

# HP Integrity rx6600 Server

Data sheet



The HP Integrity rx6600 Server is a highly expandable platform for workload consolidation and virtualization that redefines the entry class. This next-generation Integrity server is capable of handling the demanding workloads previously possible only with larger, more costly systems. It is ideally suited for application and database deployments in enterprise resource planning, supply chain management, billing, business intelligence, and enterprise application integration. Its excellent Java™, transaction, and online analytical processing (OLAP) performance distinguishes it from other entry-class servers and sets a new standard for the amount of work that can be accomplished with a 4-processor/8-core system.

The Integrity rx6600 Server's balanced architecture is built around the innovative HP zx2 Chipset and is combined with the powerful new dual-core Intel® Itanium® 2 processor. Together, they deliver greater scalability and performance—along with higher

levels of availability—than previously found in entry-level servers. Broad application support across HP-UX 11i, Microsoft® Windows® Server 2003, Linux, and OpenVMS operating environments gives you the choice to deploy the right solution for your business needs.

The Integrity rx6600 Server supports up to 192 GB of DDR2 memory and 16 small form factor internal hard disk drives. For additional flexibility, there will be an optional upgrade from PCI-X to PCI Express I/O. The flexible capacity and innovative virtual machine technologies available in the Integrity rx6600 Server make it an ideal platform for workload consolidation and virtualization, leading to a significantly better return on IT. The Integrity rx6600 Server is a logical upgrade from the PA-RISC-based HP 9000 rp4400 Server series, the HP AlphaServer DS45 and ES45 Server series, and the HP Integrity rx4640 Server.

# HP Integrity servers: delivering a better return on your IT investment through flexible capacity, secured availability, and simplified management

**Significant ROI through consolidation**—The HP Integrity rx6600 Server's large memory capacity, generous internal storage, flexible I/O, and comprehensive virtualization offerings combine to offer outstanding consolidation opportunities. This, in turn, leads to dramatic cost savings in terms of licensing and data center space along with increased resource utilization. Plus, powerful integrated management tools—including HP Systems Insight Manager, HP Integrity Essentials, HP Storage Essentials, Integrated Lights Out (iLO 2) remote management, Global Workload Manager (gWLM), and HP OpenView software—work with the Integrity rx6600 Server for faster, more efficient server deployment, which further reduces operational costs. You can manage your servers with the same tools as the rest of your infrastructure, promoting greater control and efficiency as well as an enhanced experience for both the user and the administrator.

**Increased flexibility in operating environment deployment**—As part of HP's commitment to flexibility, the HP Integrity rx6600 Server runs HP-UX 11i v2 with HP Virtual Server Environment, Microsoft® Windows® Server 2003, Linux, and OpenVMS operating environments. The HP Integrity rx6600 Server includes all the management, availability, and security features you typically expect to find when running these environments, allowing seamless integration and management for deployment and redeployment into a heterogeneous IT environment, and enabling you to choose the right operating environment for the task at hand. In addition, the convergence of HP Integrity and HP ProLiant technologies in areas such as system deployment and management add to greater flexibility and a better return on IT.

**Enhanced scalability**—The insights HP has gained as a co-developer, with Intel, of the Intel Itanium processor have produced substantial system performance gains through the development of the HP zx2 Chipset. Invented

by HP, this chipset fully unleashes the power of the Intel Itanium 2 processor by lowering memory latencies; providing extensive reliability, availability, and serviceability (RAS) features; and increasing memory and I/O subsystem scalability. This type of scalability within the server enables increased balanced performance across transactional and batch workloads.

**Robust secured availability features**—New technologies that increase the levels of system and application availability are integrated within the Integrity rx6600 Server. These include double chip spare—reducing memory errors 17-fold over previous servers—which enables the system to recover from two DRAM failures and will result in significantly fewer reboots from memory failures. The Integrity rx6600 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 authorization 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 for 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 realized through workload and server consolidation are immense, along with the resulting improvements in resource utilization. Or, you can extend your system to incorporate HP StorageWorks' industry-leading portfolio of network storage solutions, which makes it easy for you to increase information availability while radically cutting costs.

