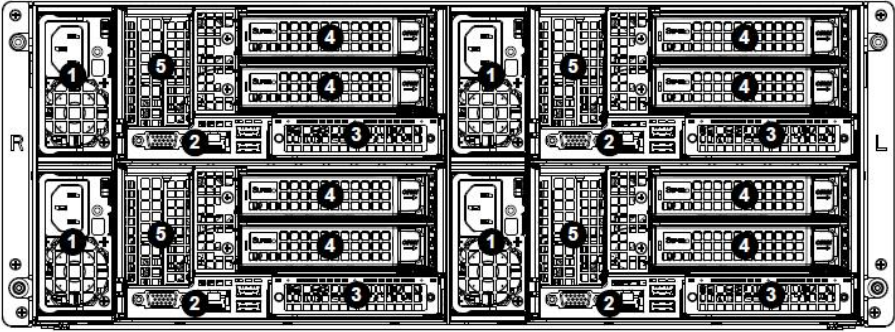


Figure 2-6 PR4740TP Rear Window Interface Function

Item	Function	Description
1	Power	The rear of the chassis has four (4) 1200W redundant power supplies.
2	I/O Ports	Includes USB 3.0, VGA, and IPMI.
3	SIOM Module	Each node has one rear SIOM module bracket, which can be used for other I/O ports.
4	Drive Chassis	Each node's rear has two (2) brackets for 3.5-inch HDD/SSD/NVMe drives.
5	Expansion Slot	Each node has one (1) expansion slot for access.

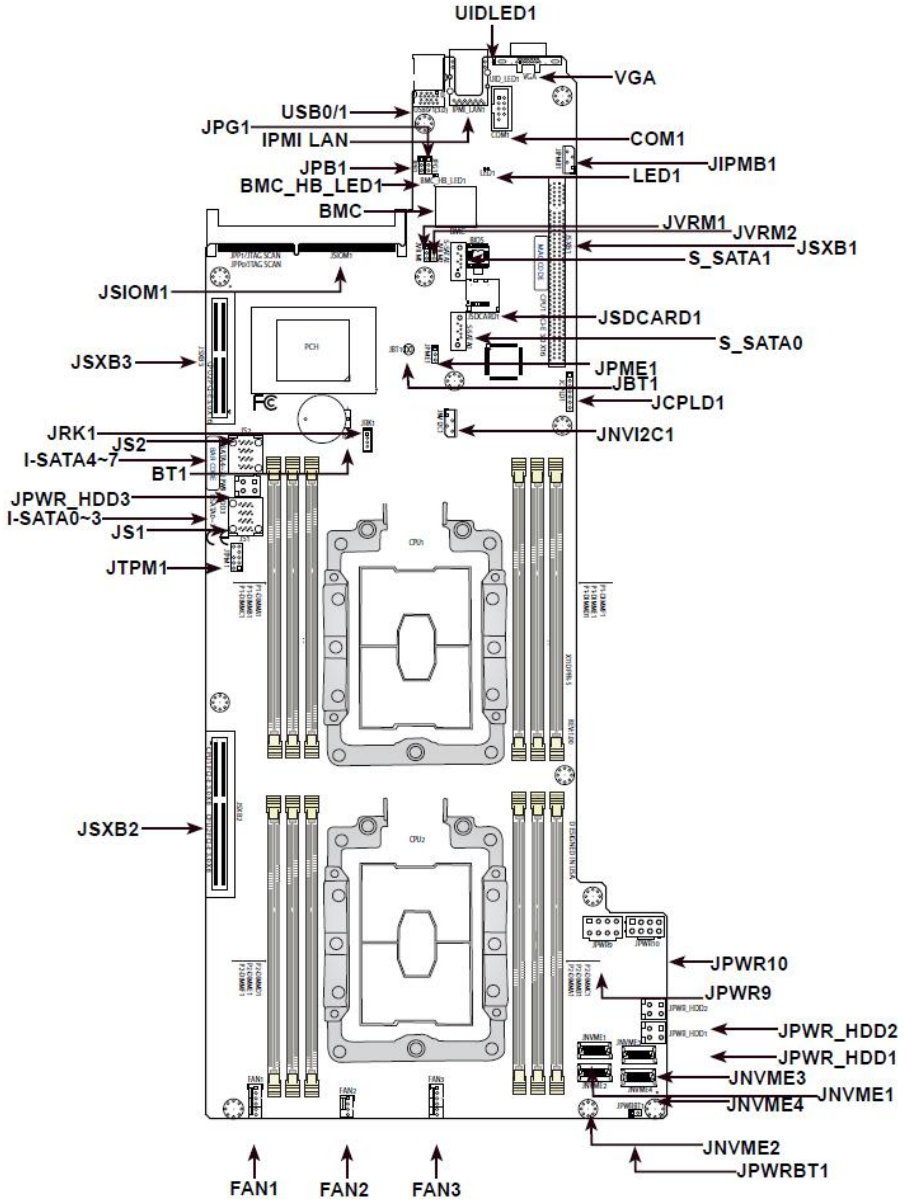
Chassis shape:

Form Factor	Rackmount 2U
Length	177mm
Width	448mm
Height	737mm
Weight	Net Weight: Approximately 68.04 KG Gross Weight: Approximately 90.71 KG

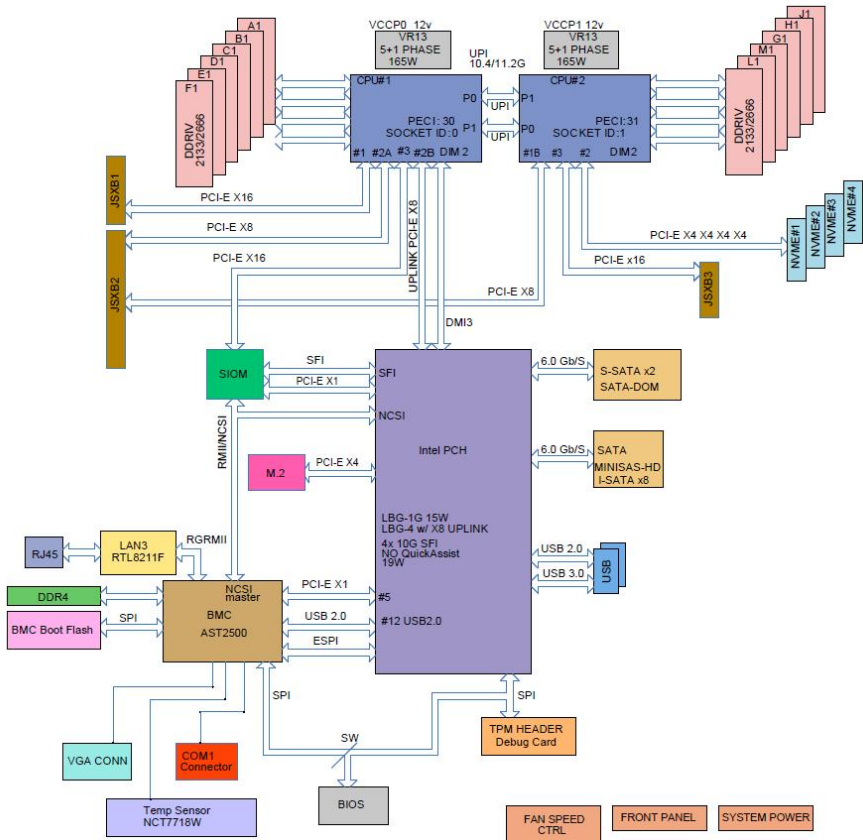
2.6 Motherboard Diagram



2.7 Motherboard Layout Diagram



2.8 Motherboard System Architecture Diagram



2.9 Motherboard Jumper Settings

Jumpers	Description	Default Setting
JBT1	Clear CMOS	On (Normal)
JVRM1	ME Recovery	Pins 1-2 (BMC, Normal)
JVRM2	VRM SMB Data (to BMC or PCH)	Pins 1-2 (BMC, Normal)
Connector	Description	
Battery (BT1)	On-board CMOS Battery	
FAN1~3	System cooling fan connector	
IPMI_LAN	IPMI dedicated port	
JIPMB1	4-pin external BMC I2C header connector (for IPMI cards)	
JNVME1~4	NVMe OcuLink port	
JNVI2C1	NVMe I2C connector	
JPWR9/JPWR10	8-pin power connector 9 (12V_in) / power connector 10 (ground)	
JPWR_HDD1/2/3	HDD power connector 1/2/3	
JRK1	RAID keys for NVMe devices	
JS1/2	MiniSAS HD SATA 3.0 ports	
JSDCARD1	Micro SD card slot	
JTPM1	Trusted Platform Module (TPM) Connectors	
(I-)SATA0~3, 4~7	Intel PCH Supported I- SATA 3.0 Connectors	

