Dear User of Inspur Yingxin Server,

Heartfelt thank you for your use of Inspur Yingxin Server!

This manual introduces the technical characteristics, the system installation and setup of the server to help you to fully understand and expediently use this server.

Please deliver the package of our product to the waste recycling station for recycling, in favor of pollution prevention and humankind's benefit.

This manual is the property of the Inspur.

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Any alteration about the content of this manual will not be informed.

Please contact Inspur if you have any questions or advice about this manual.

Inspur

October, 2013

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Other trademarks belong to other corresponding registered companies.

Statement

Please read the following statements before you use this server. Only when you have read this statement hereinafter and agreed the following terms, you can formally use this server. If you have any questions about the following terms, please contact our supplier or us directly. If you have no questions about these terms and start to use this server, it acquiesces that you have agreed the following terms.

1. We must call your attention that you must not alter any other parameters in the motherboard BIOS of this server at any time, except for the parameters which we promote that you can alter.

2. If there are any hardware problems when you use this server, or you wish to upgrade the hardware, please feed back the detailed hardware configuration of your server to our Customer Service. Don't disassemble the server case or any hardware components in the case by yourself.

3. In this server, the MEMORY, CPU, CPU Fan, Fan, and so on are all in given standard. Please don't use them together with the corresponding components of any other machines.

4. When you have any software problems during the application of this server, we hope that you firstly contact the corresponding software supplier and then he will contact us in favor of communication so as to solve your problem together, especially for the software problems about the installation and operation of the database, network management software or other networking products.

5. The figures in the pressworks attached to the server are just for your reference. The server that you purchase prevails.

6. Please read carefully our user manual before you install this server. If you have any questions about the usage, please contact our Customer Service.

7. We must call your attention that in the application process you should pay attention to doing necessary backup of your file.

8. This is a Grade A product, and this product may cause radio jamming. In this

case, users need to adopt feasible measures to the interference.

9. The copyright of the marks and names of all the software and hardware products involved in this manual is reserved by the relevant companies.

10. In the statements above, “us” indicates Inspur; Inspur holds the right of final explanation about the above statements.

Regarding the Manual

● **Chapter One Safety Information**

In this chapter, safety information regarding server usage is introduced.

● **Chapter Two Product Introduction**

In this chapter the technical characteristics, appearance features, I/O interface technical specification of this server are introduced.

● **Chapter Three System Setup**

In this chapter the setup of the main board BIOS of this server and the usage of some common jumpers is introduced.

● **Chapter Four Install Operating System**

In this chapter, how to install the main operating system to this server is introduced.

● **Chapter Five Common Problems and Trouble-shooting**

In this chapter, solutions to some common problems are introduced.

● **Chapter Six Management Functions Introduction of Integrated management card**

In this chapter, the usage of integrated management card of this server is introduced.

● **Chapter Seven Sever Installation Guide**

In this chapter, how to install server to the cabinet by rail is introduced.

We suggest you read this manual carefully before you use this server for fear of the unnecessary faults in your operation.

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Chapter 1 Safety Information



Warning: The following warnings show that there are potential dangers that may cause property loss, personal injury or death:

Warning 1: The power supply equipment in the system may generate high voltage and dangerous electrical energy and thus cause personal injury. Please do not dismount the cover of the host or to dismount and replace any component in the system by yourself, unless otherwise informed by Inspur; only maintenance technicians trained by Inspur have the right to disassemble the cover of the host, dismount and replace the internal components.

Warning 2: Please connect the equipment to appropriate power supply, and the power should be supplied by external power supply which is indicated on the rated input label. To prevent your equipment from damages caused by momentary spike or plunge of the voltage, please use relevant voltage stabilizing equipment or uninterruptible power supply equipment.

Warning 3: If extended cables are needed, please use the three-core cables matched with correct earthed plug, and check the ratings of the extended cables to make sure that the sum of rated current of all products inserted into the extended cables do not exceed 80% of the limits of the rated currents of the extended cables.

Warning 4: Please be sure to use the supplied power supply component, such as power lines, power socket (if supplied with the equipment) etc.. For the safety of equipment and the user, do not replace randomly power cables or plugs.

Warning 5: To prevent electric shock dangers caused by leakage in the system, please make sure that the power cables of the system and peripheral equipment are correctly connected to the earthed power socket. Please connect the three-core power line plug to the three-core AC power socket that is well earthed and easy to access, be sure to use the earthing pin of power lines and do not use the patch plug or the earthing pin unplugged with cables. In case of the earthing conductors not installed and it is uncertain whether there are appropriate earthing protections, please do not operate or use the equipment. Contact and consult with the electrician, please.

Warning 6: To avoid short circuit of internal components and fire or electric

shock hazards, please do not fill any object into the open pores of the system.

Warning 7: Please place the system far away from the cooling plate and at the place with heat sources, and be sure not to block the air vents.

Warning 8: Be sure not to scatter food or liquid in the system or on other components, and do not use the product in humid and dusty environment.

Warning 9: The replacement of batteries with those of another model may cause explosion. When replacement of batteries is required, please consult first the manufacturer and choose batteries of the same or a similar model recommended by the manufacturer. Do not dismount, extrude and pink the batteries or make the external connection point short circuit, and do not expose them in the environment over 60°C. Never throw them into fire or water. Please do not try to open or repair the batteries, and be sure to reasonably deal with the flat batteries and do not put the flat batteries, the circuit boards that may include the batteries and other components with other wastes. For relevant battery recovery, please contact the local waste recovery and treatment mechanism.

If what you bought is the chassis, besides carefully read the installation description attached with the cabinet products and get known about the special warning notices and installation process, you must abide by the following preventive measures to guarantee the cabinet to be stable and safe:

Warning 10: Before installing equipment in the chassis, please install front and side supporting feet on the independent chassis; for cabinet connecting with other chassis, it shall install the front supporting foot first. If you fail to install correspondingly the supporting foot before installing equipment in the chassis, it may cause the cabinet to turn over in some cases, and thus may cause personal injury. Therefore, it is necessary to install supporting feet before installing equipment in the chassis. After installing the equipment and other components in the chassis, it can only pull out one component from the cabinet through its sliding component at one time. Pulling out several components at the same time may lead the cabinet to turn over and cause serious personal injury.

Warning 11: Please do not move the chassis. Considering the height and weight of the chassis, at least two people are needed to complete its movement.

Warning 12: Declaration

The product is Grade A product, and in the living environment, it may cause

radio interference. In such case, it may need the user to take feasible measures for the interference.

Notes: In order to help you use the equipment, the following considerations can help avoid the occurrence of problems that may damage the components or cause data loss:

1. In case of the following cases, please unplug the power line plug of products from the power socket and contact the customer service department of Inspur:

- The power cables, extended cables or power plugs are damaged.
- The products get wet by water.
- The products have fallen off or been damaged.
- Objects fall into the products.
- When operating according to the operation instructions, the products cannot function normally.

2. If the system becomes damp, please treat it according to the following steps:

- Switch off the power supplies of the system and the equipment, disconnect them with the power socket, wait for 10 to 20 minutes, and then open the cover of the host.
- Move the equipment to the ventilation place to dry the system at least for 24 hours and make sure that the system is fully dried.
- Close the cover of the host, re-connect the system to the power socket, and then start the equipment.
- In case of operation failure or abnormal situation, please contact Inspur and get technical support.

3. Pay attention to the position of the system cables and power cables, wire them in places not to be stepped on or knocked down and ensure not to place other objectives on the cables.

4. Before dismounting the cover of host or contacting the internal components, you shall cool down the equipment first; to avoid damaging the main-board, please power off the system and wait for 5 seconds, and then dismount the components from the main-board or disconnect the connection of peripheral equipment of the system.

5. If there are modulator-demodulator, telecommunication or local area network options in the equipment, please pay attention to the following matters:

- In case of thunder and lightning weather, please do not connect or use the modulator-demodulator. Otherwise, it may be subject to lightning strike.
- Never connect or use modulator-demodulator in moist environment.

- Never insert the modulator-demodulator or telephone cables to the socket of network interface controller (NIC).

- Before unpacking the product package, contacting or installing internal components or contacting un-insulated cables or jacks of the modulator-demodulator, please disconnect the modulator-demodulator cables.

6. In order to prevent the electrostatic discharge from damaging the electronic components in the equipment, please pay attention to the following matters:

- You shall conduct off the static electricity on the body before dismounting or contacting any electronic component in the equipment. You can conduct off the static electricity on the body by contacting the metal earthing objects (such as the unpainted metal surface on the chassis) to prevent the static electricity on the body from conducting itself to the sensitive components.

- For electrostatic sensitive components not ready to be installed for application, please do not take them out from the antistatic package materials.

- During the work, please touch the earthing conductor or the unpainted metal surface on the cabinet regularly to conduct off the static electricity on the body that may damage the internal components.

7. When dismounting the internal components with the approval of Inspur, please pay attention to the following matters:

- Switch off the system power supply and disconnect the cables, including disconnecting any connection of the system. When disconnecting the cables, please grab the connector of cables and plug it out, and never pull the cables.

- Before dismounting the cover of cabinet or touching the internal components, the products need to be cooled down.

- Before dismounting and touching any electronic component in the equipment, you shall conduct off the static electricity on the body by touching the metal earthing objectives.

- During the dismounting process, the operation shall not be too big, so as to prevent damage to the components or scratching of the arms.

- Carefully deal with the components and plug-in cards, and please never touch the components or connection points on the plug-in cards. When taking the plug-in cards or components, you should grab the edges of the plug-in cards or components or their metal fixed supports.

8. During the process of cabinet installation and application, please pay attention to the following matters:

- After the installation of cabinet is finished, please ensure that the supporting feet have been fixed to the rack and supported to the ground, and all weight of the rack have been fell onto the ground.

- It shall install into the cabinet according to the sequences from the bottom to the top, and first install the heaviest component.

- When pulling out the components from the cabinet, it shall apply force slightly to ensure the cabinet to keep balance and stabilization.

- When pressing down the release latch of the sliding rail of components and sliding in or out, please be careful, as the sliding rail may hurt your figures.

- Never make the AC power branch circuit in the cabinet overload. The sum of cabinet load shall not exceed 80% of the ratings of branch circuits.

- Ensure that components in the cabinet have good ventilation.

- When repairing components in the cabinet, never step on any other components.

Chapter 2 Product Introduction

2.1 Server Technical Specification

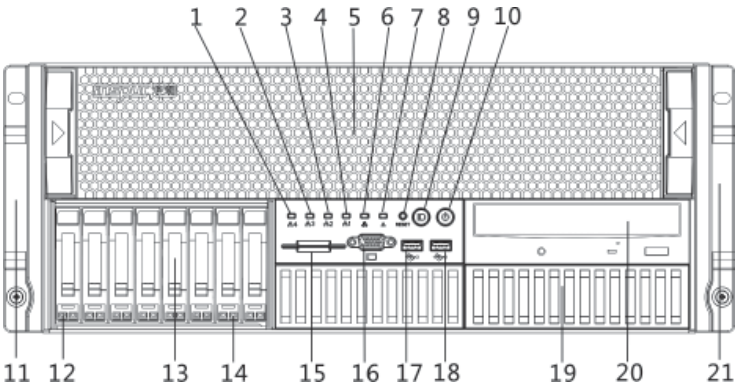
Processor	
Processor type	Intel 4-way Xeon E5-4600 series CPU
Processor number	1~4 CPU
Interface	Socket 2011
Chipset	
Chipset type	Intel C600 chipset
Memory	
Memory type	DDR3 ECC Registered memory
Memory slot number	Up to 32 DIMMs
Memory capacity	Support up to 256GB using single 8G memory Maximum memory capacity will increase with the increase of single memory capacity
Memory advanced characteristics	4-channel access, support memory mirroring and memory hot standby
I/O Interface	
USB interface	4 rear USB interfaces 2 front USB interfaces 3 internal USB interface
Serial interface	1 rear serial interface 2 internal serial interface
Network interface	4 RJ45 network interface, 1 management interface
Display interface	1 front VGA interface 1 rear VGA interface
ID button and LED	
ID button and LED	1 ID button and LED in the front of the chassis 1 ID button and LED in the rear of the chassis
Display controller	
Controller type	Onboard AST2300 display controller
Video memory	16MB Video memory
HDD controller	
SAS controller	Optional SAS RAID card or SAS card

