

RS7250

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 fitted with a local power standard. The expected overload current is 13A, or less than 100- 120VAC/6.5A or less than 200-240VAC. 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. Note: Ensure that the server power supply is properly grounded.
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 Description of the Front Panel and Structural Characteristics

RS7250 Enlarged view of the disk position front panel and indicator/control panel:

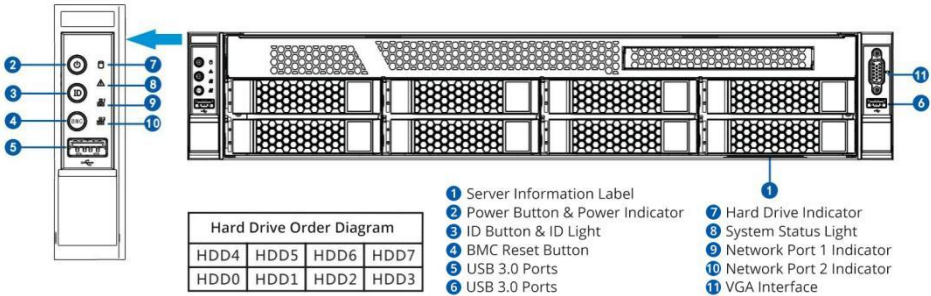


Figure2-1 RS7250 Disk Server Front

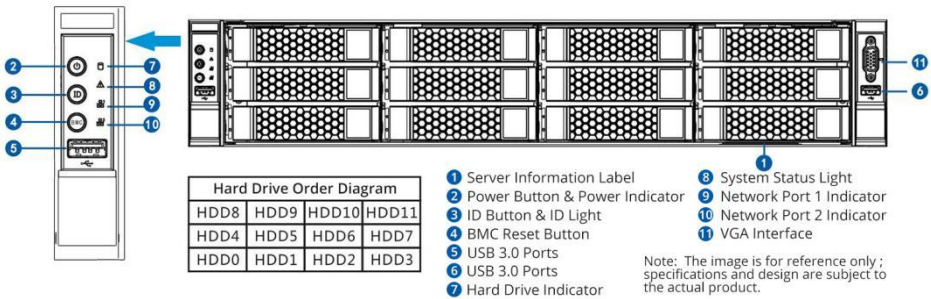


Figure 2-2 RS7250 Disk Server Front Panel Diagram

RS7250 enlarged view of the front panel and indicator/control panel of the disk position:

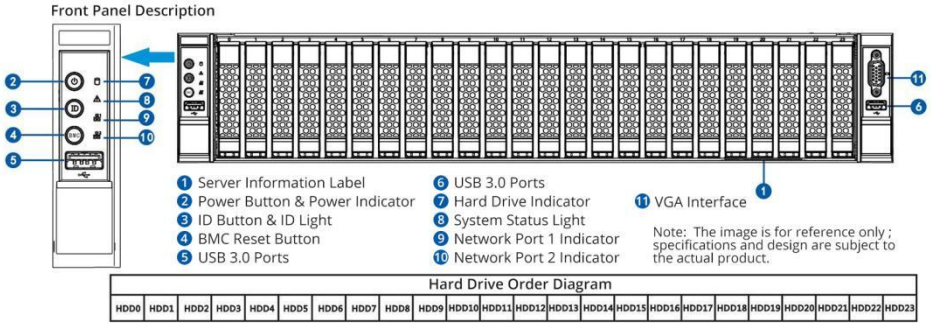


Figure 2-3 RS7250 Disk Server Front

Control panel indicator light instructions:

Definition	Color	Condition	Illustration
Power Lamp	Blue	Light	The server is being turned on
Network 1 Pilot Lamp	Green	Light	On-board network 1 is normally connected and is active
Network 2 Pilot Lamp	Green	Light	On-board network 2 is connected normally and is active
system status light	red	vague (of speech)	Abnormal status of server fans, temperature sensors, or voltage sensors. Always on: Temperature sensor abnormal 4 Hz: Power module abnormality 2 Hz: Fan, Voltage Sensor

Definition	Color	Condition	Illustration
ID light	Blue		The server identification light is on
HD light	Yellow		On-board PCH hard disk read and write

Description of control panel keys and interface:

Boot key	Start button, press power; turn power off for 5 seconds.
BMC Key	BMC key, the key to restart the BMC.
ID key	Server identification light button, press the ID light on, and then press the ID light off.
USB3.0	USB3.0 interface.
VGA Interface	Front VGA Interface

RS7250 3.5-inch Hard Drive Bay Installation and Hard Drive Bay Indicator Light Description:

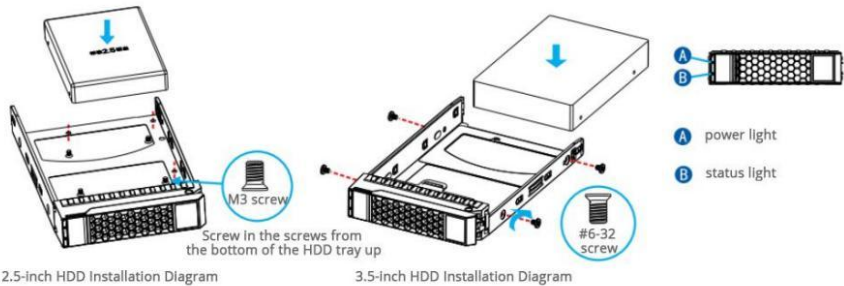


Figure 2-4 3.5 inch HDD bay mounting and bay indicator instructions

RS7250 3.5 inch hard disk installation and hard disk indicator instructions:

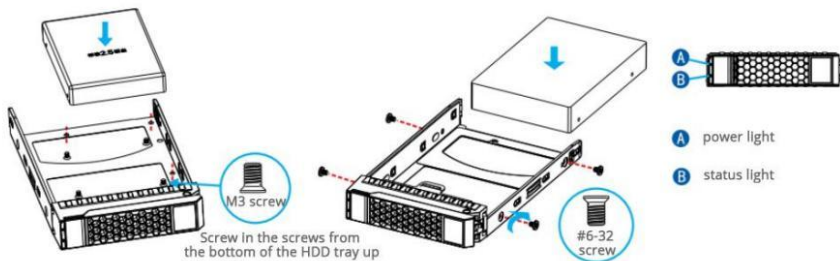
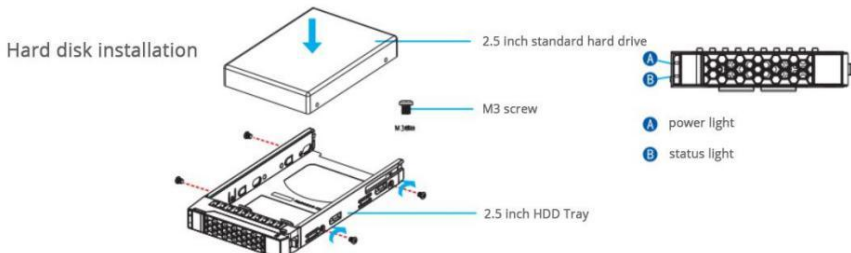


Figure 2-5 3.5 inch hard disk bracket installation and bracket indicator instructions

RS7250 2.5inch hard disk installation and hard dis indicator instructions:



Figur2-6 2.5 inch hard disk bracket installation and bracket indicator instructions

Power supply:

Power Source	Redundant power supplies for servers
Input AC Electricity Pressure/Frequency Range	100V-240V, 10A-5A, 50Hz Adaptive, standard single power, optional 1+1 Redundancy (following numerical value) or more

Chassis-shaped:

Profile System	Rackmount 2U
Height	88mm
Width	445mm
Depth	745mm
Weight(minimum configuration)	About 23KG

