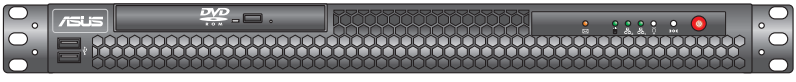
RS100-E7/PI2

Configuration Guide



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First Edition V1
July 2011

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Contents

Revision history III
Safety information IV

Chapter 1: Product introduction
1.1 Key features 1-2
1.2 System overview 1-3
1.3 Front panel features 1-4
1.4 Rear panel features 1-4
1.5 System specifications 1-5

Chapter 2: Components
2.1 Upgrading CPU and CPU heatsink 2-2
2.2 Upgrading system memory 2-3
2.3 Upgrading hard disk drives 2-4
2.4 Installing ASUS Server Management Board 2-6
2.5 Rackmount rail kit 2-8
2.6 OS support list 2-9

Revision history

Revision	Revision history	Date
V1	First release of RS100-E7/PI2 configuration guide	July 2011

Safety information

Electrical Safety

- Before installing or removing signal cables, ensure that the power cables for the system unit and all attached devices are unplugged.
- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing any additional devices to or from the system, contact a qualified service technician or your dealer. Ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you service.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your dealer.

Operation Safety

- Servicing of this product or units is to be performed by trained service personnel only.
- Before operating the server, carefully read all the manuals included with the server package.
- Before using the server, ensure all cables are correctly connected and the power cables are not damaged. If any damage is detected, contact your dealer as soon as possible.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Place the server on a stable surface.

This product is equipped with a three-wire power cable and plug for the user's safety. Use the power cable with a properly grounded electrical outlet to avoid electrical shock.

Lithium-Ion Battery Warning

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

CD-ROM Drive Safety Warning

CLASS 1 LASER PRODUCT

Heavy System

CAUTION! This server system is heavy. Ask for assistance when moving or carrying the system.

Chapter 1

This chapter describes the key features of RS100-E7/PI2. It includes the product overview and general specifications.

Product introduction

1.1 Key features

Ultra-Quiet Rack Server

- Provides excellent acoustic control (under 29dBA), which is even lower than a projector.
- Facilitate customers with quiet working environment.

Excellent Thermal Design

- Heat-pipe for cooing efficiency.
- Lower acoustic level and power saving.

Maximin Storage

- Highly compacted size of 15” depth for space saving.
- Two 3.5 HDD Supported with RAID.

Flexible Rack Selections

- Short Chassis Can Widen Your Selections on Rack and Cabinet.
- More Capacity in Data Center with Short Rack.
- Not only save your cabinet space, but increase density on cabinet