SATA controller	South bridge integrated SATA controller, 2 SATA 3.0 interfaces on the mother board, one SATA interface is used for connecting SATA optical drive
Management card	
Management card chip	Integrated A speed 2300 chip, support IPMI2.0+IKVM
Management card interface	IPMI management dedicated interface or multiplex onboard Intel –I350 network card 3 is available
Network card	
Network card controller	Onboard 2 Intel –I350 Gigabit network chips, total 4 RJ45 interfaces Optional 10Gigabit Ethernet expansion card, 2 RJ45 interfaces
PCI expansion slot	
PCIE bus type	PCI-Express bus, supporting vertically inserted full height expansion card
PCIE slot	PCIE_0 CPU0 slot: internal half-length full-height PCIE x8 slot(CPU_0 supports) PCIE_1 CPU0 slot: full-length full-height PCIE x8+x1 slot(CPU_0 supports) PCIE_2 CPU0 slot: full-length full-height PCIE x16 slot(CPU_0 supports) PCIE_0 CPU1 slot: full-length full-height PCIE x8 hot-swap slot(CPU_1 supports) PCIE_1 CPU1 slot: full-length full-height PCIE x8 hot-swap slot(CPU_1 supports) PCIE_2 CPU1 slot: full-length full-height PCIE x16 slot(CPU_1 supports) PCIE_0 CPU2 slot: internal half-length full-height PCIE x8 slot(CPU_2 supports) PCIE_3 CPU1 slot: 10Gigabit Ethernet expansion card installation slot(CPU_1 supports)
Hard disk	
Hard disk type	2.5″ SAS and SATA hard disk
Number	Different CPU numbers configured support different hard disk number: 1-2 CPU, support up to 8 pieces of 2.5″ HDD 4 CPUs, support up to 16 pieces of 2.5″ HDD
External storage drive	
Optical drive (optional)	Optional standard SATA optical drive, no standard SATA optical drive when the hard disks number is over 8
Inspur drive U disk	Optional Inspur drive U disk. Load HDD controller driver when install OS manually
Power supply	
Specification	700W power module, 2+1 redundancy or 2+2 redundancy is available
Power input	Please refer to the power input label on the host nameplate

Physical dimensions	
Package box outer size	W(Width) 664mm; H(Height) 443mm; D(Depth) 963mm
Main chassis size	W(Width) 448mm; H(Height) 177 mm; D(Depth) 751mm
Weight	Standard configuration: 2 CPUs/4 DIMMs/4 SAS HDDs/3 power module Net weight: 38Kg Gross weight: 47Kg (packaging + guide rail) Full configuration: 4 CPUs/32 DIMMs/16 SAS HDDs/4 power modules Net weight: 42Kg Gross weight: 51Kg (packaging + guide rail)
Environment parameter	
Operating environment temperature	10℃ -35℃
Storage and transport temperature	-40℃ -55℃
Operating humidity	35%-80% relative humidity
Storage and transport humidity	20%-93%(40℃) relative humidity

2.2 Front Panel View

The pictures are for reference only; please refer to your actual machines.

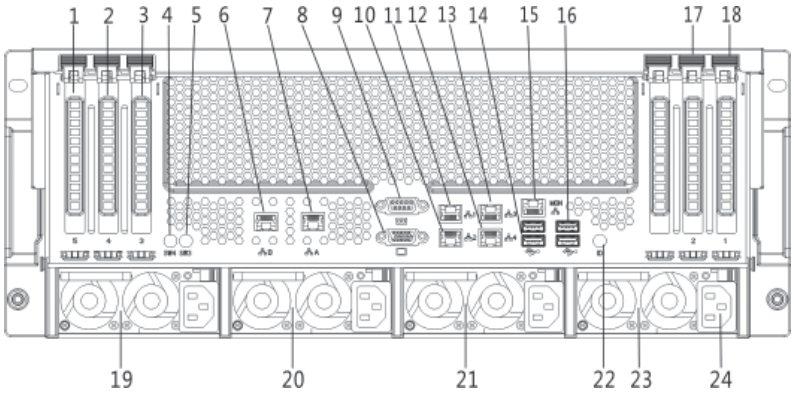


Front panel view

Number	Name	Introduction
1	Network card 4 indicator light	Integrated I350 network card 4 indicator light Blinking: network connected or transferring data (green) Off: no network connection
2	Network card 3 indicator light	Integrated I350 network card 3 indicator light Blinking: network connected or transferring data (green) Off: no network connection
3	Network card 2 indicator light	Integrated I350 network card 2 indicator light Blinking: network connected or transferring data (green) Off: no network connection
4	Network card 1 indicator light	Integrated I350 network card 1 indicator light Blinking: network connected or transferring data (green) Off: no network connection
5	Fan module plane	Open the fan module plane and there are 4 fan modules; Every fan module contains 2 fans and it is Fan 1 which is close to the motherboard side; Seen from chassis front view, the fan module is 1/2/3/4 from left to right in turn; There are FAN1/FAN2 indicator lights on each fan module; when fan failure occurs, the light is orange.
6	Fan failure indicator light	Fan failure alert On: fan fails (orange color) Off: fan is working normally
7	System failure indicator light	System failure alert On: system fails (orange color) Off: system is working normally
8	Reset button	System restart button
9	ID button and indicator light	When server is connected to power, press ID button on chassis front side or ID button on chassis back side, and this light will turn blue for server identification; repress the button and the light will turn off.
10	Power button and indicator light	Power on/off button and power up indicator light On: the server is powered up; Off: the server is not powered up.
11	Left handle	Chassis handle on the left
12	HDD active state indicator light	Turn green when the hard disk is reading and writing.
13	1~8 2.5″ HDD bays	HDDs supported by SAS module 1 and HDD0-HDD7 from left to right in turn

14	HDD failure alert indicator light	When the hard disk fails, it will turn red; When the hard disk is under RAID card rebuilding, it will turn purple; When the hard disk is operating Locate, it will turn blue.
15	Label mylar bar	Pull mylar bar out and view product information from the label pasted on it
D	Front VGA port	Connecting VGA port display device
17	USB port	Connecting USB device
18	USB port	Connecting USB device
19	9~16 2.5″ HDD bays	HDDs supported by SAS module 2 and HDD8-HDD15 from left to right in turn; Only the configuration with 4 CPUs supports more than 8 HDDs; The configuration with SAS module 2 can't support standard SATA optical drive.
20	Optical drive (optional)	SATA standard optical drive The configuration with SAS module 2 can't support standard SATA optical drive.
21	Right handle	Chassis handle on the right

2.3 Rear Panel View



Rear panel view

Number	Name	Function and introduction
1	PCIE_2 CPU1 slot	PCIE x16 slot (CPU_1 supports)
2	PCIE_1 CPU1 hot-plug slot	PCIE x8 hot-plug slot (CPU_1 supports) This slot supports hot-plug function.
3	PCIE_0 CPU1 hot-plug slot	PCIE x8 hot-plug slot (CPU_1 supports) This slot supports hot-plug function.
4	PCIE_1 CPU1 hot-plug slot on/off switch and working status indicator light	When PCIE_1 CPU1 hot-plug slot is configured with expansion card and if the indicator light is normally on, the expansion card in this slot works normally. If it needs to online replace the expansion card in this slot, press the switch of this hot-plug slot. And then online replace the expansion card in this slot after the indicator light is off. After the replacement is completed, again press the switch of the hot-plug slot. After the indicator light is normally on, the expansion card works normally.
5	PCIE_0 CPU1 hot-plug slot on/off switch and working status indicator light	When PCIE_0 CPU1 hot-plug slot is configured with expansion card and if the indicator light is normally on, the expansion card in this slot works normally. If it needs to online replace the expansion card in this slot, press the switch of this hot-plug slot. And then online replace the expansion card in this slot after the indicator light is off. After the replacement is completed, again press the switch of the hot-plug slot. After the indicator light is normally on, the expansion card works normally.
6	10Gigabit network port B (optional)	This port is available only when PCIE_3 CPU1 slot is configured with 10Gigabit Ethernet expansion card.
7	10Gigabit network port A (optional)	This port is available only when PCIE_3 CPU1 slot is configured with 10Gigabit Ethernet expansion card.
8	VGA port	Connecting VGA port display device
9	Serial port	Connecting serial port device
10	I350 network card 2 interface	Integrated I350 network card 2 interface
11	I350 network card 1 interface	Integrated I350 network card 1 interface
12	I350 network card 4 interface	Integrated I350 network card 4 interface
13	I350 network card 3 port	Integrated I350 network card 3 interface can be used as multiplex management interface; Each network card interface has two indicator lights: Indicator light on the left: network card activity indicator light, when network card is active, the yellow light blinks; Indicator light on the right: network card status indicator light, it is green for 100 megabit while it is orange for Gigabit.

14	USB port	Connecting USB port device
15	IPMI management interface	Integrated IPMI management dedicated interface
16	USB port	Connecting USB port device
17	PCIE_2 CPU0 slot	PCIE x16 slot (CPU_0 supports)
18	PCIE_1 CPU0 slot	PCIE x8+x1 slot (CPU_0 supports)
19	PSU 4 installation slot	Installation position for the 4th power module
20	PSU 3 installation slot	Installation position for the 3rd power module
21	PSU 2 installation slot	Installation position for the 2nd power module
22	ID button and indicator light	When server is connected to power, press this ID button or ID button on chassis front side, and this light will turn blue for server identification; repress the button and the light will turn off.
23	PSU 1 installation slot	Installation position for the 1st power module
24	Power input interface	Connecting power supply cables Each power module has a power input interface.

Chapter 3 System Setup

In this chapter, the regular jumper of motherboard and BIOS function setup of this server are introduced. Only operator or administrator with qualification of system maintenance can implement these operations described in this part.

3.1 System BIOS Setup

BIOS is a basic input and output system. With some special setting programs, it can adjust the system parameter and the hardware parameter. As BIOS has great influence on the starting and running of the system, setting parameters improperly may arise the conflict among hardware resources, or affect the system's performance. Hence understanding the BIOS setup is significant to server configuration. If there is no especial requirement, we suggest you use the default value and not alter the parameters.



Notes:

1.Before the server BIOS setup is altered, please record the corresponding original setup. Hence when there are operating problems in the system due to the alteration, the setup can be restored.

2.The factory default system setup is usually the optimized setup. Don't try to alter the parameters before you understand their denotations.

3.The common setup is introduced in detail in this chapter. For items less used in the application, this chapter only offers simple instruction or just omits the instruction.

4.The contents of the BIOS may differ due to the different configurations of products; no detailed introduction will be provided here.

3.1.1 How to Enter the BIOS Setup

Power up and start the server. When the prompt "Press [DEL] to SETUP or [TAB] to POST" displays on screen below, press [DEL] and wait for a while. And then the system enters BIOS setup.

If the system does not enter BIOS setup after previous steps, please press [Ctrl]-[Alt]-[Del] at the same time to reset the system, and repeat operations above. (If the

prompt displays to press [DEL] again, please press it quickly.)

3.1.2 BIOS System Menu Introduction

Next the following main function menus of BIOS are introduced.

Menu Name	Menu Function
Main	Configuring the basic system settings, such as system time, system date, displaying BIOS information, system memory capacity, etc.
Advanced	Configuring CPU, integrated SATA controller and other advanced characteristics
Chipset	Configuring memory mode, CPU characteristics, etc.
Server Mgmt	Configuring server management functions.
Boot	Configuring boot priority of system devices
Security	Configuring the system super user and password
Save & Exit	Saving or exiting BIOS setup, etc

Some items in BIOS cannot be configured, for example, information of system detecting and configuration. For some items, there is a right pointer, which means if you select this item and press [Enter], cascading menu (that is, submenu) will be displayed on the screen.

Introduction of operational keys:

Button	Description
↑(up)	For selecting the upper menu or value
↓(down)	For selecting the next menu or value
←(left)	For selecting the left menu or value
→(right)	For selecting the right menu or value
Esc	For returning to the superior menu or the main menu
+	For changing the item value For changing the current menu item into the previous item value The key only displays the item values relevant to the item itself rather than all the item values
—	For changing the item value For changing the current menu item into the next item value The key only displays the item values relevant to the item itself rather than all the item values
F1	The help key for displaying the relevant introduction of current menu
F2	For recovering the previous default configuration
F9	For recovering the optimized performance configuration

F10	For saving CMOS settings and exiting
Enter	For executing current command or entering the submenu

1 Main menu

In BIOS setup utility, Main menu first displays. In this menu, BIOS version and memory capacity can be viewed. System time, date, etc. also can be set up in this menu.

