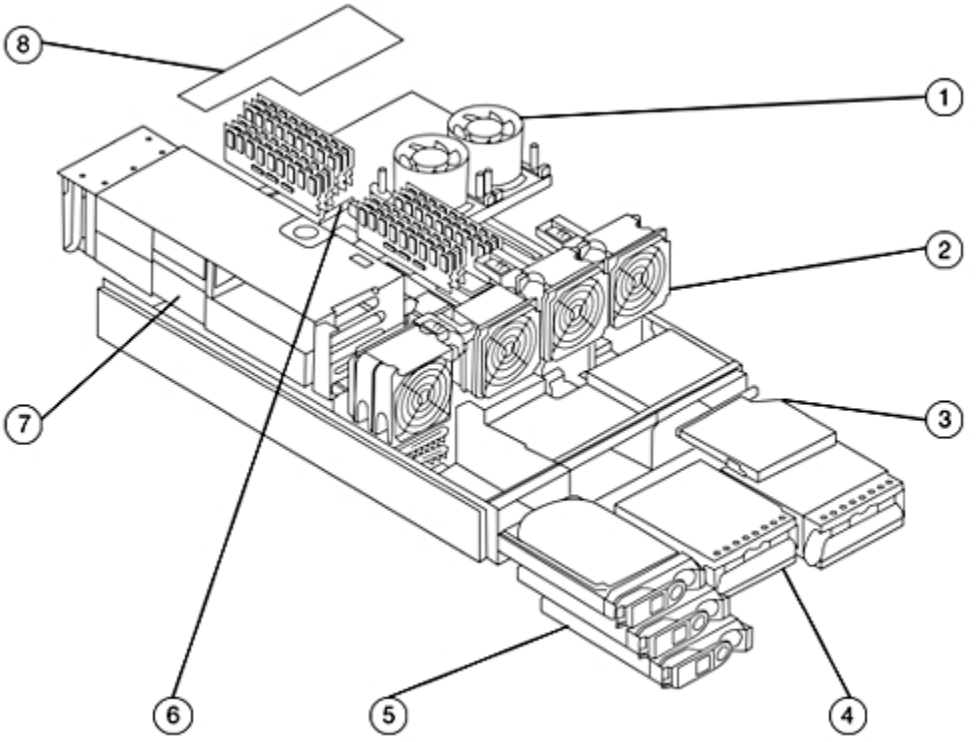
Overview



1. Intel® 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. Optimal Management Processor Card

At A Glance

rx2620 Server Product Numbers

- Model rx2620 base system with one 1.6 GHz/6 MB CPU (200 MHz system bus, 400 MT/s).
  System includes one CPU, core I/O, and one power supply. Must select rack mounting kit or standalone mounting kit.
  AB331A
- Model rx2620 base system with one 1.6 GHz/3 MB CPU (200 MHz system bus, 400 MT/s).
  System includes one CPU, core I/O, and one power supply. Must select rack mounting kit or standalone mounting kit.
  AB332A
- Model rx2620 base system with one 1.3 GHz/3 MB CPU (200 MHz system bus, 400 MT/s).
  System includes one CPU, core I/O, and one power supply. Must select rack mounting kit or standalone mounting kit.
  AB333A

Standard System Features

- 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
- Two ports 10/100/1000Base TX LAN (auto speed sensing, RJ 45 connector)
- Optional Management Processor Card for remote management and HA monitoring
  NOTE: Management Processor Card is required for Windows configurations and Linux RHEL 4 configurations
- Telnet and web console via 10/100Base TX management LAN (RJ 45 connector)
- One general purpose RS 232 serial port
- 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 CPUs, memory, disk drives, removable media, and I/O cards
- Rackmountable into 19 inch cabinets

Overview

- Optional stand alone pedestal mount
- One year warranty with next business day on site

