

HP Integrity rx8640 Server

Data sheet



The HP Integrity rx8640 Server offers high-end performance, functionality and value in the mid-range. The combination of Dual-Core Intel® Itanium® processors and the processor-enhancing capabilities of the cell-based HP Super-Scalable Processor Chipset sx2000 makes the Integrity rx8640 Server a reliable platform for business-critical IT operations. This server goes beyond current demands for consolidation, scale-up, simplified management and performance workloads such as enterprise resource planning, customer relationship management, business intelligence, database housing, and financials and billing.

Multiple-operating-system support (HP-UX 11i, Microsoft® Windows® Server 2003, Linux and OpenVMS) and the Integrity rx8640 Server's innovations in terms of virtualisation, scalability and availability enable you to accelerate business growth, lower costs and mitigate risk. In addition, balanced performance improvements and forward-looking technology investments and partnerships solidify your adaptive infrastructure and help prepare your IT for the future.

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

Key features and benefits

Outstanding scalability and ultra high-speed application performance for all types of workloads –

The HP Integrity rx8640 Server offers state-of-the-art features in the areas of balanced performance and flexible capacity. Powered by the new, second-generation Dual-Core Intel Itanium processors – optimised by the HP sx2000 Chipset – the HP Integrity rx8640 Server delivers the scalability and compute density required to meet your most demanding business needs.

Industry-leading high-availability and reliability features –

Leading high-availability technologies in the Integrity rx8640 Server protect your applications from unacceptable interruptions. The server's sx2000 Chipset uses error-correcting and self-healing technologies throughout, reducing customer outages. Other high-availability technologies include double chip sparing, which immediately restores chip-spare protection after a DRAM chip has failed, providing protection against the vast majority of memory failures. In addition, the server provides link retries and reconfiguration on reboot, which allows recovery from any link failure. Together with other products in HP's enterprise portfolio, such as HP StorageWorks network storage solutions, the Integrity rx8640 Server makes it easier for your business to increase information availability and protect data while radically cutting costs.

Increased flexibility with deployment and management simplicity –

The Integrity rx8640 Server offers a full range of operating environments, including HP-UX 11i, Microsoft Windows Server 2003, Linux and OpenVMS. This multi-operating-system capability gives you the flexibility to easily deploy and redeploy a broad range of the applications best suited to your business on the

operating system of your choice. Using soft and hard partitioning, you can even run multiple operating systems simultaneously on the same server. In addition, the convergence of system management technologies such as integrated Lights Out 2 (iLO2) promotes greater flexibility and a better return on IT investment.

Optimised resource utilisation and consolidation opportunities –

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

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 specialised PCI-X and PCI Express 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.

Sound return on investment – Multiple generations of Intel Itanium processors can be mixed in the same HP Integrity rx8640 Server in different hard partitions, avoiding costly box swaps and delivering a better return on your IT investment.