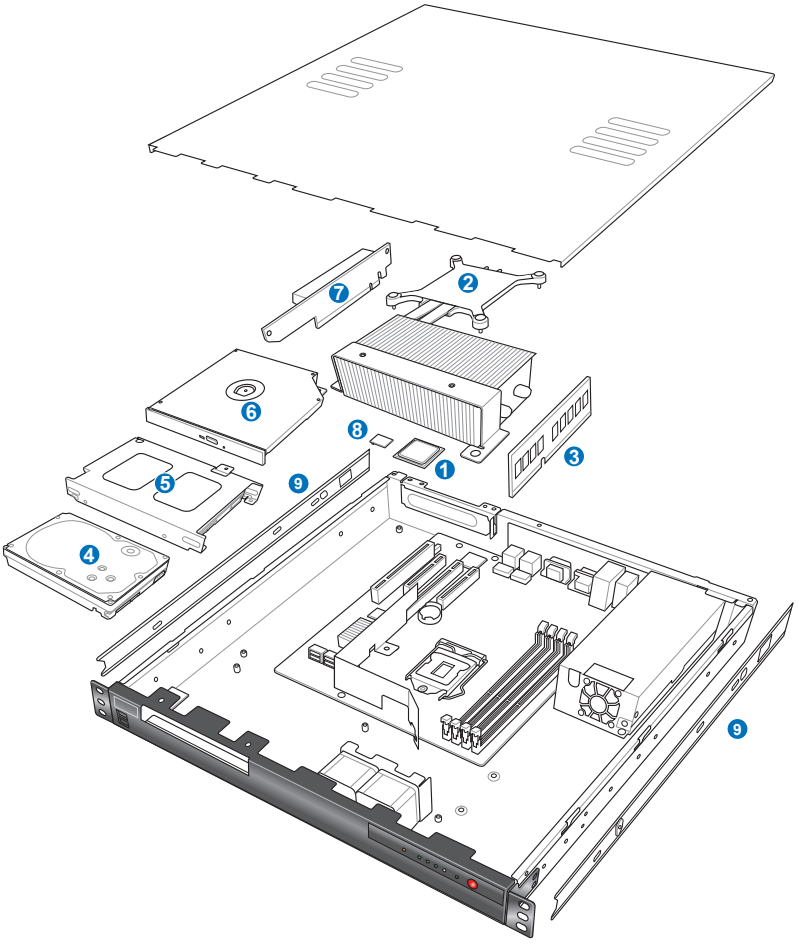
Remote Management Solution

- Easy maintenance, friendly GUI, 7x24 real time management.

Energy saving

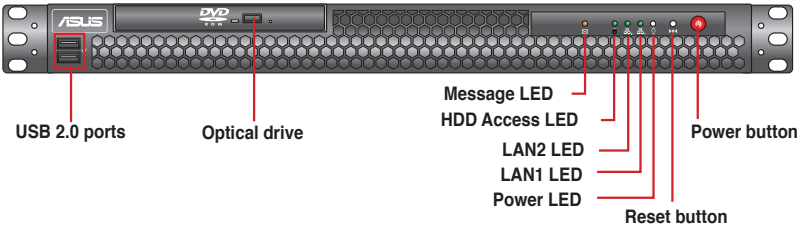
- 80Plus PSU for optimal power efficiency.
- High power efficiency fan.
- Intelligent fan control technology.
- ASUS proprietary CPU heat-pipe.

1.2 System overview



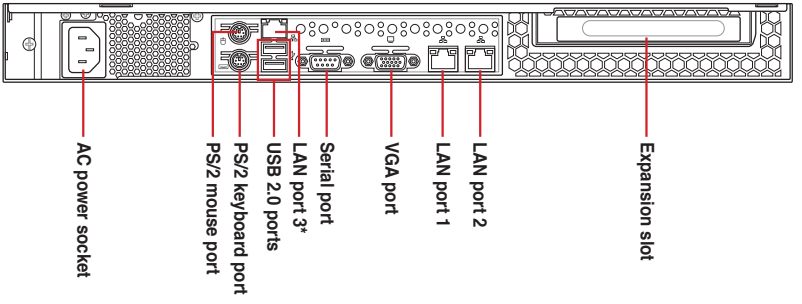
Items	Items
1. Central processing unit (CPU)	6. Optical disk drive
2. CPU heatsink	7. Riser card
3. System memory	8. ASUS Server management board (optional)
4. Hard disk drives	9. Rackmount rail kit (optional)
5. HDD bracket	

1.3 Front panel features



Turn off the system power and detach the power supply before removing or replacing any system component.

1.4 Rear panel features



- The ports for the PS/2 keyboard, PS/2 mouse, USB, VGA, and Gigabit LAN do not appear on the rear panel if motherboard is not present.
- *The port is for ASUS ASMB4-iKVM controller card only.