(S-)SATA0/1	S-SATA 3.0 Connectors Supported by Intel PCH	
JSXB1	PCI-E 3.0 x16 Right Boost Board (CPU1)	
JSXB2	PCI-E 3.0 (x8 + x8) SMCI proprietary slots (CPU1 and CPU2)	
JSXB3	PCI-E 3.0 x16 Left Boost Board (CPU2)	
USB0/1	Rear panel USB 3.0 port	
VGA	Back panel VGA port	
LED	descriptive	state of affairs
UID_LED1	UID Lights	Blue (normal recognition)
LED1	Onboard Power LEDs	On: Onboard Power On
BMC_HB_LED1	BMC Indicator Light	Flashing green: BMC normal

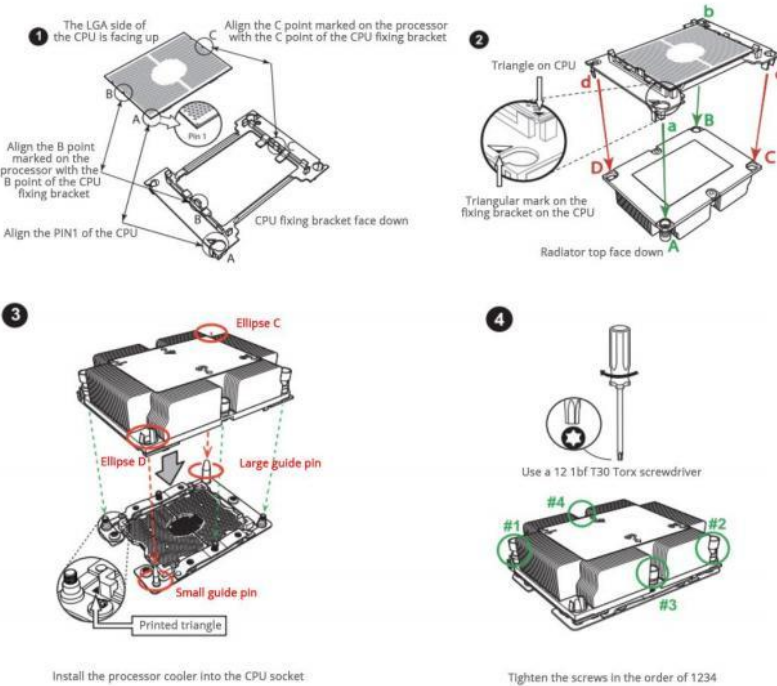
3. System Description of the System Structure

3.1 CPU

3.1.1 CPU Summary

Each node supports two processors from the Cascade Lake or Skylake series, with UPI supporting a maximum of 10.4 GT/s and CPU TDP ranging from 70 to 165W.

3.1.2 CPU Installation Steps



3.2 Memory Installation Precautions

3.2.1 Memory Summary

Each node of the server has 16 memory slots, supporting 16 Load Reduced DIMMs (LRDIMMs), 3D LRDIMMs, Registered DIMMs (RDIMMs), Non-Volatile DIMMs (NV-DIMMs) DDR4 (288-pin) ECC at speeds of 2933/2666/2400/2133 MHz, with a maximum memory capacity of 3TB. Please refer to the table below:

DDR4 Memory Support for 82xx/62xx/52xx/42xx/32xx Processors							
Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)			Speed (MT/s)		
					One Slot per Channel	Two Slots per Channel	
		DRAM Density			One DIMM per Channel	One DIMM per Channel	Two DIMMs per Channel
		4 Gb	8 Gb	16 Gb	1.2 Volts	1.2 Volts	1.2 Volts
RDIMM	SRx4	4 GB	8 GB	16 GB	2933	2933	2933
	SRx8	8 GB	16 GB	32 GB			
	DRx8	8 GB	16 GB	32 GB			
	DRx4	16 GB	32 GB	64 GB			
RDIMM 3Ds	QRX4	N/A	2H-64GB	2H-128GB			
	8RX4	N/A	4H-128GB	4H-256GB			
LRDIMM	QRx4	32 GB	64 GB	128 GB			
LRDIMM 3Ds	QRx4	N/A	2H-64GB	2H-64GB			
	8Rx4	N/A	4H-128 GB	4H-256 GB			

DDR4 Memory Support for 82xx/62xx/52xx/42xx/32xx Processors							
Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)			Speed (MT/s)		
					One Slot per Channel	Two Slots per Channel	
		DRAM Density			One DIMM per Channel	One DIMM per Channel	Two DIMMs per Channel
		4 Gb	8 Gb	16 Gb	1.2 Volts	1.2 Volts	1.2 Volts
RDIMM	SRx4	4 GB	8 GB	16 GB	2933	2933	2933
	SRx8	8 GB	16 GB	32 GB			
	DRx8	8 GB	16 GB	32 GB			
	DRx4	16 GB	32 GB	64 GB			
RDIMM 3Ds	QRX4	N/A	2H-64GB	2H-128GB			
	8RX4	N/A	4H-128GB	4H-256GB			
LRDIMM	QRx4	32 GB	64 GB	128 GB			
LRDIMM 3Ds	QRx4	N/A	2H-64GB	2H-64GB			
	8Rx4	N/A	4H-128 GB	4H-256 GB			

3.2.2 Memory Installation Consideration

When installing memory modules, the DIMM slots must be filled in the following order:

Memory Population Table for 12 DIMM Slot Motherboards	
CPU's / DIMMs	Memory Installation Sequence
1 CPU & 1 DIMM	CPU1: P1-DIMMA1
1 CPU & 2 DIMMs	CPU1: P1-DIMMA1/P1-DIMMD1
1 CPU & 3 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1
1 CPU & 4 DIMMs	CPU1: P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1
1 CPU & 5 DIMMs*	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1
1 CPU & 6 DIMM	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1
1 CPU & 6 DIMM	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1
2 CPU's & 2 DIMMs	CPU1: P1-DIMMA1 CPU2: P2-DIMMA1

2 CPUs & 4 DIMMs	CPU1: P1-DIMMA1/P1-DIMMD1 CPU2: P2-DIMMA1/P2-DIMMD1
2 CPUs & 6 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1
2 CPUs & 8 DIMMs	CPU1: P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1 CPU2: P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1
2 CPUs & 10 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 CPU2: P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1
2 CPUs & 12 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-

3.3 Video Controller

The motherboard integrates ASPEED2500 video graphics controller, which supports 2D, up to 1920x1200@60Hz, 32bpp true color.

3.4 Hard Drive Controller

The Intel C621 PCH supports SATA3 (6Gbps) and Intel RSTe SW RAID 0/1/5/10 (supports SATA hard drives only).

3.5 Keyboard and Mouse

USB keyboard / mouse support.

3.6 Optical Drives and Floppy Drives

The server supports optional USB optical drives and floppy drive emulation.

3.7 PCI Expansion

1 half-height, half-length PCI Express 3.0 x16; 1 PCI Express 3.0 x16 (SIOM);

3.8 Other Configurations

1 VGA port; 2 USB 3.0 ports; 1 BMC management port; 1 SIOM port;



Note: The above configuration description is an example for a single-node system

3.9 Certified Compatible Operating System

Skylake CPU Compatible OS

Number	Operating System
1	Windows Server* 2012R2
2	windows server 2016
3	RedHat EL Linux7 U3 32&64
4	RedHat EL Linux7 U4 32&64
5	RedHat EL Linux7 U5 32&64
6	RedHat EL Linux7 U6 32&64

Cascade Lake CPU compatible operating systems.

Number	Operating System
1	windows server 2016
2	RedHat EL Linux7 U4 32&64
3	RedHat EL Linux7 U5 32&64
4	RedHat EL Linux7 U6 32&64

Note: Certification of compatible operating systems is subject to continuous updating and is subject to change without notice.