2.2 RS7250 Description of the Rear Window

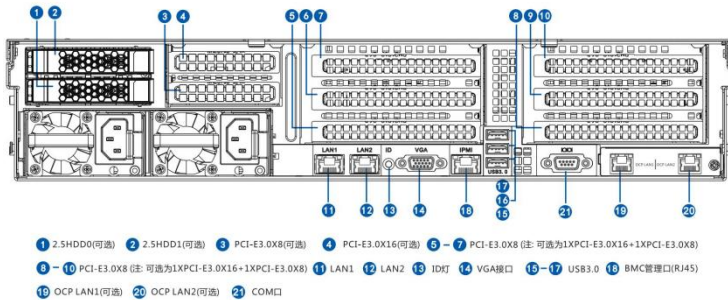


Figure 2-7 RS7250 Rear Window IO diagram

2.3 RS7250 Rear Window IO Description Style A Rear Window IO Description

Rear IO Panel Description - Style A

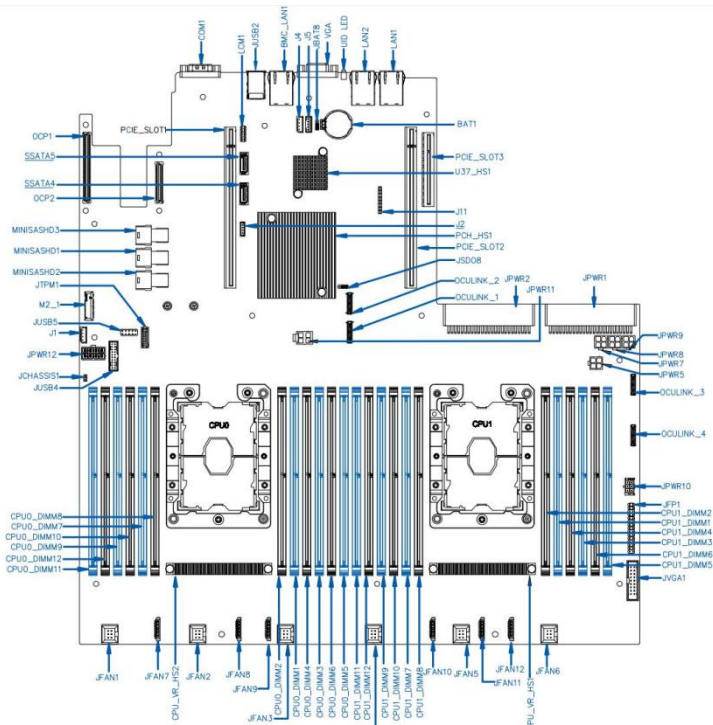
1-2	Optional 2.5" module to support SAS/SATA/NVME hard drives
3-4	Only one PCI-E 3.0 X8 is supported by default, optional two slot kit (one X8) is available One X16)
5-7	3 PCI-E 3.0 X8 adapters, optionally replaceable with 1 PCI-E3.0X16 plus 1 PCI-E3.0X8
11-12	LAN1 2 connector for Category 6 Gigabit cable (100 Gigabit or less networks not supported)
13	ID Lights

14	VGA interface, can be connected to the VGA interface monitor and other display devices
15-17	USB3.0 interface, can be connected to USB keyboard and mouse, USB3.0 USB flash drive and other devices
18	IPMI Interface, IPMI 2.0 Interface: Supports Cat 6 Gigabit Ethernet cables. This interface is used for monitoring and managing the server.
19-20	Supports different models of OCP cards, with OCP Network Ports 1 and 2.
21	Serial Port Interface

Description of the Rear Window Network Lamp Working Status:

Name	Color	Status	Illustration
BMC Managementport (RJ45)	Yellow	Twinkle	Network connection is normal
	Green/ Orange Double- color	Orange	The IPMI works at 100Mbps
		Green	The IPMI works at 1Gbps
LAN1/2	Green	Twinkle	The network connection is normal
		Turn off	The LAN is not connected
		Green	The LAN works at 1Gbps

2.4 Jumper Settings and Connector Description



Jumpers	Description	Default Setting
JBAT8	Clear CMOS	Pins 1-2 (Recovery Jumper)
JSD08	Firmware Security Override	Pins 1-2 (Normal)
Connector	Description	
OCP1	OCP Type A Slot	
OCP2	OCP Type C Slot	
MINISAS HD1	Intel PCH SATA 0-3	
MINISAS HD2	Intel PCH SATA 4-7	
MINISAS HD3	Intel PCH SSATA 0-3	
Buzzer	Motherboard Buzzer	
Battery	Motherboard Battery	
JTPM1	TPM Interface	
JUSB4	USB 3.0 Connector	
J1	Front I2C Interface	
JFP1	Front Control Panel Connector	
CPU0 DIMM1-12	Memory Slots 1-12 for CPU0	
CPU1 DIMM1-12	Memory Slots 1-12 for CPU1	
JFAN1-JFAN6	2U Fan Connectors 1-6	
JVGA1	Front VGA Connector	

JPW10	Power Connector for Rear 2x2.5-inch HDD Module
J4	Rear 2x2.5-inch HDD SGPIO Connector (SSATA4-5)
J5	Rear I2C Interface
Oculink1	Oculink1 Interface
Oculink2	Oculink2 Interface
Oculink3	Oculink3 Interface
Oculink4	Oculink4 Interface
JPWR5	GPU Power Connector
JPWR7-9	Front HDD Backplane Power Connector
JPWR1	Power Module 1 Connector
JPWR2	Power Module 2 Connector
U57	BIOS ROM Interface
U34	BMC ROM Interface
PCI-E_SLOT1	PCI-E 3.0 x24 (CPU0) for Adapter Card
PCI-E_SLOT1	PCI-E 3.0 x24 (CPU1) for Adapter Card
PCI-E_SLOT1	PCI-E 3.0 x8 (CPU1)
SSATA4-5	Intel PCH SSATA 4-5
LAN1-2	Integrated Network Ports 1-2
UID LED	Node Identification LED

VGA1	Integrated VGA
BMC_LAN1	BMC Dedicated Network Port
JBUS2	Integrated USB 3.0 x3

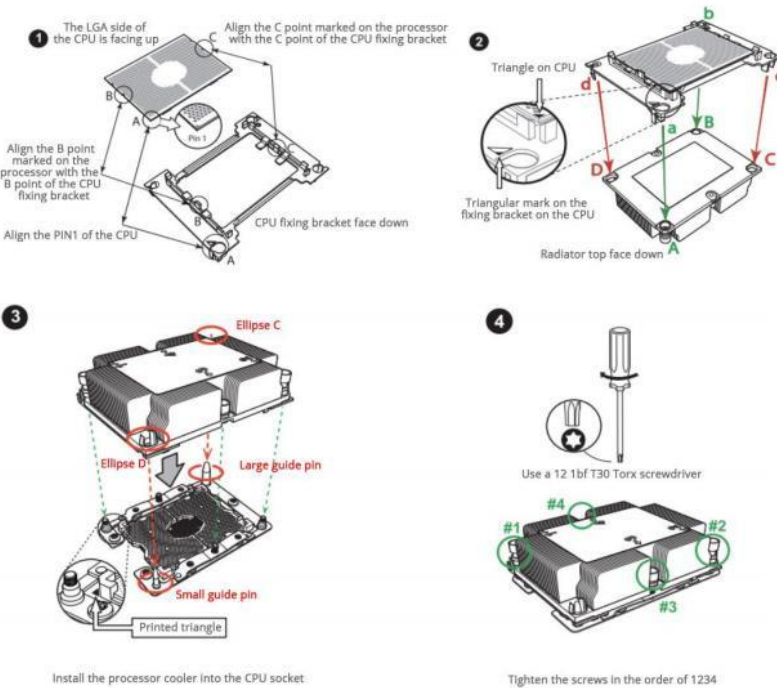
3. System Description of the System Structure

3.1 CPU

3.1.1 CPU Summary

This series supports two Intel Xeon Scalable-SP and second generation Intel Xeon Scalable-SP series processors, UPI support up to 10.4 GT / s, up to 205W.