1.5 System specifications

Model Name		RS100-E7/PI2
Processor / System Bus		1 x Socket LGA1155 Intel® Xeon® E3-1200 Processor Family Intel® CoreTM i3-2100 Processor Family
Core Logic		Intel® C204 Chipset
ASUS Features	Smart Fan	√
	ASWM2.0	√
Memory	Total Slots	4 (2 Channels)
	Capacity	Maximum up to 32GB Do not support R-DIMM and non ECC U-DIMM
	Memory Type	DDR3 1333 / 1066 Unbuffered DIMM with ECC
	Memory Size	1 GB, 2GB, 4GB, 8GB
Expansion Slots	Total PCI/PCI-X/ PCI-E Slots	1
	Slot Type	1 x PCI-E 2.0 x16 slot (x16 link) (Full-Height/HL)
Storage		2 x SATA3 6Gb/s Intel® C204 (for Windows only) - Supports software RAID 0 & 1
HDD Bays	I = internal A or S = hot-swappable	2 x Internal 3.5” SATA2 HDD Bays
Networking	LAN	2 x Intel® 82574L + 1 x Mgmt LAN
Graphic	VGA	Aspeed® AST2050 16MB
Auxiliary Storage FDD / CD / DVD		1 x Slim-type Optical Device Bay (Options: No ODD / DVD-ROM / DVD-RW)
Onboard I/O		1 x External Serial Port 3 x RJ-45 ports (1 for ASMB5-iKVM) 4 x USB 2.0 ports (Front x 2, Rear x 2) 1 x VGA port 1 x PS/2 keyboard port 1 x PS/2 mouse port

(continued on the next page)

OS Support		Windows® Server 2008 R2 Windows® Server 2008 Enterprise 32/64-bit Windows® Server 2003 R2 Enterprise 32/64-bit RedHat® Enterprise Linux AS5.5/6.0 32/64-bit SuSE® Linux Enterprise Server 10 SP3/11 32/64-bit (Subject to change without any notice)
Anti-virus Software		Optional anti-virus CD Pack
Management Solution	**Out of Band Remote Hardware**	Optional ASMB5-iKVM for KVM-over-IP support
	Software	ASUS ASWM Enterprise®
Net Weight Kg (CPU, DRAM & HDD not inclu ded)		6.5 Kg
Dimension (DD x WW x HH)		380mm x 429.6mm x 43.2mm
Power Supply		220W Single Power Supply
Power Rating		Input: 100-240Vac, 4-2A, 50-60Hz, Class I
Environment		Operation temperature: 10°C–35°C / Non operation temperature: -40°C–70°C Non operation humidity: 20%–90% (Non-condensing)

***Specifications are subject to change without notice.**

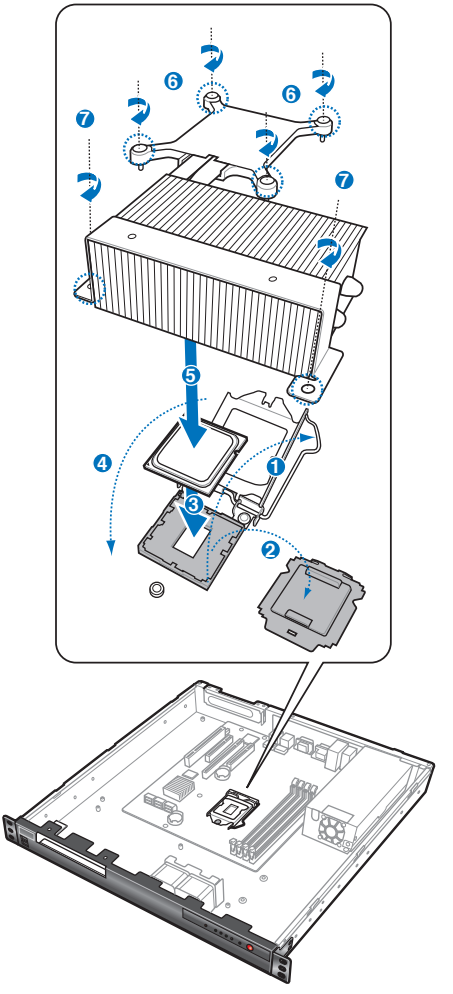
Chapter 2

This chapter lists the key components and optional accessories for the server system.

