HP Integrity rx4640-8 Server

Data sheet

HP servers offer innovation based on standards, laying the foundation for the Adaptive Enterprise, where business and IT are synchronized to capitalize on change. Powered by the industry-standard Intel® Itanium® 2 processor, HP Integrity servers deliver superior choice, focused innovation, and world-class experience. Integrity servers provide you with the leading performance, exceptional scalability, unparalleled flexibility, and mission-critical reliability your business demands.

The HP Integrity rx4640-8 Server extends the performance of entry-class servers, with scalability up to 8 processors. This enables commercial computing users to run demanding applications at a lower price point. The Integrity rx4640-8 Server enhances the price/performance of the Intel® Itanium® 2 processor by integrating it with the HP Scalable Processor Chipset zx1 to achieve greater performance through increased memory and I/O subsystem scalability. With 128 GB memory capacity, the Integrity rx4640-8 Server can help you get more out of today's demanding application software, such as enterprise resource planning (ERP), supply-chain management, and business intelligence. And, if you are a technical computing user, you can run more simulations and perform more in-depth analyses than previously possible.

Key features:
HP Integrity rx4640-8 Server

- Choice of operating systems (HP-UX 11i, Linux®, Microsoft® Windows® Server 2003, OpenVMS)

- Consistent management tools

- HP Integrated Lights Out (iLO) remote management

- Complete high-availability and business-continuity solutions

- In-box upgrade to the next-generation Intel Itanium 2 processor

Key benefits:
HP Integrity rx4640-8 Server

- Increased flexibility, maximum deploy/redeploy utility

- Easy integration of the HP Integrity rx4640-8 Server into your existing environment

- Lower operational costs and improved IT productivity

- Increased application availability and data protection

- Investment protection

HP servers—innovation based on standards

Taking HP Integrity rx4640-8 Servers to the next level
HP Integrity servers now bring you even more computing power, creating even greater opportunities to take advantage of the Intel Itanium 2 processor for workloads that call for increased performance and scalability.

The industry-leading flexibility, performance, and investment protection you have come to expect from the HP Integrity rx4640-8 Server have been extended even further with the introduction of a new generation of Intel Itanium 2 processors. These processors run at clock speeds as high as 1.6 GHz and are available with a Level 3 cache as large as 9 MB.

The HP Integrity rx4640-8 Server is also available with the HP mx2 Dual-Processor Module, consisting of two Intel Itanium 2 processors. With the mx2 Dual-Processor Module—developed by HP—the Integrity rx4640-8 Server can scale up to 8 processors without sacrificing the rack-dense form factor that helps you reduce costs by conserving data-center space.

Innovative HP chipset delivers more power
The insights HP has gained as a co-developer, with Intel, of the Intel Itanium processor—and HP's extensive experience with Itanium-based systems—have produced substantial system performance gains through the development of the HP Scalable Processor Chipset zx1. Invented by HP, the HP zx1 Chipset fully unleashes the power of the Intel Itanium 2 processor by lowering memory latencies and increasing memory and I/O subsystem scalability. With the HP zx1 Chipset, Integrity servers achieve industry-leading performance and memory expandability.

HP Integrity servers deliver breakthrough value within and beyond the system, along with outstanding return on your IT investment. They give you the agility to grow with your business so you can manage the cost of change.

HP Integrity rx4640-8 Server provides superior choice and manageability

As part of HP's commitment to flexibility, the HP Integrity rx4640-8 Server runs a variety of operating environments, including HP-UX 11i v2 with HP Virtual Server Environment, Linux, Windows, and OpenVMS.

Regardless of your choice of operating environment, HP has a highly available and easily managed clustering solution to improve application availability, provide data protection, and reduce planned maintenance time.

HP also makes it possible to add HP Integrity rx4640-8 Servers to either existing HP 9000 clusters running HP-UX 11i v2 Update 2 or existing AlphaServer clusters running OpenVMS v7.0 or later.

Powerful management tools, including HP Systems Insight Manager, Integrated Lights Out (iLO) remote management, and HP OpenView, work with the Integrity rx4640-8 Server to lower operational costs and improve IT productivity.