4.Integrated RAID Configuration

This chapter describes how to create RAID 0, RAID 1, RAID 10, and RAID 5 using the motherboard's integrated SATA RAID controller. After RAID 1 is created, the usable disk capacity is only half of the total capacity, as the disks form a backup, improving reliability. After RAID 0 is created, the disk read/write speed increases, but reliability decreases, with usable capacity equal to the total capacity. RAID 10 combines the high read/write efficiency of RAID 0 with the data protection and recovery capabilities of RAID 1, offering a good balance of performance and reliability. The motherboard integrates the Intel RSTe controller, supporting RAID 1, 0, 10, and 5 (only supports SATA hard drives and Windows systems). An optional version of the platform motherboard integrates the LSI 3x08 controller, supporting SAS hard drives with RAID 0, 1, 10, and 5, and supports both Windows and Linux systems..

4.1 Set the RAID Status in the BIOS

In the factory default settings, the RAID function is not enabled. To create RAID, please follow these steps: During boot, press <DELL> to enter the BIOS. In the Advanced menu, select the Mass Storage Controller Configuration submenu and set the SAS/SATA Capable Controller to Intel RSTe/ESRT2 to enable the SATA RAID controller.

4.2 Operating Guide for Main board Integrated RAID

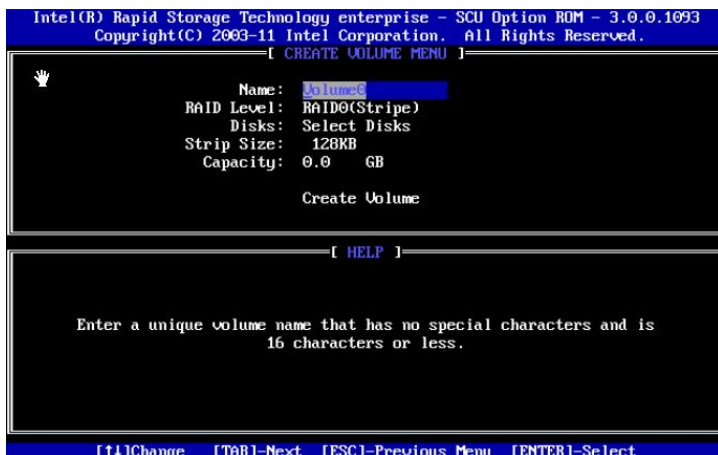
The Intel RSTe RAID chip only supports RAID 5 on Windows systems. During the boot self-test, press the <Ctrl> + <I> key combination (it is recommended to disable Quiet Boot to automatically display this key combination) to enter the RAID setup, as shown in the figure.



After entering, it should look like this

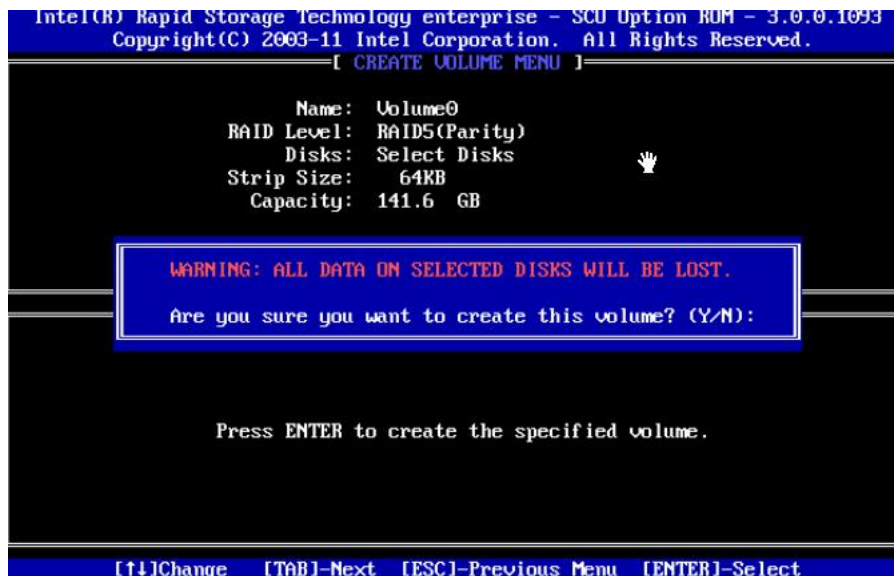


4.2.1.1.1 To create an array, select the Create RAID Volume option. The following menu will appear:

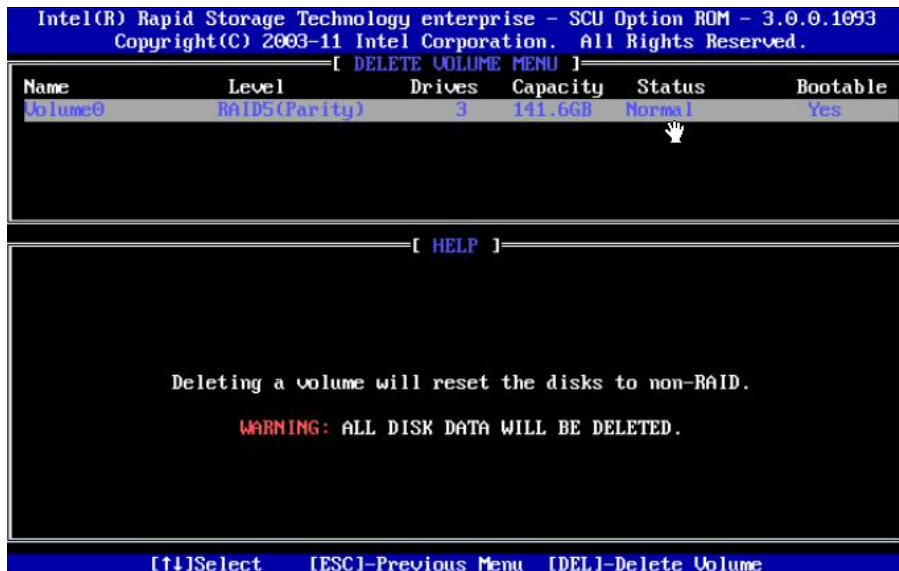


Use the < ↑ > and < ↓ > keys to move the cursor up and down. In the **RAID Level** section, select the desired RAID level to create, with options including RAID0, RAID1, and RAID5. After selecting the RAID level and the disks for the array, press the **Create Volume** option and follow the prompts to choose 'Y' to create the array. The screen will look like this:

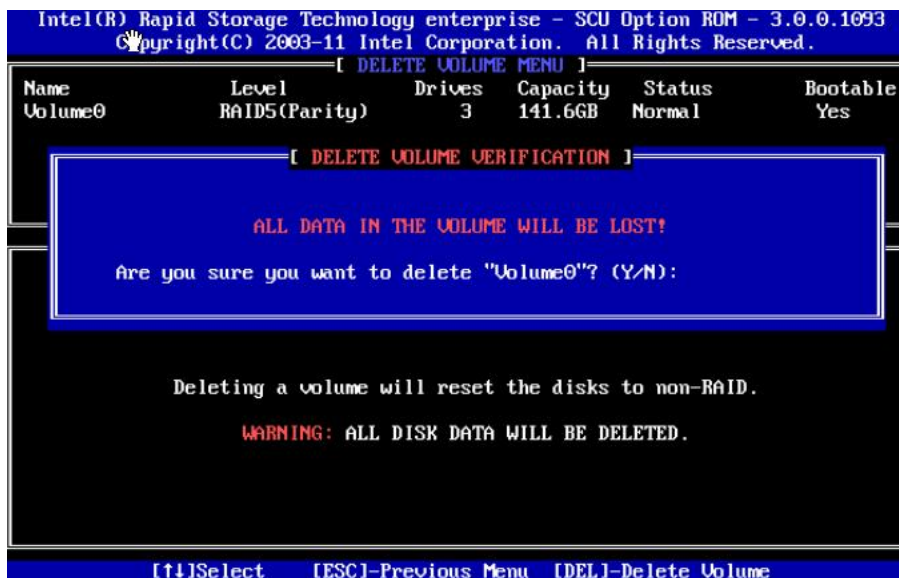
want to do, tap the Create Volume option to select 'Y' to create the array. As shown in the figure below:



4.2.1.1.2 To delete an array, select the ****Delete RAID Volume**** option. The following menu will appear:



Once inside, select the array you want to delete, then press 'DEL' and choose 'Y' to delete the array. The screen will look like this:



5. Operating System Installation Instructions

This chapter describes the manual installation and driver installation of the Windows Server 2016 operating system.

5.1 Microsoft Windows Server 2016 Installation Installations

This guide is suitable for the manual installation of the Microsoft Windows 2008 Server R2 SP1 operating system.