3.1.2 CPU Installation Steps



3.2 Memory

3.2.1 Memory Summary

The server has 24 memory slots, 24 Load Reduced DIMM (LRDIMM), 3D LRDIMM, Registered DIMM (RDIMM), Non-Volatile DIMM (NV-DIMM) DDR4 (288-pin) ECC 2933 / 2666 / 2400 / 2133 MHz memory (Mixed installation of different types of memory is not supported), up to 5TB of memory.

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Table 11. 1st Gen Intel® Xeon® processor Scalable family traditional DDR4 SDRAM DIMM support guidelines

Type	Ranks per DIMM and Data Width	DIMM Capacity (GB)		Max Speed (MT/s); Voltage (V); Slots per Channel (SPC) & DIMMs per Channel (DPC)	
				2 Slots per Channel	
		DRAM Density		1DPC	2DPC
		4 Gb	8 Gb	1.2 V	1.2 V
RDIMM	SRx8	4 GB	8 GB	2666	2666
	SRx4	8 GB	16 GB		
	DRx8	8 GB	16 GB		
	DRx4	16 GB	32 GB		
RDIMM 3DS	QRx4	N/A	2H-64 GB		
	8Rx4	N/A	4H-128 GB		
LRDIMM	QRx4	32 GB	64 GB		
LRDIMM 3DS	QRx4	N/A	2H-64 GB		
	8Rx4	N/A	4H-128 GB		

Table 12. 2nd Gen Intel® Xeon® processor Scalable family traditional DDR4 SDRAM DIMM support guidelines

Type	Ranks per DIMM and Data Width	DIMM Capacity (GB)			Max Speed (MT/s); Voltage (V); Slots per Channel (SPC) & DIMMs per Channel (DPC)	
					2 Slots per Channel	
		DRAM Density			1DPC	2DPC
		4 Gb ¹	8 Gb	16 Gb	1.2 V	1.2 V
RDIMM	SRx8	4 GB	8 GB	16 GB	2933	2666
	SRx4	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-64 GB	2H-128 GB		
	8Rx4	N/A	4H-128 GB	4H-256 GB		
LRDIMM	QRx4	32 GB	64 GB	128 GB		
LRDIMM 3DS	QRx4	N/A	2H-64 GB	2H-128 GB		
	8Rx4	N/A	4H-128 GB	4H-256 GB		

¹ 4 Gb DRAM density is only supported on speeds up to 2666 MT/s

3.2.2 Memory Installation Considerations

Because one CPU supports 8 memory slots, and two CPU's support 16 memory slots, so one is used the CPU and using the two CPU in memory are installed in a different order.

The correspondence between CPU and memory is shown in the following table:

CPU and Memory Correspondence													
CPU 0	P0-DI MM	1	2	3	4	5	6	7	8	9	10	11	12
CPU 1	P1-DI MM	1	2	3	4	5	6	7	8	9	10	11	12

The installation guidelines for CPU and memory are as follows:

For a single CPU:

DIMM Number	1	2	3	4	4	5	6	7	8	9	10	11	12
CPU0_DI MM01	√	√	√	√	√	√	√	√	√	√	√	√	√
CPU0_DI MM02								√	√	√	√	√	√
CPU0_DI MM03			√	√	√	√	√	√	√	√	√	√	√
CPU0_DI MM04										√	√	√	√
CPU0_DI MM05						√	√	√	√	√	√	√	√
CPU0_DI MM06												√	√
CPU0_DI MM07		√	√	√	√	√	√	√	√	√	√	√	√
CPU0_DI MM08									√	√	√	√	√
CPU0_DI MM09					√	√	√	√	√	√	√	√	√
CPU0_DI MM10											√	√	√
CPU0_DI MM11							√	√	√	√	√	√	√
CPU0_DI MM12													√

Memory installation order for dual CPUs:

DIMM Number	1	2	4	6	8	10	12	14	16	18	20	22	24
CPU0_DI MM01	√	√	√	√	√	√	√	√	√	√	√	√	√
CPU0_DI MM02								√	√	√	√	√	√
CPU0_DIM M03				√	√	√	√	√	√	√	√	√	√

DIMM Number	1	2	4	6	8	10	12	14	16	18	20	22	24
CPU0_DIM M04										√	√	√	√
CPU0_DIM M05						√	√	√	√	√	√	√	√
CPU0_DIM M06												√	√
CPU0_DIM M07			√	√	√	√	√	√	√	√	√	√	√
CPU0_DIM M08									√	√	√	√	√
CPU0_DIM M09					√	√	√	√	√	√	√	√	√
CPU0_DIM M10											√	√	√
CPU0_DIM M11							√	√	√	√	√	√	√
CPU0_DIM M12													√
CPU1_DIM M01		√	√	√	√	√	√	√	√	√	√	√	√
CPU1_DIM M02								√	√	√	√	√	√
CPU1_DIM M03				√	√	√	√	√	√	√	√	√	√
CPU1_DIM M04										√	√	√	√
CPU1_DIM M05						√	√	√	√	√	√	√	√
CPU1_DIM M06												√	√
CPU1_DIM M07				√	√	√	√	√	√	√	√	√	√
CPU1_DIM M08									√	√	√	√	√
CPU1_DIM M09					√	√	√	√	√	√	√	√	√

DIMM Number	1	2	4	6	8	10	12	14	16	18	20	22	24
CPU1_DIM M10											√	√	√
CPU1_DIM M11							√	√	√	√	√	√	√
CPU1_DIM M12													√

Note:

1. To ensure proper memory functionality, it is important to use identical memory products within the same server, including memory capacity and module model.
2. The memory operating frequency depends on the CPU, and different CPUs support different maximum memory frequencies. 2933 MHz is supported only with the second-generation Intel Xeon Scalable-SP (82XX, 62XX) processors.
3. An unbalanced memory topology, such as installing two memory modules in one channel and one module in another channel, can result in reduced memory performance.

3.2.3 DCPMM Memory Installation Instructions

DCPMM Installation Method is shown in the table below:

Note: DCPMM is supported only with the second-generation Intel Xeon Scalable-SP (82XX/62XX/52XX/4215) CPUs.

Table 11. 1st Gen Intel® Xeon® processor Scalable family traditional DDR4 SDRAM DIMM support guidelines

Type	Ranks per DIMM and Data Width	DIMM Capacity (GB)		Max Speed (MT/s); Voltage (V); Slots per Channel (SPC) & DIMMs per Channel (DPC)	
				2 Slots per Channel	
		DRAM Density		1DPC	2DPC
		4 Gb	8 Gb	1.2 V	1.2 V
RDIMM	SRx8	4 GB	8 GB	2666	2666
	SRx4	8 GB	16 GB		
	DRx8	8 GB	16 GB		
	DRx4	16 GB	32 GB		
RDIMM 3DS	QRx4	N/A	2H-64 GB		
	8Rx4	N/A	4H-128 GB		
LRDIMM	QRx4	32 GB	64 GB		
LRDIMM 3DS	QRx4	N/A	2H-64 GB		
	8Rx4	N/A	4H-128 GB		

Table 12. 2nd Gen Intel® Xeon® processor Scalable family traditional DDR4 SDRAM DIMM support guidelines

Type	Ranks per DIMM and Data Width	DIMM Capacity (GB)			Max Speed (MT/s); Voltage (V); Slots per Channel (SPC) & DIMMs per Channel (DPC)	
					2 Slots per Channel	
		DRAM Density			1DPC	2DPC
		4 Gb ¹	8 Gb	16 Gb	1.2 V	1.2 V
RDIMM	SRx8	4 GB	8 GB	16 GB	2933	2666
	SRx4	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-64 GB	2H-128 GB		
	8Rx4	N/A	4H-128 GB	4H-256 GB		
LRDIMM	QRx4	32 GB	64 GB	128 GB		
LRDIMM 3DS	QRx4	N/A	2H-64 GB	2H-128 GB		
	8Rx4	N/A	4H-128 GB	4H-256 GB		

¹ 4 Gb DRAM density is only supported on speeds up to 2666 MT/s

Note:

- 1Rx8 DDR4 memory does not support DCPMM.
- DCPMM DIMMs are not installed in the memory DIMM slots corresponding to the second CPU socket.
- For MM, typical MM/FM ratios range between 1:4 and 1:16. Excessive FM capacity can be used for AD (NM = Near Memory; FM = Far Memory).
- Use the same DDR4 memory.
- Currently, DCPMM modules operate at a frequency of 2666 MHz. Symmetrical installation is recommended.
- Mixing DCPMM and NV-DIMM within the same platform is not allowed.
- The following DCPMM population table is for balanced DCPMM and DRAM cache ratios in MM and MM+AD modes.