Standard Features

Minimum System

- One 64 bit Intel® Itanium 2® processor: Either 1.3 GHz/3.0 MB cache (200 MHz system bus, 400MT/s), 1.6 GHz/3 MB cache (200 MHz system bus, 400 MT/s) or 1.6 GHz/6 MB cache (200 MHz system bus, 400 MT/s)
- 1 GB PC2100 ECC Registered DDR266A SDRAM (4×256MB DIMMs)
- One internal DVD drive for OpenVMS and Windows
- One power supply

Maximum Server Capacities

- Two 64 bit Intel® Itanium 2® processors: Either 1.3 GHz/3.0 MB cache (200 MHz system bus, 400 MT/s), 1.6 GHz/3 MB cache (200 MHz system bus, 400 MT/s) or 1.6 GHz/6 MB cache (200 MHz system bus, 400 MT/s)
- 24 GB PC2100 ECC Registered DDR266A SDRAM (12×2GB DIMMs)
- Two Hot swap power supplies, providing N+1 protection for power supplies and power input
- Four PCI X/PCI IO adapter cards
- One internal DVD ROM or DVD+RW drive
- Three internal hot plug LVD SCSI disks

Standard System Features

- 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
- Two ports 10/100/1000Base TX LAN (auto speed sensing, RJ 45 connector)
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  NOTE: Management Processor Card is required for Windows configurations and Linux RHEL 4 configurations.
- Telnet and web console via 10/100Base TX management LAN (RJ 45 connector)
- One general purpose RS 232 serial port
- 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 Cluster Services for Windows Server 2003, Enterprise Edition
- HP StorageWorks Software for HP Integrity Servers running Windows Server 2003, Enterprise Edition. Includes Cluster Extension XP and EVA, Continuous Access, Business Copy and SQL Server Fast Recovery.
- HP ServiceGuard Extension for RAC for HP-UX
- ServiceGuard Manager for HP-UX
-
-

Standard Features

- Insight Manager 7-proactive fault management
- EMS HA Monitors for HP-UX
- ECM Toolkit for HP-UX
- 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 System Insight Manager (SIM)
- HP Integrity Essentials Foundation Pack for Windows, includes Smart Setup CD for easy server setup and configuration
- HP Intelligent Networking Pack for Windows
- HP Performance Management Pack for Windows
- Windows System Resource Manager (included with each copy of Windows Server 2003 Enterprise Edition)
- Integrated Lights Out (iLO) Management Processor Card for comprehensive remote management. **NOTE:** Card is required for Windows orders
- Optional Integrated Lights -ut (iLO) Advanced Pack activation key and license
- Process Resource Manager for HP-UX workload management

Processor Configuration

The HP Integrity rx2620 is a symmetrical multiprocessing (SMP) server supporting up to two high performance 64 bit single-core Itanium 2 processors. Processor speeds cannot be mixed within the same system.

Processor Details

- 1.3 GHz with 3.0 MB Level 3 Cache
- 1.6 GHz with 3.0 MB Level 3 Cache
- 1.6-GHz with 6.0-MB Level 3 Cache

All processors support:

- Level 2 Cache: 256 KB
- Level 1 Cache: 32 KB
- 200 MHz System Bus (400 MT/s)
- Single bit cache error correction
- 50 bit physical addressing
- 64 bit virtual addressing
- 4 GB maximum page size

The HP Integrity rx2620 servers may require a firmware update to support Intel® Itanium® 2 Processor Add-On products shipping after June 15th, 2005.

Affected Intel Itanium 2 processors products for the Integrity rx2620 are:

- AB334A Intel Itanium 2 1.6-GHz 6MB
- AB335A Intel Itanium 2 1.6-GHz 3MB
- AB336A Intel Itanium 2 1.3-GHz 3MB

ACTION:
Check server firmware prior to installing any of these processor products. The rx2620 requires system firmware 03.17 or later. The firmware version can be checked as follows:

FIRMWARE INFORMATION
Firmware Revision: 3.17 [4513]
BMC Revision: 3.47
Management Processor Revision: E.03.15
Updatable EFI Drivers:
Floating-Point Software Assistance Handler: 00000118
LSI Logic Ultra320 SCSI Driver: 01040200
Broadcom Gigabit Ethernet Driver: 00070003
Intel(R) PRO/1000 Ethernet Driver: 00002160

If firmware requires updating, the firmware upgrade instructions are included in the Release Notice that is included in the download bundle.