To set system date and time, use the arrow key to choose one of the options. Press [Enter] to select subfield and use keys "-, +" to set field value.

● BIOS Information

It displays the version of system BIOS and when the BIOS is altered.

● Memory Information

It displays the system memory capacity.

● System Date

Set the system date in format of [week month/day/year].

● System Time

Set the system time, adopting 24 hour system, in format of [hour/minute/second]

● Acess Level

Display user name of login BIOS Setup.

2 Advanced menu

This menu is mainly applied to set advanced characteristic items. Improper setup can result in abnormal system operation. Default configurations are recommended.

Following are the introductions for main and common-used items.

● PCI Subsytem Settings

This item displays PCI Bus driver version, ROM priority setting, enabled and disabled functions of hot-plug PCIE slots 3 and 4.

* PCIE 0 CPU1(PCIE 3) Hotplug

PCIE 0 CPU1 slot hot-plug functions setting includes two options: [Enabled] (default setting) and [Disabled].

* PCIE 1 CPU1(PCIE 4) Hotplug

PCIE 1 CPU1 slot hot-plug functions setting includes two options: [Enabled] (default setting) and [Disabled].

● CPU Configuration

* Socket 0/1/2/3 CPU Configuration

This menu is used to display detailed information of CPU currently installed.

* Hyper-threading

CPU hyper-treading function setup includes [Enabled] (default setting) and [Disabled] two items.

* Active Processor Cores

It sets cores number of each CPU currently installed.

* Intel Virtualization Technology

CPU virtualization tech supports function setup, including [Disabled] and [Enabled] two items. It is defaulted to [Enabled].

* CPU Power Management Configuration

This menu enables the user to enter the CPU power management.

● Onboard LAN Configuration

* Launch PXE Oprom

This item can enable or disable PXE functions of integrated network card, including [Enabled] (default setting) and [Disabled] two items.

*Onboard NIC1/2/3/4 Control

This item can enable or disable integrated network card, including [Enabled] (default setting) and [Disabled] two items.

*Onboard NIC1/2/3/4 ROM

This item can enable or disable the ROM of integrated network card 1/2/3/4, including [Enabled] and [Disabled] two items. If the network card is set to [Disabled], the ROM item of corresponding network card will autohide.

● Intel(R) VT-D Configuration

* Intel(R) VT-D

Directed IO virtualization technology supports two options including [Disabled] (default setting) and [Enabled].

● SATA Configuration

This item can view the status of all the SATA devices connected to each SATA interface and set SATA controller mode and all SATA interfaces.

* SATA Mode

This item is used to set SATA controller modes including [Disabled], [IDE Mode], [AHCI Mode] and [RAID Mode] four items. This server only integrates 2 SATA ports.

If you want to use serial devices as parallel IDE storage devices when onboard SATA controller is used, please set this item to [IDE Mode].

If you do not use RAID and want to connect 1-6 SATA devices when onboard

SATA controller is used, please set this item to [AHCI Mode].

Notes: When installing Suse Linux 11.1 operating systems and if using standard SATA optical drive for installing operating system, it needs entering BIOS and setting Advanced → SATA Configuration → SATA Mode option to [AHCI Mode] so as to support optical drive to install operating system.

If you want to create Intel SATA HostRAID when onboard SATA controller is used, please set this item to [RAID Mode].

This server's onboard SATA controller is only used for connecting SATA optical drive, the default setting [IDE Mode] adopted.

* Serial-ATA Controller 0

This item can be sued only when SATA Mode option is set to [IDE Mode]. When set to [Enhanced], it can support 4 SATA 3.0Gb/s devices at most.

* Serial-ATA Controller 1

This item can be sued only when SATA Mode option is set to [IDE Mode]. When set to [Enhanced], it can support 2 SATA 3.0Gb/s devices at most.

● USB Configuration

This menu is used to set some configuration related to USB and displays the USB devices that the system automatically examines.

* Legacy USB Support

The traditional USB devices support function setup and there are three options [Enabled], [Disabled] and [Auto]. If set it to [Auto], the default does not support traditional USB devices when USB devices are not connected.

*USB3.0 Support

This item is used to set whether to support USB3.0, including [Enabled] (default setting) and [Disabled] two items.

3 Chipset menu

● CPU Advanced Settings

This menu is used to set IOH and QPI related information as well as memory related items.

* IOH Configuration

This menu can set IOH related information and PCIE interface speed.

▲ Intel(R) I/0AT

This item is used to enable or disenable Intel I/O acceleration technology, including [Enabled] and [Disabled] (default setting) two items.

▲VGA Priority

This item is used to set priority order of onboard graphic card and external graphic card, including:

[Offboard] (default setting): external graphic card has the priority for use.

[Onboard]: onboard graphic card has the priority for use.

* QPI Configuration

The submenu of this menu is used to set QPI speed mode, frequency and others.

If it is single CPU configured, “QPI Link Speed Mode” item is set to [Fast] and “Current QPI Link Speed” item actually displays “Slow” state.

* Memory Mode

Memory mode setup includes four options [Independent], [Mirroring], [Lock Step] and [Sparing]

If the system memory configuration supports [Mirroring] and [Sparing], the two function modes status displayed above this configuration item should be “Supported”, otherwise, the status should be “Not Possible”.

To realize [Mirroring] function, it must be in the first channel and the second channel or the third channel and the fourth channel of the same CPU. Besides, the memory configuration in the two channels must be the same, i.e. both the channels have been configured 1 memory chip or 2 memory chips.

To realize [Sparing] function, when more than 1 memory chips are configured in the same channel, it can realize this function.

* DDR Speed

This item is used to set DDR speed.

If the system is configured with 4Rank memory of DDR3 1066/1333MHz and it is full configuration for memory, the system Memory Speed will be limited to 800MHz and [Force DDR3 1066/1333] will not function.

* DIMM Information

This menu can view system memory installation DIMMs and memory capacity.

● PCH

Display and setup of PCH chip related information.

* SMBus Controller

This item is used to enable or disable system bus controller, including [Enabled] (default setting) and [Disabled] two items.

* Restore AC Power Loss

Set status of power supply again after the system powers off abnormally, including:

[Power off] (default setting): is shutdown status which needs to start up manually;

[Last State]: is the status before power down;

[Power on] is the startup status.

* Disable SCU devices

This item is used to enable or disable integrated SCU controller, including [Enabled] (default setting) and [Disabled] two items.

* Onboard SATA RAID Oprom/Driver

This item is used to enable or disable integrated SATA RAID controller Oprom and EFI driver, including:

[Enabled]: enable or disable integrated SATA RAID controller Oprom and EFI driver;

[Disabled]: disable integrated SATA RAID controller ROM and EFI driver;

[Legacy Option ROM] (default setting): set to traditional Option ROM.

● ME Subsystem

This menu is used to set ME subsystem.

* ME Subsystem

This menu is used to enable or disable ME subsystem. When set to [Enabled] (default setting), it can view ME related information.

4 Server Mgmt menu

● Wait For BMC

This item is used to set up whether waiting for BMC startup or not, including [Enabled] and [Disabled] (default setting) two items.

● System Event Log

This menu is used to set the features of system event log. Modification in this menu can take effect only after the computer restarts.

* SEL Components

This item is used to set whether the system shall record all the logs when the system starts, including [Enabled] and [Disabled] (default setting) two items. If it is set to be [Enabled], the user can also set the log-clear method and other configurations.

* Erasing SEL

This item is used to configure the method of log erasing, including:

[No] (default setting): not to erase log;

[Yes, On next reset]: erase log on next reset;

[Yes, On every reset]: erase log on every reset.

* When SEL is Full

This option is used to set the approach when event logs are full, including two options:

[Do Nothing] (default setting): do nothing about log;

[Erase Immediately]: erase log immediately.

● BMC network configuration

This menu is used to set up the configuration information of BMC network interface.

* Sharelink Network

This item is used to set whether to enable multiplex management interface, including [Enabled] (default setting) and [Disabled] two items.

* BMC Sharelink Management Channel

Related items of this menu can be used to setup the access method to network card IP address when Intel I350 network card 3rd works as multiplex management interface.

When it is set to [Static], the user has to manually set the information, such as IP address, subnet mask and router IP address. When it is set to [Dynamic] (default setting), the user does not need to set the previous items.

* BMC Dedicated Management Channel

Related items of this menu can be used to setup the IP address access method of IPMI management dedicated interface.

When it is set to [Static], the user has to manually set the information, such as IP address, subnet mask and router IP address. When it is set to [Dynamic] (default setting), the user does not need to set the previous items.

* User Configuration

The options under this menu are used to set remote login IPMI management interface user name, user permissions, whether the user name can be used and whether user password can be changed, etc.

▲User ID: set user group including five options [Select], [Admin], [User1], [User2] and [User3].

After set to [admin] user group, user privilege and whether the user is available options can’t be modified, but only password can be set.

▲Privilege: set the privilege of user group including three options [USER], [OPERATOR] and [ADMIN].

▲User Status: set whether the user is available including two options [DISABLE] (default settings) and [ENABLE].

▲User Name: set the user name of user group. The user name's length is at least 4 bytes but no more than 15 bytes.

▲PASSWORD: set the password of user name of user group. The password's length is at least 4 bytes but no more than 15 bytes.

After this setting modification is completed, it needs to restart the system. Please wait for a while. The operation can't take effect until BMC status light blinks and BMC works normally.

● System Health Information

This menu enables user to check CPU temperature, memory slot temperature, PCH temperature, fan speed, voltage and other information.

* System Temperature Information

Entering this menu can view CPU temperature, memory slot temperature, system temperature and PCH temperature.

* System Fan Speed

Entering this menu can view 8 hot-plug fans' speed in front part of chassis.

There are altogether from left to right 8 fans in 4 groups displayed in BIOS corresponding to chassis front part. In each group, the fan which is close to the motherboard is the first fan.

* System Voltage Information

Entering this menu can view system power module information as well as whether BIOS normally gets voltage information.

● View System Information

This menu enables user to check detailed information of the system, such as system manufacturer, product name, SDR version, BMC version and other information.

5 Boot menu

Boot menu is mainly used to the configuration of system boot process and system boot devices priority.

● Boot Devices Seeking

This item is used to open or close the function of retrying to seek boot devices during system starting procedure, including [Enabled] (default setting) and [Disabled]

two items.

● Quiet Boot

This menu is used to set the display status in system boot process. If the system is set to [Disabled], it shows self-check process and information. If the system is set to [Enabled] (default setting), it shows manufacturer LOGO.

● Boot Option #1/#2/#3

Select certain boot order device item and press [Enter] button. The system will display optional boot device table. Then select a device through arrow key in the table and press [Enter] to finish the setting of the boot order item.

● Hard Drive BBS Priorities

Press [Enter] to enter the sub items of this menu and set up the boot order of the HDDs.

6 Security menu

● Administrator Password

This menu is used to set up system administrator password. After the setup of the administrator password, you must input the password when entering the BIOS setup progress. Otherwise, some administrator right will be limited.

● User Password

This menu is used to set up user password. After the setup of the user password, you must input the password when booting and entering the BIOS setup progress. In the setup interface of BIOS Setup, you have the same authority with the administrator after entering the password.

7 Save & Exit menu

The options in this menu can be used to save or discard the settings of the changes in the BIOS and exit the setting program.

● Save Changes and Exit

Select this item and press [Enter]. After you select [Yes] for confirmation, the changes in the BIOS settings will be saved and the system will exit the BIOS setup. The menu function can use [F10] shortcut key to realize.

● Discard Changes and Exit

Select this item and press [Enter]. After you select [Yes] for confirmation, the changes in the BIOS settings will be discarded and the system will exit the BIOS setup.

● Save Changes and Reset

Select this item and press [Enter]. After you select [Yes] for confirmation, the

changes in the BIOS settings will be saved and then the server will be rebooted.

● Discard Changes and Reset

Select this item and press [Enter]. After you select [Yes] for confirmation, the changes in the BIOS settings will be discarded and then the server will be rebooted.

● Saving Changes

Select this item and press [Enter]. After you select [Yes] for confirmation, the changes in the BIOS settings will be saved and the system will not exit the BIOS setup.

● Discard Changes

Select this item and press [Enter]. After you select [Yes] for confirmation, the changes in the BIOS settings will be discarded and the system will not exit the BIOS setup.

● Restore Defaults

Select this item and press [Enter]. After you select [Yes] for confirmation, the system will load system default optimization setup and the system will not exit the BIOS setup. This menu function can use [F9] shortcut key to realize.