Validation Matrix (DDR4 DIMMs Validated w/DCPMM)			
DIMM Type	Ranks Per DIMM & Data Width (Stack)	DIMM Capacity (GB)	
		DRAM Density	
		4Gb	8Gb
RDIMM	1Rx4	8GB	16GB
	2Rx8	8GB	16GB
	2Rx4	16GB	32GB
LRDIMM	4Rx4	N/A	64GB
LRDIMM 3DS	8Rx4 (4H)	N/A	128GB

3.3 Video Controller

Motherboard integrated via AST 2500BMC's ASpeed2500 video controller.

3.4 Hard Drive Controller

Supports 14 SATA3 hard drives.

3.5 Network Controller

Integrated with one Marvell 88E1512 dual-channel Gigabit network controller, providing two Gigabit Ethernet ports for high-speed network connectivity. Optional support for Gigabit or 10-Gigabit OCP network cards (10-Gigabit OCP requires the 622 chipset version motherboard).

3.6 Keyboard and Mouse

USB keyboard / mouse support.

3.7 Optical Drives and Floppy Drives

The server optionally supports a USB optical drive.

3.8 PCI Expansion (Requires Two CPUs for All PCI-E Slots to be Used)

Full-height PCI-E 3.0 x16 x2

Full-height PCI-E 3.0 x8 x2

Half-height PCI-E 3.0 x8 x1 or Full-height PCI-E 3.0 x8 x6

Half-height PCI-E 3.0 x8 x1

With a single CPU installed, only one full-height x16 or two x8 slots are supported.

3.9 Other Configurations

There are 5 USB 3.0 interfaces (2 front, 3 rear) and 1 BMC management network port.

3.10 Certified Compatible Operating System

First-generation Intel Xeon Scalable-SP series processor

Number	Operating System
1	Microsoft Windows 2016
2	Red Hat Enterprise Linux 7.6

Second-generation Intel Xeon Scalable-SP Series processors

Number	Operating System
1	Microsoft Windows 2012R2
2	Microsoft Windows 2016
3	Red Hat Enterprise Linux* 7.3

4. Integrated RAID Configuration

This chapter explains how to create RAID1, RAID0, and RAID10 using the motherboard's integrated SATA RAID controller.

RAID1: After creating RAID1, the total disk capacity will be halved, as the disks are mirrored to provide backups, greatly improving reliability.

RAID0: Creating RAID0 increases disk read and write speeds but reduces reliability. The available capacity equals the total capacity of the disks.

RAID10: RAID10 combines the high read and write efficiency of RAID0 with the data protection and recovery capabilities of RAID1. It offers a good balance of performance and data protection.

4.1 Set the RAID Status in the BIOS

By default, RAID functionality is not enabled. If you need to create a RAID array, follow these steps:

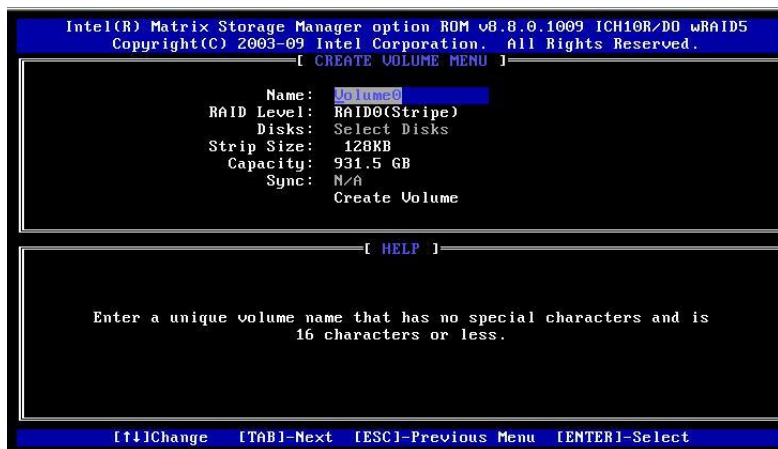
1. Press during startup to enter the BIOS.
2. In the Platform Configuration menu, select the PCH Configuration submenu.
3. Choose either PCH SATA Configuration or PCH sSATA Configuration.
4. Change the setting for ****Configure SATA as**** from [AHCI] to [RAID] to enable the SATA/sSATA RAID controller.

4.2 Operating Guide for Main board Integrated RAID

Before configuring the array, set up the RAID controller mode in the BIOS. During the power-on self-test, press the <Ctrl>+<I> key combination to enter the RAID setup. Once entered, you will see a screen 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: hard disk you 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



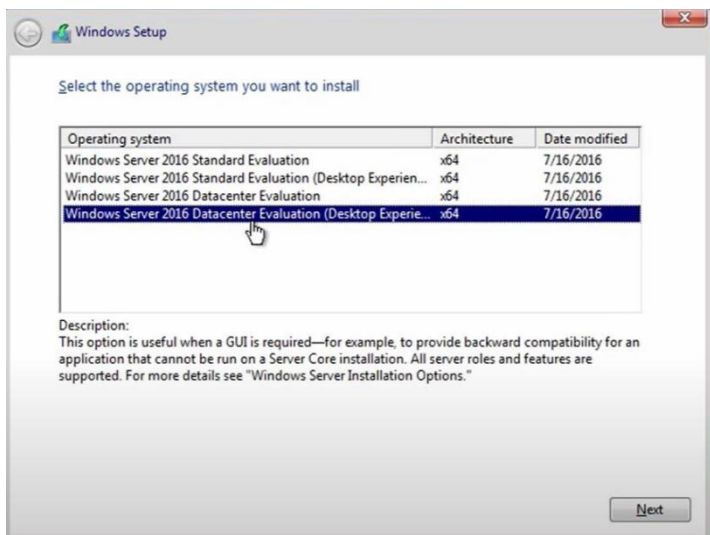
2.Go to the following screen and select the language / keyboard:



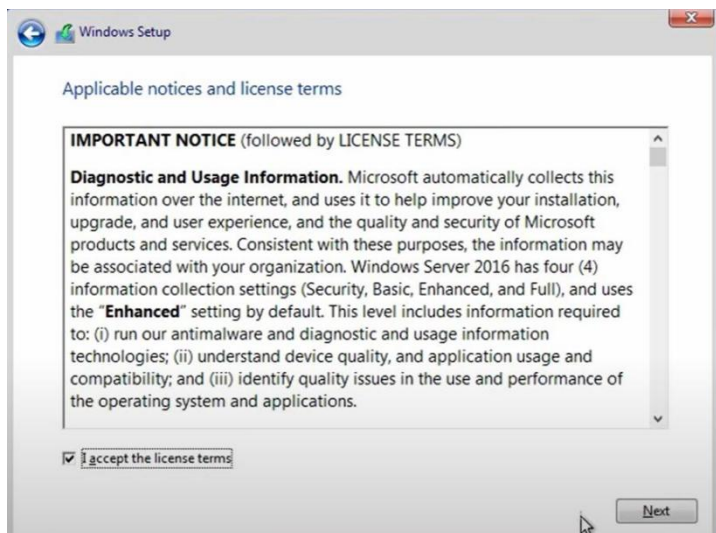
3. Click to start the installation:



