HP Integrity rx3600 Server

Data sheet

The HP Integrity rx3600 Server is a powerful entry-class workhorse that you can trust for business-critical application and database workloads. This next-generation Integrity server features a new architecture that helps you prepare for the future by delivering significantly expanded computing capabilities. The Integrity rx3600 Server's virtualisation, scalability and availability features make it an ideal choice for entry-level workload consolidation – helping you to accelerate business growth, lower costs and mitigate risk. It is also excellent in clustered and distributed environments – providing enterprise-class availability while meeting demanding requirements of supply-chain management, enterprise resource planning, billing, human resource applications, business intelligence, Java™ and transaction workloads.

The Integrity rx3600 Server's balanced architecture, designed around the HP zx2 Chipset, delivers high levels of capacity and availability to protect your investment further. The Integrity rx3600 Server can scale to two processors and four cores, and can support up to 192 GB of memory and eight internal hard disk drives. It supports your choice of broad application deployment throughout HP-UX 11i, Microsoft® Windows® Server 2003 and Microsoft® Windows® Server 2008, Linux and OpenVMS operating environments, increasing your return on investment and further aligning your IT with business needs. For additional flexibility, it is available in either rack-improved or standalone pedestal form factors and with a choice of PCI-X or mixed PCI-X/PCI Express I/O technologies. Powered by the Dual-Core Intel® Itanium® processor, the Integrity rx3600 Server is a logical upgrade from the PA-RISC–based HP 9000 rp3440 Server and the HP AlphaServer DS20 and ES45 series, as well as from the HP Integrity rx2620 and rx5670 Servers.

Key features and benefits

Simplified management and deployment for lower costs: With the Integrity rx3600 Server, you have the flexibility to deploy a high-performing standalone, clustered or distributed computing model. For example, you can place one server in each of your branch offices and manage every one of them remotely. Powerful, integrated management tools – including HP Systems Insight Manager, HP Integrity Essentials, Integrated Lights Out (iLO 2) remote

HP Integrity server technology is always virtualised, always scalable and always available – so you get the right outcome, at the right time, for the right price

management, Global Workload Manager (gWLM) and HP OpenView applications – work with the Integrity rx3600 Server to promote faster, more efficient server deployment and reduced operational costs. You can manage your servers with the same tools you use to manage the rest of your infrastructure – from a single interface – promoting greater control and efficiency and an enhanced experience for both the user and the administrator.

Increased operating environment flexibility to mitigate risks: The HP Integrity rx3600 Server enables you to run HP-UX 11i with the HP Virtual Server Environment, as well as the Microsoft Windows Server 2003, Linux, and OpenVMS operating environments, so you can choose the right operating environment for your workload. It also includes all of the management, availability and security features you typically expect to find when running these environments, promoting seamless integration and management when deployed or redeployed in a heterogeneous IT environment. In addition, common HP Integrity and HP ProLiant technologies (including universal racks, accessories and management tools) mean greater flexibility and return on IT.

Enhanced scalability for greater power with fewer resources: The new HP zx2 Chipset fully unleashes the power of the Intel Itanium processor by lowering memory latencies; providing extensive reliability, availability and serviceability features; and increasing memory and I/O subsystem scalability. This type of flexible capacity within the server – enabling increased, balanced performance throughout transactional and batch workloads as well as Java applications and technical computing workloads – lowers costs further because it reduces the need for additional servers.

Robust availability for every application, every user, every time: New technologies that increase the levels of system and application availability are integrated into the Integrity rx3600 Server. These include double chip spare – reducing memory errors 17-fold over previous servers – that enables the system to recover from two DRAM failures and means significantly fewer reboots due to memory failure. The Integrity rx3600 Server also features built-in error protection for the processor as well as dynamic processor resilience and de-allocation. In terms of security, robust security features such as authentication and authorisation are built into all four operating environments.

Your choice of storage: The large internal disk capacity gives you flexibility in storage options. You can use internal storage as a self-contained database, which delivers the advantages of managing internal storage through server management tools and requires fewer devices. This solution adds up to a cost-effective 'database-in-a-box'. When you use it with HP Integrity Virtual Machines, the savings that can be realised through workload and server consolidation are immense – along with the resulting improvements in resource utilisation. Or, you can extend your system to incorporate the industry-leading HP StorageWorks range of network storage solutions, which makes it easy for you to increase information availability while cutting costs radically.