● Save as User Defaults

Select this item and press [Enter]. After you select [Yes] for confirmation, the system will save the current items setup values of the BIOS as the user default value.

● Restore User Defaults

Select this item and press [Enter]. After you select [Yes] for confirmation, the system will load the already saved user defaults.

● Boot Override

Select the device item of this menu. After you select [Enter] for confirmation, then it will boot system from the selected device.

3.2 Motherboard Jumper Settings

Motherboard jumper setting is the operation of shorting cut two pins of the jumper to change the interface functions. Refer to the following figure, and adjust the motherboard functions.

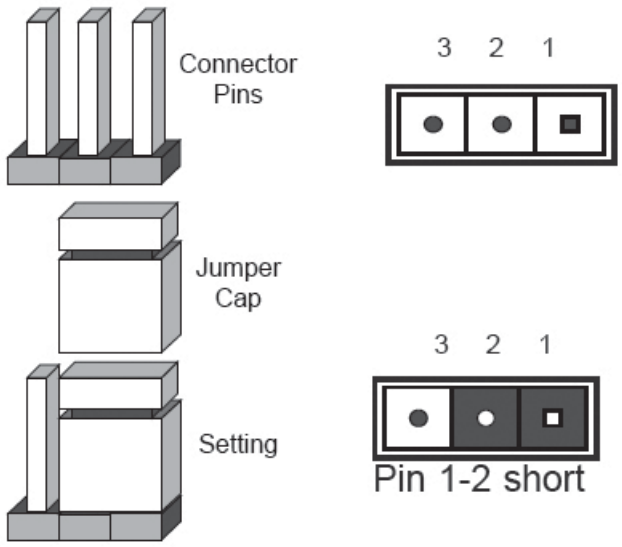


Figure of jumper settings

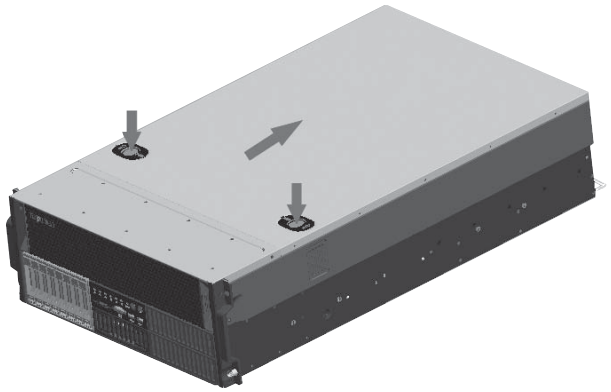
3.2.1 Open the Chassis Upper Panel

If the following operations are needed, please get the authorization of Inspur according to the methods as follows to open the chassis upper panel:

1. Power off the system (turn off the AC power);

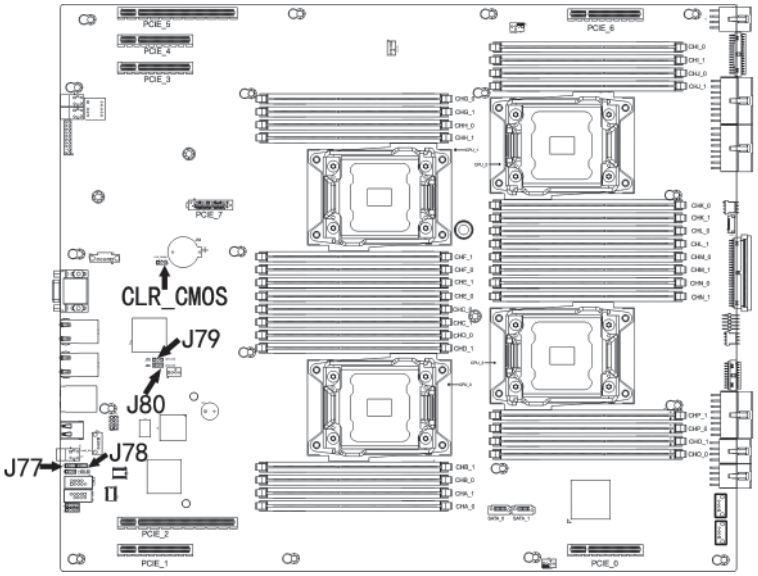
2. Vertically press the PUSH button on the chassis upper panel with two thumbs and meanwhile push the chassis upper panel backwards.

3. Remove the chassis upper panel.



Open the chassis upper panel

Following is the layout of common motherboard jumper:



Motherboard common use jumper location picture

Jumper name	Function description	Jumper function
CLR_CMOS jumper	CMOS jumper	Short-cutting pin1 and 2, normal state (default); Short-cutting pin2 and 3, clear CMOS
J77 jumper	Integrated I350 network card 3 jumper	Short-cutting pin1 and 2, enable network card (default); Short-cutting pin2 and 3, disenable network card
J78 jumper	Integrated I350 network card 4 jumper	Short-cutting pin1 and 2, enable network card (default); Short-cutting pin2 and 3, disenable network card
J79 jumper	Integrated I350 network card 1 jumper	Short-cutting pin1 and 2, enable network card (default); Short-cutting pin2 and 3, disenable network card
J80 jumper	Integrated I350 network card 2 jumper	Short-cutting pin1 and 2, enable network card (default); Short-cutting pin2 and 3, disenable network card

Notes:

1. When clearing CMOS, the system must be shut down and power supply cut off. Short cut pin2-3 for 5 seconds. And then reuse jumper cap to short cut Pin1 and Pin2 (default state) and restore to the original state.

2. After the jumper operation, please install the upper panel of the chassis.

Chapter 4 Install Operating System

This chapter primarily focuses on the method for manually installing the prevailing operating system to the server. Ruijie Server Kit supports the intelligent and automatic installation of mainstream Windows operating system and Linux operating system. As for the actual operating system supported, the optional operating system versions in the drop-down menu of [Select the Operating System] in the software prevail. What's more, some configuration of the server may not support the automatic installation of these operating systems (such as onboard SATA HostRAID configuration), you need to install other version of the operating system manually according to the actual demands.

During manual setup of the operating system, some operating system may need the floppy drive or Inspur driver U disk to load the driver of hard disk controller. Refer to the readme.pdf file under the root directory in Inspur driver CD for the making method of the driver floppy disk. If the configuration you purchased is configured with Inspur driver U disk, you may refer to relevant contents of this chapter for the making method of Inspur driver U disk.

If your server is configured with external RAID card or SAS sub-card, please refer to the electronic version of User Manual in the CD of external RAID card or SAS sub-card to load the driver of the hard disk controller. If it uses onboard SATA controller, please make the driver of controller according to the attached driver CD. For network card driver, video driver and system patch program, the guidance in the chapter can also be referred for setup.

This installation instruction states the manual installation of operating system. Taking configuring 2108 SAS RAID as example, if your server is configured with other external RAID card, please load the HDD controller drive by referring to the user manual in the attached CD. As for the network drive, video driver and system patch program, you can still refer to this chapter.

It is suggested that you confirm in advance that whether the purchased machine configuration supports the version of the operating system to be installed.

4.1 Application Instructions for Inspur Driver U disk

Under Windows system and Linux system, Inspur driver U disk can be identified

as two parts: virtual floppy driver [3.5 floppy disk (A :)] and normal partition of U disk [UDISK PRO]. When you install some operating systems manually, you can use Inspur driver U disk to load the drive of hard disk controller (at present, the operating systems that use Inspur driver U disk to load the hard disk controller support Windows XP or above versions, Red Hat Linux 4.5 or above versions, and Suse Linux 9.0 SP2 or above versions).

Warning:

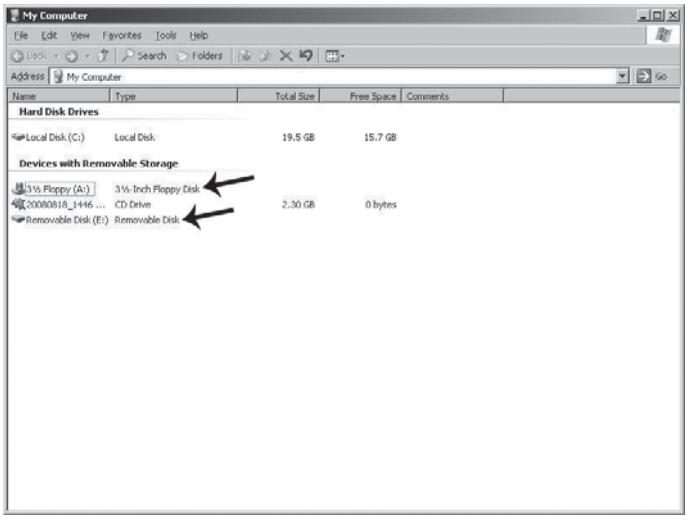
During the installation of the operating system by using Inspur driver, it may detect Inspur driver U disk on the disk partition interface. At this moment, the user must distinguish U disk from hard disk, and never delete or format U disk.

During the installation of the operating system, if it needs to boot the system from hard disk after reboot, it must enter the server BIOS for setting to ensure the starting sequence of hard disk is prior to the starting sequence of U disk and the system can boot from the disk. If the starting sequence of U disk is prior to the starting sequence of hard disk, the system will fail to boot from hard disk.

The following introduces the making method for the driver of onboard hard disk controller when using Inspur driver U disk to install the operating system. For driver making of external RAID card or SAS card, please refer to the corresponding contents in the driver CD of external board card.

Make Driver

1. Prepare a set of computer installed with Windows system and connect the Inspur driver U disk to the USB interface of the computer as is shown in the picture below. Inspur driver U disk will be identified as two parts: virtual floppy driver [3½ Floppy (A:)] and normal partition of U disk [Removable Disk (E:)]. Among of them, the disk character E in [Removable Disk (E:)] will be different according to the actual partitions of your computer.

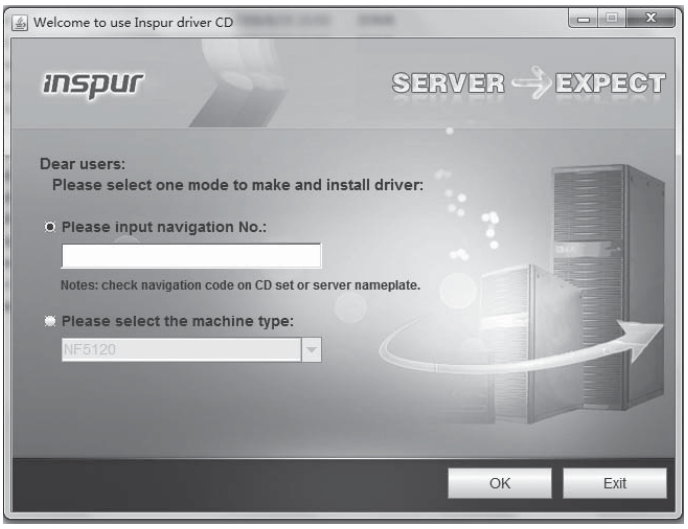


Notes: Before connecting the Inspur driver U disk to the computer, if your computer is configured with standard floppy, please enter BIOS and close this standard floppy; if your computer is connected with USB floppy, please first disconnect USB floppy. It must guarantee that when the Inspur driver U disk is connected to your computer, the disk character of virtual floppy driver under Windows system shall be identified to be A:, and only by this can the subsequent normal driver making be guaranteed.

2. Put the driver CD (Inspur driver CD and RAID card driver CD) into optical drive, and the driver making software will operate automatically. If the system forbids the automatic operation of CD, please enter CD directory and operate dolphin.bat (Inspur driver CD) in CD or setup.exe (RAID card driver CD) in CD directory.

3. Methods for making drivers by using Inspur driver CD:

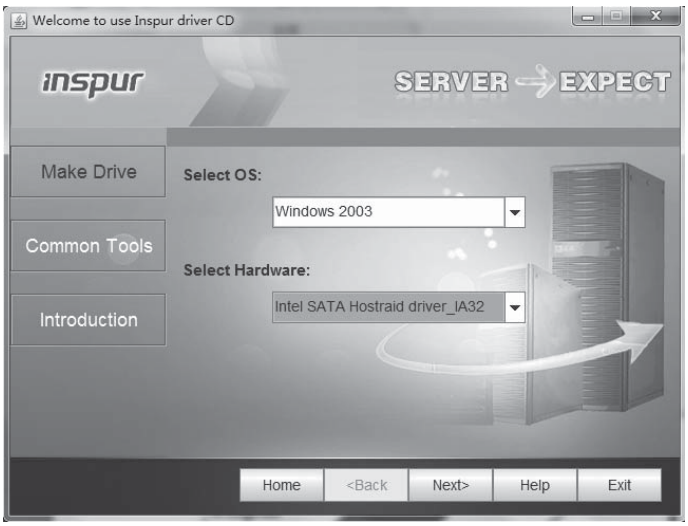
(1) After operating dolphin.bat documents, the system will enter the interface of "Welcome to Inspur driver CD":



Two methods to enter drive making software main interface, as follows:

- In the text box below "Please input navigation No.", input navigation No (check navigation No. on CD cover) to log in the drive making software main interface. Click [Exit] to exit the log-in.
- In the drop-down menu below "Please select the machine type", select this server's type (As for specific type, please refer to host nameplate label).

