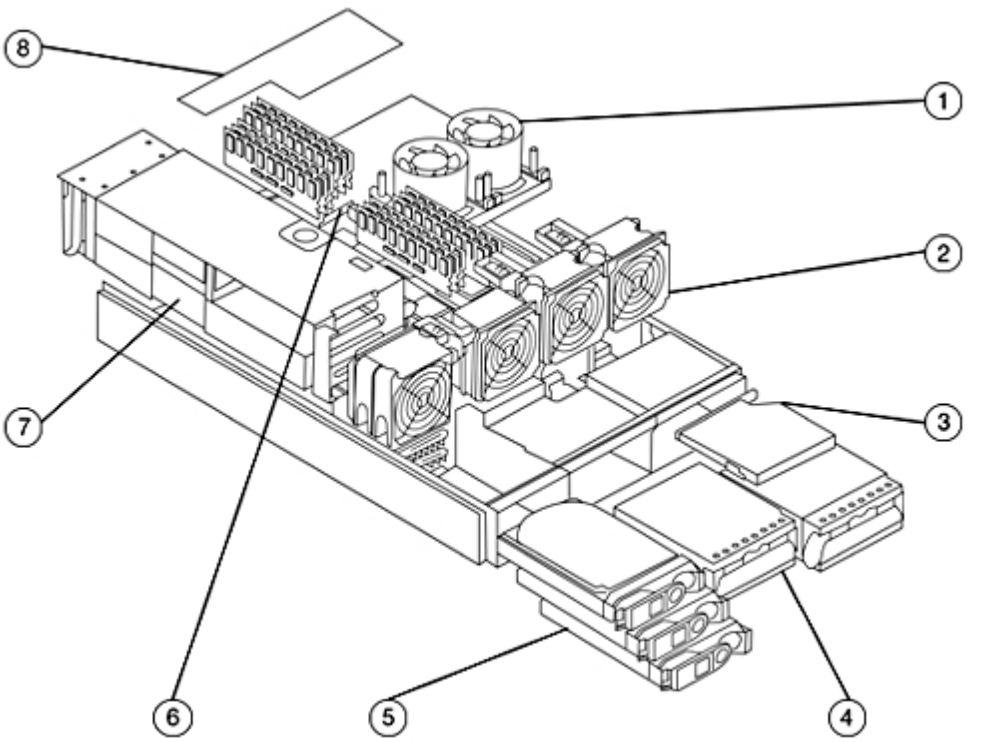
Overview



1. Itanium 2 CPUs
2. Hot Swap Fans
3. DVD-ROM
4. Hot Swap Power Supplies
5. Hot Plug Disk Drives
6. 12 DDR Memory DIMMS
7. 4 PCI-X I/O Slots
8. Management Processor

At A Glance

rx2600 Server Product Numbers

- Server and one 1.3 GHz/3 MB processor/one core A6870B
- Server and one 1.5 GHz/6 MB processor/one core A6873B
- Server and one 1.0 GHz/1.5 MB processor/one core AB323A
- Server and one 1.4 GHz/1.5 MB processor/one core AB324A

Standard System Features

Overview

- Four Operating System support: HP UX 11i version 2, Windows Server 2003 Enterprise Edition, Linux, and OpenVMS V8.2 (minimum version)
- Dual-channel Ultra320 SCSI controller, 2 internal disks on one channel, 1 internal disk on a second channel
- External Ultra320 SCSI port
- 10/100/1000Base-TX LAN (auto speed sensing, RJ-45 connector)
- 10/100Base-TX LAN (auto speed sensing, wake-on capability, RJ-45 connector)
- Management Processor for remote management and HA monitoring
- Telnet and web console via 10/100Base-TX management LAN (RJ-45 connector)
- One general purpose RS 232 serial ports
- Three RS 232 serial ports linked to the management processor (multiplexed from a single DB 25 port); one general purpose, one remote and one local console.
- Factory integration of processors, memory, disk drives, removable media, and I/O cards
- Rackmountable into 19-inch cabinets
- Optional stand-alone pedestal mount
- One-year warranty with next business day on-site