Technical specifications

Processor	1.6 GHz/24 MB Dual-Core Intel Itanium (9150N)	1.6 GHz/18 MB Dual-Core Intel Itanium (9140N)	1.4 GHz/12 MB Dual-Core Intel Itanium (9120N)
Processors/Cores per system	2p/4c-16p/32c	2p/4c-16p/32c	2p/4c-16p/32c
Module type	Dual core	Dual core	Dual core
Clock speed	1.6 GHz	1.6 GHz	1.4 GHz
Front-side bus	533 MHz	533 MHz	533 MHz
L1 cache	16 KB inst + 16 KB data	16 KB inst + 16 KB data	16 KB inst + 16 KB data
L2 cache	1 MB inst + 256 KB data	1 MB inst + 256 KB data	1 MB inst + 256 KB data
L3 cache	24 MB	18 MB	12 MB
L4 cache	N/A	N/A	N/A
RAM minimum/maximum	2 GB/512 GB		
RAM type	DDR-2 registered DIMMs (2 GB, 4 GB and 8 GB DIMMs – installed in pairs)		
Memory protection	Error checking and correcting (ECC) on memory and caches; double chip spare		
Hard drive capacity	73 GB, 146 GB and 300 GB Ultra320 SCSI hard disk drives		
Internal hard drive bays	4 hot-plug Ultra320 SCSI; 4 additional disk drive slots on optional Server Expansion Unit 2 (SEU-2)		
Maximum internal storage	1200 GB; 2400 GB with optional SEU-2		
Removable media	2 (either DVD+RW or DAT); 2 additional removable media bays (DVD+RW or DAT) with optional SEU-2		
I/O slots	Base system – PCI-X I/O backplane option: 16 internal PCI-X hot-plug I/O card slots available (8 PCI-X 266, 8 PCI-X 133) Base system – PCIe/PCI-X I/O backplane option: 16 internal PCIe and PCI-X hot-plug I/O card slots available (8 PCIe x8, 8 PCI-X 133) Optional SEU-2 – PCI-X I/O backplane option: 16 internal PCI-X hot-plug I/O card slots available (8 PCI-X 266, 8 PCI-X 133) Optional SEU-2 – PCIe/PCI-X I/O backplane option: 16 internal PCIe and PCI-X hot-plug I/O card slots available (8 PCIe x8, 8 PCI-X 133)		
Network adapter	10/100/1000Base-T Ethernet		
Storage adapter	Ultra320 SCSI; Smart Array 6402 RAID adapter (optional)		
Interfaces	1 RS-232 serial port for local console and 10/100BT management LAN		
Form factor	Rack-optimised with 17U height		
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 Datacenter Editions Red Hat Enterprise Linux 4 and 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	Dynamic CPU and memory allocation/de-allocation		
Standard server features	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)		
Environmental specifications			
Altitude	Operating: 3,000 m (10,000 ft.) maximum Non-operating: 4,500 m (15,000 ft.) maximum		
Temperature	Operating: 5°C to 32°C (41°F to 90°F) ; for altitudes > 1,500 m (5,000 ft.), derate max. temp. by 1°C (1.8°F)/300 m (1,000 ft.) Non-operating: -40°C to +70°C (-40°F to +158°F) Maximum rate of temperature change: 20°C (36°F) per hour		
Humidity	Operating: 15% to 80% relative non-condensing; maximum wet bulb = 26°C (79°F)		
Dimensions			
Rack form factor	Height: 776 mm (29.75 in.) /17U EIA Width: 483 mm (19.0 in.) Depth: 762 mm (30.0 in.)		
Server Expansion Unit 2	Height: 401 mm (15.75 in.) Width: 483 mm (19.0 in.) Depth: 762 mm (30.0 in.)		
Weight	Base system (maximum configuration): 378 lb. (171.4 kg); Server Expansion Unit 2: 180 lb. (81.65 kg)		
Power requirements	Typical power dissipation: base system – 3,800 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		
BTU rating	Typical: 12,970 BTU/hour		
Voltage tolerance range	180 to 264 VAC (operating range of 200–240 VAC +/- 10%)		
Frequency tolerance range	48.5 to 61.8 Hz (operating range of 50–60 Hz +/- 3%)		
Regulatory	Regulatory model number: S16		

HP Financial Services – put the power of the HP portfolio to work for you

In addition to having the industry's strongest portfolio of products, services, people, tools, methodologies and world-class partnerships, we also provide world-class financial services. HP Financial Services offers a full range of IT transition, acquisition, management and disposition services to help customers manage both their IT infrastructure and their balance sheet as effectively as possible. For more information on these services, contact your HP sales representative or visit: www.hp.com/go/hpfinancialservices

For additional information, please visit our Web sites at:

HP Storage – www.hp.com/go/storageworks

HP Serviceguard – www.hp.com/go/serviceguard

HP Systems Insight Manager (SIM) – www.hp.com/go/hpsim

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 rx8640 Server, contact any of our worldwide sales offices or visit our Web sites at: www.hp.com/go/integrity or www.hp.com/go/rx8640

HP Services

HP Services provides people and processes to help you take full advantage of the server capabilities that are needed to deliver the high levels of availability and performance your business requires. From initial assessment and design to ongoing support, HP is your single point of contact and accountability.

Our services portfolio offers:

- **Assessment and Design services** to translate your business and technical needs into a solution that combines the necessary hardware and software support
- **Deployment services** for reducing the risk involved in installation and start-up, implementation and integration
 - HP Factory Express – customised factory configurations and on site deployment
- **Premium Hardware and Software services** to help reduce downtime and meet availability service levels 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 IT environment
 - HP Critical Service – comprehensive support solution designed to help minimise the business impact of downtime on mission-critical applications
- **Education** – curriculum of traditional classroom and online instructor-led courses, either off the shelf or customised to ensure 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.

For more information, please visit:

www.hp.com/services/missioncritical

© Copyright 2006, 2007 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Itanium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation.

To learn more, visit www.hp.com

4AA0-4075EEW Rev.4, November 2007

