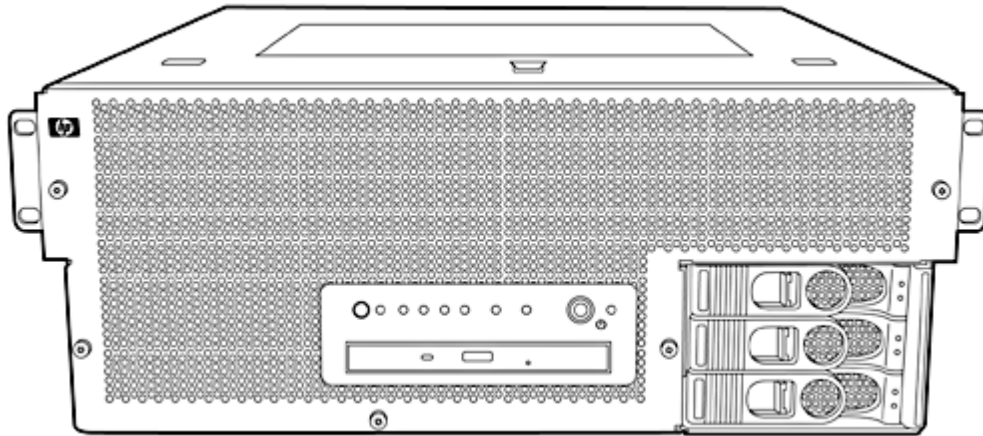


Overview



At A Glance

- HP Integrity cx2620 Server Product Numbers
 - HP cx2620 Server with one 1.6GHz/3MB single-core CPU
AB401A
 - HP cx2620 Server with one 1.4GHz/12MB dual-core
AB402A

Standard System Features

- Multiple Operating Environment support (HP-UX 11i version 2, Linux)
- Dual-channel Ultra320 SCSI controller, 2 internal disks on one channel, 1 internal disk on a second channel
- External Ultra320 SCSI port
- 2 x 10/100/1000Base-TX LAN (auto speed sensing, RJ-45 connector)
- Management Processor for remote management and HA monitoring
- Telnet and web console via 10/100Base-TX management LAN (RJ-45 connector)
- Two general purpose RS-232 serial ports
- Three RS-232 serial ports linked to the management processor (multiplexed from a single DB-25 port)
- Factory integration of CPUs, memory, disk drives, removable media, I/O cards
- One-year warranty with next business day on-site

Standard Features

Minimum System	<ul style="list-style-type: none">• One 64-bit Itanium 2 CPU: either 1.6GHz/3MB single-core or 1.4Hz/12MB cache dual-core• One GB PC2100 ECC Registered DDR266A SDRAM (4x256MB DIMMs)• Two hot swap power supplies, providing N+1 protection and dual feed input
Maximum Server Capacities	<ul style="list-style-type: none">• Two 64-bit Itanium 2 CPUs: Either 1.6GHz/3MB single-core or 1.4GHz/12MB cache dual-core-processor types may not be mixed.• 32 GB PC2100 ECC Registered DDR266A SDRAM• Two hot swap power supplies, providing N+1 protection and dual feed input• Four full size PCI-X/PCI IO adapter cards• One internal DVD ROM or DVD+RW• Three internal hot plug LVD SCSI disks
Supported Operating Environments	<ul style="list-style-type: none">• HP-UX 11i V2• Debian GNU/Linux with HP Telco Extensions 2.x• Red Hat Enterprise Linux version 4 Update 4 or later
Standard System Features	<ul style="list-style-type: none">• Support for multiple operating environments (HP-UX 11i version 2, Linux)• Dual-channel Ultra320 SCSI controller, 2 internal disks on one channel, 1 internal disk on a second channel• External Ultra320 SCSI port 10/100/1000Base-TX LAN (auto speed sensing, RJ-45 connector)• 10/100/1000Base-TX LAN (auto speed sensing, wake-on capability, RJ-45 connector)• Management Processor for remote management and HA monitoring• Telnet and web console via 10/100Base-TX management LAN (RJ-45 connector)• Two general purpose RS-232 serial ports• Three RS-232 serial ports linked to the management processor (multiplexed from a single DB-25 port)• Factory integration of CPUs, memory, disk drives, removable media, PCI/PCI-X I/O cards• One-year warranty with next business day on-site
High Availability	<ul style="list-style-type: none">• N+1 Hot swap, front to rear chassis cooling• Two Hot swap power supplies required, provides N+1 protection and dual feed capability• IPMI monitoring of system health and reporting to host based HA or remote manageability• Management processor with down system diagnostics and remote power down and boot• ECC protected DDR memory• Memory chip spare to overcome single DRAM chip failures• On-line memory page de-allocation• Dynamic Processor resilience and de-allocation• Hot Plug internal disks• Two independent Ultra SCSI channels to internal disks for mirroring across disks and channels• Journal file system for HP-UX
Security	<ul style="list-style-type: none">• Separate LAN for system management• Password protection on console port• Disablement of remote console ports• SSL encryption on web console