5.1.1 Preparations

If your server needs to load the RAID driver when installing the operating system, prepare the U disk and the random drive discs. If your server is configured with a RAID plug card, drive discs. Then follow these steps to copy the corresponding driver from the drive disc or external card drive disc to the U disk:

1. Insert a U disk into a USB interface with a windows OS computer, and a new removable disk appears on the computer. If using an integrated RAID drive, place a random drive disc on this computer and double-click to open the drive disc. If it is an external card RAID card, place a random external card drive disc on this computer and double-click Open.
2. Select the driver copy to the U disk required to install the operating system.
3. The loading driver step is performed in step 9 of subsection 6. 1.2.

5.1.2 Installation Steps:

1. Set the optical drive as the first startup device in the BIOS, insert the Windows 2016 Server installation disc, save the BIOS settings, and reboot.

Start from the disc, load in



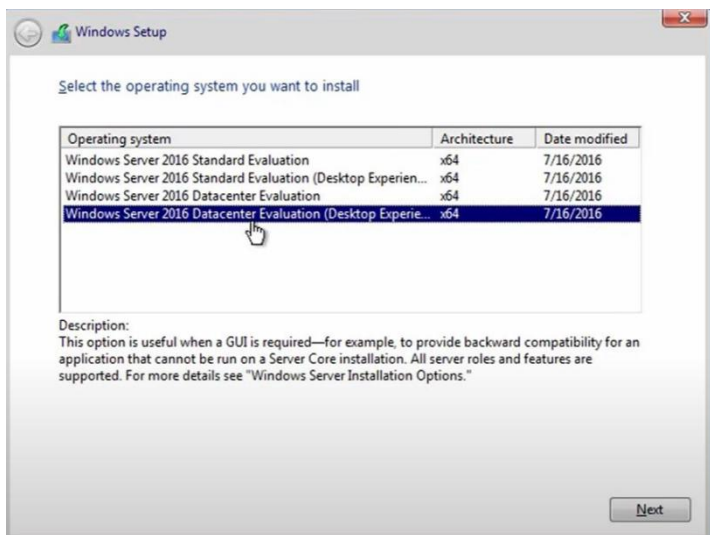
2.Go to the following screen and select the language / keyboard:



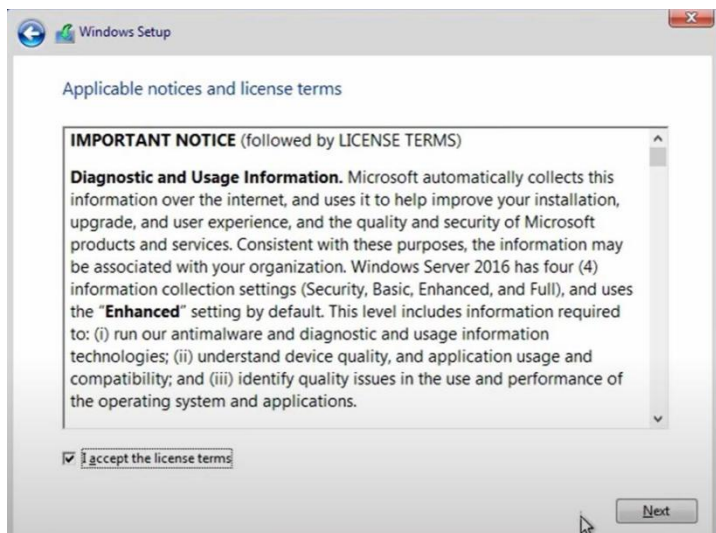
3. Click to start the installation:



4. Select the type of operating system that you want to install, and press Next

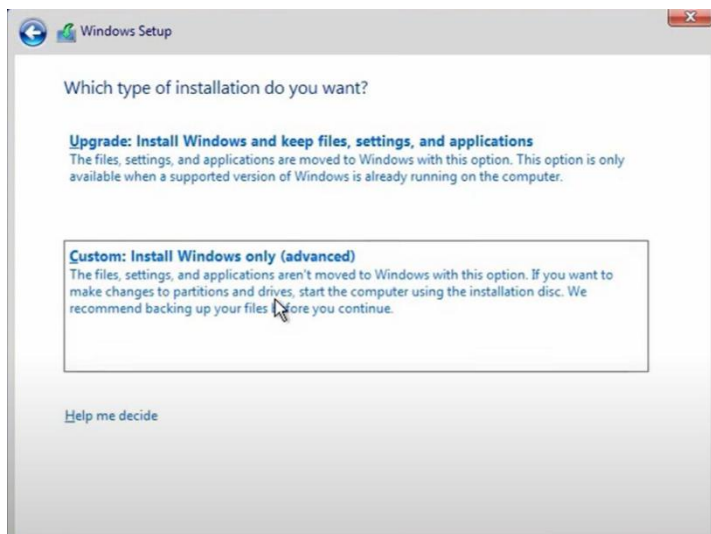


5. Read the User License Agreement with PAGE DOWN / PAGE UP:

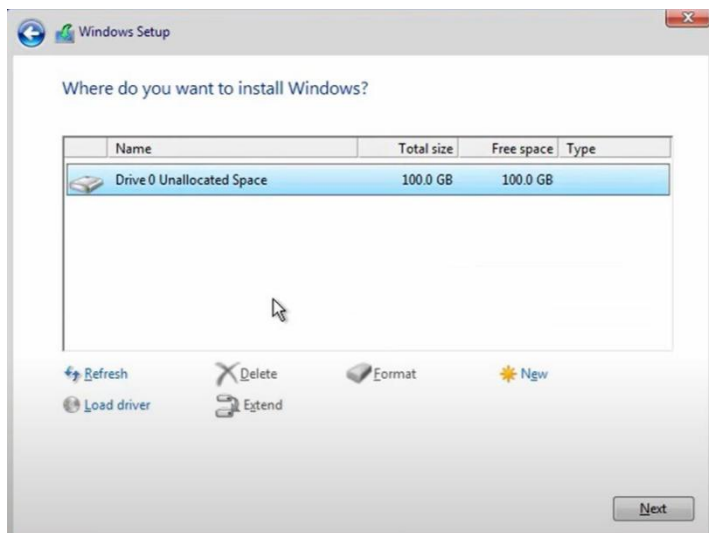


6. Select the term I Accept the License Terms and press the term Next step

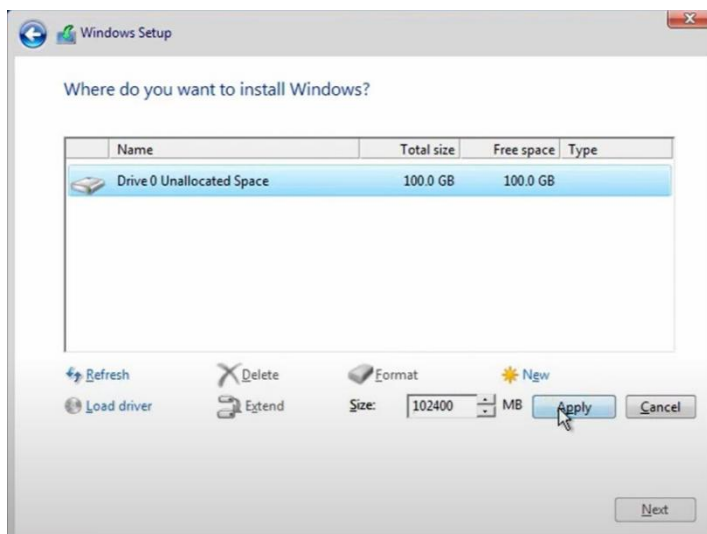
7. To select how to install the operating system



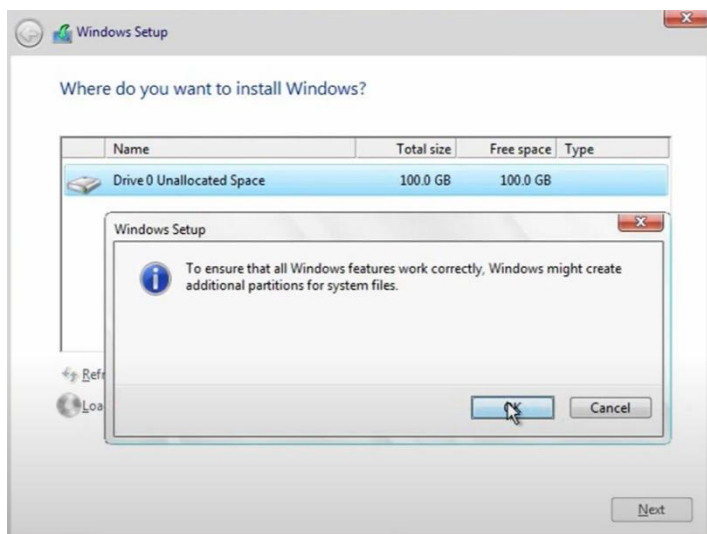
8. If you do a RAID, the disk cannot be found. Select Load Driver for RAID driver loading to see the disk array. With the left mouse button, the load directory dialog box appears and select the copy directory of step 2 in 6. 1. 1. If the SATA disk is onboard AHCI mode can directly recognize the disk, no need to load the drive.