Standard Features

Minimum System

- One 64 bit Itanium 2 processor: Either 1.0 GHz/1.5 MB cache, 1.4 GHz/1.5 MB cache, 1.3 GHz/3 MB cache or 1.5 GHz/6 MB cache
- 1 GB PC2100 ECC Registered DDR266A SDRAM (4×256MB DIMMs)
- One internal DVD for OpenVMS and Windows
- One power supply

Maximum Server Capacities

- Two 64-bit Itanium 2 processors: either 1.0-GHz/1.5-MB cache, 1.4-GHz/1.5-MB cache, 1.3-GHz/3-MB cache or 1.5-GHz/6-MB cache
- 24-GB PC2100 ECC Registered DDR266A SDRAM (12×2GB DIMMs)
- Two Hotswap power supplies, providing N+1 protection for power supplies and power input
- Four PCI-X/PCI IO adapter cards
- One internal DVD ROM or CD-RW/DVD-ROM combo drive
- Three internal hot-plug LVD SCSI disks

Standard System Features

- Three Operating System support: HP UX 11i version 2, Windows Server 2003 Enterprise Edition, and Linux
- Dual-channel Ultra320 SCSI controller, 2 internal disks on one channel, 1 internal disk on a second channel
- External Ultra320 SCSI port
- 10/100/1000Base-TX LAN (auto speed sensing, RJ-45 connector)
- 10/100Base-TX LAN (auto speed sensing, wake-on capability, RJ-45 connector)
- Management Processor for remote management and HA monitoring
- Telnet and web console via 10/100Base-TX management LAN (RJ-45 connector)
- One general purpose RS 232 serial ports
- Three RS 232 serial ports linked to the management processor (multiplexed from a single DB 25 port); one general purpose, one remote and one local console.
- Factory integration of processors, memory, disk drives, removable media, and I/O cards
- Rackmountable into 19-inch cabinets
- Optional stand-alone pedestal mount
- One-year warranty with next business day on-site

High Availability

- N+1 Hot swap cooling
- One Hot swap power supply standard-optional second hot swap power supply for N+1 protection
- On-line memory page deallocation
- ECC protected DDR memory
- Memory chip spare to overcome single DRAM chip failures
- Dynamic Processor resilience and deallocation
- UPS power management
- Hot Plug internal disks
- Two independent Ultra SCSI channels to internal disks for mirroring across disks and channels
- Journal file system for HP-UX
- Auto reboot
- HP MC/ServiceGuard for HP-UX
- Microsoft Windows Cluster Service
- HP ServiceGuard Extension for RAC for HP-UX
- ServiceGuard Manager for HP-UX
- Insight Manager 7 – proactive fault management
- EMS HA Monitors for HP-UX
- ECM Toolkit for HP-UX
- HP Surestore AutoPath for HP-UX

Standard Features

- MirrorDisk for HP-UX
- OpenVMS Clusters

Security

- Separate LAN for system management
- Password protection on console port
- Disablement of remote console ports
- SSL encryption on web console

Manageability

- HP Ignite-UX for installation and deployment of the operating system
- HP Software Distributor-UX for software and patch management
- HP Servicecontrol Suite for HP-UX
- HP TopTools for Windows and Linux
- Management processor for comprehensive remote management of HP-UX, Windows, and Linux
- Process Resource Manager for HP-UX workload management

Configuration

Processor Configuration

The HP Integrity rx2600 is a symmetrical multiprocessing (SMP) server supporting up to two high performance 64 bit Itanium 2 processors. Processor speeds cannot be mixed within the same system.

Processor Details

- 1.0 GHz, 1.4 GHz, 1.3 GHz or 1.5 GHz frequencies
- Level 3 Cache: 1.5 MB (1.0 GHz and 1.4 GHz), 3 MB (1.3 GHz) or 6 MB (1.5 GHz)
- Level 2 Cache: 256 KB
- Level 1 Cache: 32 KB
- Single bit cache error correction
- 50 bit physical addressing
- 64 bit virtual addressing
- 4 GB maximum page size

Memory Configuration

The HP Integrity rx2600 supports DDR (double data rate) SyncDRAM (synchronous dynamic random access memory) DIMMs with ECC and chip spare protection. The HP Integrity rx2600 has twelve DIMM slots, allowing a maximum of 24 GB of total system memory.