Components

2.1 Upgrading CPU and CPU heatsink

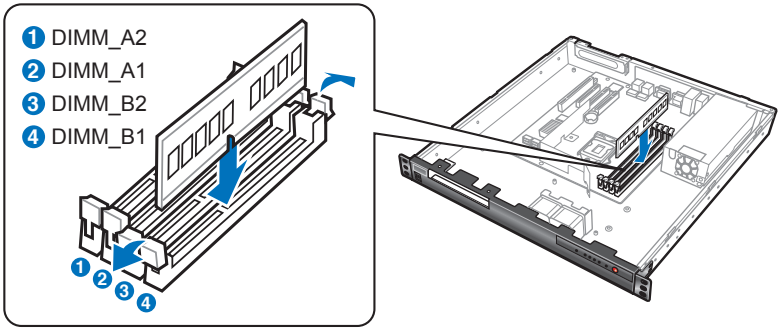
The ASUS RS100-E7/PI2 supports one Dual-core / Quad-core Intel® LGA1155 Xeon® series processor.



Order P/N	Description
90-S000U09Y1T (single pack)	Quad Core Intel Xeon E3-1220 3.1G
90-S000U0A21T (single pack)	Quad Core Intel Xeon E3-1230 3.1G
90-S000U0A41T (single pack)	Quad Core Intel Xeon E3-1240 3.1G
90-S000U0A71T (single pack)	Quad Core Intel Xeon E3-1270 3.1G
90-S000U0A91T (single pack)	Quad Core Intel Xeon E3-1280 3.1G

2.2 Upgrading system memory

The motherboard comes with four (4) Double Data Rate 3 (DDR3) Dual Inline Memory Modules (DIMM) slots.



Recommended memory configurations

UDIMM				
DIMM Slot Per Channel	DIMM Populated per Channel	DIMM Type	Speed	Rank per DIMM
2	1	Unbuffered DDR3 ECC	1066/1333	Single Rank, Dual Rank
2	2	Unbuffered DDR3 ECC	1066/1333	Single Rank, Dual Rank

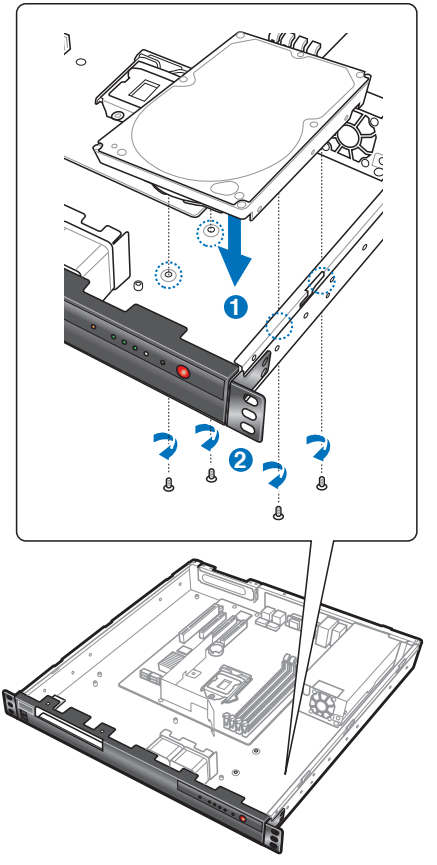
Order P/N	Description
90-S000I05L0T	DDR3 1333 ECC UNB 1G Single Pack
90-S000I05M0T	DDR3 1333 ECC UNB 2G Single Pack
90-S000I0570T	DDR3 1333 ECC UNB 4G Single Pack