HP StorageWorks solutions— put information to work

HP StorageWorks helps businesses put information to work. Our industry-leading portfolio of network storage solutions makes it easier for businesses to keep the right information at their fingertips, quickly adapt to change and exploit new opportunities, and increase information availability while radically cutting costs.

For more information on StorageWorks, contact your HP sales representative or visit:
www.hp.com/storage

HP Services—get the most out of your HP Integrity server

HP Services professionals take a collaborative approach to help you reduce IT complexity and better control the impact of change on your business. HP has the expertise to design, build, integrate, manage, and evolve IT environments to more closely align business and IT. Our global portfolio of flexible services helps you to create an Adaptive Enterprise that provides greater flexibility and business value, reduces risk, controls costs, and promotes more predictability and improved service levels—while maximizing the value of your IT investments.

HP's end-to-end service solutions offer consistent quality and service levels across multiple platforms, including UNIX®, OpenVMS, Windows, and Linux. Our hardware and software support offerings—from reactive to comprehensive mission-critical—reduce the risks associated with downtime.

For more information on these services, contact your HP sales representative or visit:
www.hp.com/hps/premium

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, HP makes it easy on the balance sheet to put the power of the HP portfolio to work for you through HP Financial Services.

For more information on these services, contact your HP sales representative or visit:
www.hp.com/go/hpfinancialservices

Technical specifications

Processor	HP mx2 Module Intel Itanium 2	1.6 GHz/9 MB Intel Itanium 2	1.6 GHz/6 MB Intel Itanium 2	1.5 GHz/4 MB Intel Itanium 2
Processors per system	2, 4, 6, 8	1–4	1–4	1–4
Module type	Dual processor	Single processor	Single processor	Single processor
Clock speed	1.1 GHz	1.6 GHz	1.6 GHz	1.5 GHz
Front-side bus	400 MHz	400 MHz	400 MHz	400 MHz
L1 cache	32 KB	32 KB	32 KB	32 KB
L2 cache	256 KB	256 KB	256 KB	256 KB
L3 cache	4 MB	9 MB	6 MB	4 MB
L4 cache	32 MB	N/A	N/A	N/A
RAM minimum/maximum	1 GB/128 GB (1 GB/64 GB for Windows)			
RAM type	PC2100 ECC registered DDR266A/B			
Memory protection	Error checking and correcting (ECC) on memory and caches; memory chip spare			
Hard drive capacity	36 GB, 73 GB, and 146 GB drives available			
Internal hard drive bays	2 hot-plug Ultra320 SCSI			
Maximum internal storage	292 GB			
Removable media	1 open bay for DVD-ROM or DVD+RW drive			
Expansion slots	6 PCI-X slots available (2 x 133 MHz, 4 x 66 MHz); 4.2 GB/s total I/O bandwidth			
Network adapter	Dual-port 10/100/1000Base-T Ethernet			
Storage adapter	Dual-channel Ultra320 SCSI, configured as 2 internal or 1 internal/1 external; Smart Array 6402 RAID adapter can be substituted for standard SCSI adapter			
Interfaces	VGA and 2 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) management			
Form factor	Rack-optimized with 4U height; standalone (rack-less) form factor kit available			
Hot-plug fans	6, configured in 3 redundant pairs			
Operating systems supported	HP-UX 11i v2 Microsoft Windows Server 2003 Enterprise Edition Red Hat Enterprise Linux AS 3* SUSE LINUX Enterprise Server 9* OpenVMS v8.2			

High availability

Standard server features	• N+1 redundant power supplies (N=1) • N+1 fans • Error checking and correcting (ECC) on memory and caches • Memory chip spare • Automatic deconfiguration of memory and processors • Service processor to monitor system status
High-availability and business-continuity solutions (optional)	• HP Serviceguard for HP-UX 11i and Linux • HP Serviceguard Extension for RAC for HP-UX 11i • HP Serviceguard Extension for SAP for HP-UX 11i • HP Serviceguard Manager for HP-UX 11i and Linux clusters • HP Event Monitoring Service • HA Monitors for HP-UX 11i • High Availability Toolkits for HP-UX 11i and Linux • HP Mirrordisk/UX for HP-UX 11i • HP Extended Campus Cluster (including RAC) for HP-UX 11i • HP Metrocluster with Continuous Access XP for HP-UX 11i • HP Metrocluster with EMC SRDF for HP-UX 11i • HP Continentalclusters (including RAC) for HP-UX 11i • OpenVMS clusters, including disaster-tolerant environments with Disaster Tolerant Cluster Services • Microsoft Cluster Service for Windows Server 2003, Enterprise Edition • HP StorageWorks Cluster Extension XP for Windows Server 2003, Enterprise Edition and Linux