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

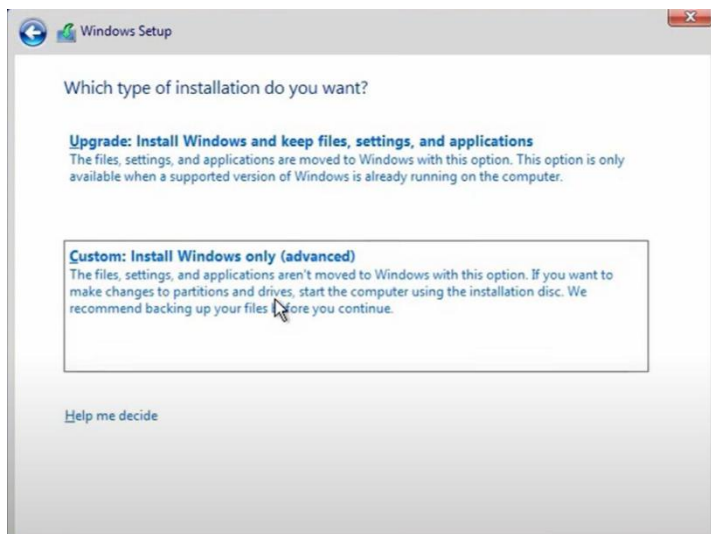


5. Read the User License Agreement with PAGE DOWN / PAGE UP:

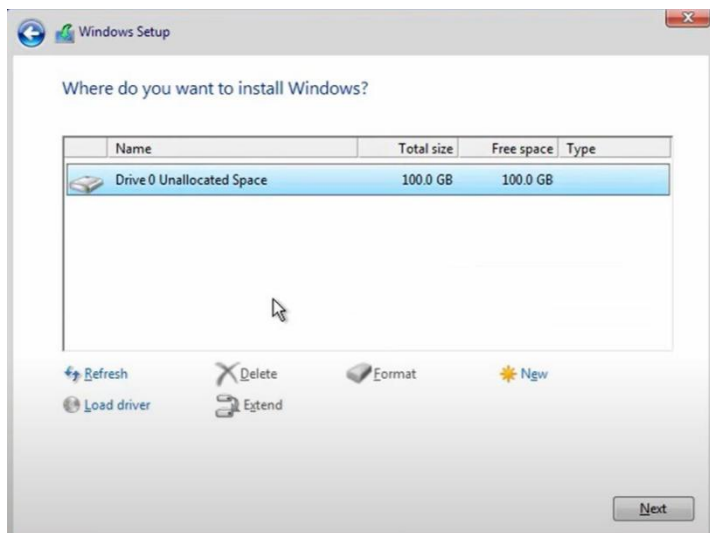


6. Select the term I Accept the License Terms and press the term Next step

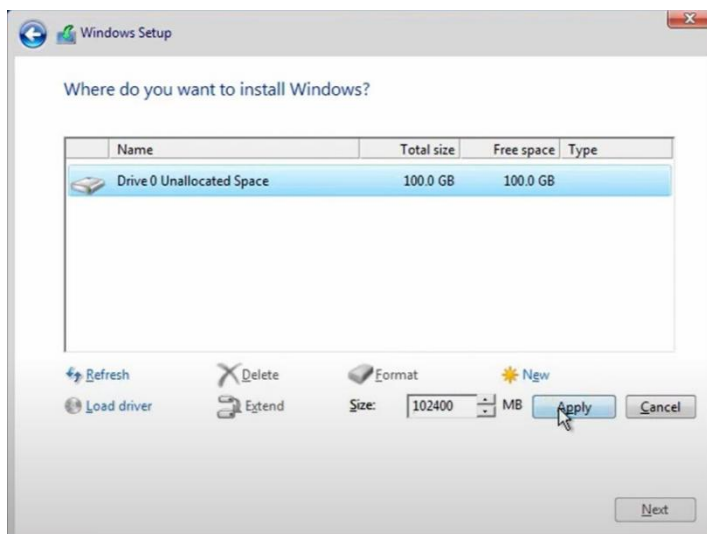
7. To select how to install the operating system



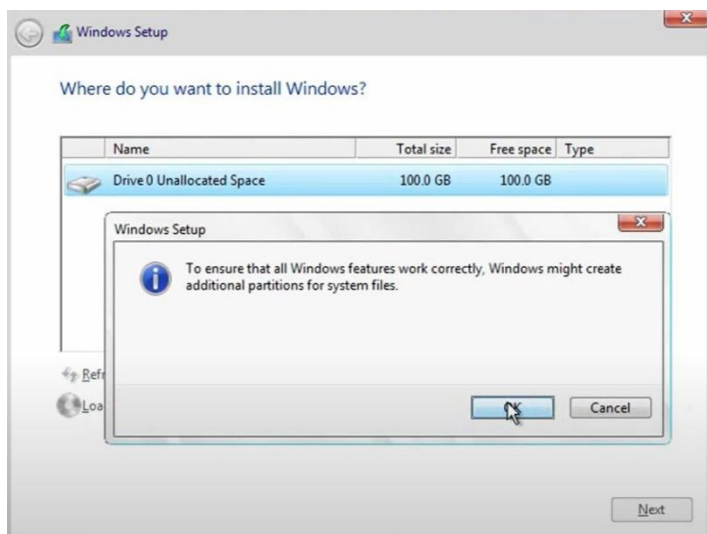
8. If you do a RAID, the disk cannot be found. Select Load Driver for RAID driver loading to see the disk array. With the left mouse button, the load directory dialog box appears and select the copy directory of step 2 in 6. 1. 1. If the SATA disk is onboard AHCI mode can directly recognize the disk,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



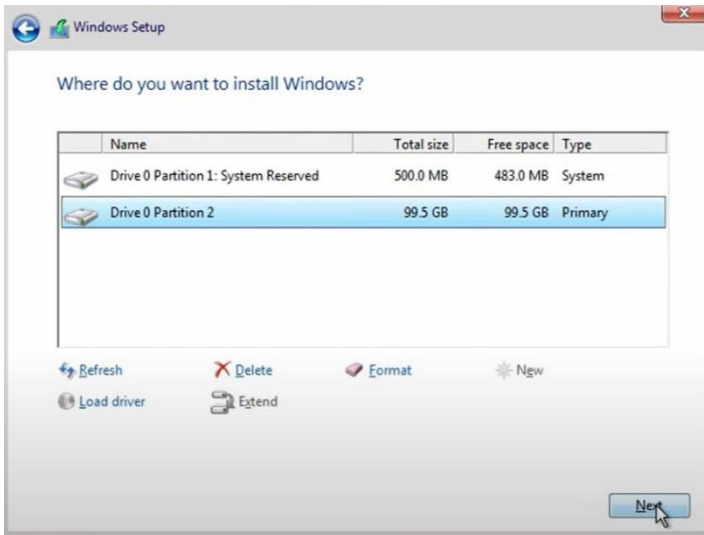
9. Show space size on the disk array installation Windows Server 2016