2.3 Upgrading hard disk drives

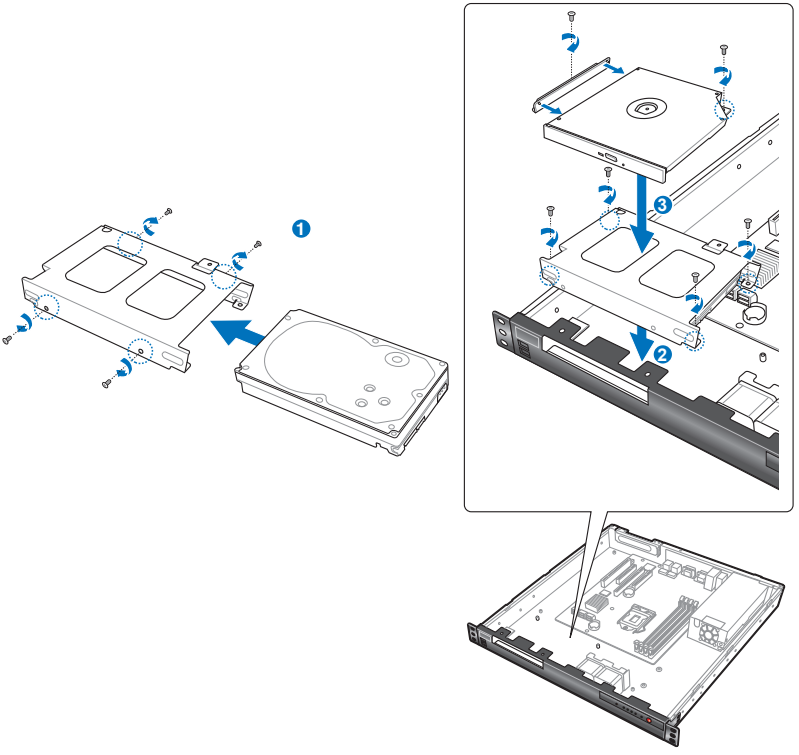
The system supports two SATAII/SAS hard disk drives.

We recommend that you install identical drives of the same model and capacity for RAID configuration.

Installing a hard disk drive to the HDD tray 1



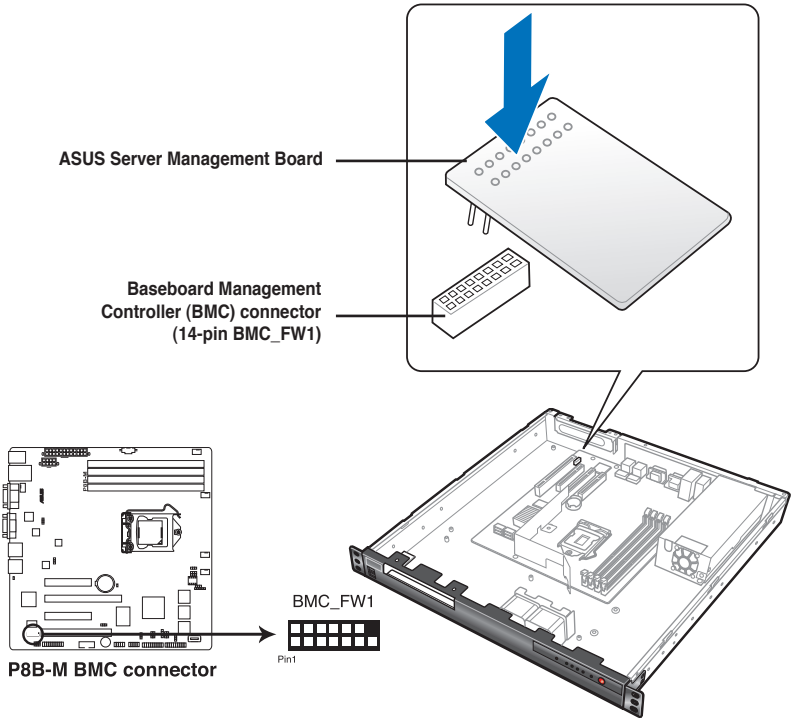
Installing a hard disk drive to the HDD tray 2



Order P/N	Description
90-S000H6560T	SATA2 500G 7200rpm with tray (single pack)
90-S000H6570T	SATA2 1TB 7200rpm with tray (single pack)
90-S000H65D1T	SATA3 500G 7200rpm with tray (single pack)
90-S000H65C1T	SATA3 750G 7200rpm with tray (single pack)
90-S000H65B1T	SATA3 1TB 7200rpm with tray (single pack)
90-S000H64R0T	SAS 6G 300G 15Krpm with tray (single pack)
90-S000H64S0T	SAS 6G 450G 15Krpm with tray (single pack)
90-S000H64T0T	SAS 6G 600G 15Krpm with tray (single pack)