* Linux is supported on single Intel Itanium 2 processors. There are no current plans to support Linux on the HP mx2 Dual-Processor Module.

Technical specifications *(continued)*

Management	HP Systems Insight Manager provides a single point of administration across all operating systems supported on HP Integrity servers. In addition, the following tools are available to manage the servers under their specific operating systems:

HP-UX 11i

Software deployment
- HP Ignite-UX for installation and deployment of the HP-UX 11i Operating System
- HP Software Distributor-UX for software and patch management
- Update-UX automates updates to HP-UX 11i Operating Environments
- Software Package Builder packages software into SD-UX packages

Configuration management
- HP System Administration Manager for HP-UX 11i system administration
- HP-UX 11i webmin-based Admin allows easy plug-in of open source management tools
- HP-UX 11i Bastille provides security hardening and lockdown
- Security Patch Check efficiently improves system security
- Serviceguard Manager monitors and manages Serviceguard clusters
- Integrated Lights Out enables comprehensive remote server management
- WBEM for consistent management

Workload management
- HP Process Resource Manager manages allocation of resources (optional)
- Secure Resource Partitions for secure application stacking
- HP-UX 11i Workload Manager automatically manages resources based upon SLOs (optional)
- Global Workload Manager to manage large environments

Windows
- HP Integrity Essentials Foundation Pack (includes Systems Insight Manager and Smart Setup CD for Windows installation)
- Integrated Lights Out enables comprehensive remote server management

Linux
- HP Enablement Kit for Linux eases installation in Linux environments
- System Management Home Page for HP Integrity servers with Linux for single-system management
- Insight Management Agents for HP Integrity servers with Linux
- Integrated Lights Out enables comprehensive remote server management
- Global Workload Manager for resource optimization

OpenVMS
- Management Station manages resources across multiple OpenVMS systems
- Availability Manager monitors multiple OpenVMS nodes
- Class Scheduler manages resources on a per-user basis
- Integrated Lights Out enables comprehensive remote server management

Environmental specifications

Altitude	Operating: 10,000 ft. (3000 m) maximum Non-operating: 15,000 ft. (4500 m) maximum
Temperature	Operating: 41 to 95°F (5 to 35°C) Non-operating: −40 to +158°F (−40 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: 19.0 in. (482 mm) Depth: 27.2 in. (690 mm)
Standalone frame	Height: 20.9 in. (530 mm) Width: 10.2 in. (260 mm) Depth: 27.4 in. (695 mm)
Weight	Maximum configuration: 100 lb. (45 kg)
Power requirements	Maximum input current: 8 A @ 240 VAC Line frequency: 50–60 Hz Maximum AC power input: 1368 W (conservative), 1065 W (typical) *Note: Power figures are per system, not per input line (power supply), and include losses in the power supplies.*
Power supply	Maximum output: 1200 W per supply Number of supplies: 1 or 2 (1+1 configuration: one required, one optional) Power inlet type: IEC320-C14
BTU rating	Typical: 3,600 BTU/hour Maximum: 5,500 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: RSVLA-0201

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For more information

For more information about the HP Integrity rx4640-8 Server, contact any of our worldwide sales offices or visit our Web sites at: **www.hp.com/go/integrity** or **ww.hp.com/go/rx4640**

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, contact your HP sales representative or find us on the Web at: **www.hp.com/go/hpfinancialservices**

HP Customer Support provides a broad spectrum of services to commercial and enterprise customers, including performance and availability services such as proactive mission-critical services and support management services for deployment of the entire IT infrastructure, including HP and multivendor environments. For more information on these services, contact your HP sales representative or visit: **www.hp.com/hps/support**

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