

# HP Integrity rx8640 Server

Data sheet



The HP Integrity rx8640 Server offers high-end performance, functionality, and value in the midrange class. The combination of dual-core Intel® Itanium® 2 processors and the processor-enhancing capabilities of the cell-based HP Super-Scalable Processor Chipset sx2000 makes the Integrity rx8640 Server an ideal platform for world-class IT operations. This server exceeds the demands for consolidation, scale-up, and performance workloads such as enterprise resource planning, customer relationship management, business intelligence, database housing, and financials and billing. Leadership virtualization with hardware and

software partitioning as well as multiple operating-system support give you the freedom to run the right solution for your business requirements.

By investing in the Integrity rx8640 Server now, you get long-term, balanced performance improvements along with outstanding scalability and simplified management. In addition, HP offers better investment protection and return on IT with in-box upgrades.

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

## Key features and benefits

### **Outstanding scalability and blazing-fast application performance for all types of workloads**

—The HP Integrity rx8640 Server offers state-of-the-art features in balanced performance and flexible capacity. Powered by the new dual-core Intel Itanium 2 processors—optimized by the HP sx2000 Chipset—the HP Integrity rx8640 Server delivers the scalability and compute density needed to meet your most demanding business needs.

### **Industry-leading high-availability and reliability**

**features**—Leading high-availability technologies in the Integrity rx8640 Server guard your applications from unacceptable interruptions. The sx2000 Chipset employs error-correcting and self-healing technologies throughout, which reduces customer outages. Unique technologies include Double Chip Sparing, which immediately restores chip-spare protection after a DRAM chip has failed—shielding against the vast majority of memory failures. In addition, it provides link retries and reconfiguration on reboot, which allows the recovery from any link failure.

### **Increased flexibility with deployment/redeployment simplicity**

—The Integrity rx8640 Server offers a full range of operating environments—including HP-UX 11i, Microsoft® Windows® Server 2003, Linux, and OpenVMS. By doing so, this server provides the flexibility to easily deploy and redeploy a broad range of applications that are best suited for your business on the operating system of your choice. You can even run multiple operating systems simultaneously on the same server using soft and hard partitioning.

### **Consolidation opportunities and optimized resource utilization**

—The cell-based architecture of the Integrity rx8640 Server and robust soft, hard, and sub-core partitioning capabilities enhance your consolidation initiatives. With comprehensive server tools to provide excellent resource partitioning, increase resource utilization, and reduce complexity, the Integrity rx8640 Server frees up IT resources and staff to perform other mission-critical tasks. Plus, HP offers the Virtual Server Environment (VSE), a flexible, fully integrated server virtualization offering that makes excellent use of your server resources. The Integrity rx8640 Server and VSE enable higher resource utilization, continuous service levels, and utility pricing—including HP Instant Capacity and Pay per use to provide a better return on IT.

**Enterprise-grade I/O**—The Integrity rx8640 Server supports enterprise-grade multi-port Gigabit Ethernet, SCSI, and Fibre Channel adapters as well as a variety of specialized I/O cards for network, storage, high-performance, and legacy connectivity. Additionally, the Integrity rx8640 Server supports multifunction cards that offer both storage and network connectivity for high-density I/O.

**Investment protection**—The Integrity rx8640 Server allows upgrades to future Intel Itanium 2 processors in the same chassis. In addition, multiple generations of Intel Itanium 2 processors can be mixed in the same HP Integrity rx8640 Server in different hard partitions, which means avoiding costly box swaps and delivering better return on your IT investment.