Technical specifications

Processor	1.66 GHz/18 MB Dual-Core Intel Itanium (9140M)	1.42 GHz/12 MB Dual-Core Intel Itanium (9120N)
Processors/Cores per system	2/4	2/4
Module type	Dual core	Dual core
Clock speed	1.66 GHz	1.42 GHz
Front-side bus	667 MHz	533 MHz
L1 cache	32 KB	32 KB
L2 cache – instruction	1 MB per core	1 MB per core
L2 cache – data	256 KB per core	256 KB per core
L3 cache	18 MB (9 MB per core)	12 MB (6 MB per core)
RAM minimum/maximum	2 GB/192 GB	
RAM type	PC2-4200 ECC chip spare DDR2	
Memory protection	Error checking and correcting (ECC) on memory and caches; double chip spare	
Hard drive capacity	36 GB, 72 GB and 146 GB Small Form Factor Serial Attached SCSI (SAS) drives available	
Internal hard drive bays	8 hot-plug Small Form Factor Serial Attached SCSI (SAS)	
Maximum internal storage	1.2 TB	
Removable media	1 open bay for DVD-ROM or DVD+RW drive	
I/O slots	With PCI-X backplane: 8 PCI-X slots available; with mixed backplane: 4 PCI-X and 4 PCI Express slots available	
Network adaptor	Dual-port 10/100/1000Base-T Ethernet	
Storage adaptor	HP 8-port Serial Attached SCSI (SAS) host bus adaptor with RAID 1 (HP-UX and OpenVMS); HP 8-port SAS Smart Array Adaptor upgrade with RAID 1, 5, 6 (Windows and Linux)	
Interfaces	VGA (required for Windows; optional for HP-UX, Linux and OpenVMS) and 3 USB ports for local human interface; 1 RS-232 serial port for general use; 2 RS-232 serial ports and 10/100Base-T LAN for Integrated Lights Out (iLO 2) management	
Form factor	Rack-improved with 4U height or in a standalone, pedestal form factor	
Hot-plug fans	6, configured in 3 redundant pairs	
Operating systems supported	HP-UX 11i v3 and HP-UX 11i v2 (choice of Mission Critical, Enterprise, or Foundation Operating Environment) Microsoft Windows Server 2003, Enterprise and Datacentre Editions, Microsoft Windows Server 2008 for Itanium-based Systems and Microsoft SQL Server 2005 and SQL Server 2008 Red Hat Enterprise Linux 4 and 5; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 (choice of Mission Critical, Enterprise, or Foundation Operating Environment)	**www.hp.com/go/hpux11i** **www.hp.com/go/integrity/windows** **www.hp.com/go/integritylinux** **www.hp.com/go/openvms**
High availability – standard server features	N+1 redundant power supplies (N=1) Double chip spare Error checking and correcting (ECC) on memory and caches Automatic deconfiguration of memory and processors Service processor to monitor system status N+1 redundant fans	
HP Virtual Server Environment (VSE)	Workload management, partitions, availability software and utility pricing (optional)	**www.hp.com/go/vse**

Environmental specifications

Altitude	Operating: 10,000 ft. (3,000 m) maximum Non-operating: 15,000 ft. (4,600 m) maximum
Temperature	Operating: 41°F to 95°F (5°C to 35°C) Non-operating: –40°F to +158°F (–40°C to +70°C) Maximum rate of temperature change: 36°F (20°C) per hour
Humidity	Operating: 15% to 80% relative non-condensing Non-operating: 8% to 85% non-condensing
Dimensions	
Rack form factor	Height: 6.8 in. (173 mm)/4U EIA Width: 17.32 in. (440 mm) Depth: 27.4 in. (696 mm)
Standalone, pedestal form factor	Height: 20.2 in. (512 mm) Width: 8.5 in. without feet, 14.5 in. with feet (216 mm without feet, 369 mm with feet) Depth: 27.4 in. (696 mm)
Weight	Maximum configuration (racked): 99 lb. (45 Kg) Maximum configuration (pedestal version): 114 lb. (52 Kg)
Power requirements	Maximum input current: 14 A @ 100 VAC Line frequency: 50 – 60 Hz Maximum AC power input: 1,095 W *Note: Power figures are per system, not per input line (power supply) and include losses in the power supplies.*
Power supply	Maximum output: 1,200 W per supply Number of supplies: 1 or 2 (1+1 configuration: one required, one optional) Power inlet type: IEC320-C20
BTU rating	Typical: 2,337 BTU/hour Maximum: 3,736 BTU/hour
Voltage tolerance range	90 to 132 VAC (operating range of 100 – 120 VAC +/–10%) 180 to 264 VAC (operating range of 200 – 240 VAC +/–10%)
Frequency tolerance range	47 to 63 Hz (operating range of 50 – 60 Hz +/–3 Hz)
Regulatory	Regulatory model number: RSVLA-0404

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For more information about the HP Integrity server family, visit: www.hp.com/go/integrityserverfamilyguide

For more information about the HP Integrity rx3600 Server, contact any of our worldwide sales offices or visit our Web sites at: www.hp.com/go/integrity or www.hp.com/go/rx3600

HP Services

HP Services provides the people and processes that help you take full advantage of the server capabilities needed to deliver the high levels of availability and performance your business requires.

The HP Service range offers:

Consulting and integration: A range of infrastructure, industry, business application and availability services

Support

- **Assessment and design services:** To translate business and technical needs into a solution that melds the necessary hardware and software support
- **Deployment services:** For risk-reducing installation and start-up, implementation and integration
  - **HP Factory Express:** Customised factory configurations and on-site deployment
- **Availability services:** To reduce downtime and meet service-level commitments in mission-critical environments
  - **HP Support Plus 24 Service:** Integrated hardware and software support services designed specifically for your technology
  - **HP Proactive 24 Service:** Integrated hardware and software support, including proactive and reactive services to improve stability and availability throughout your environment
  - **HP Critical Service:** Comprehensive support solution designed to help reduce the business impact of downtime on mission-critical applications

Education: Curriculum of traditional classroom and on-line instructor-led classes delivered off the shelf or customised to deliver an effective learning experience

Customers rely on HP to design, deploy, operate and support the IT systems that run their businesses. HP Services has an extensive track record of helping customers improve their ability to support changing business needs.

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4AA0-6529EEW Rev. 6, December 2008