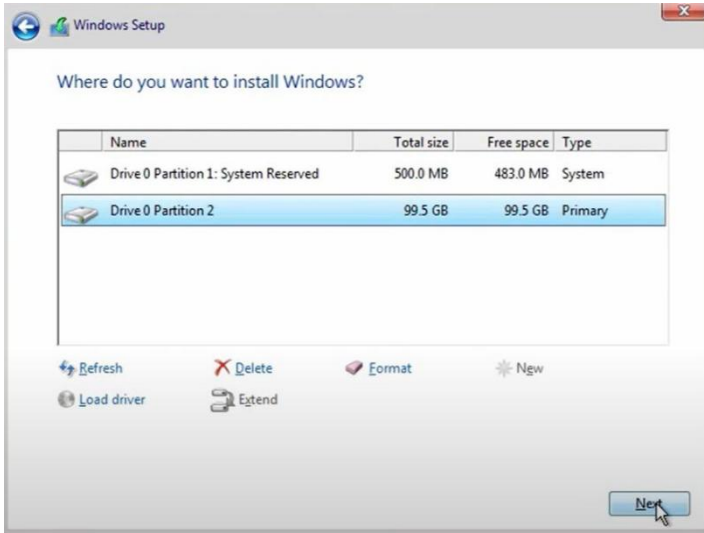
9. Show space size on the disk array installation Windows Server 2016



10. Click OK to confirm the partition:



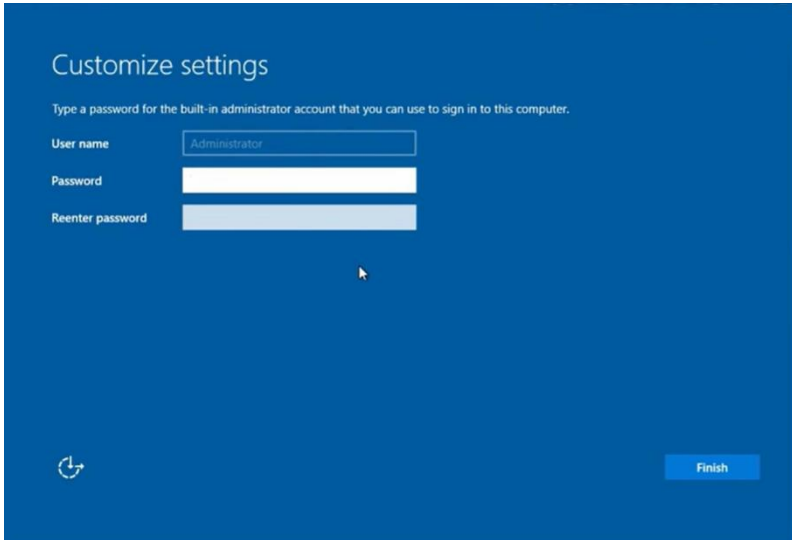
1 1. Complete the partition, click Next to install the system;



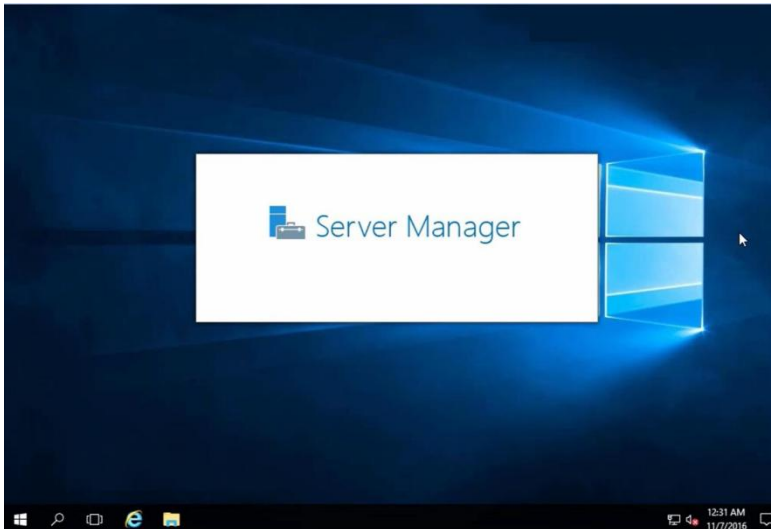
12. Start copying the data, and install the system:



13. Complete the installation, and restart the computer
14. You need to reset the password before entering the system



15. Enter the password to enter the system:





16. Install the driver, put in the random drive disc, the drive disc open as shown below:

17. Click "Windows" to select the chip and controller to be driven, as shown in the figure below;



18. Install chipset, and other chip driver, graphics and external card drivers inside the expansion card drive disc, select to restart the computer after installation:

Chipset main board chipset drive;

LAN main board integrated network card drive;

SATA RAID integrates SATA and SATA driver for the main board;

USB3.0 integrated 3.0 drive for the main board;

VGA main board integrated graphics card drive;

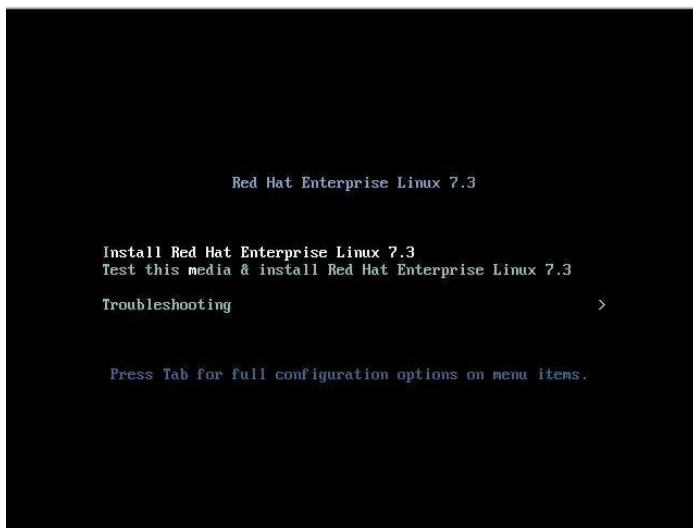
5.2 Redhat Enterprise Linux 7.3 Installation Instructions

5.2.1 Preparations:

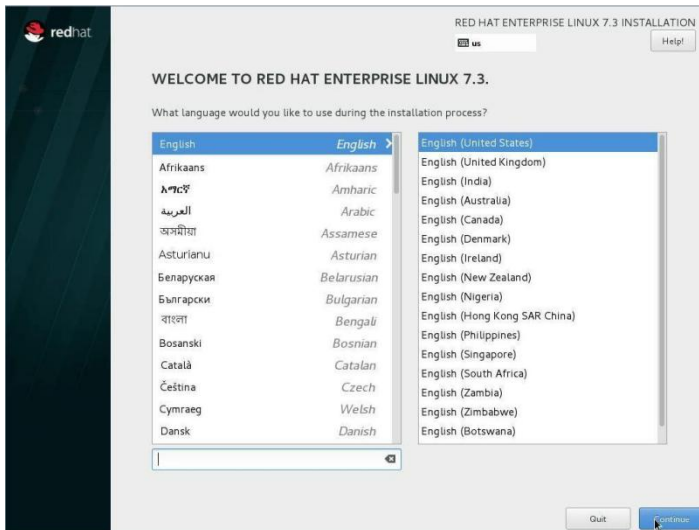
If your server needs to load RAID drives when installing the operating system, prepare the U disk and random drive discs. If your server is configured with a RAID plug card, drive discs.