(2) After inputting the navigation No. or selecting machine type to log in, enter the main interface of driver making software. The main interface is shown in the following picture:



(3) After you select the corresponding operating system and the controller driver to be made according to the actual need, click [Next] button and make corresponding driver. Different operating systems correspond to different making interfaces and methods of the driver.

● Driver making of Windows system

When the driver of Windows operating system is made, copy the driver directly into the virtual floppy drive A: of Inspur driver U disk.

Select the Windows version to be installed and driver to be made, and then click [Next].

The system will display a prompt as shown in the following picture. Please confirm that Inspur driver U disk is well connected. Format the virtual floppy drive A: of Inspur driver U disk, and then click [OK] to start the driver making.



After the driver making is completed, the system will pop up the window, prompting “Driver has been completed”. Click [OK] to complete the making of driver.



● Notices for using Inspur driver U disk to load driver under windows system

During the installation of Windows operating system, if the driver of hard disk controller is loaded by using Inspur driver U disk, entering the interface of disk partition, Inspur driver U disk will occupy a disk letter. If the disk is not partitioned, U disk will occupy disk C:. If the disk has other partitions, U disk will occupy other disk letter (please distinguish according to the actual hard disk partition).

If there are other partitions on the disk, at this moment, it needs to delete all of them and then create new partitions on the hard disk. The U disk will not occupy disk letter any more.

If the disk is not partitioned, it needs to create one disk partition on the unallocated space, and then delete this newly created disk partition. And at this time the U disk will not occupy any disk letter any more. Then create disk partition based on actual need and complete the installation of operating system according to the instructions.

Notes: Be sure to distinguish U disk from hard disk, and never delete or format U disk.

4.2 Manually Install Windows Server 2008 R2

4.2.1 Preparation Prior to the Installation

● Windows Server 2008 Installation disk (DVD)

● Inspur driver CD

● HDD controller driver floppy disk (the configuration with external LSI 2108 RAID card does not need driver for Windows Server 2008 R2 installation)

● As for the above mentioned drivers, if USB floppy drive is used, please make the driver into floppy disk; if Inspur driver U disk is used, please make the driver into Inspur driver U disk; if general driver U disk is used, input the disk letter occupied by general U disk and the directory for saving the driver to make the driver into general U disk.

4.2.2 Installation Steps

1. Connect well USB floppy drive or Inspur driver U disk or general U disk, power up to start the server, put the installation CD of Windows Server 2008 into optical drive and then enter BIOS to configure so that the server can boot from CD.

2. Press any key when the system presents “Press any key to boot from CD or DVD” and the system will start Windows installation program from CD.

3. According to actual needs, set Language to install, Time and currency format, Keyboard or input method. And then click [Next] to continue.

4. In the interface of installation confirmation, click [Install now] to continue.

5. The system pops up “Load Driver” window, prompting: A Required CD/DVD drive device driver is missing. If you have a driver floppy disk, CD, DVD, or USB flash driver, please insert it now.

Notes:If the Windows installation media is in the CD/DVD drive, you can safely remove it for this step.

If USB floppy drive is used, please put the ready-made driver floppy disk into floppy drive.

If Inspur driver U disk or general U disk is used, please confirm that there is no problem for U disk's connection;

And then click [Browse] button, select the path of the driver and click [OK]. The system will automatically search the driver.

6. In "Select the driver to be installed" interface, select the driver to be installed and then click [Next] to start loading driver.

7. In "Type your product key for activation" interface, input your product key (25 character), and then click [Next] to continue.

8. In "Select the edition of Windows that you purchased" interface, select the operating system version to be installed, then select "I have selected the edition of Windows that I purchased", and click [Next] to continue.

9. The Microsoft software license clauses will be shown in the interface of "Please read the license terms". Select "I accept the license terms" and after reading, click [Next] to continue.

10. In the interface of "Which type of installation do you want?", select the installation type, and here the default set by us is the first installation. Select "Custom" model to continue.

11. The system enters the interface of "Where do you want to install Windows?". It will display the existing disk partitions and unallocated spaces on the computer. You can conduct the following operations by clicking [Drive options]:

⊙ It can delete the existing partitions by selecting the existing partitions and then clicking [Delete].

⊙ It can format the partitions by selecting the existing partitions and clicking [Format].

⊙ It can create new partitions by selecting unallocated disk spaces and then clicking [New] to create new partitions.

You can operate according to the actual demands. Here we'd expound on the issue when there are no existing partitions in the disk.

(1) Select the unallocated space, click [New], delete the number in the Size input box, then input the one you want to create (unit: MB) and click [Apply] to continue. If the confirmation window pops up, click [OK] to continue.

Notes: We suggest the partition should be larger than 30GB.

(2) Select the newly created disk partition, then click [Format], and click [OK] at the prompt confirmation interface.

(3) After formatting the partition, click [Next] to continue.

12. The system starts to install Windows, and it will complete operations of "Copying files", "Expanding Windows files", "Installing features", "Installing updates" and "Completing installation" etc.. In this course the system may automatically reboot for several times.

13. After the installation is completed, the system would boot to the interface of "The user's password must be changed before logging on the first time." Take out the installation CD and then click [OK] to continue.

Notes: As for the above Windows Server 2008 operating system installation steps, because the used system CD version is different, there may be some differences. Please install it according to the actual display interface.

14. Follow the prompt to set the Administrator password and then click the arrow button at the right of the password input box to continue. If the password meets the requirements, it will prompt "Your password has been changed." and then click [OK] to confirm that the password has been changed.

Windows Server 2008 has strict requirement for the password, so it must contain letters, numbers and special characters, or the setting cannot be successful.

15. After logging in the system, select "Do not show this window at logon" at the bottom of the "Initial Configuration Tasks" interface, and then click [Close]. In the new interface of "Server Manager", select "Do not show this console at logon" and close the interface.

16. Install Chipset patch

(1) Insert Inspur driver CD into the optical drive, click the blue dolphin icon under the installation or operation procedure item in the automatically playing interface popped out after the disk's running. Enter "Welcome to use Inspur driver CD" window, input the navigation code (on the driver CD case) or select machine type (for the specific type, please check the host nameplate tag), and click [OK] to enter the installation interface automatically;

(2) In "Select OS" column, select Windows 2008 R2;

(3) In "Select Hardware" column, select Chipset patch;

(4) Click [Next] to start the installation;

(5) Enter the interface of "Welcome to the Setup Program" and click [Next] to continue the installation;

(6) Enter the interface of "License Agreement", and select [Yes] to continue the

installation;

(7) Enter the interface of “Readme File Information”, and click [Next] to continue the installation;

(8) The installation program begins to install; and click [Next] according to the prompts;

(9) Complete the installation, click [Finish] according to the prompts, take out the driver CD and restart the system.

17. Install Network card driver

(1) Insert Inspur system driver CD into the optical drive, click the blue dolphin icon under the installation or operation procedure item in the automatically playing interface popped out after the disk’s running. Enter “Welcome to use Inspur driver CD” window, input the navigation code (on the driver CD case) or select machine type (for the specific type, please check the host nameplate tag), and click [OK] to enter the installation interface automatically;

(2) In the “Select OS” column, select Windows 2008 R2;

(3) In the “Select Hardware” column, select Network card driver

(4) Click [Next] to start the installation;

(5) Enter the interface of “Intel ® Network Connections”, and double click “Install Drivers and Software”;

(6) Enter the interface of “Welcome to the InstallShield Wizard for Intel(R) Network Connections”, and click [Next] to continue;

(7) Enter the interface of “License Agreement”, select “I accept the terms in the license agreement” and then click [Next] to continue;

(8) Enter the interface of “Setup Options” and click [Next] to continue;

(9) Enter the interface of “Ready to Install the Program”, and click [Install] to continue;

(10) The installation program starts to install; when the installation is completed, click [Finish] according to the prompt.

18. Install Video driver

After installing the network card drive, please do not exit the installation interface of driver CD, but continue the installation of video driver installation.

(1) In the “Select OS” column, select Windows 2008 R2;

(2) In the “Select Hardware” column, select Video driver

(3) Click [Next] to start the installation;

(4) Enter the interface of "Welcome to the InstallShield Wizard", and click [Next] to continue;

(5) Enter the interface of "License Agreement", select "I accept the terms in the license agreement" and then click [Next] to continue;

(6) Enter the interface of "Customer Information", please input User Name and Organization, and the click [Next] to continue;

(7) Enter the interface of "Setup Type", please select installation type in these two choices: "Complete" and "Custom". Here select "Custom", click [Next] to continue;

(8) Enter the interface of "Custom Setup" and click [Next] to continue;

(9) Enter the interface of "Ready to Install the Program", and click [Install] to start the installation of video driver;

(10) The installation program starts to install; when the installation is completed, click [Finish] in the interface of "InstallShield Wizard Completed" and the system pops up a prompt that you need to restart the server so that the settings can take effect. Take all the disks out of the drive, and select [Yes] to restart the server.

Notes: In the above Video driver installation, some installation steps may be different because of the different Windows 2008 system versions to install, so please follow the actual installation steps.

4.3 Manually Install Red Hat Enterprise Linux 6.1

4.3.1 Preparation Prior to the Installation

● Installation CD for Red Hat Enterprise Linux 6.1 (1 piece of DVD)

4.3.2 Installation Steps

1. Power up and start the system, put the installation CD into the optical drive (here taking using DVD installation disk as example), enter BIOS to set, and make the server boot from the CD.

2. The system enters the interface of "Welcome to Red Hat Enterprise Linux 6.1!". This includes the following items:

Install or upgrade an existing system

Install system with basic video driver

Rescue installed system

Boot from local driver

You can use up and down arrow key to select items. Here we default that this is the first installation. Select "Install or upgrade an existing system", and press [Enter] to

continue installation.

3. The system prompts Disc Found, To begin testing the media before installation press OK.

Choose Skip to skip the media test and start the installation.

Here select [Skip] to skip the disk detection and press [Enter] to continue the installation.

4. The installation program goes to “RED HAT ENTERPRISE LINUX 6” interface; click [Next] to continue the installation.

5. The installation program goes to “What language would you like to use during the installation process?” interface. Select to install language version of the operating system. Here we select “English (English)” for installation and click [Next] to continue.

6. The installation program enters “Select the appropriate keyboard for the system” interface. Please select keyboard type according to actual situation. Here we select “U.S. English” and click [Next] to continue the installation.

7. The installation program goes to: What type of devices will your installation involve?

Basic Storage Devices

Installs or upgrades to typical type of storage devices. If you’re not sure which option is right for you? This is probably it.

Specialized Storage Devices

Installs or upgrades to enterprise devices such as Storage Area Networks (SANs). This option will allow you to add Foe/Ischia/Zech disks and to filter out devices the installer should ignore.

Here we select Basic Storage Device, and click [Next] to continue the installation.

8. The system enters Please name this computer. The hostname identifies the computer on a network.

Please input the Hostname.

Here we also can select [Configure Network] on the left bottom of the window to configure the network. You can add or delete the network card to configure the network IP address. After finishing the network configuration, click [Next] to continue the installation.

9. The installation program goes to the time zone selection interface “Please select the nearest city in your time zone:”. Select “Asia/shanghai” and then click [Next] to continue the installation.

10. The installation program enters Root Password setting interface, set at least six figures as needed and click [Next] to continue the installation.

The root account is used for administering the system. Enter a password for the root user.

11. The installation program enters “Which type of installation would you like?” This is the installation selection interface, including:

Use All Space

Replace Existing Linux System(s)

Shrink Current System

Use Free Space

Create Custom Layout

This installation takes custom manual partition as an example, so select “Create Custom layout” and click [Next] to continue the installation.

