HP Integrity rx7640 Server

Data sheet

The HP Integrity rx7640 Server delivers excellent performance and compute density for business-critical data centre applications. Businesses and high-performance computing centres will benefit from the high levels of functionality and exceptional value of this mid-range server. Powered by Dual-Core Intel® Itanium® processors – and enhanced by the HP Super-Scalable Processor Chipset sx2000 – the Integrity rx7640 Server is the platform you can trust for scale-up or scale-within for database hosting, enterprise resource planning, customer relationship management, business intelligence, and data mining and warehousing. The Integrity rx7640 Server also supports multiple operating systems – giving you the freedom to run the right solution for your IT requirements.

By investing in the Integrity rx7640 Server now, you benefit from long-term, balanced performance improvements, simplified management and innovative technologies that provide you with a future-ready, adaptable infrastructure. As with the entire HP Integrity server family, the Integrity rx7640 Server is intelligently virtualised, dynamically scalable and continuously available – helping you to accelerate business growth, lower costs and mitigate risk. Upgrades to further protect your investment and enhance your return on IT are included as part of the package.

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 incredibly fast application performance for all types of workloads – the HP Integrity rx7640 Server offers state-of-the-art features with balanced performance and scalability. Powered by new Dual-Core Intel Itanium processors – optimised by the HP sx2000 Chipset – the Integrity rx7640 Server delivers compute density and scalability to meet the most demanding business needs.

Industry-leading high-availability and reliability features – High-availability technologies in the Integrity rx7640 Server protect 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 – for protection from the vast majority of memory failures. In addition, the Integrity rx7640 Server provides link retries and reconfiguration on reboot, which allows recovery from link failure. Combined with other products in HP's enterprise portfolio, such as the HP StorageWorks network storage solutions, the Integrity rx7640 Server makes it easier for your business to increase information availability and protect data while cutting costs radically.

Increased flexibility with deployment and management simplicity – Offering a full range of operating environments – including HP-UX 11i, Microsoft® Windows® Server 2003, Linux and OpenVMS – the Integrity rx7640 Server has the flexibility to easily deploy and redeploy a broad range of applications, tailored to the needs of your business, on the operating system of your choice. 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) means greater flexibility and a better return on IT investments.

Optimised use of resources and consolidation opportunities – Robust hard, soft and sub-core partitioning capabilities enhance your consolidation initiatives. With comprehensive server tools to provide excellent resource partitioning, increase resource utilisation and reduce complexity, the Integrity rx7640 Server frees up IT resources and staff to perform other mission-critical tasks. Also, HP offers the Virtual Server Environment (VSE), a flexible, fully integrated server virtualisation offering that makes excellent use of your server resources. The Integrity rx7640 Server and VSE enable increased use of resources, continuous service levels and utility pricing solutions – including HP Instant Capacity and Pay per use.

Enterprise-grade I/O – The Integrity rx7640 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 rx7640 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 rx7640 Server in different hard partitions, avoiding costly box swaps and delivering 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–8P/16C	2P/4C–8P/16C	2P/4C–8P/16C
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/256 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	
Maximum internal storage	1200 GB	
Removable media	1 (either DVD+RW or DAT 72 GB) or 2 (slim line DVD+RW)	
I/O slots	PCI-X IO backplane option: 15 internal PCI-X hot-plug I/O card slots available (8 PCI-X 266, 7 PCI-X 133) PCIe/PCI-X IO backplane option: 15 internal PCIe and PCI-X hot-plug I/O card slots available (8 PCIe x8, 7 PCI-X 133)	
Network adapter	2 10/100/1000Base-T Ethernet	
Storage adapter	Ultra320 SCSI; Smart Array 6402/6404 RAID adapter (optional)	
Interfaces	1 RS-232 serial port for local console and 10/100Base-T management LAN	
Form factor	Rack-optimised with 10U height	
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 (choice of Enterprise or Datacenter Edition)	**www.hp.com/go/integrity/windows**
	Red Hat Enterprise Linux 4 and 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**	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 functionality (for HP-UX 11i and OpenVMS partitions only; requires iCAP processors) Hardware partitions (nPars)	

Environmental specifications

Altitude	Operating: 10,000 ft. (3,000 m) maximum Non-operating: 15,000 ft. (4,500 m) maximum
Temperature	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)/1,000 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
Humidity	Operating: 15% to 80% relative non-condensing; maximum wet bulb = 79°F (26°C)
Dimensions **Rack form factor**	Height: 17.5 in. (445 mm)/10U EIA Width: 19.0 in. (483 mm) Depth: 30.0 in. (762 mm)
Weight	Maximum configuration: 220 lb. (99.8 kg)
Power requirements	Typical power dissipation: 2,030 VA (maximum configuration) Input current: 10.2 A @ 200 VAC AC input power: 200–240 V, 50–60 Hz
BTU rating	Typical: 6,930 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-0102

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

HP Virtual Server Environment (VSE) – **www.hp.com/go/vse**

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 rx7640 Server, contact any of our worldwide sales offices or visit our Web sites at: **www.hp.com/go/integrity or www.hp.com/go/rx7640**

HP Services

HP Services provides people and processes to help you take full advantage of the server capabilities needed to deliver the high levels of availability and performance your business requires.

The HP Services portfolio includes:

- **Assessment and Design services** to translate your business and technical needs into a solution that combines the necessary hardware and software support
- **Deployment services** to reduce the level of risk involved in installation and start-up, implementation and integration
- **Ongoing maintenance services** ranging from basic reactive support to mission-critical service levels
  - HP Support Plus 24 Service – customised, integrated hardware and software support services
  - 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 solutions designed to help minimise the business impact of downtime for 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 their changing business needs.

For more information, please visit: **www.hp.com/services/support**

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