10. Click OK to confirm the partition:



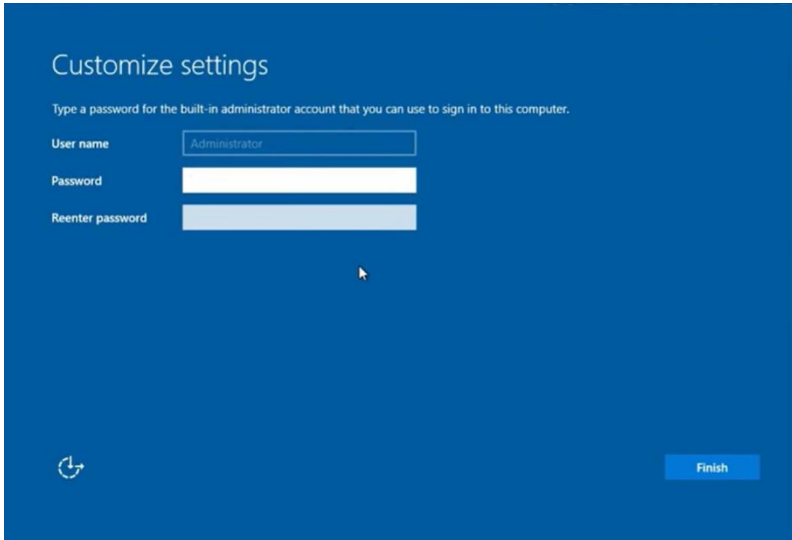
1 1. Complete the partition, click Next to install the system;



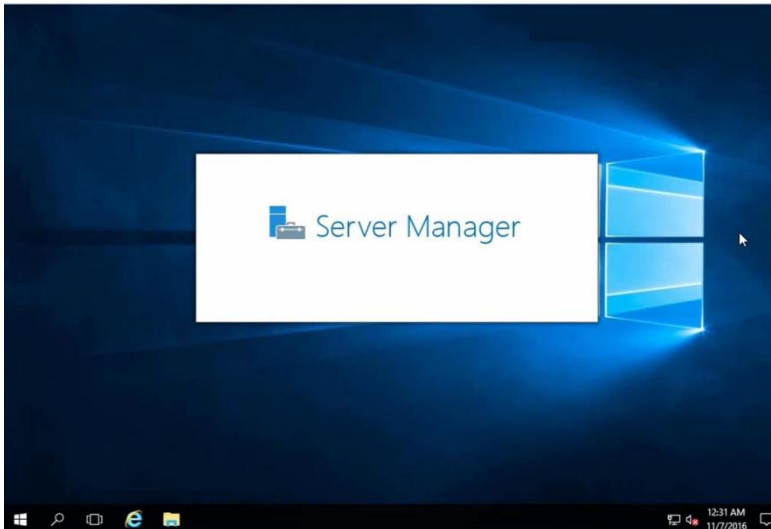
12. Start copying the data, and install the system:



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;

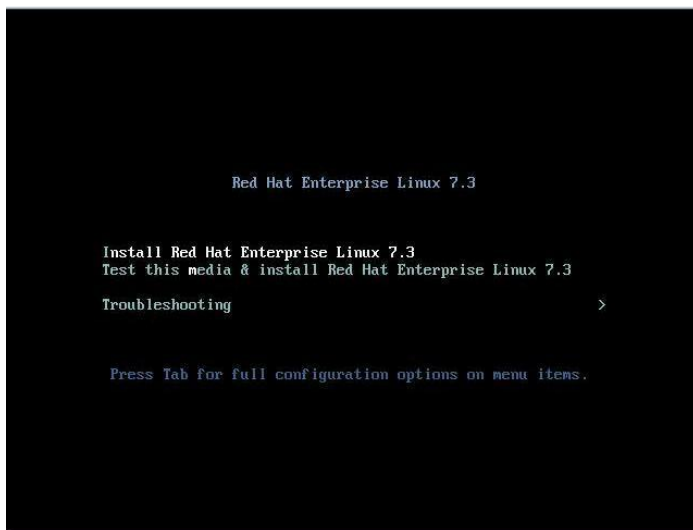
5.2 Redhat Enterprise Linux 7.3 Installation Instructions

5.2.1 Preparations:

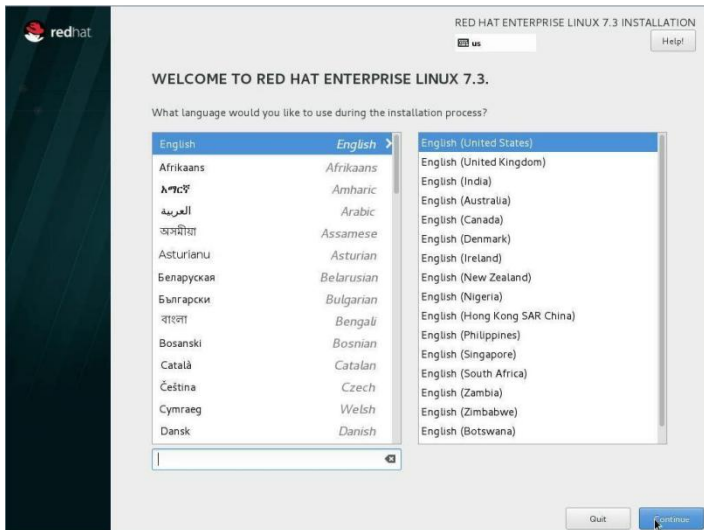
If your server needs to load RAID drives when installing the operating system, prepare the U disk and random drive discs. If your server is configured with a RAID plug card, drive discs.

5.2.2 Installation Steps:

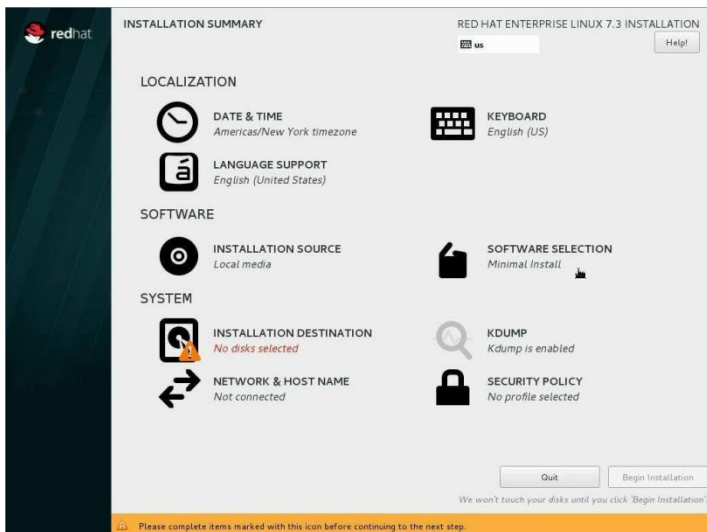
- 1 . Set the optical drive as the first startup device in the BIOS, insert the installation disc, save the BIOS settings, and reboot.
- 2 . Start from the CD, load the following interface, select: Install Red Hat Enterprise Linux 7.3 as shown in the ente



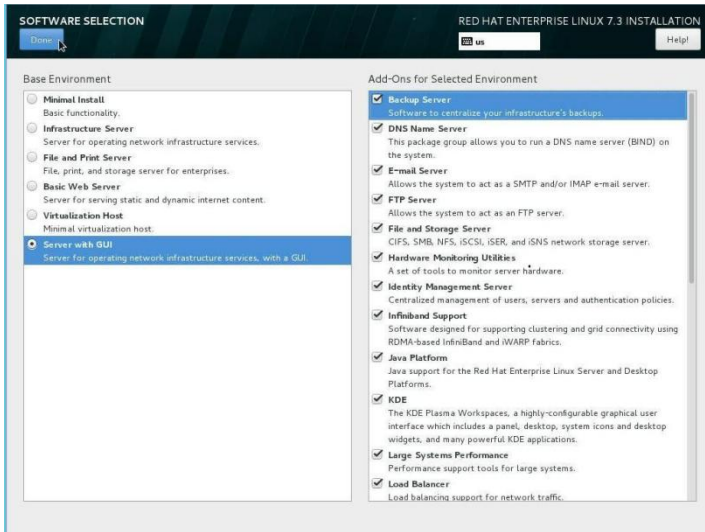
3 . Select the system language, the default English, and click on Next