5.2.2 Installation Steps:

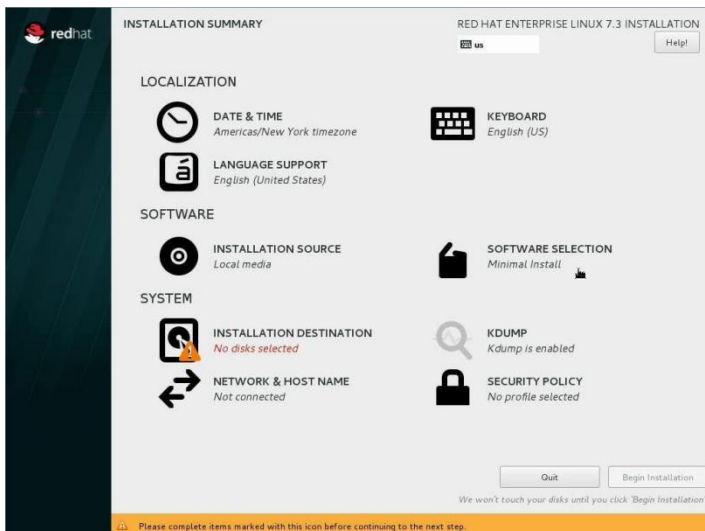
- 1 . Set the optical drive as the first startup device in the BIOS, insert the installation disc, save the BIOS settings, and reboot.
- 2 . Start from the CD, load the following interface, select: Install Red Hat Enterprise Linux 7.3 as shown in the ente



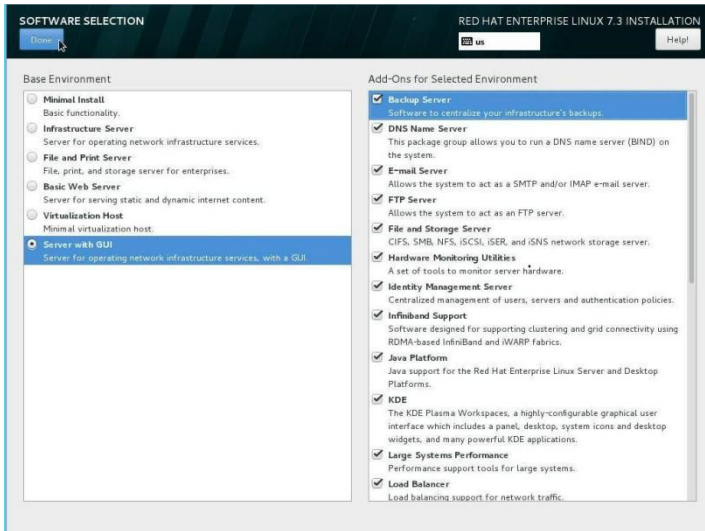
3 . Select the system language, the default English, and click on Next



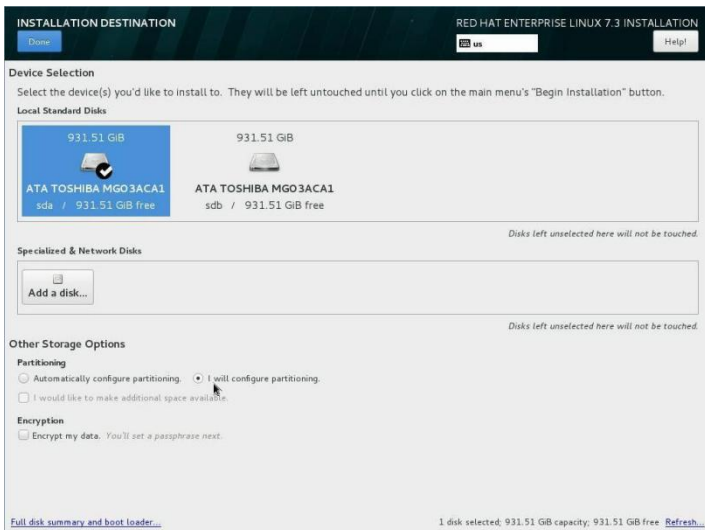
4. The system goes to the following interface. (Set time, system package, hard disk partition)



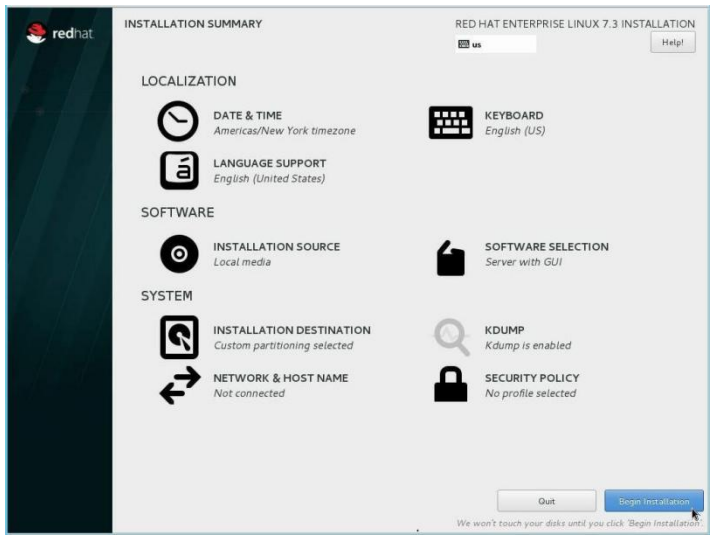
5. Click **SOFTWARE SELECTION** to select the system software; click **Done** to return to the step 4 interface;



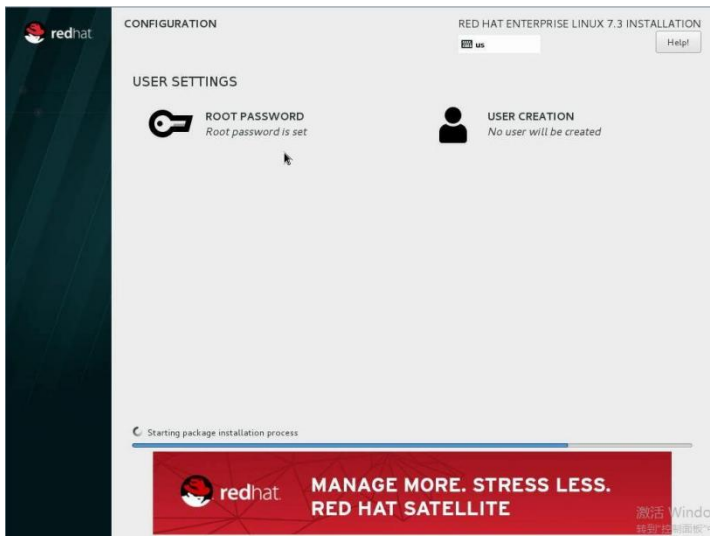
6. Select **INSTALLATION DESTINATION**, hard disk partition; (optional automatic or manual partition)



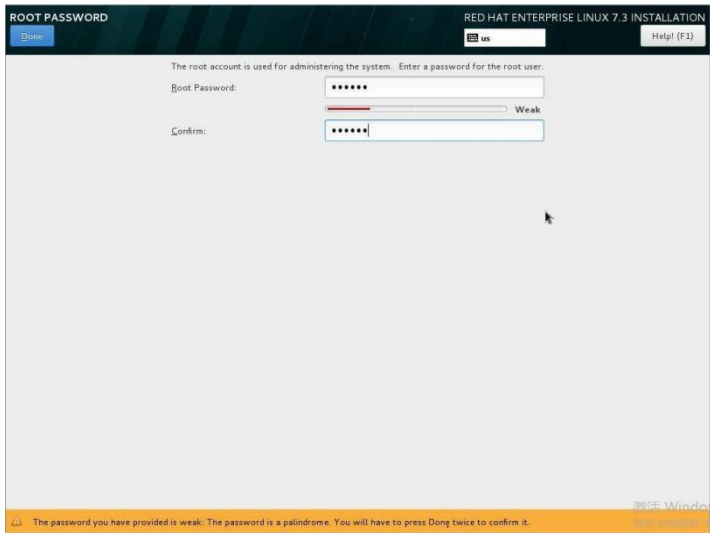
7. Click on Next,



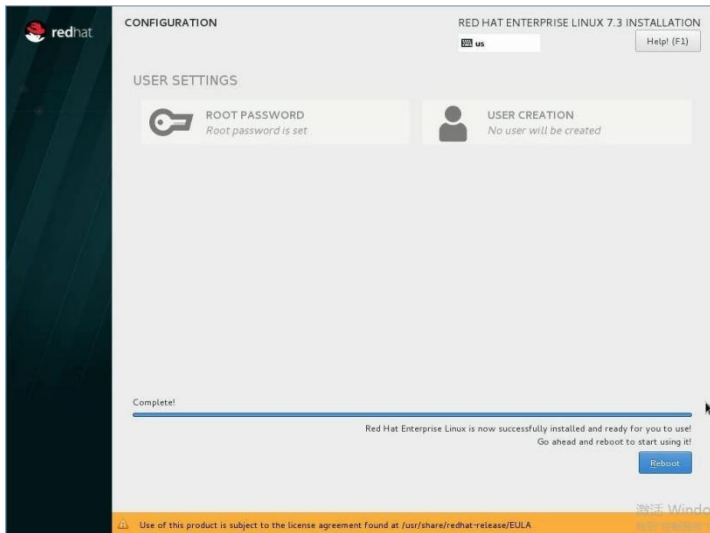
8. Start installing the system as shown in the following figure