Memory Loading Rules and Performance Guidelines

- Memory must be installed in groups of four DIMMs, also known as quads
- Each quad must consist of equal density DIMMs
- Memory can be ordered in quads of 1 GB (4×256 MB), 2 GB (4×512 MB), 4 GB (4×1 GB), or 8 GB (4×2 GB)
- Minimum memory is 1 GB (4×256 MB)
- Maximum memory is 24 GB (12×2 GB)
- Memory must be loaded in the specific order outlined on the system board.
- Each quad of memory is loaded across both memory buses (two DIMMs on each bus) to ensure maximum bandwidth and performance
- Total memory bandwidth is 8.5 GB/s, split across two 4.25 GB/s memory buses
- Open page memory latency is 80 nanoseconds

Supported Memory Options

Description	Product Number
1-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 256MB DIMMs)	A9908A
2-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 512MB DIMMs)	A9909A
4-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 1GB DIMMs)	A9910A
8-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 2GB DIMMs)	AB228A

Racking Configurations

The HP Integrity rx2600 can either be factory installed in HP cabinets or customer installed in HP or third party cabinets. The racking hardware includes slider rails, enabling the server to easily slide out of a cabinet for servicing. The rails have adjustable mounting hardware, enabling the server to mount in many non HP cabinets.

Configuration

HP Cabinets

The HP Integrity rx2600 was designed for and has been tested in HP Rack System/E series cabinets and HP Universal Rack G2 cabinets. HP cabinets are the best option for customers who want to ensure that their rack environment offers the utmost in safety, ease of service, factory integration, and HP field support. For factory integration, order racking product number A6939AZ in the HP Integrity rx2600 ordering guide.

Refer to the 10000 G2 Series Rack Best Practices Guide for information on rack deployment, stabilization and transportation. Go to http://HP.com/go/rackandpower/ for more information.

Non-HP Cabinets

For customers who choose to use non HP cabinets, the HP Integrity rx2600 provides simple options for installation and HP field support. The HP Integrity rx2600 field rack kit (AB376A) contains adjustable slide rails, allowing the server to be mounted in cabinets that use the four post EIA mounting system.

Once the server is mounted in a non HP cabinet, it must meet some simple criteria to ensure that HP field personnel can fully support the rack environment.

- Anti Tip – The rack/cabinet must be solidly anchored to the floor both front and rear. This is usually accomplished by anti tip feet or by direct bolting to the floor.
- Air Flow – The HP Integrity rx2600 uses front to back airflow to cool the unit. Thus a cabinet cannot have a solid front or rear door. Solid doors may have to be removed or changed to an open perforation pattern.
- Cable Strain Relief – A proper method of strain relief must be used. This may force the elimination of the rear door in some cases.
- Front and Rear Access – For proper cooling and ease of service access, HP recommends 32 inches of unobstructed floor space in the front and rear of rack installations. This recommendation applies to both HP and third party racks and cabinets

If a rack is not required, the system can be mounted vertically in the stand alone pedestal mount (AB377A).

I/O Architecture

The HP Integrity rx2600 I/O architecture utilizes industry standard PCI X and PCI buses in a unique design for maximum performance, scalability and reliability.
The HP Integrity rx2600 architecture uses eight high speed I/O channels. Each channel provides 0.5 GB/s of sustained I/O throughput. The diagram above shows how these channels allocate bandwidth to the open PCI X slots and to the integrated core I/O.
The four open PCI X slots all have their own dedicated 64 bit 133 MHz PCI X bus and their own independent I/O channel or channels. The independent channels provide improved I/O performance and error containment. Independence protects each I/O card from bus hangs or extended latencies due to the failure or high bandwidth demands of other I/O cards. Independence also ensures that each I/O card can achieve maximum throughput.
The first PCI X slot has two dedicated I/O channels, resulting in sustained PCI X bandwidth of 1.0 GB/s. This slot should be reserved for the highest bandwidth cards, such as clustering interconnects or multi port storage adapters. The remaining three PCI X slots each have a single dedicated I/O channel, resulting in 0.5 GB/s of sustained bandwidth on each slot.

