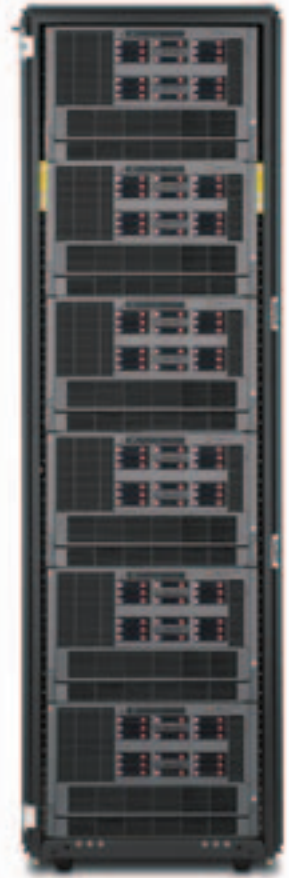# HP Integrity rx6600 Server

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 business-critical 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 Dual-Core Intel® Itanium® processor. 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. Designed with forward-looking technologies, the Integrity rx6600 Server helps you prepare for the future while also accelerating business growth, lowering costs, and mitigating risk.

The Integrity rx6600 Server supports up to 192 GB of DDR2 memory and 16 small form factor internal hard disk drives. For additional flexibility, it is available in either rack-optimized or standalone form factors and with a choice of PCI-X or mixed PCI-X/PCI Express I/O technologies. The flexible capacity and innovative virtual machine technologies available in the Integrity rx6600 Server make it an ideal platform for workload consolidation, 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 series, and the HP Integrity rx4640 Server.

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

Key features and benefits

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 applications—work with the Integrity rx6600 Server to promote faster, more efficient server deployment and reduced 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 operating environment flexibility to protect your investment—As part of HP's commitment to flexibility, the HP Integrity rx6600 Server runs HP-UX 11i with 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 the task at hand. The HP Integrity rx6600 Server also includes all 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, the convergence of HP Integrity and HP ProLiant technologies in areas such as system deployment and management mean greater flexibility and a better return on IT.

Enhanced scalability for greater power with fewer resources—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 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 availability for every application, every user, every time—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 means significantly fewer reboots due to memory failure. 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 the industry-leading HP StorageWorks portfolio of network storage solutions, which makes it easy for you to increase information availability while radically cutting costs.

Technical specifications

Processor	1.6 GHz/24 MB Dual-Core Intel Itanium (9150N)	1.6 GHz/18 MB Dual-Core Intel Itanium (9140N)	1.42 GHz/12 MB Dual-Core Intel Itanium (9120N)
Processors/Cores per system	4/8	4/8	4/8
Module type	Dual-core processor	Dual-core processor	Dual-core processor
Clock speed	1.6 GHz	1.6 GHz	1.42 GHz
Front-side bus	533 MHz	533 MHz	533 MHz
L1 cache	32 KB	32 KB	32 KB
L2 cache—instruction	1 MB per core	1 MB per core	1 MB per core
L2 cache—data	256 KB per core	256 KB per core	256 KB per core
L3 cache	24 MB (12 MB per core)	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, 73 GB, and 146 GB Small Form Factor Serial Attached SCSI (SAS) drives available
Internal hard drive bays	16 hot-plug Serial Attached SCSI (SAS) small form factor (SFF) 2.5 in. drives
Maximum internal storage	2.3 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 adapter	Dual-port 10/100/1000Base-T Ethernet
Storage adapter	HP 8-port Serial Attached SCSI (SAS) host bus adapter with RAID 1 (HP-UX and OpenVMS); HP 8-port SAS Smart Array Adapter 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; 1 RS-232 serial port and 10/100Base-T LAN for Integrated Lights Out (iLO 2) management
Form factor	Rack-optimized with 7U height or in a standalone form factor
Hot-plug fans	12, configured in 6 redundant pairs

Operating systems supported	HP-UX 11i v3 and HP-UX 11i v2 (choice of Mission Critical, Enterprise, or Foundation Operating Environment)	www.hp.com/go/hpux11i
	Microsoft Windows Server 2003, Enterprise and Datacenter Editions	www.hp.com/go/integrity/windows
	Red Hat Enterprise Linux 4 and 5; Novell SUSE Linux Enterprise Server 10	www.hp.com/go/integritylinux
	OpenVMS v8.3 (choice of Mission Critical, Enterprise, or Foundation Operating Environment)	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: 12 in. (306 mm)/7U EIA Width: 17.32 in. (440 mm) Depth: 27.4 in. (696 mm)
Standalone form factor	Height: 16.7 in. (422 mm) Width: 19.3 in. (489 mm) Depth: 27.4 in. (696 mm)
Weight	Maximum configuration (racked): 150 lb. (68 kg) Maximum configuration (standalone version): 189 lb. (86 kg)
Power requirements	Maximum input current: 9 A @ 200 VAC Line frequency: 50–60 Hz Maximum AC power input: 1,633 W Note: Power figures are per system, not per input line (power supply), and include losses in the power supplies.
Power supply	Maximum output: 1,600 W per supply Number of supplies: 1 or 2 (1+1 configuration: one required, one optional) Power inlet type: IEC320-C20
BTU rating	Typical: 3,405 BTU/hour Maximum: 5,572 BTU/hour
Voltage tolerance range	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-0405

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For more information

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

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** or **www.hp.com/go/rx6600**

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Consulting and integration—a portfolio 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

• HP Factory Express—customized factory configurations and onsite deployment

• Availability services—to reduce downtime and meet service-level commitments in mission-critical environments

 – HP Proactive 24 Service—integrated hardware and software support, including proactive and reactive services to improve stability and availability across your environment

 – HP Critical Service—comprehensive solution designed to help minimize the business impact of downtime on mission-critical applications

 – HP Mission Critical Partnership—customized support to help you achieve your business objectives through continuous service improvements

Education—curriculum of traditional classroom and online instructor-led courses delivered off the shelf or customized 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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