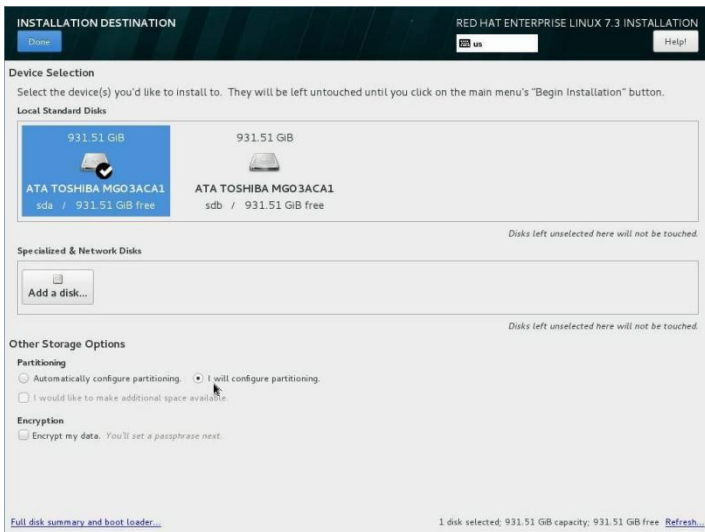
4. The system goes to the following interface. (Set time, system package, hard disk partition)



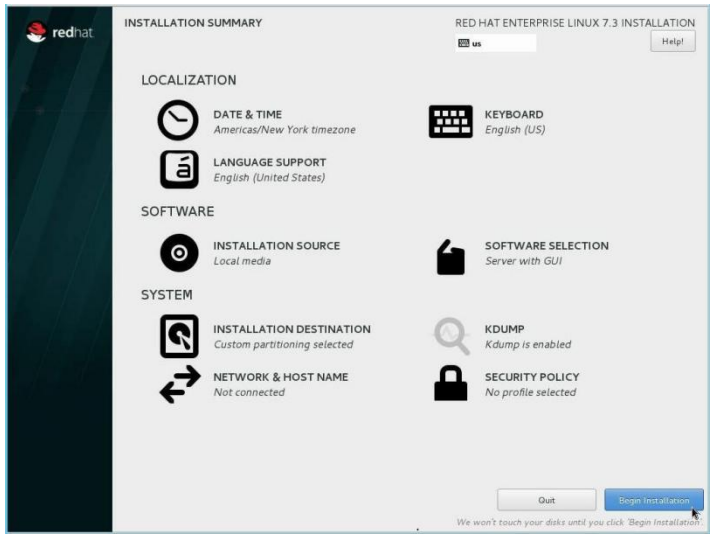
5. Click **SOFTWARE SELECTION** to select the system software; click **Done** to return to the step 4 interface;



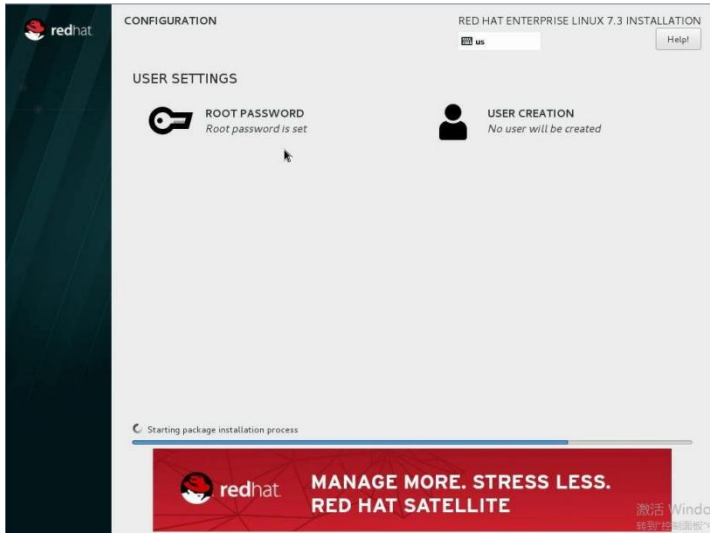
6. Select **INSTALLATION DESTINATION**, hard disk partition; (optional automatic or manual partition)



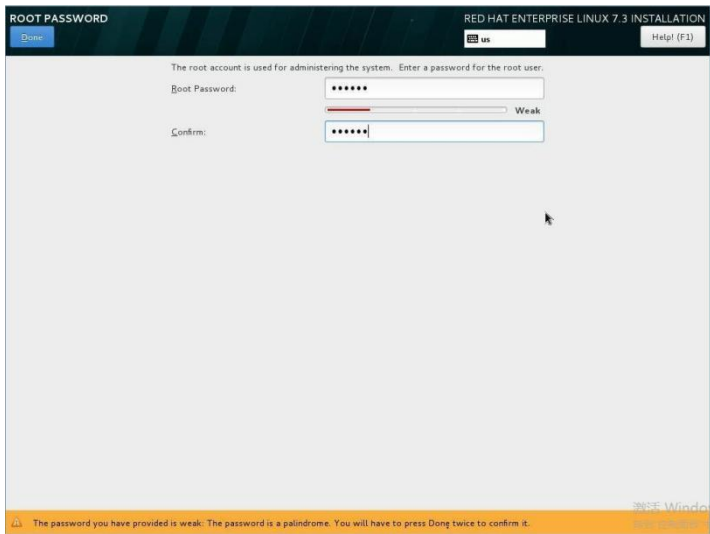
7. Click on Next,



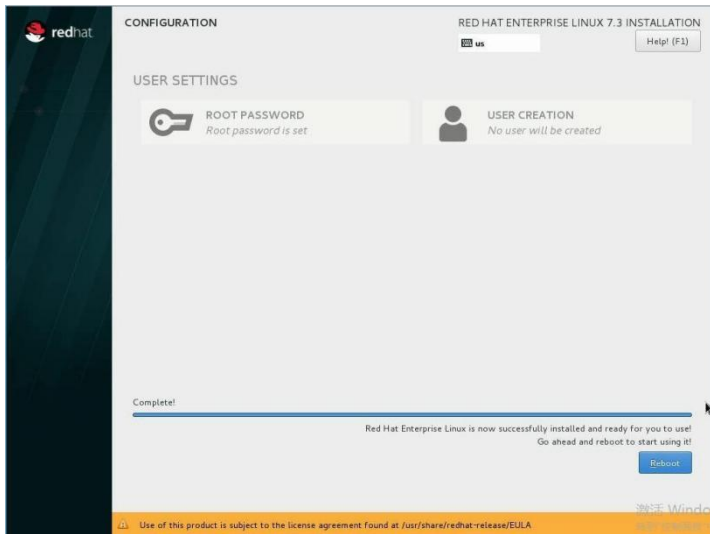
8. Start installing the system as shown in the following figure



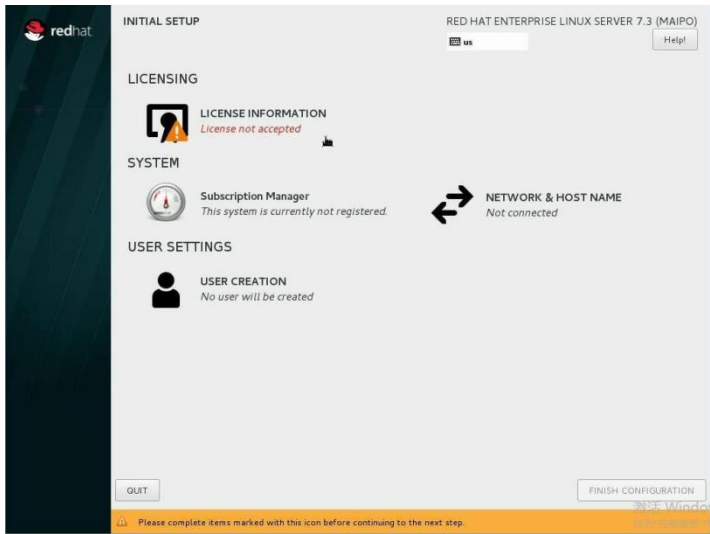
9. Set the Root user password, and then click Done, see the figure below