12. The installation program enters the interface of selecting the hard disk to install. In the Data Storage Devices (to be mounted only) list, the system shows the detected storage device. Please select hard disk to install the system according to the actual demand and add this hard disk to “Install Target Devices”. Then select a hard disk as “Boot Loader”, and click [Next] to continue the installation.

13. When the installation program enters “Please Select A Device” partition creating interface, (if partition has been created on the hard disk, it will be displayed and you can delete it if you do not need it).

Double click the Free partition or other existing partitions in the hard disk, or click [Create] button at the lower right corner, and the system will pops up “Add Partition”.

① Create root partition (/) and boot partition: Select root partition in Mount point: /, select the hard disk to install the system in Allowable Drives window, input the Size (MB) of partition and click [OK] to finish the creating of root partition. Create the boot partition in the same way: /boot.

② Create a swap partition (Swap). Select “Swap” in File system Type, select the hard disk to install the system in Allowable Drives window, input the size (MB) of the swap partition (set according to the size of memory, if the memory is smaller than 512MB, set as twice of it. If the memory exceeds 512MB, you can set it as 2GB) and click [OK] to finish the creating of swap partition.

You can also create other partitions as needed, and click [Next] to continue the installation after the creation.

14. The system prompts window “Writing storage configuration to disk”.

The partitioning options you have selected will now be written to disk. Any data on deleted or reformatted partitions will be lost.

Select “Write changes to disk” to continue installation and the system begins to format hard disk partition.

15. The installation program enters [Boot Loader] setting interface, set as needed and click [Next] to continue the installation.

16. The system prompts: “The default installation of Red Hat Enterprise Linux is a basic server install. You can optionally select different sets of software now”.

Please select the type to install and the software package that needs customization according to actual demand, so select “Customize now” and click [Next] to continue the installation.

17. The installation program enters program package selection interface. Please select according to the actual demand. After confirming the selected software package to install, click [Next] to continue the installation.

Here we select the [Desktop] and [X Windows System] in Desktops and [Development tools] software package in [Development].

18. The installation program begins to build file system and copy files.

19. Entering “Congratulations, your Red Hat Enterprise Linux installation is complete.” interface indicates the success of installation. Then click [Reboot], and take out the installation CD. The system would reboot automatically.

20. The system reboots to enter “Welcome” interface; click [Forward] to continue the installation.

21. The installation program enters “License Agreement” interface. Select “Yes, I agree to the License Agreement” and click [Forward] to continue the installation.

22. The installation program enters “Set Up Software Updates” interface and click [Forward] to continue the installation.

23. The installation program enters “Create User” interface. Set user name and password to add user; click [Forward] to continue the installation.

24. The installation program enters “Date and time” interface, please set the right time and date, and click [Forward] to continue the installation.

25. The installation program enters Kdump setting interface, please set as needed and click [Finish] to finish the installation.

26. Input Username and Password to log in the system.

27. After the operating system installation, it will automatically load onboard network card driver. You can use the driver CD attached with the machine to update the network card manually.

(1) Insert Inspur driver CD into the optical drive; click the Terminal menu in Applications→System Tools; input the following in the windows:

```
#mount /dev/cdrom   /mnt
#cd  /mnt
#cd  driver/nic/linux/sv
#cp  igb-4.3.0.tar.gz  /tmp
#cd /tmp
#tar -zxvf igb-4.3.0.tar.gz
#cd  igb-4.3.0/src
#make install
#cd  /
#umount  /mnt
#reboot
```

Notes: “igb-4.3.0.tar.gz” is network card driver, and its version will be updated. When being installed, the actual version name in the attached driver CD shall prevail.)

(2) The system will automatically restart; please take out the driver CD.

(3) Log in the system, connect the network wires and configure the network.

Chapter 5 Common Problems and Trouble-shooting

This chapter focuses on the common problems and trouble-shooting of the server. If you are not sure about the cause of a failure and its removal method, please contact our customer service center for solution.

Notes: When replacing or installing hardware device for the server, you should disconnect the power cable from the server completely. It is recommended to use the anti-static wrist strap and to earth-connect the other end to provide electrostatic protection in dismounting the server.

5.1 Restarting Server

When a failure occurs, please try to restart the machine according to the following methods first.

Purpose	How to operate
Restart the software, clear up system memory and restart the operating system.	[Ctrl+Alt+Del]
Clear up system memory, self-check the POST again and restart the operating system.	Reset button
Cold boot again, switch off and restart the system power so that to clear up the system memory, to self-check the POST again, to restart the operating system and to power up all peripherals again.	Power button

5.2 Problems When Starting the Machine

Some problems often occur when the machine is started, generally due to incorrect hardware installation and configuration. You may find and solve the problems by the following methods.

5.2.1 System Can Not Be Powered on

After pressing the power button, the power light is not on and the system stays in non-electric state. Please try the following steps:

1. Check whether your power socket can supply power normally and the power cable is correctly connected.

2. Repeatedly press the power button to start the machine (pay attention not to exerting too much force).

3. Disconnect the power cable from the system and open the chassis to check.

4. Check the fastness of the cable connection and accessory plugging in the chassis.

5. Remove other external components other than Inspur's.

6. Pack the chassis, connect the power cable correctly and start the machine.

5.2.2 Monitor Has No Display

The server can be powered on (the host can start and run normally), but the monitor doesn't work:

1. Check the correctness and fastness of the signal cable and power cable connected to the monitor.

2. Make sure to power on the display.

3. Adjust the contrast and brightness of the monitor to confirm whether it can display or not.

4. Shut down the system and disconnect the power cable to check whether there is curve in the pin at the connecting end of the monitor signal cable and the host.

5. Find another monitor for test if possible.

6. If the machine is installed with components other than Inspur ones, please remove them first.

7. With the permission of Inspur technical support personnel, you may pull and plug RAM and clear CMOS for test.

5.2.3 Installation System Can't Find Hard Disk

1. When installing the system directly booted with the system CD, if it prompts that no hard disk can be found, please check the normality of the disk state and power-on self-check hard disk state.

2. If the power-on self check can detect the hard disk but the hard disk can't be detected when installing the system, it may be caused by the following conditions:

● If you are using the system CD to boot and install the operating system directly, the hard disk drive is generally added through the floppy driver or Inspur driver U disk. When using USB floppy driver to add the drive, please set the BIOS first and close the onboard floppy driver controller. When using Inspur driver U disk to add the drive, please connect Inspur driver U disk when starting the server.

● Please check whether the driver having been made is correct or not (the drive for external RAID card should be made directly from the attached RAID card driver CD) and whether there is fault in the floppy disk or Inspur driver U disk.

5.2.4 Keyboard and Mouse Do Not Work

1. Check whether the cable joint of the mouse and keyboard is plugged and connected correctly. Make sure the joint pin has no curve.

2. Check whether the mouse setting in the control panel of the operating system is correct or not.

3. Clean the scrolling and drive shaft of the mouse.

4. It is suggested that you use the keyboard and mouse tested for compatibility by Inspur group or replace with other keyboard and mouse for testing.

5.2.5 System Blue Screen, Halt or Restart

For blue screen, restart or halt of the machine in the utilization of the system, you may refer to the following measures:

1. If other external non-Inspur components or some application program software are installed before the fault, it is suggested removing it and going on to test your server.

2. Use the latest antivirus software for antivirus test.

3. It is suggested that you record the displayed information code for blue screen, such as: stop c000000218.....; stop: 0x0000007b. This kind of information reveals problems in the system. It is suggested that you reinstall it. For the installation process, you can refer to the user manual.

4. If all above operations failed to solve the problem, it is suggested that you backup the file winnt/minidump in disk C, and call the service center for support from professional technical engineers who may ask you to provide minidump file for further analysis on the cause for blue screen and halt. If there is no minidump folder in disk C, please refer to the following steps: right-click on My Computer, select [Property]→[advanced]→[startup and recovery], then select [settings], change [write debugging information] in the next page to “small RAM dump” and restart the machine. The system will produce minidump file automatically in the next blue screen.

5.2.6 Machine Alarm

If there’s machine alarm in startup or utilization process, please refer to the following measures:

1. If this happens after you plugged in some external board, you may need to pull off this device and to do another test. If the alarm goes off, it shows that your external board is incompatible with the machine. It is suggested not to use it any more; if the

alarm is still on, please go on referring to the following steps.

2. Locate the alarm sound:

● When the alarm sound is from the front of the chassis, usually we notice abnormal changes of the fault indicating light. There is the possibility of abnormal fans or hard disk module;

● If the alarm sound is from the rear of the chassis, please check whether a redundant power supply is configured or not and whether there is an abnormal status light of the power supply module or a module without power cable (when power alarm goes on, the shield switch can be pressed to stop it);

● If the alarm sound is in the chassis, the alarm may be from motherboard, RAID card or hard disk back plane. If it is also accompanied by no display on the monitor or power on faults, there is high possibility of something wrong with motherboard. You can try to pull or plug RAM or clear CMOS; if the starting self-check is normal and the alarm starts when the RAID card is under test, and there is abnormal array information, then it is likely that the RAID card has set off the alarm. There may be array abnormality; when the hard disk back plane alarms, there is always abnormal status light of the hard disk on the front panel, which can be used to help analysis.

3. After having collected the basic information, please feedback the detailed alarm information to Inspur technical support personnel in a timely manner. We will make further analysis and judgment and help you solve the problem as soon as possible.

5.3 Problems about Attached Ruijie Server Suite

When using attached Reijie server suite to conduct server management and system auto-installation, configuration change, factory settings change, BIOS settings change and other reasons may cause abnormity during using process. You can find and eliminate problems according to the following methods.

5.3.1 Prompt Unable to Get the Disk Size When Using Reijie to Guide System Installation

Please check whether the local hard disk and RAID are normal.

1. Onboard RAID configuration, it's need to confirm whether RAID mode under BIOS is enabled.

2. Offboard RAID configuration, please confirm whether RAID array is configured.

5.3.2 The Disk Size and Local Disk Capacity Are Inconsistent When Using Reijie to Guide System Installation

Please check whether there are external mobile devices (USB device, external disk array, tape library and so on). If the server is connected with USB flash drive, USB softdog, mobile HDD or other USB devices, please remove them first and then install the system; if the server is connected with storage devices, please disconnect the storage devices, and then use Reijie to install, otherwise, it may cause storage array abnormity and data lost.

5.3.3 The Machine Auto Reboots Repeatedly after Inserting System CD, When Reijie Boot Configuration Is Finished

1. Reijie CD system installation is developed based on genuine system CD directory structure, so if you use all-in-one system CD, please change to use a single system CD to install.

2. When Reijie boot configuration is finished, please operate according to Reijie boot prompt. If there is not prompt to insert system CD, please don't insert the system CD into CD driver; once system prompts to insert system CD, please don't intervene manually, system installation will complete automatically, otherwise, it may cause system installation abnormity.

5.3.4 Lose the Attached Reijie Server Suite CD or System Driver CD

Please login Inspur offlcial website and download the right version according to your machine model.

1. Reijie server suite download link:

http://www.inspur.com/downloads/channel_home/Downloads_sv_1.asp

2. System drivers download link:

http://www.inspur.com/downloads/channel_home/Downloads_sv.asp

5.4 Additional Notes

1. In order to guarantee the reliability of the system, it is suggested that you use the component of the relevant Model tested and authenticated by us when expanding and equipping components.

2. Please guarantee the fine electricity utilization environment of the server, normal voltage input and earth-connecting condition and temperature and humidity and so on within the normal range.

3. For special needs, when transferring the server, pay attention to avoiding the vibration and carry out in power off condition..

4. Solution for blurred screen when entering RAID card configuration interface

In this server, for some RAID card configuration (such as 2008 RAID card, 2108 RAID card, 9261 RAID card, 9211 SAS card configuration), when entering RAID card configuration interface, sometimes there is problem of blurred screen. It needs to follow the methods below: before entering RAID card configuration interface, firstly enter BIOS and then set Advanced→ Runtime Error Logging → Runtime Error Logging Support option to [Disabled]. After RAID card configuration is completed, set this option to [Enabled].

5. Instruction for SATA Mode option settings when installing some operating systems

When installing Suse Linux 11.1 operating systems and if using standard SATA optical drive for installing operating system, it needs entering BIOS and setting Advanced → SATA Configuration → SATA Mode option to [AHCI Mode] so as to support optical drive to install operating system.