To download the firmware, go to http://www.hp.com/bizsupport.

NOTE:
After the firmware has been downloaded to the server, proceed with attaching the Processor Add-On Products to the server using the Server Installation Guide. The installation guide is provided:

- On the CD-ROM that shipped with Server
- On the http://docs.hp.com Web site

Configuration

Memory Configuration

The HP Integrity rx2620 supports DDR (double data rate) SyncDRAM (synchronous dynamic random access memory) DIMMs with ECC and chip spare protection. The HP Integrity rx2620 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), 8 GB (4×2 GB), or 16 GB (4×4 GB) DIMMs
- Minimum memory is 1 GB (4×256 MB)
- Maximum memory is 32 GB (8×4 GB). When 4-GB DIMMs are used, only one configuration is supported, which is 8×4-GB DIMMs (8×4-GB DIMMs in the first 8 processors-please note that 4×4-GB is not supported, must order quantity two of memory option AB475A). The remaining four DIMM processors must be left unpopulated. The next highest amount of memory supported is 24 GB (12×2 GB DIMMs).
- 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

NOTE: These memories are also supported in the rx2600.

Supported Memory Options

Description	Product Number
1-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 256MB DIMMs)	AB395A
2-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 512MB DIMMs)	AB396A
4-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 1GB DIMMs)	AB397A
8-GB chip spare PC2100 DDR-SDRAM memory quad (4 x 2GB DIMMs)	AB228A

Racking Configurations

The HP Integrity rx2620 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.

HP Cabinets

The HP Integrity rx2620 was designed for and has been tested in HP Standard Rack System/E Seriescabinets and HP Universal Rack G2 Series 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 rx2620 ordering guide.

Configuration

Non-HP Cabinets

For customers who choose to use non HP cabinets, the HP Integrity rx2620 provides simple options for installation and HP field support. The HP Integrity rx2620 field rack kit (A6939A) 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 rx2620 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.

The rx2620 can also be deployed as a stand-alone pedestal (order # AD244A) appropriate for the office environment. When choosing to convert a rack system to the office, the HA113A1 installation service is mandatory (the AD244A is not customer installable). Note: In an office deployment, the rx2620 does not support redundant power and cooling.

I/O Architecture

The HP Integrity rx2620 I/O architecture utilizes industry standard PCI-X and PCI buses in a unique design for maximum performance, scalability and reliability.

The HP Integrity rx2620 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 rx2620. The remaining three I/O channels are allocated to the integrated core I/O.