All I/O slots are keyed for 3.3V I/O cards. 5V cards are not supported in the HP Integrity rx2600.
The remaining three I/O channels are allocated to the integrated core I/O.

Configuration

	Number of Slots	Bandwidth Per Slot	Bus Width	Bus Speed	Slot Keying
Dedicated 1 GB/s	1	1.0 GB/s	64 bits	133 MHz, 66 MHz or 33 MHz	3.3 Volts
Dedicated 0.5 GB/s	3	0.5 GB/s	64 bits	133 MHz, 66 MHz or 33 MHz	3.3 Volts

Supported I/O Cards

I/O Card	Product Number	Boot Support	Connector Type(s)	Operating Systems	Maximum Cards/Ports	Special Notes
Mass Storage Host Bus Adapters						
PCI 2 Gb/s Fibre Channel	A6795A	Yes	LC	HP-UX	4/4	
PCI 1 channel U160 SCSI	A6828A	Yes	VHDCI	HP-UX	4/4	
PCI 2 channel U160 SCSI	A6829A	Yes	VHDCI	HP-UX	4/8	
PCI Windows and Linux Ultra160 SCSI	A7059A	Yes	VHDCI	Windows, Linux	1/1	
PCI Windows Linux 2 port Ultra160 SCSI	A7060A	Yes	VHDCI	Windows, Linux	1/1	
PCI 2 channel Ultra320 SCSI	A7173A	Yes	VHDCI	HP-UX, OpenVMS, Linux	4/8	
PCI-X 2 channel Smart Array 6402 U320[1]	A9890A[3]	Yes	VHDCI	HP-UX, Linux, Windows, OpenVMS[2]	3/6	
PCI-X 4 channel Smart Array 6404 U320[1]	A9891A[3]	Yes	VHDCI	HP-UX, OpenVMS[2]	3/12	
PCI X 2 Gb /sFibre Channel	AB232A	Yes	LC	Windows	2/2	
PCI-X 2-channel 2-Gb/s Fibre Channel	A6826A	No	LC	HP-UX, Linux, OpenVMS	4/8	Boot support with OpenVMS
2 channel Smart Array 5302 / 128 MB[1]	A9825A	Yes	VHDCI	Windows	3/6	
PCI X 1 channel 2 Gb/s Fibre Channel Windows	AB467A	Yes	LC	Windows	2/2	
PCI X 2 channel 2 Gb /sFibre Channel Windows	AB466A	Yes	LC	Windows	2/4	
Local Area Network (LAN) Adapters						
PCI 1 port 1000Base T (gigabit copper)	A6825A	No	RJ-45	HP-UX, OpenVMS	4/4	
PCI 1 port 1000Base SX (gigabit fiber)	A6847A	No	Duplex SC	HP-UX, OpenVMS	4/4	
PCI 1 port 10/100Base-TX	A5230A	No	RJ-45	HP UX, OpenVMS	4/4	
PCI-X 2-port 1000Base-T	A7012A	No	RJ-45	HP UX, OpenVMS	4/8	
PCI-X 2-port 1000Base-SX	A7011A	No	Duplex SC	HP-UX, OpenVMS	4/8	
PCI 4 port 100Base-TX	A5506B	No	RJ-45	HP UX, OpenVMS	4/16	