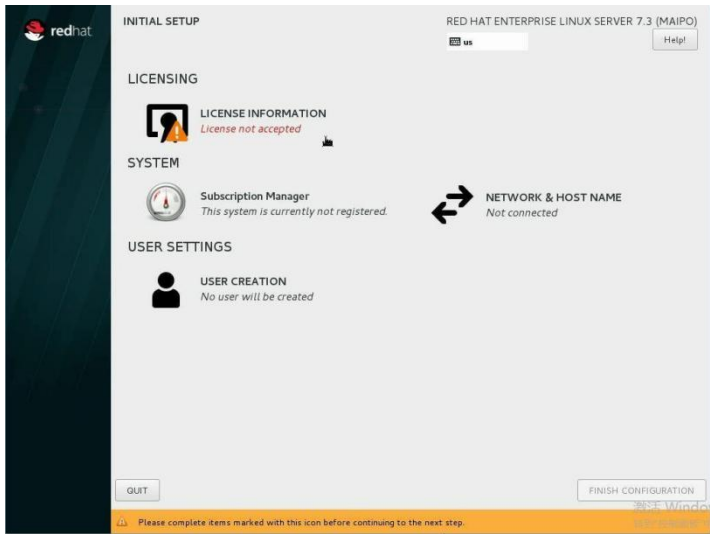
9. Set the Root user password, and then click Done, see the figure below



10. Installation is complete, click on REBOOT, see the figure below

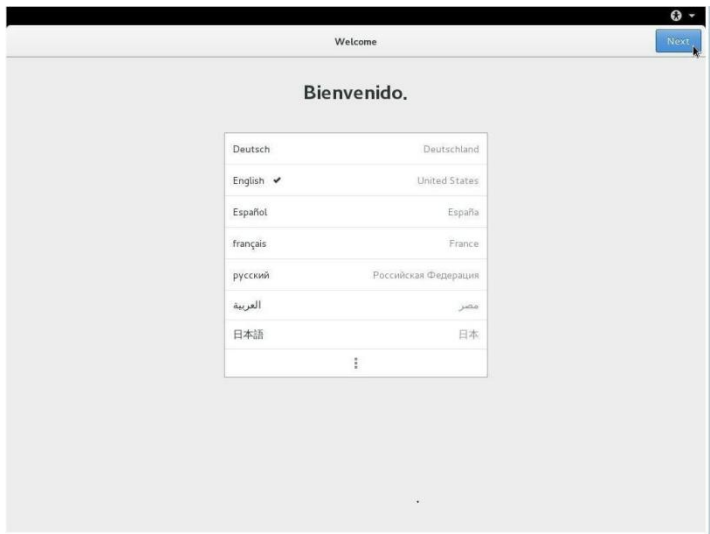


11. License information

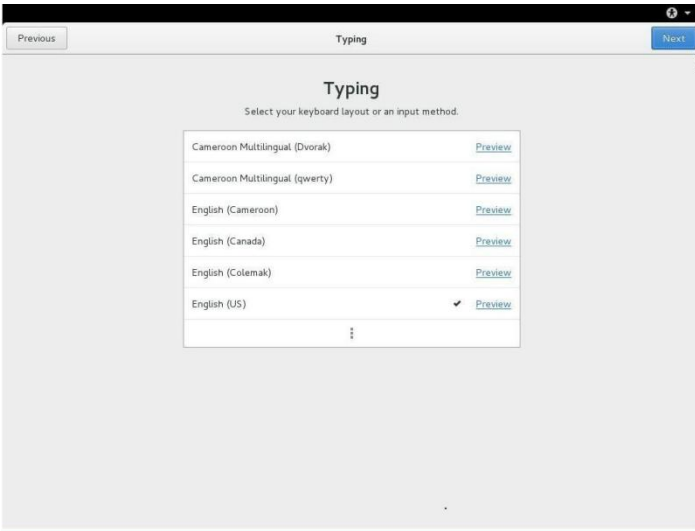


12. Default click FINISH CONFIGURATION ,as following picture shows:

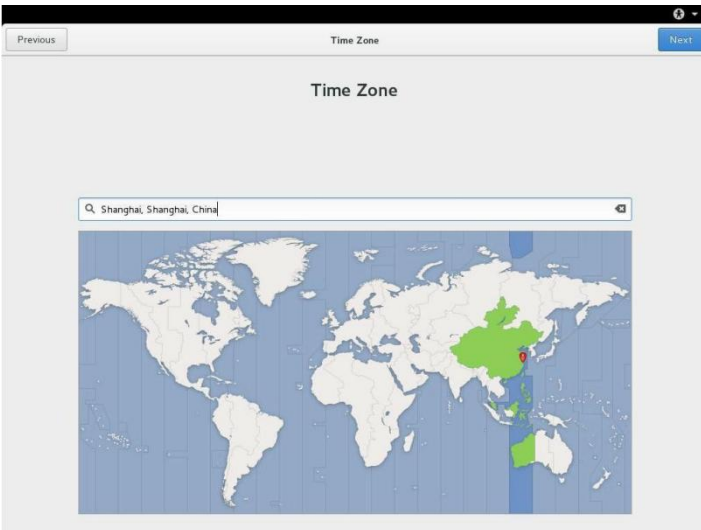
13. Click on Next by default, see the figure below



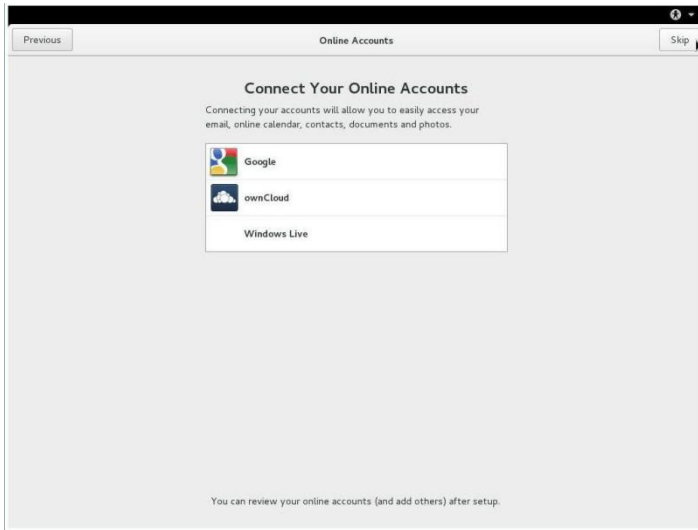
14. Click on Next by default, see the figure below



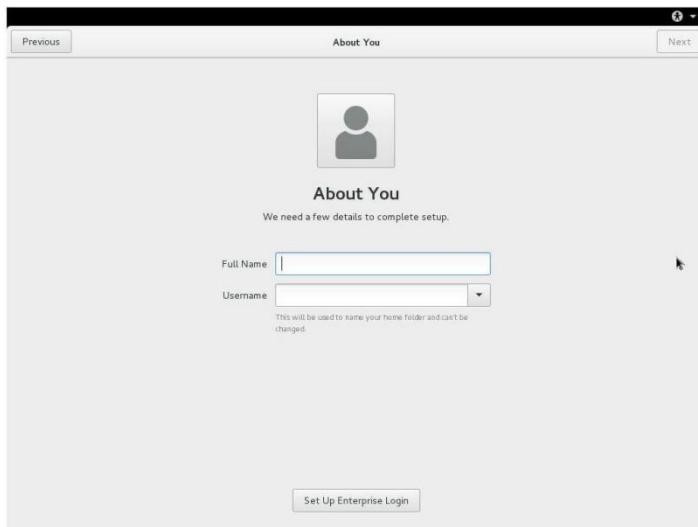
15. Select the time zone (such as Shanghai) and click on Next, see the figure below



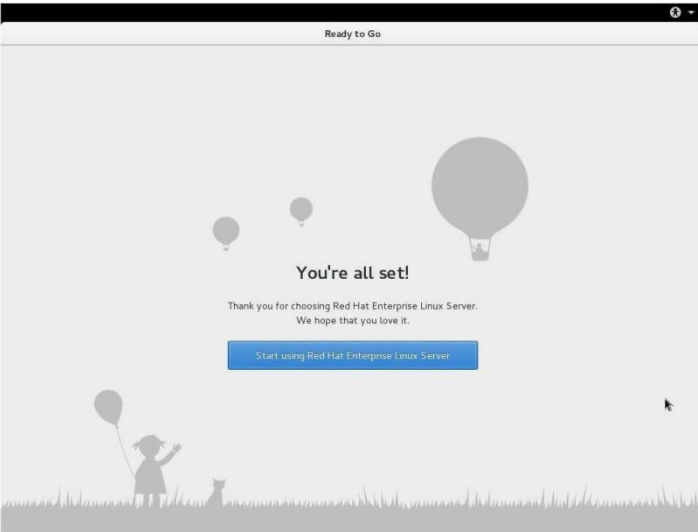
16. Click on Skip and see the figure below



17. Create a user, see the figure below



18. Click Start using Red Hat Enterprise Linux Server to enter the system, see the figure below



6.System Troubleshooting

6.1 Introduction to System Reset

This chapter helps you check and resolve problems that you may encounter while using the Powerleader server system.