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

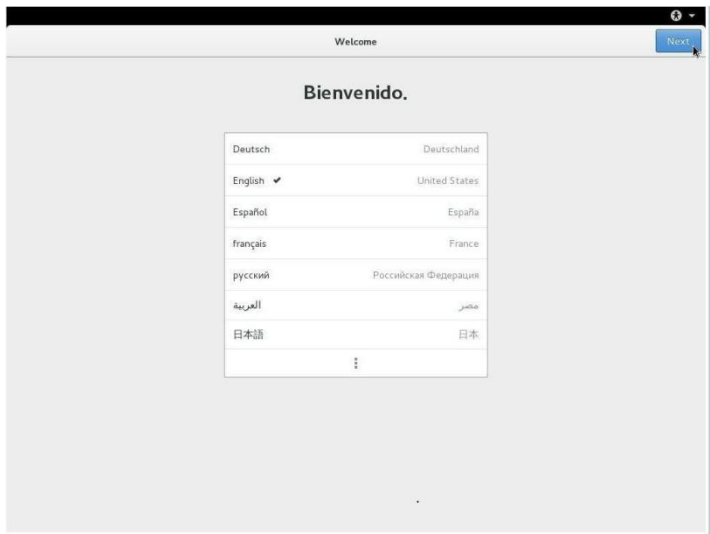


11. License information

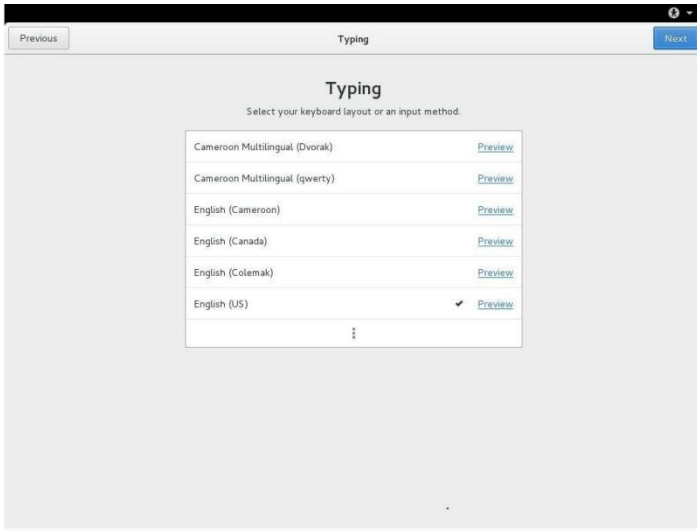


12. Default click FINISH CONFIGURATION ,as following picture shows:

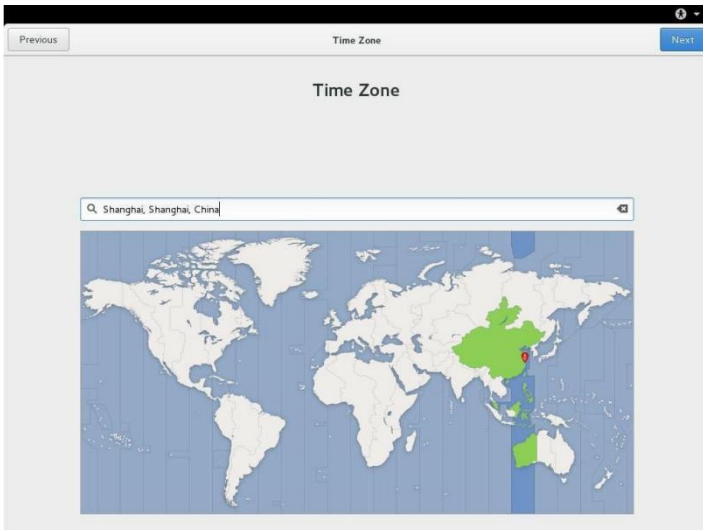
13. Click on Next by default, see the figure below



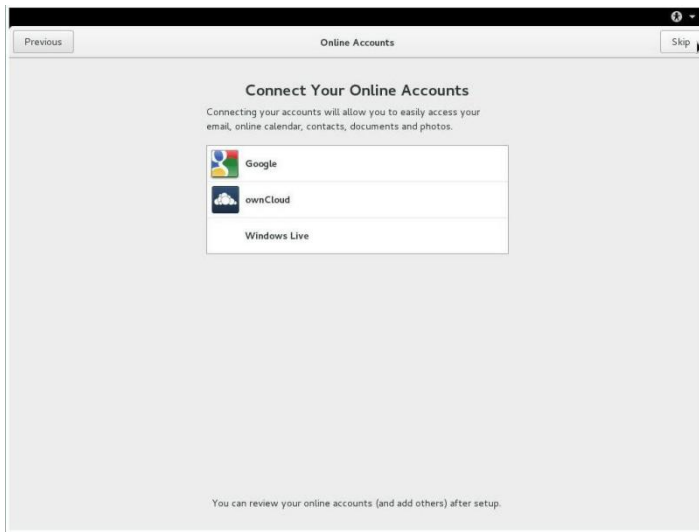
14. Click on Next by default, see the figure below



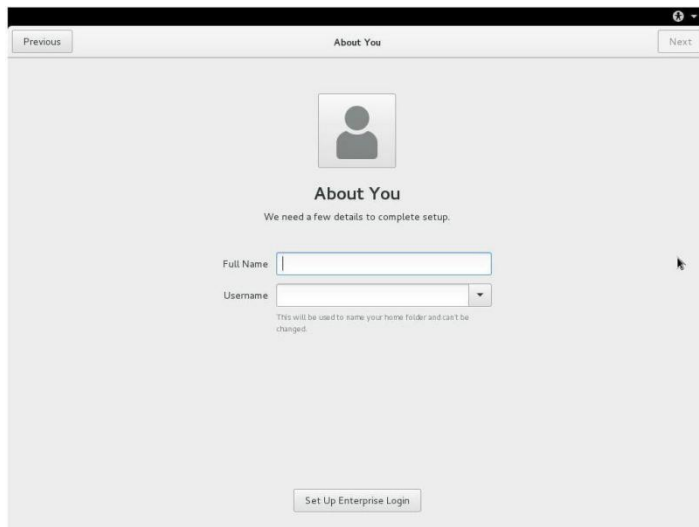
15. Select the time zone (such as Shanghai) and click on Next, see the figure below



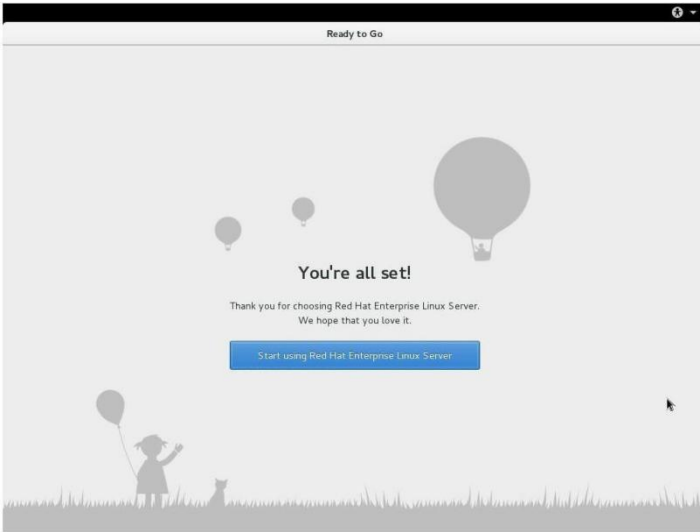
16. Click on Skip and see the figure below



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 technician.

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.