	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	H	4/4	

Configuration

PCI 1 channel U160 SCSI	A6828A[3]	Yes	VHDCI	H	4/4	
PCI 2 channel U160 SCSI	A6829A[3]	Yes	VHDCI	H	4/8	
PCI Windows and Linux Ultra160 SCSI	A7059A[3]	Yes	VHDCI	W, L	1/1	
PCI Windows Linux 2 port Ultra160 SCSI	A7060A[3]	Yes	VHDCI	W, L	1/2	
PCI 2 channel Ultra320 SCSI	A7173A	Yes	VHDCI	H, W, L, OpenVMS	4/8	1/2 for Windows
PCI-X Smart Array P600 Serial Attached SCSI (SAS) Controller	337972-B21	Yes	SFF8470	Windows Linux	2/2[6] 3/12	Supported with external storage only
512MB cache memory upgrade for SA P600 controller	372538-B21	N/A	N/A	Windows Linux	N/A	
PCI X 2 channel Smart Array 6402 Ultra3201	A9890A[7]	Yes	VHDCI	HP UX, Windows, OpenVMS5	24/4	
PCI X 4 channel Smart Array 6404 Ultra3201	A9891A[7]	Yes	VHDCI	HP UX, OpenVMS[5]	14/4	
PCI-X 2-channel Smart Array 5302 Ultra 160[1]	A9825A[3]	Yes	LC	Windows	1/2	
PCI-X 4-channel Smart Array 5304 Ultra 160[1]	A9826A3	Yes	LC	Windows	1/4	
PCI X 2 Gb/s Fibre Channel	AB232A[3]	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 for OVMS
PCI X 1 channel 2 Gb/s Fibre Channel Linux	A7538A	No	LC	Linux	4/4	
PCI X 1 channel 2 Gb/s Fibre Channel Windows	AB467A	Yes	LC	Windows	2/2	
PCI X 2 channel 2 Gb/s Fibre Channel Windows	AB466A	Yes	LC	Windows	2/4	
PCI-X 2Gb/s Fibre Channel	AB232A[3]	Yes	LC	Windows	2/2	
PCI 2GB/s Fibre Channel	A7298A[3]	Yes	LC	Windows	1/1	
Local Area Network (LAN) **Adapters**						
PCI 1 port 1000Base T (gigabit copper)	A6825A	No	RJ-45	H, OpenVMS	4/4	
PCI 1 port 1000Base SX (gigabit fiber)	A6847A	No	Duplex SC	H, OpenVMS	4/4	
PCI 1 port 10/100Base-TX	A5230A[3]	No	RJ-45	H, OpenVMS	4/4	
PCI-X 2-port 1000Base-T	A7012A	No	RJ-45	H, OpenVMS	4/8	
PCI-X 2-port 1000Base-SX	A7011A	No	Duplex SC	H, OpenVMS	4/8	
PCI 4 port 100Base-TX	A5506B[3]	No	RJ-45	H, L, OpenVMS	4/16	
PCI 1 port 802.5 Token Ring 4/16/100	A5783A	No	RJ-45 and DB 9	H	4/4	
PCI 1 port Universal FDDI LAN	A3739B	No	FDDI SC	H	4/4	
PCI 2 port Windows/Linux 1000Base-SX	A9899A	No	LC	W, L	2/4	
PCI 2 port Windows/Linux 1000Base-TX	A9900A	No	RJ-45	W, L	2/4	
PCI 1 port 1000Base-T	A7061A	No	RJ-45	W, L	4/4	
PCI 1 port 1000Base-SX	A7073A	No	Duplex SC	W, L	4/4	
PCI -X 2 port 4x Fabric (HPC) Adapter[2]	AB286A[3]	No	4x Infiniband Copper	H	2/4	

Configuration

PCI X 2 port 4x Fabric (HPC) Adapter[2]	AB286C	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 X 2 port 4x Fabric (Ha and DB) Adapter	AB345A[3]	No	4x Infiniband Copper	HP-UX	2/4	
PCI X 2 port 4x Fabric (HA and DB) Adapter[10]	AB345C	No	4x Infiniband Copper	HP UX	2/4	
PCI-X 4-port 1000Base-T Gbit Adapter	AD145A	Yes	RJ-45	Linux (RHEL 4, SLES 9)	1/4	
Multi-Function Cards (Mass Storage/LAN)						
PCI 2 port 100Base T/ 2 port Ultra2 SCSI[1]	A5838A[3]	No	VHDCI/RJ-45	H	3 /12	
PCI-X 2Gb Fibre Channel / 1000BaseSX	A9782A	Yes	LC	H, OpenVMS	4 /8	
PCI-X 2Gb Fibre Channel / 1000BaseTX	A9784A	Yes	1 LC, 1 RJ-45	H, OpenVMS	4/8	
PCI-X 2-port 2-Gb Fibre Channel/2-port 1-Gb Ethernet Adapter	AB465A	Yes	2 RJ-45	HP UX, OpenVMS	4/8	1/2 for OpenVMS
PCI-X 2-port 1000BT/2-port U320 SCSI Multifunction adapter[1]	AB290A	Yes	SCSI - LVD/SE LAN - RJ-45	HP-UX, OpenVMS	3/12	2/8 for OpenVMS
Wide Area Network (WAN) **Adapters**						
PCI 1 port ATM 155 Mbps (MMF)	A5513A	No	Duplex SC	H	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	H	4 /8	
Additional Interface Cards						
PCI 8 port Serial MUX Adapter	AD278A	No		HP UX (11i v2 only)	3/241	
PCI 64 port Serial MUX Adapter	AD279A	No		HP UX	4/256	
16-port RS-232 RJ45 Port Module	AD280A[8]	No		HP UX	4 per AD279A	
16-port RS-232 DB25 Port Module	AD281A[9]	No		HP UX	4 per AD279A	
PCI 64 port Serial MUX adapter	A6749A	No	RS 232 or RS 422	HP UX	4/256	
PCI 8 port Serial MUX adapter	A6748A	No	RS 232	HP UX	4/32	
PCI HyperFabric 2 Fibre[2]	A6386A	No	LC Duplex	H	4 /4	
PCI 2D/3D Graphics	AB551A	No	VGA	H, OpenVMS	4/4 for OpenVMS, 2/2 for HP UX	