Task	Keys (combination)
Hot start: Clear the system memory and remount the operating system.	<Ctrl>+<Alt>+ (Depending on the operating system)
System reset: clear the system memory, repower self-check and remount the operating system	System Reset Button
Cold start: clear the system memory and rethe self-check (POST) ,Reload the operating system and stop supplying power to all external equipment	Power button

6.2 The System Started for the First Time

Problems with the first boot of the system are usually caused by an incorrect installation or configuration. In general, there are relatively few failures directly caused by hardware.

Check steps:

Whether all cables are connected correctly and securely.

Whether all plug-in cards are fully inserted into the slots on the motherboard.

Whether all jumper settings on the motherboard are correct.

Whether the card is set correctly with all jumpers and switches on external devices.

To check these settings, refer to the vendor's file that came with them. To ensure that the card is available, check for resource conflicts.

Whether all DIMMs are installed correctly.

Whether all external devices are installed correctly

Whether the system has a hard disk that has been formatted or configured.

Whether all device drivers are installed correctly.

Whether the configuration set by SSU is correct

Whether the operating system is mounted correctly (see the operating system-related documentation).

Whether the server is turned on by pressing the system power button on the front panel (the light indicates that it should be lit)

Whether the system power cord is properly connected to the system and plugged into an outlet.

Whether the wall outlet has AC power.

If these items are correct but the problem still occurs, see the introduction later.

6.3 Other Problems and Solutions

6.3.1 Prepare the System for Diagnostic procedures

Turn off the device before unplugging the cable: Turn off the external device that is connected to the system before disconnecting the external cable from the system. Failure may result in damage to the system or external devices.

1. Turn off all external devices connected to the system. Except for the keyboard, mouse and monitor, disconnect them all from the system.
2. Make sure the system power cord is plugged into a reliable AC outlet.
3. Make sure your monitor, keyboard, and system are connected correctly. Turn on the monitor and adjust its brightness and contrast to at least two-thirds of the maximum value (see Monitor Random Files).
4. Turn on the system. If the power LED is not lit, see the troubleshooting instructions below for the power LED not lit.

6.3.2 Verify the System Indicator Light

After POST detects the system configuration, the system tests whether each mass storage device exists. After each device passed the test, the corresponding LED flashed briefly.

Please check to confirm the following:

If a hard drive is installed in the system, check to see if the hard drive activity light on the control panel flashes briefly. If not, contact technical support or an authorized reseller for assistance.

6.4 Concrete Issue

6.4.1 The Power Light Is Not lit

Please check the following items:

All power cords are plugged in or not. Whether the power cord is connected to the junction box or socket. Whether your fuse or fuse is damaged.

Whether the system is operating properly. If it is normal, there may be a problem with the power LED, or whether the cable from the front panel to the motherboard is loose.

There are other issues with the system. If so, check the items listed in "System Cooling Fan Not Spinning Properly." If all checks are correct and the problem persists, contact your technical.

6.4.2 The Screen Does not Display Characters

Check the following items:

Whether the keyboard is working properly. Check to see if the "Num Lock" light is on.

Whether the cable of the monitor is plugged in and whether the power is on. Many monitors now automatically turn off when not working, while when activated require a period of warm-up.

Whether the brightness and contrast of the display are adjusted appropriately

Whether the display is set up correctly.

Whether the signal cable of the monitor is installed correctly.

Whether the on-board video controller works properly.

6.4.3 The Screen Displays Incorrect or Distorted Characters

Check the following:

Whether the brightness and contrast of the display are adjusted appropriately. Refer to the documentation of the display manufacturer.

Whether the monitor's signal cable power cable is installed correctly.

Correct display card installed in the operating system.

If the problem persists, the monitor may be faulty or may be an incorrect model. Contact a technical support person or authorized reseller for assistance.

6.4.4 The System Fan Is Not Rotating Properly

If the system cooling fan does not work properly, the system components may be damaged.

At this point, check the following:

Whether the wall outlet has AC power.

Whether the system power cord is properly connected to the system and wall outlets.

Whether the power button was pressed.

Whether the power LED is on.

Whether the fan motor stops (using the Server Management subsystem to check the fan status)

Whether the fan power connector is properly connected to the board. Whether the cable from the front panel is properly connected to the motherboard.

Whether the power cord is properly connected to the motherboard.

Whether a short circuit is caused by a squeeze cable or the power connector incorrectly plugged into the power connector connector interface.

If the connection is correct and there is AC power in the wall outlet, contact a technical support person or authorized dealer for assistance.

6.4.5 The Working LED of the Hard Drive Is Not Lit

If you already have one or more hard drives installed in the system, check the following:

Whether the power and signal cables of the hard disk are installed correctly.

Whether the hard drive is set correctly with all the relevant switches and jumpers on the adapter.

Whether the hard disk is configured correctly.

6.4.6 The Working LED of the CD-ROM Drive Is Not Lit

Please check the following items:

Whether the power supply and signal cables on the CD-ROM are installed correctly.

Whether all associated switches and jumpers on the CD-ROM set up correct.

Whether the CD-ROM configuration is correct.

Whether the board-integrated IDE controller is enabled.

Note:

IDE and SATA device: The hard drive activity indicator on the front panel starts when an IDE hard drive or a SATA device controlled by a mainboard integrated SATA controller is in use. The indicator light does not show the CD-ROM activity status.

6.4.7 Bootable Discs Cannot be Self-guided

If the disc being used is boot-enabled, check the following settings:

Is the CD-ROM set as the first boot device in the BIOS setup

7.Statement on Environmental Protection

7.1 ROHS Statement

The RoHS Directive 2011 / 65 / EU (ROHS 2.0) was published in the official EU magazine on 1 July 2011 and in 2011 Effective on 21 July.

According to ROHS 2.0, we collected the supplier material information and controlled the production process within the company. Therefore, our company (including subsidiaries) hereby guarantees that the products / components provided in the following list or through the accessories listed meet the items and control values of the ROHS Directive 2011 / 65 / EU control listed in the following table. Once signed this statement, we agree to assume liability arising from the breach of this ROHS statement and any part of all materials.

No.	Restricted Substances	Eucontrol Value(PPM)	Control Value(PPM) Cannon	Remark
1	Pb	< 1000	< 1000	
2	Hg	< 1000	< 1000	
3	Cd	< 100	< 100	
4	CrVI	< 1000	< 1000	
5	PBB	< 1000	< 1000	
6	PBDE	< 1000	< 1000	
7	HBCDD	< 1000	< 1000	
8	DEHP	< 1000	< 1000	

9	DBP	< 1000	< 1000	
10	BBP	< 1000	< 1000	

7.2 Recycling Instructions for Waste Electronics

In order to protect the environment, protect human health, according to the law of the People's Republic of China on environmental prevention and control of solid waste pollution and waste electrical and electronic products recycling management regulations, users should waste electronic products unified collection, classification, marking, transfer and management, should be submitted to "professional technical environmental protection company" to recycling, dismantling and landfill, to reduce or eliminate its harmful composition, meet the requirements of environmental protection.

The main control objects of waste products are: packaging materials such as waste paper boxes, waste PE bags, plastic bottles and other plastic products, waste glass containers, waste batteries containing zinc and cadmium, waste organic solvents, waste computer machine, waste display.