6. Instructions of hot-swap PCIE slots

On the motherboard, PCIE_0 CPU1 slot and PCIE_1 CPU1 slot are hot-swappable, which supports online replacement of expansion card. When hot-swappable slot is configured with expansion card and if the indicator light is normally on, the expansion card in this slot works normally. If it needs to online replace the expansion card in this slot, press the switch of this hot-swappable slot. And then replace the expansion card in this slot after the indicator light is off. After the replacement is completed, again press the switch of the hot-swappable slot. After the indicator light is normally on, the expansion card works normally.

Some PCIE expansion card cannot support hot swapping operation very well. For details, please consult Inspur customer service center.

7. For more notices of our products, please refer to the FAQ for server in the official website of Inspur:

http://www.inspur.com/support/Channel_Home/support_sv.asp

5.5 Technical Support Information

During your using Inspur server, if there's any doubt or problem, please adopt the following solutions:

1. If you have any doubt on product configuration and detailed specification, please contact your supplier.

2. If there's any system problem occurred during your using the machine, please contact Inspur server customer service center directly. Please record the product serial number on your host chasis. Our technical support personnel will provide you solutions or carry out onsite repair after receiving your request.

3. Contact information of Inspur server customer service center:

Email: sv_str_pcs@inspur.com

Inspur server dirvers and product information download link:

http://www.inspur.com/support/Channel_Home/support_sv.asp

Chapter 6 Management Functions Introduction of Integrated management Card

This product integrates IPMI management card, by which the user can remote log in the server. The following will describe the application of management function that management controller integrates.

6.1 Management Chip BMC IP

Onboard IPMI management card IP can be checked and set in the menu of "Server Mgmt"→"BMC network configuration" →"BMC Sharelink Management Channel/ BMC Dedicated Management Channel" →"Station IP address" in the BIOS.

Notes:

BMC Sharelink Management Channel: refers to the multiplex management network interface, onboard Intel I350 network card 3.

BMC Dedicated Management Channel: refers to IPMI management dedicated interface.

Please set or view IP address according to the actual use of the network card.

If you reset IP address of IPMI card, only after saving and restarting the server or powering off (disconnecting the power) can you make it into normal use.

6.2 Remote Login

1. Remote Client System Requirements

The requirements of remote client system of GUI interface connecting to the server management chip through web browser are shown in the following table:

Requirements	Remote web control panel/client
Operation system	Support the operation system of Microsoft Internet Explorer browser
Browser plug-in module	Install Java SE Runtime Environment 6, Update 12 or higher version
TCP/IP network protocol stack	Support TCP/IP network protocol stack

The download address of browser plug-in module:

Java SE Runtime Environment:http://www.java.com/en/download/

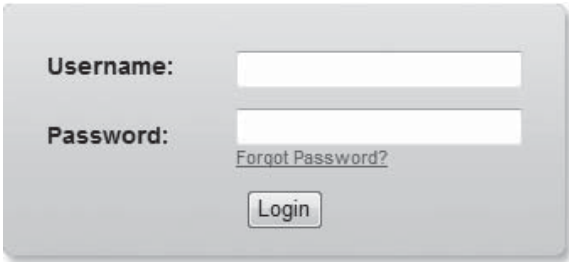
You can use Inspur driver CD to get and install browser plug-in module: enter

the java directory in the CD root directory (here is the Java SE Runtime Environment 6, Update 18 plug-in module based on Windows system) and directly install browser plug-in module.

Please install the browser plug-in module on the user end before log into the remote desktop.

2. Remote Login Method

Input IP address of BMC in the IP address bar of client browser, and then click [Enter]. The management log-in interface will appear, just as shown in the following picture.



Please input default Username and Password:

Username:admin

Password:admin

Notice: default Username and Password can conduct all module configurations and setting of permission. So for security reasons, it is recommended changing login password in time when you login.

6.3 Function Menu Introduction

The default display interface after logging in is as follows.



The following function menus can be found on the upper left corner of the interface: Dashboard, FRU Information, Server Health, Configuration, Remote Control and Maintenance.

In the upper right corner of the interface are user login name and user group displayed where the login user is. And the user can use shortcut menus such as Refresh (Refresh page), Print (print page), Logout (cancellation), simplified Chinese (language switching), etc.

1. Dashboard menu

In this menu, the information of management chip Firmware version, modification time and MAC address, etc. can be viewed.

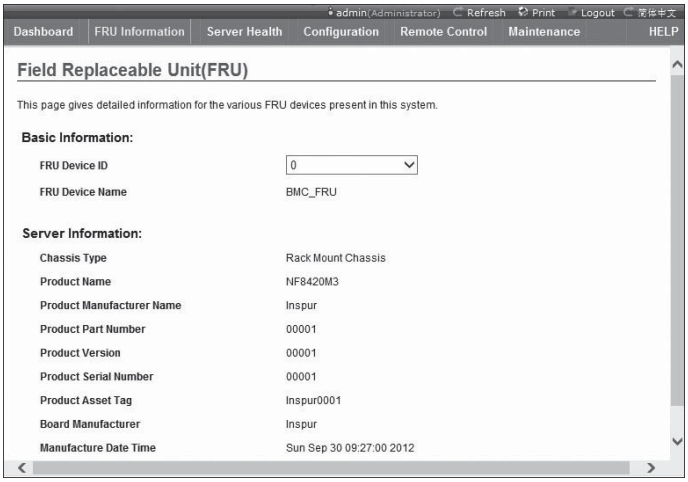
Click [Edit] button behind Network Information to enter network settings interface. And set IP address and gateway as well as other information.

Click [Launch] behind Remote Control to log in console. When using, if prompted to install Jviewer browser, please install according to the prompt.

Notes: If external graphics card is used, it is unable to use the [Launch] button to log into the console.

2. FRU Information menu

This menu displays FRU Information, including Basic Information and Server Information two parts. Basic Information shows ID number and names of FRU device. Server Information displays server whole machine's type, name, manufacturer and other information. Following are the detailed information:



3. Server Health menu

In this menu, data information relating to server health including [Sensor Readings], [Event Log] and [System and Audit Log] can be checked.

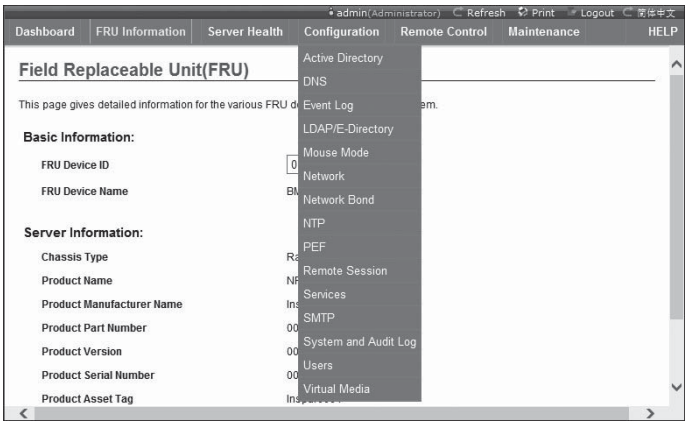
① Sensor Readings menu: shows all Sensor values, which are mainly

temperature, voltage and fan speed. It can refresh and display according to category.

② Event Log menu: displays sensor events, BIOS events, system management software events, OEM events and remote console software event logs. It can display according to category or display uniformly. The user can view logs anytime and also can clear logs.

③ System and Audit Log menu: displays system log and check Log. System log needs displaying according to category.

4. Configuration menu



Configuration menu is shown in picture above. The following will introduce the commonly used menus.

① Mouse Mode menu: set mouse mode.

Set Mode to Absolute (Recommended when server OS is Windows): the absolute mode mouse can switch freely between remote picture and local picture.

Set Mode to Relative (Recommended when server OS is Linux): the relative mode mouse can switch between remote picture and local picture by selecting [Alt]+[M].

② Network menu: set network. Please change IP address or select DHCP according to needs.

③ NTP menu: set date and time to be synchronous with time server or set at will. If the remote management needs to choose time server to be synchronization, please input address of time synchronization server.

④ Remote Session menu: set KVM or data to be encrypted or not during the next redirection as well as the loading method of virtual media.

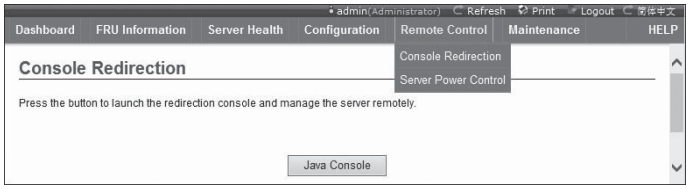
⑤ SMTP menu: set SMTP server's IP address as well as user name and

password.

⑥ User menu: set user. And be able to add, edit and remove users.

The username should start with English letters and have a character size within 4~32 and a password of at least 8 characters size.

5. Remote Control menu



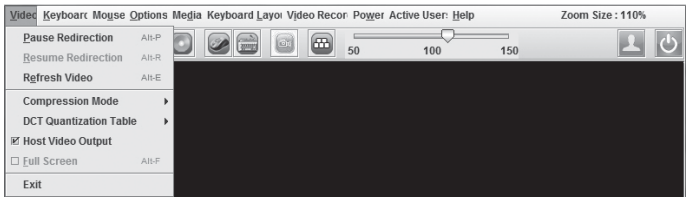
This function menu allows you to perform various remote operations on the server, including operating remote console, system switch and other control operations.

① Console Redirection menu: log in console.

After choosing this menu, and click [Java Console] button, the system will log in remote desktop. When using, if prompted to install Jviewer browser, please install according to the prompt.

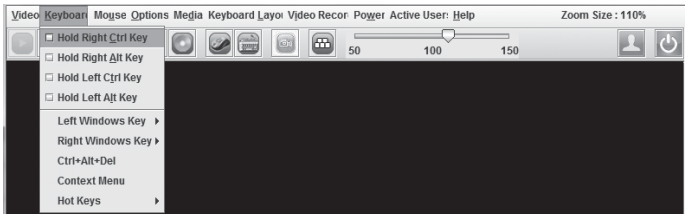
Notes: If external graphics card is used, it is unable to use the [Java Console] button to log into the console.

A. Remote desktop: Video menu



Menu	Function
Pause Redirection	Pause remote desktop display
Resume Redirection	Resume remote desktop display
Refresh Video	Refresh remote desktop display
Compression Mode	Compression mode setting
Dct Quantization Table	Remote desktop display quantization setting
Host Video Output	Open or close host video output display
Full Screen	Full screen display of remote desktop
Exit	Exit remote desktop

B. Remote desktop: Keyboard menu



Menu	Function
Hold Right Ctrl Key	Select this option, equal to click the “Ctrl” key on the right side of the keyboard when operating.
Hold Right Alt Key	Select this option, equal to click the “Alt” key on the right side of the keyboard when operating.
Hold Left Ctrl Key	Select this option, equal to click the “Ctrl” key on the left side of the keyboard when operating.
Hold Left Alt Key	Select this option, equal to click the “Alt” key on the left side of the keyboard when operating.
Left Windows Key	Selecting this option will appear “Hold down” and “Press and Release”. It stands for press down or release Windows key on the left side of the keyboard
Right Windows Key	Selecting this option will appear “Hold down” and “Press and Release”. It stands for press down or release Windows key on the right side of the keyboard.
Ctrl+Alt+Del	Select this option, equal to press “Alt+Ctrl+Del”.
Context Menu	Shortcut menu
Hot Keys	Selecting this option can add hot keys based on actual need.

Notes: When configuring RAID through remote console, it requires the following three ways to enter the RAID configuration interface (take combination keys Ctrl + H for example):

① Check Hold Left Ctrl Key option in remote desktop Keyboard menu, and then click key H on the Keyboard;

② Select key LCTRL at the lower right corner of remote desktop, and then click key H on the keyboard;

③ Through SoftKeyboard in remote desktop Keyboard Layout menu, click “CTRL + H” on the soft keyboard.

C. Remote desktop: Mouse menu



Menu	Function
Show Cursor	Select this option to display local mouse and redirection mouse on remote desktop at the same time.
Mouse Mode	Select this option to set mouse mode.