PCI 1 port 802.5 Token Ring 4/16/100	A5783A	No	RJ-45 and DB 9	HP-UX	4/4	
PCI 1 port Universal FDDI LAN	A3739B	No	FDDI SC	HP-UX	4/4	
PCI 2 port Windows/Linux 1000Base-SX	A9899A	No	LC	Windows	2/4	
PCI 2 port Windows/Linux 1000Base-TX	A9900A	No	RJ-45	Windows	2/4	
PCI X 2 port 4x Fabric (HA and DB) Adapter	AB345A	No	4x Infiniband Copper	HP-UX	2/4	
PCI-X 4-port 1000Base-T Gbit Adapter	AB545A	Yes	RJ-45	HP-UX	4/16	
PCI 1 port 1000Base-T	A7061A	No	RJ-45	Windows, Linux	4/4	Windows supports 2 cards / 2 ports
PCI 1 port 1000Base-SX	A7073A	No	Duplex SC	Windows, Linux	4/4	Windows supports 2 cards /1 ports
PCI -X 2 port 4x Fabric (HPC) Adapter[2]	AB286A	No	4x Infiniband Copper	HP-UX	4/8	
PCI-X 1-port 10-GbE Fiber Adapter	AB287A	No	Duplex LC	HP-UX	1/1	
Multi-Function Cards (Mass Storage / LAN)						
PCI 2 port 100Base T/ 2 port Ultra2 SCSI[1]	A5838A	No	VHDCI/RJ-45	HP-UX	3/12	
PCI-X 2Gb Fibre Channel / 1000BaseSX	A9782A	Yes	LC	HP-UX, OpenVMS	4/8	
PCI-X 2Gb Fibre Channel / 1000BaseTX	A9784A	Yes	1 LC, 1 RJ-45	HP-UX, OpenVMS	4/8	
PCI-X 2-port 2-Gb Fibre Channel/2-port 1-Gb Ethernet Adapter	AB465A	Yes	2 RJ-45	HP-UX	4/8	
PCI-X 2-port 1000BT/2-port U320 Multifunction adapter[1]	AB290A	Yes	SCSI - LVD/SE LAN - RJ-45	HP-UX, OpenVMS	3/12	
Wide Area Network (WAN) **Adapters**						
PCI 1 port ATM 155 Mbps (MMF)	A5513A	No	Duplex SC	HP-UX	4/4	
2 port Programmable Serial Interface (PSI) X.25 / Frame Relay / SDLC	J3525A	No	RS-530, RS-232, V.35, RS-449 or X.21	HP-UX	4/8	
Additional Interface Cards						
PCI 64-port Terminal Multiplexer	J3593A	No	RS-232 or RS-422	HP-UX	4/256	
PCI 8-port Terminal Multiplexer	J3592A	No	RS-232	HP-UX	4/32	
PCI 8-port Serial MUX adapter	A6748A	No	RS-232 or RS-422	HP-UX	4/32	
PCI 64-port Serial MUX adapter	A6749A	No	RS-232	HP-UX	4/256	
PCI HyperFabric 2 Fibre	A6386A	No	LC Duplex	HP-UX	4/4	
PCI 2D/3D Graphics	AB551A	No	VGA	OpenVMS HP-UX	4/4	

Configuration

[1]SCSI cards are supported in slots 1, 2, and 3 only.
[2]Support in OpenVMS V8.2-1 Q3 Calendar Year 2005.
[3]Internal configurations supported:
- RAID1 internal HDD connect (must order #0D1, minimum/maximum two identical HDDs and A9827A #0D1)
- RAID1 plus Hot Spare internal HDD connect (must order #0D1, minimum/maximum three identical HDDs and A9827A #0D1)
- RAID5 internal HDD connect (must order #0D1, minimum/maximum three identical HDDs and A9827A #0D1)

Internal Supported Storage Devices	Product Number
Internal Disk Drives (Optional – Maximum 3)	
36GB 15K RPM Ultra320 SCSI Low Profile Hot Plug Disk	AB420A
73GB 15K RPM Ultra320 SCSI Low Profile Hot Plug Disk	AB421A
146GB 10K RPM Ultra320 SCSI Low Profile Hot Plug Disk	AB422A
300-GB 10K RPM Ultra320 SCSI Low Profile Hot Plug Disk	AB423A
Removable Media Dirve (Optional – Maximum 1)	
DVD ROM drive (required for systems ordered with OpenVMS and Windows)	A9919B
DVD+RW drive	AB348B

Integrated Multi-function Core I/O

The integrated multi function I/O provides core I/O functionally and includes the Management Processor Card, which provides remote management and high availability monitoring capabilities.

Core I/O

- 10/100/1000Base T LAN with RJ 45 connector – Supports LAN boot for operating system installation
- 10/100Base T LAN with RJ 45 connector and wake on LAN capabilities
- Ultra320 SCSI port
- Four USB 2.0 style A ports (USB 1.1 compatible)
- Two general purpose serial ports (Serial A and Serial B)
- VGA graphics
- Telnet and web console via 10/100Base TX management LAN (RJ45 connector) requires Management Processor Card.