Configuration

[1]Card is supported in slots 1, 2, and 3 only.
[2] A minimum 512 MB of system memory per card is required for performance considerations.
[3] I/O card is supported but no longer orderable.
[4] Only can be used for internal drives. For Windows, the SmartArray 640x is also supported with external storage.
[5] Support in OpenVMS V8.2 1 Q4 January 2006.
[6] For Windows, each 337972-B21 external port supports a maximum of two (2) MSA50s attached in series.
7 Internal configurations supported: RAID1 internal HDD connect (must order #0D1, min/max 2 identical HDDs and A9827A #0D1), RAID1 plus Hot Spare internal HDD connect (must order #0D1, min/max 3 identical HDDs and A9827A #0D1), and RAID5 internal HDD connect (must order #0D1, min/max 3 identical HDDs and A9827A #0D1)
[8] AD280A #001 Port Module Power Supply, required on Port Module (3) and Port Module (4) connected to an AD279A 64P Mux adapter.
[9] AD281A #001 Port Module Power Supply, required on Port Module (3) and Port Module (4) connected to an AD279A 64P Mux adapter.
10 A minimum 1 GB of system memory per card is required for performance considerations.

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 Drive (Optional – Maximum 1)*	
DVD-ROM drive	A9919B
DVD+RW drive	AB348B
***NOTE:** DVD drive required for OpenVMS and Windows configurations. Third party software required to support DVD write with Windows. OpenVMS will support DVD write in a future release of the operating system. **NOTE:** CD RW/DVD ROM Combo drive (A9920A) is supported but no longer orderable.	

Integrated Multi-function Core I/O

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

Core I/O

- Two 10/100/1000Base T LAN with RJ 45 connector-Supports LAN boot for operating system installation and wake on LAN capability
- Two channel Ultra320 SCSI controller; one external port with 68 pin high density connector and one internal port for integrated disks
- Four USB 2.0 style A ports (USB 1.1 compatible)
- One general purpose serial ports (Serial B); two general purpose serial ports if Management Processor Card is installed.
- Telnet and web console via 10/100Base TX management LAN (RJ45 connector) requires Mangement Processor Card.

Configuration

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.
- Management Processor Card is required for Windows.
- Support for Integrated Lights-Out (iLO) Advanced Pack activization key and license (AB500A). Firmware license installs on the integrated Processor Management Card. Integrated Lights-Out (iLO) Advanced Pack provides additional remote management capabilities, including LDAP directory services, SSH security, and Group Actions with HP Systems Insight Manager (SIM).
- The Management Processor Card provides basic graphic capabilities via integrated Radeon 7000 2D graphics chip. VGA port is provided on rear of the system. Supported resolutions and refresh rates include:

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 rx2620'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.