## Technical specifications

<b>Processor</b>	1.6 GHz/24 MB dual-core Intel Itanium 2	1.6 GHz/18 MB dual-core Intel Itanium 2	1.4 GHz/12 MB dual-core Intel Itanium 2
<b>Processors/Cores per system</b>	4/8	4/8	4/8
<b>Module type</b>	Dual-core processor	Dual-core processor	Dual-core processor
<b>Clock speed</b>	1.6 GHz	1.6 GHz	1.4 GHz
<b>Front-side bus</b>	533 MHz	533 MHz	533 MHz
<b>L1 cache</b>	32 KB	32 KB	32 KB
<b>L2 cache—instruction</b>	1 MB per core	1 MB per core	1 MB per core
<b>L2 cache—data</b>	256 KB per core	256 KB per core	256 KB per core
<b>L3 cache</b>	24 MB (12 MB per core)	18 MB (9 MB per core)	12 MB (6 MB per core)
<b>RAM minimum/maximum</b>	2 GB/192 GB		
<b>RAM type</b>	PC2-4300 ECC chip spare DDR2		
<b>Memory protection</b>	Error checking and correcting (ECC) on memory and caches; double chip spare		
<b>Hard drive capacity</b>	36 GB, 73 GB, 146 GB (available in 4Q06)		
<b>Internal hard drive bays</b>	16 hot plug Serial Attached SCSI (SAS) small form factor (SFF) 2.5 in. drives		
<b>Maximum internal storage</b>	1.2 TB with 73 GB drives, 2.4 TB with 146 GB drives		
<b>Removable media</b>	1 open bay for a DVD		
<b>I/O slots</b>	8 PCI-X slots available; optional upgrade to PCI Express in 1Q07 (will have 4 PCI Express slots and 4 PCI-X slots)		
<b>Network adapter</b>	2 x Gigabit Ethernet		
<b>Storage adapter</b>	HP 8-port Serial Attached SCSI (SAS) Host Bus Adapter with RAID 1 (HP-UX & OpenVMS); HP 8-port SAS Smart Array Adapter upgrade with RAID 1, 5, 6 (Windows & Linux)		
<b>Interfaces</b>	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; 1 RS-232 serial port and 10/100Base-T LAN for Integrated Lights Out (iLO 2) management		
<b>Form factor</b>	Rack-optimized with 7U height; standalone (rack-less) form kit available (in 1QCY07)		
<b>Hot-plug fans</b>	6, configured in 3 redundant pairs		
<b>Operating systems supported</b>	HP-UX 11i v2 (choice of Mission Critical, Enterprise, or Foundation Operating Environment) Microsoft Windows Server 2003, Enterprise Edition Red Hat Enterprise Linux <sup>1</sup> AS 4 and Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 (choice of Mission Critical, Enterprise, or Foundation Operating Environment)	<a href="http://www.hp.com/go/hpux11i">www.hp.com/go/hpux11i</a> <a href="http://www.hp.com/go/integrity/windows">www.hp.com/go/integrity/windows</a> <a href="http://www.hp.com/go/integritylinux">www.hp.com/go/integritylinux</a> <a href="http://www.hp.com/go/openvms">www.hp.com/go/openvms</a>	
<b>High availability</b>	<b>Standard server features</b> 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		
<b>HP Virtual Server Environment (VSE)</b>	Workload management, partitions, availability software, and utility pricing (optional)	<a href="http://www.hp.com/go/vse">www.hp.com/go/vse</a>	
<b>Environmental specifications</b>			
<b>Altitude</b>	Operating: 10,000 ft. (3000 m) maximum Non-operating: 15,000 ft. (4500 m) maximum		
<b>Temperature</b>	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		
<b>Humidity</b>	Operating: 15% to 80% relative non-condensing Non-operating: 8% to 85% non-condensing		
<b>Dimensions</b>			
<b>Rack form factor</b>	Height: 12 in. (3058 mm)/7U EIA Width: 17.32 in. (440 mm) Depth: 27.4 in. (696 mm)		
<b>Standalone frame</b>	Height: 16.7 in. (422 mm) Width: 19.3 in. (489 mm) Depth: 27.4 in. (696 mm)		
<b>Weight</b>	Maximum configuration: 150 lb. (68 kg)		
<b>Power requirements</b>	Maximum input current: 10 A @ 200 VAC Line frequency: 50–60 Hz Maximum AC power input: 1,726 W <i>Note: Power figures are per system, not per input line (power supply), and include losses in the power supplies.</i>		
<b>Power supply</b>	Maximum output: 1600 W per supply Number of supplies: 1 or 2 (1+1 configuration: one required, one optional) Power inlet type: IEC320-C20		
<b>BTU rating</b>	Typical: 2,380 BTU/hour Maximum: 5,893 BTU/hour		
<b>Voltage tolerance range</b>	180 to 264 VAC (operating range of 200–240 VAC +/- 10%)		
<b>Frequency tolerance range</b>	47 to 63 Hz (operating range of 50–60 Hz +/- 3 Hz)		
<b>Regulatory</b>	Regulatory model number: RSVLA-0405		

<sup>1</sup> Support planned by end of 2006

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### For more information

For more information about the HP Integrity rx6600 Server, contact any of our worldwide sales offices or visit our Web sites at: [www.hp.com/go/integrity](http://www.hp.com/go/integrity) or [www.hp.com/go/rx6600](http://www.hp.com/go/rx6600)

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