Management Processor Functionality

- Dedicated 10/100Base T LAN port for LAN console and embedded web console access
- DB 25 serial port – multiplexed (using W cable) into three RS 232 ports: local ASCII console, remote/modem console, and general purpose
- Password protected console ports
- Console mirroring between all local, modem, LAN, and web consoles
- Remote power up and power down control
- Configurable remote access control
- Event notification to system console – Provides connectivity, information, and support for HP UX tools (such as STM and EMS) to notify by email, pager and/or HP response centers.
- Interface to system monitoring and diagnostic hardware via an internal IC bus
- Secure Sockets Layer security on web console
- The Enhanced Manageability Card provides basic graphic capabilities via integrated Radeon 7000 2D graphics chip and 16MB of memory. VGA port is provided on rear of the system. Supported resolutions and refresh rates include:

Configuration

Operating System	Minimum Resolution	Refresh Rate	Maximum Resolution	Refresh Rate
HP-UX	1024x768	75 Hz	1920x1200	75 Hz
Linux	1024x768	75 Hz	1920x1200	75 Hz
Windows	640x480	75 Hz	1600x1200	75 Hz
OpenVMS	640x480	60 Hz	1920x1200	75 Hz

System Console Configurations

The HP Integrity rx2600's integrated Management Processor provides five methods for console connections.

- SSL secured Web console accessible through the 10/100Base T management LAN
- Standard telnet connections accessible through the 10/100Base T management LAN
- Local VT100 or hpterm terminal, or VT100 or hpterm emulator via local RS 232 serial connection
- Remote VT100 or hpterm terminal, or VT100 or hpterm emulator via external modem
- VGA graphics console-supported on Windows, Linux, and HP UX - using the integrated VGA port.

Internal Disk and Media Drives

- The HP Integrity rx2600 supports up to three internal low profile hot plug disk drives.
- A dual channel U320 SCSI channel provides independent channels for the internal disks-two disks on one channel and one disk on a second channel. Split SCSI channels provide enhanced high availability-one channel can fail without impacting the disks on the other channel.
- Supported by MirrorDisk/UX across disk drives and independent channels
- The Smart Array 5302 and 5304 U160 SCSI RAID cards are available for hardware RAID under the Windows and Linux operating systems. Currently, the hp factory does not load the operating system in a RAID configuration. Customers should order internal RAID cables (A9827A) and re load their operating system if internal RAID is desired.
- 36 GB 15K, 73GB 15K, 146 GB and 300-GB 10K hot plug Ultra320 SCSI disks are supported
- Optional optical media drives include a DVD ROM (A9919A) and DVD+RW (AB348A). A DVD drive is required for all OpenVMS and Windows configurations. Third party software (not included with the AB348A) is required to support DVD write with Windows on AB348A. OpenVMS will support DVD write capability in a future release of the operating system.
- Factory configured RAID 1 array on internal disks is supported on the IPF servers. Refer to the following URL for details on servers, Smart Array cards, and operating systems supported.

  http://www.docs.hp.com/en/RAID_SM-20050125/CombinedRaidsupportMatrix.html

HP Integrity rx2600 Power Subsystem

The HP Integrity rx2600 provides a high level of integrated power protection.

- N+1 redundant hotswap power supplies (N=1)
- N+1 redundant AC power input protection with electrical phase isolation (N=1)
- Power monitoring and control
- The HP Integrity rx2600 supports up to two hot swap power supplies for N+1 protection. One supply is shipped as a standard component with every system. The second supply is optional.
- The HP Integrity rx2600 provides an independent power input receptacle for each power supply. The independent design provides protection against losing the connection from a power cord or breaker. The HP Integrity rx2600 power cords should always be plugged into separate breakers when possible.