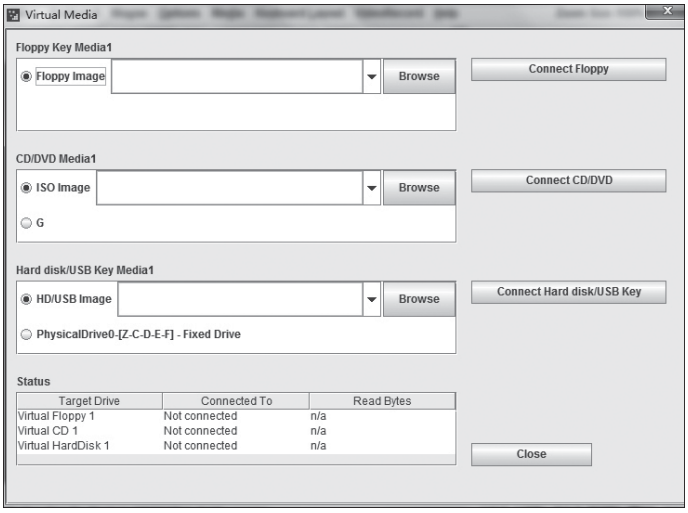
D. Remote desktop: Options menu



Menu	Function
Bandwidth	Select this item to set displayed bandwidth
Keyboard/Mouse Encryption	Encryption configuration for keyboard and mouse
Zoom	Select this item to magnify or minify the window of remote desktop, [Zoom In] for magnifying and [Zoom out] for minifying.

E. Remote desktop: Media menu

Click [Media] menu. It will appear [Virtual Media Wizard] window. In this window, the user can load client-side floppy disk image, CD image and CD drive, as is shown in figure below:



Select image type to load. If to load floppy disk image, please select [Floppy Image]. And if to load CD image, please select [ISO Image], then click [Browse] to select image location, and click the corresponding [Connect] to complete loading image.

If it is bootable CD or system installation disk in optical drive of synchronous client, set client CD drive as the first startup sequence in server BIOS settings. Installation of ISO file is the same with remote CDROM installation, which needs to set startup sequence in server BIOS.

F. Remote desktop: Keyboard Layout menu

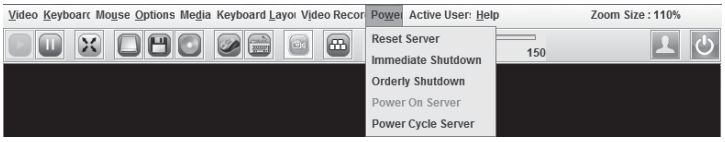
Menu	Function
Auto Detect	Select this option and it will automatically detect the keyboard type.
SoftKeyboard	Use soft keyboard. There are keyboard types of many kinds of languages for choice.

G. Remote desktop: VideoRecord menu

Select [VideoRecord] menu to set options related with video record.

Menu	Function
Start Record	Select this option and start video record.
Stop Record	Select this option and stop video record.
Settings	This option is used to set video record duration and storage directory. Only after the directory is set can the video record begin.

H. Remote desktop: Power menu



Menu	Function
Reset Server	Select this option to reset server
Immediate Shutdown	Select this option to shutdown server immediately
Orderly Shutdown	Select this option to shutdown server orderly
Power On Server	Select this option to power on server
Power Cycle Server	Select this option to power cycle server

I. Remote desktop: Active User

Click [Active User] menu to view the user name and IP address of the remote login currently.

J. Remote desktop: Help menu

Click [Help] menu. A drop-down menu [About JViewer] appears. Select this option, and redirection browser version will display.

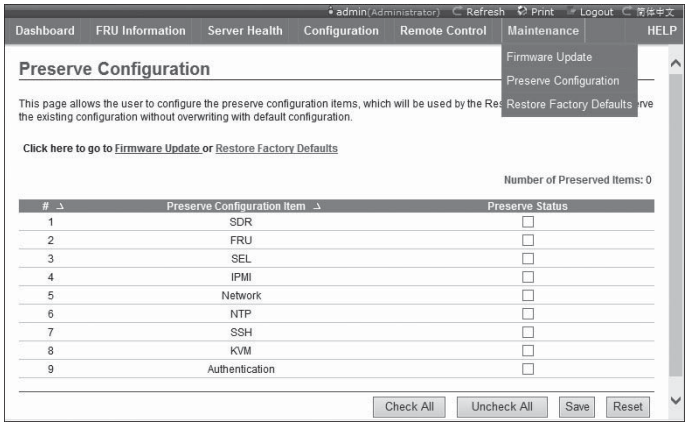
② Server Power Control Menu

Select Server Power Control menu and enter the interface shown in the following figure:



Server Power Control menu: displays the current power state of server, providing reset server, power off server immediately, power off server orderly, power on server and power cycle server. After selecting the option to execute, click [Perform Action] to execute.

6. Maintenance menu



This function menu can realize remote update of BMC firmware and restart of IPMI card.

① Firmware Update menu

This menu can realize remote update of IPMI management card Firmware. We recommend users not updating it by themselves. If it really needs to be updated, the update file must have been approved by us.

② Preserve Configuration

This menu can realize that the option values in the drop-down box can be selected to remain unchanged before loading factory default values. The selected option values will not be changed because of loading factory default values.

③ Restore Factory Defaults

This menu is used to load factory default values of IPMI management card.

Chapter 7 Server Installation Guide

The Guide will help you to understand how to install Inspur Yingxin NF8420M3 server in Inspur server cabinet or compatible standard industrial cabinet.

7.1 Cabinet Preparation

Angle rail adjustment: in order to guarantee the server can be installed in the cabinet normally, the clearance between the front and rear part of the angle rail should be adjusted to be at least larger than 750mm; inner width between left angle rail and right angle rail should be larger than 480mm, the space between cabinet door and front angle rail larger than 60mm.

Leveling cabinet: the cabinet must be installed in a stable place. Adjust the four support feet at the bottom of the cabinet to make the cabinet stable on the ground. Meanwhile, dismount the cabinet door for convenience of guide rail installation.

Cabinet grounding: to avoid electric shock, a grounding device must be installed in the cabinet. If the server power line is installed in the power socket, which constitutes a portion of the cabinet, grounding should be properly provided for the cabinet. If the server power line is inserted into the power socket in the wall, the grounding device in the power socket just provides grounding for the server, and then proper grounding protection for cabinet and other internal devices should be provided. We recommend you to use the cabinet specially designed by Inspur for the server. If so, the internal of the cabinet should be already grounded. Please don't change the ground joint in the cabinet unless it is of absolute necessity.

Temperature: if installed in the cabinet, the operation and working temperature of the server can't be lower than 5℃ and higher than 35℃ .

Ventilation: the cabinet used by server cluster must provide enough wind current for the front of the server to ventilate, and must ensure 4100Btu heat discharge per hour. The cabinet selected by the cluster and ventilation condition must correspond with requirements of the server.

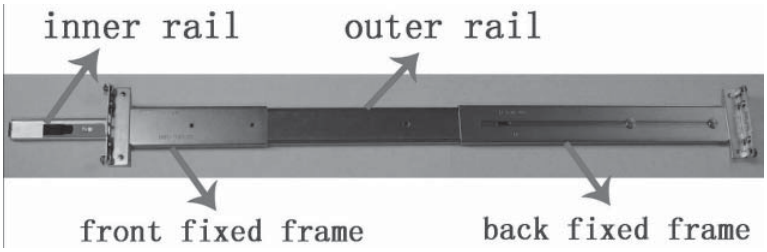
Front and back angle rail spacing: before the rails installation, please adjust the space between cabinet front and back angle rail (mobile rail) according to the depth of the server.

7.2 Components Needed in Server Installation

Accompanying slide rail suit of 4U server includes the following objects:

1. Slide rail 1 suite (one for left and one for right rail)
2. Fixing screw 1 wrap

The rail consists of inner rail, outer rail and fixed frame, just as shown in (picture 1).

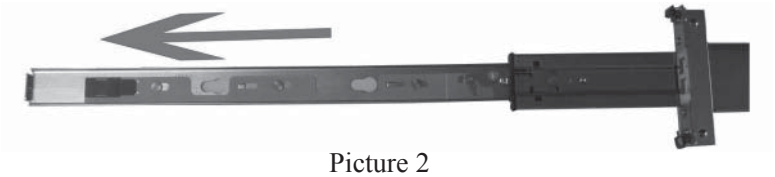


Picture 1

7.3 Installation of Inner Rail

Please install the inner rail to the chassis according to the following description.

1. Firstly, take out the inner rail from the slide rail: hold the front fixed frame of the whole slide rail and pull outward the inner rail, just as shown in (picture 2).



Picture 2

2. When the inner rail can't be pulled any more, stir the bayonet lock shown in (picture 3) along the direction of arrow, and then pull outward the inner rail completely with even strength.



Picture 3

3. Fix the inner rail on the five screws on the chassis, the fix position shown in (picture 4).



Picture 4

4. Make the smooth side of the inner rail confront the side of chassis, get the holes on the inner rail and screws on chassis corresponding with each other well, let the inner rail cling to the chassis closely, then push the inner rail in the direction (rear of the machine) of red arrows shown in (picture 5), and clamp tightly the inner rail with studs.

▲ Special notice: when push the inner rail in the direction of red arrows, if the inner rail can't be clamped into the stud, slightly loose the five screws and then push the inner rail again. After the inner rail is clamped tightly, screw down.



Picture 5

5. Repeat step 1~4, install the other inner rail in the corresponding position at the other side of the cabinet.

7.4 Install Slide Rail into Cabinet

1. Make sure the installation location of the slide rail on the cabinet; firstly, let the bearing studs of the front frame pass through the fixed hole of the cabinet's angle rail (picture 6). Based on the depth of the cabinet, properly adjust the back frame and fix the bearing studs of the back frame to the angle rail at the back of the cabinet. (**Notice: the front and back frame must be guaranteed at the same level.**)



Picture 6

In picture 6, 1 refers to the first hole location: bearing stud,

2 refers to the second hole location: fixed rail screw,

3 refers to the third hole location: fixed rail screw,

4 refers to the fourth hole location: bearing stud.

2. Find out the screw accompanied with slide rail (picture 7); fix well the second hole (picture 6) on the front and back frame corresponding to angle rail. Fix well the third hole (picture 6) on the back frame corresponding to angle rail.



Picture 7

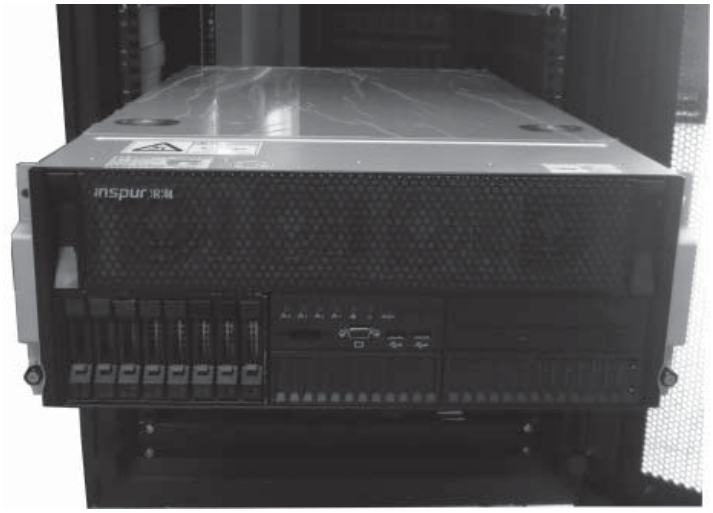
3. Repeat the above operation; install the other slide rail to the cabinet.

7.5 Install the Server to Cabinet

1. Raise the server and carry it close to the cabinet, and align the back of the server with the front of the cabinet.

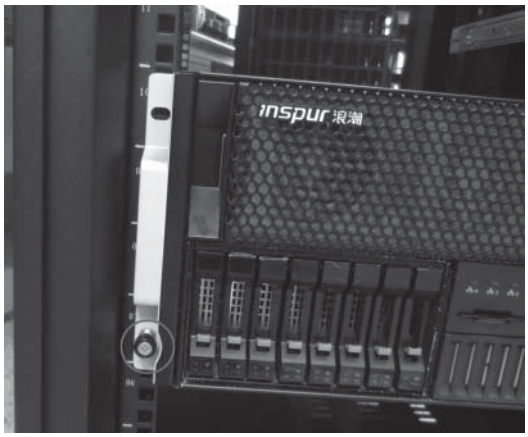
2. Clamp the inner rail at both sides of the server into the outer rail groove of the cabinet (the sliding bead of the outer rail must be moved to the front end of the outer rail).

3. Refer to (picture 8), keep the server horizontal and push it steadily into the cabinet. If it is blocked during the pushing, pull forward the bayonet lock at the front of the inner rail, and at the same time push it into the cabinet.



Picture 8

4. Use the attached screws on left and right handles of the chassis to fix the server into the cabinet through the third hole (picture 9) in the front of slide rail corresponding to angle rail.



Picture 9