Configuration

Internal Disk and Media Drives

- The HP Integrity rx2620 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.
- For Windows, the SmartArray 6402 may be factory configured to support RAID 1 on the internal disks
- 36 GB 15K, 73GB 15K, 146 GB 10K 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

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HP Integrity rx2620 Power Subsystem

The HP Integrity rx2620 provides a high level of integrated power protection.

- N+1 redundant hot swap power supplies (N=1)
- N+1 redundant AC power input protection with electrical phase isolation (N=1)
- Power monitoring and control
- The HP Integrity rx2620 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 rx2620 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 rx2620 power cords should always be plugged into separate breakers when possible.

AC Power Requirements at Various Configurations

The following table displays the AC power needs of the HP Integrity rx2620 at various configurations. These power figures are based on actual measurements under typical server workloads, and are appropriate for power budgeting at customer installations.

CPUs	DIMMs	I/O Cards	Watts, AC	Volt Amps	Amps @ 200V
1	4	2	366	373	3.2
1	8	4	456	465	4.0
1	12	4	500	510	4.4
2	4	2	501	511	4.4
2	8	4	591	603	5.2
2	12	4	635	648	5.6

Assumes:

- 1 Intel® Itanium 2® Processor 130W @ 85% max
- ½ I/O CCA @ 25W and ½ I/O CCAs @ 15W
- 2GB DIMMs
- Typical Power Usage
-

- 3 Hard Disk Drives
- No CD ROM

Server model number rx2620

Server product numbers	Model rx2620 base system with one 1.6 GHz/6 MB processor/one core (200 MHz system bus, 400 MT/s). **NOTE:** System includes one processor, core I/O, and one power supply. Must select rack mounting kit or standalone mounting kit.	AB331A
	Model rx2620 base system with one 1.6 GHz/3 MB processor/one core (200 MHz system bus, 400 MT/s). **NOTE:** System includes one processor, core I/O, and one power supply. Must select rack mounting kit or standalone mounting kit.	AB332A
	Model rx2620 base system with one 1.3 GHz/3 MB processor/one core (200 MHz system bus, 400 MT/s). **NOTE:** System includes one processor, core I/O, and one power supply. Must select rack mounting kit or standalone mounting kit.	AB333A
	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** (AB336A)	
	Cache	3 MB
	Floating Point Coprocessor included	Yes
	1.6-GHz Itanium 2 processor (AB335A)	
	Cache	3 MB
	Floating Point Coprocessor included	Yes
	1.6 GHz Intel Itanium 2 processor (AB334A)	
	Cache	6 MB
	Floating point Coprocessor included	Yes

System Memory	**Minimum memory**	1 GB
	Maximum memory capacity	24 GB

Internal Disks	**Maximum disk mechanisms**	3
	Maximum disk capacity	900 GB

Technical Specifications

Standard Integrated I/O	**Ultra320 SCSI–LVD**	2 channels
	10/100/1000Base-T (RJ-45 connector)	2 port
	RS-232 serial ports (general purpose)	2
	10/100Base-T management port (RJ-45 connector)	Optional
	VGA graphics	Optional
	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	2-4
	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	4 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 (inches/mm)	26.8 in (680 mm)
	Rack width (inches/mm)	19 in (482 mm)
	Rack height (EIA/inches/mm)	2U/ 3.4 in (86 mm)
	Pedestal depth (inches/mm)	26.5 in (672 mm)
	Pedestal width (inches/mm)	11.7 in (297 mm)
	Pedestal height (inches/mm)	19.5 in (494 mm)
	Weight (lb/kg) **Maximum**	56 lb (25 kg)

Environmental Characteristics	**Acoustics** (operator/bystander) **at 77° F (25° C)**	<6.8 Bels LwA
	Operating Temperature (up to 5000 ft/1524 m)*	41° to 95° F (5° to 35° C)
	Non-operating Temperature	5° to 35° F (-40° to 70° C)
	Maximum rate of temperature change	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 (4,600 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	**RMN**	RSVLA-0403
	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, CCC, BMSI Taiwan
	Safety	CSA NRTL Certified, EN 60950-1