2.4 Installing ASUS Server Management Board

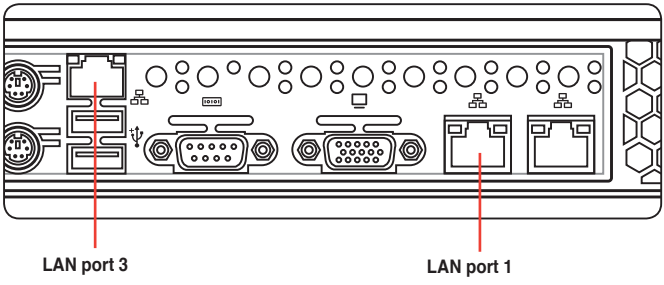
ASUS Server Management Board is an Intelligent Platform Management Interface (IPMI) 2.0-compliant board that allows users to monitor, control and manage a remote server from the local or central server in local area network (LAN).



ASMB5-iKVM

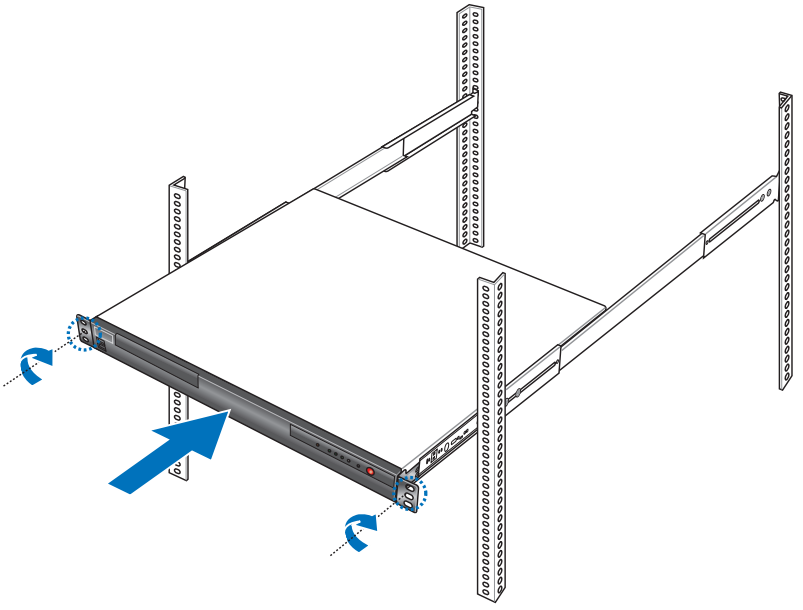
- Remote real-time access to servers with full control by keyboard, video monitor and mouse (KVM) of a single local computer from anywhere at any time. In addition, KVM function is based on BIOS-level access, therefore, even the server OS is down, the KVM module can still work to provide around-the-clock remote monitor and diagnosis through GUI (Web-based Graphical User Interface).
- Advanced server management functions including “remote power on/off/reset”, “remote hardware health monitoring” and “system event log”.
- Allows administrators to share the date saved in a local drive (floppy, CD/DVD-ROM, flash device, HDD) to target servers, which makes data-sharing convenient.

We recommend to use LAN port 3 (dedicated LAN) or LAN port 1 (shared LAN) for server management.



Order P/N	Description
90-C1SD80-00UAN00Z	ASMB5-iKVM Module (6 in 1)

2.5 Rackmount rail kit



2.6 OS support list

Operating System	Version
Microsoft Windows	Windows Server 2003 Standard/Enterprise 32/64 Edition SP2 Windows Server 2008 Standard/enterprise 32/64 Edition Windows Server 2008 Foundation 32/64 Windows Vista SP1 (Installation Only) Windows XP Professional SP3 (Installation Only)
Red Hat Enterprise Linux	RHEL AS 4.0 UP7 32/64 bit RHEL AS 5.0 UP3 32/64 bit
SuSE Linux Enterprise Server	SLES 10 SP3 32/64 bit SLES 11 32/64 bit
Linux	Fedora Core 10 (Installation Only) Free BSD 7.1 (Installation Only)
Virtualization	VMWare ESX4.0 VMWare ESX4.0i

Order P/N	Description
90-S00SW7140T	Windows® Server 2008 STD 64-bit ENG
90-S00SW7150T	Windows® Server 2008 STD 64-bit TCH