Server model number	rx2600	
Server product numbers*	Server and one 1.3 GHz/3 MB processor/one core	A6870B
	Server and one 1.5 GHz/6 MB processor/one core	A6873B
	Server and one 1.0 GHz/1.5 MB processor/one core	AB323A
	Server and one 1.4 GHz/1.5 MB processor/one core	AB324A
	Number of Processors	1-2

*NOTE: Two power cords are shipped with each system; one connects the system to the rack PDU and one enables connection to a wall socket. Localized cords are included at the Distribution center.

Supported Processors	1.3-GHz Intel® Itanium® 2 processor	
	Cache	3 MB
	Floating Point Coprocessor included	Yes
	TPM estimate (2-processor configuration)	50 K
	1.5-GHz Itanium 2 processor	
	Cache	6 MB
	Floating Point Coprocessor included	Yes
	TPM estimate (2-processor configuration)	60 K
	1.0-GHz Itanium 2 processor	
	Cache	1.5 MB
	Floating Point Coprocessor included	Yes
	TPM estimate (2-processor configuration)	
	1.4-GHz Itanium 2 processor	
	Cache	1.5 MB
	Floating Point Coprocessor included	Yes
	TPM estimate (2-processor configuration)	

System Memory	Minimum memory	1 GB
	Maximum memory capacity	

Technical Specifications

Internal Disks	Maximum disk mechanisms	3
	Maximum disk capacity	900 GB
Standard Integrated I/O	Ultra320 SCSI–LVD	2 channels
	10/100/1000Base-T (RJ-45 connector)	1 port
	10/100Base-T (RJ-45 connector)	1 port
	RS-232 serial ports (general purpose)	2
	10/100Base-T management port (RJ-45 connector)	Yes
	VGA graphics	Yes
	USB	4
I/O buses and slots	Total PCI-X/PCI Slots	4
	All four slots are 133-MHz, 64-bit slots on dedicated PCI-X buses	
Maximum I/O Cards (See supported I/O table for product specifics)	Mass Storage	1-4
	LAN	4
	WAN	4
	Multi-Function (Mass Storage / LAN)	3-4
	Additional Interface Cards	4
Electrical Characteristics	AC Input power	100-240V 50/60 Hz
	Hot swap Power supplies	1 included, 2nd for N+1
	Redundant AC power inputs	1 included, 2nd for N+1
	Current requirements at 230V	3.6 A (shared across inputs)
	Typical maximum power dissipation	600 Watts
	Theoretical maximum power dissipation	1,350 Watts
	kW rating for UPS loading	1.3
	Typical Heat dissipation (BTUs/hour)	1,945
	Maximum Heat dissipation (BTUs/hour)	4,375

Technical Specifications

Site Preparation	Site planning and installation included	No
	Rack depth (in/mm)	26.8 in (680 mm)
	Rack width (in/mm)	19 in (482 mm)
	Rack height (EIA/in/mm)	2U/ 3.4 in (86 mm)
	Pedestal depth (in/mm)	26.5 in (672 mm)
	Pedestal width (in/mm)	11.7 in (297 mm)
	Pedestal height (in/mm)	19.5 in (495 mm)
	Weight (lb/kg) Maximum	56 lb (25 kg)
Environmental Characteristics	Acoustics (operator/bystander) at 77° F (25° C)	<6.5 Bels LwA
	Operating Temperature (up to 5000 ft/1524 m)*	41° to 95° F (5° to 35° C)
	Non-operating Temperature	-40° to 158° F (-40° to 70° C)
	Maximum rate of temperature change	50° F (10° C)/hour
	Operating relative humidity	15% to 80% RH non-condensing
	Non-operating relative humidity	8% to 85% non-condensing
	Operating altitude above sea level	10,000 ft (3,000 m) maximum
	Non-operating altitude above sea level	15,000 ft (4,572 m) maximum
	*NOTE: Maximum operating temperature range up to 5000 feet. For higher altitudes, de rate the maximum temperature by 2°C/1000 feet above 5000 feet.	
Regulatory Compliance	Electromagnetic interference	Complies with FCC Rules and Regulations, Part 15 as a Class A digital device. Manufacturer's Declaration to EN55022 Level A, VCCI Registered, Class A, Korea RLL
	Safety	UL Listed, CSA Certified, UL GS Mark compliant with EN 60950 and EN 41003