## 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	1.6 GHz/6 MB Intel Itanium 2
<b>Processors/Cores per system</b>	2P/4C–16P/32C	2P/4C–16P/32C	2P/4C–16P/32C	2P/2C–16P/16C
<b>Module type</b>	Dual core	Dual core	Dual core	Single core
<b>Clock speed</b>	1.6 GHz	1.6 GHz	1.4 GHz	1.6 GHz
<b>Front-side bus</b>	533 MHz	533 MHz	533 MHz	400 MHz
<b>L1 cache</b>	16 KB inst + 16 KB data	16 KB inst + 16 KB data	16 KB inst + 16 KB data	16 KB inst + 16 KB data
<b>L2 cache</b>	1 MB inst + 256 KB data	1 MB inst + 256 KB data	1 MB inst + 256 KB data	1 MB inst + 256 KB data
<b>L3 cache</b>	24 MB	18 MB	12 MB	6 MB
<b>L4 cache</b>	N/A	N/A	N/A	N/A
<b>RAM minimum/maximum</b>	2 GB/256 GB			
<b>RAM type</b>	PC2-3200 DDR2 registered DIMMs			
<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, and 300 GB drives			
<b>Internal hard drive bays</b>	4 hot-plug Ultra320 SCSI; 4 additional disk drive slots on optional Server Expansion Unit 2 (SEU-2)			
<b>Maximum internal storage</b>	1200 GB/2400 GB with optional Server Expansion Unit 2 (SEU-2)			
<b>Removable media</b>	2 (either DVD+RW or DAT); 2 additional removable media bays (DVD+RW or DAT) with optional Server Expansion Unit 2 (SEU-2)			
<b>I/O slots</b>	Base system: 16 internal PCI-X 266 hot-plug I/O card slots available Optional Server Expansion Unit 2 (SEU-2): 16 additional PCI-X 266 hot-plug I/O card slots			
<b>Network adapter</b>	10/100/1000Base-T Ethernet			
<b>Storage adapter</b>	Ultra320 SCSI; Smart Array 6402 RAID adapter (optional)			
<b>Interfaces</b>	1 RS-232 serial port for local console and 10/100BT management LAN			
<b>Form factor</b>	Rack-optimized with 17U height			
<b>Operating systems supported</b>	HP-UX 11i v2 (choice of Mission Critical, Enterprise, or Foundation Operating Environment) Microsoft Windows Server 2003, Enterprise and Datacenter Editions Red Hat Enterprise Linux <sup>1,2</sup> AS 4 and Novell SUSE Linux Enterprise Server <sup>1</sup> 10 OpenVMS v8.3 <sup>1</sup> (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>	Dynamic CPU and memory allocation/de-allocation Double Chip Spare technology Hot-plug cell boards Hot-plug fans Error checking and correcting (ECC) on all CPU, cache, memory, and I/O paths Online addition and replacement of PCI I/O cards Redundant power inputs for dual-grid connections Management processor failover (core I/O) N+1 hot-swappable fans and power supplies Hot-spare Instant Capacity CPU functionality (for HP-UX 11i and OpenVMS partitions only; requires Instant Capacity CPUs) Hardware partitions (nPars)			
<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 90°F (5°C to 32°C); for altitudes >5,000 ft., derate max. temp. by 1.8°F (1°C)/1000 ft. (300 m) 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; maximum wet bulb = 79°F (26°C)			
<b>Dimensions</b>				
<b>Rack form factor</b>	Height: 29.75 in. (776 mm)/17U EIA Width: 19.0 in. (483 mm) Depth: 30.0 in. (762 mm)			
<b>Standalone frame</b>	Height: 32.8 in. (834 mm) Width: 19.0 in. (483 mm) Depth: 30.0 in. (762 mm)			
<b>Server Expansion Unit 2</b>	Height: 15.75 in. (401 mm) Width: 19.0 in. (483 mm) Depth: 30.0 in. (762 mm)			
<b>Weight</b>	Base system (maximum configuration): 378 lb. (171.4 kg); Server Expansion Unit 2: 180 lb. (81.65 kg)			
<b>Power requirements</b>	Typical power dissipation: base system—3800 VA (maximum configuration); Server Expansion Unit 2—662 VA (maximum configuration) Input current: 10.2 A @ 200 VAC AC input power: 200–240 V, 50–60 Hz			
<b>BTU rating</b>	Typical: 12,970 BTU/hour			
<b>Voltage tolerance range</b>	180 to 264 VAC (operating range of 200–240 VAC +/- 10%)			
<b>Frequency tolerance range</b>	48.5 to 61.8 Hz (operating range of 50–60 Hz +/- 3%)			
<b>Regulatory</b>	Regulatory model number: S16			

<sup>1</sup> Linux and OpenVMS supported only on Integrity rx8640 Server with dual-core Intel Itanium 2 processors

<sup>2</sup> Support of dual-core processors planned by end of 2006

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### For more information

For more information about the HP Integrity rx8640 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/rx8640](http://www.hp.com/go/rx8640)

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4AA0-4075ENW Rev. 2, September 2006