Configuration

CPU Configuration The HP Integrity cx2620 is a symmetrical multiprocessing (SMP) server supporting up to two high-performance 64-bit Itanium 2 dual-core processors.

- Processor Details**
- 1.4GHz dual-core with 12MB of L3 cache
 - Or
 - 1.6GHz single-core with 3MB of L3 cache
 - Single-bit cache error corrections
 - 50-bit physical addressing
 - 64-bit virtual addressing
 - 4 GB maximum page size
-

Memory Configuration HP Integrity cx2620 supports DDR (double data rate) SyncDRAM (synchronous dynamic random access memory) DIMMs with ECC and chip spare protection. The HP integrity cx2620 has twelve DIMM slots, allowing a maximum of 32 GB of total system memory.

Memory Loading Rules and Performance Guidelines

- Memory must be installed in groups of four DIMMs, also known as quads
 - Each quad must consist of equal density DIMMs
 - Memory can be ordered in quads or 1 GB (4x256 MB), 2 GB (4x512 MB), 4 GB (4x1 GB), 8 GB (4x2 GB) or 16GB (4x4GB).
 - Minimum memory is 1 GB (4x256 MB)
 - Maximum memory is 32 GB.
 - Memory must be loaded in the specific order on the system board.
 - Each quad of memory is loaded across both memory buses (two DIMMs on each bus) to ensure maximum bandwidth and performance
 - Total bandwidth is 8.5 GB/s, split across two 4.25GB/s memory buses
 - Open page memory latency is less than 80 nanoseconds
-

I/O Architecture

The HP Integrity cx2620 I/O architecture utilizes industry standard PCI-X and PCI buses in a unique design for maximum performance, scalability and reliability.

The HP Integrity cx2620 architecture uses eight high-speed I/O channels, each channel providing 0.5 GB/s of sustained I/O throughput. The eight independent I/O channels provide improved I/O performance and failure containment Independence protects each channel from bus hangs or extended latencies due to failure or high bandwidth demands of other I/O. This architecture ensures an aggregated I/O throughput of over 4GB/s between the CPUs, memory, and I/O devices.

Three of the independent 0.5 GB/s I/O channels are dedicated to the core system I/O functions, such as onboard SCSI, IDE, and LAN controllers, as well as the system management processor.

The remaining five independent 0.5GB/s I/O channels are dedicated to the PCI-X sub-system. Each of the four open full size PCI-X slots (full length) has a dedicated 64-bit 133MHz PCI-X bus and their own independent I/O channels.

The first PCI-X slot uses two dedicated I/O channels, resulting in sustained PCI-X bandwidth of 1.0GB/s. This slot should be reserved for the highest bandwidth cards, such as clustering interconnects or multi-port storage adapters. The remaining three PCI-X slots each have a single dedicated I/O channel, resulting in 0.5 GB/s of sustained bandwidth on each slot.

All slots are keyed for 3.3V I/O cards. 5V cards are not supported in the HP Integrity cx2620.

Configuration

Core I/O

- 2 x 10/100/1000Base-T LAN with RJ-45 connector - Supports LAN boot for operating system installation
- Ultra320 SCSI port
- Four USB 2.0 style A ports (USB 1.1 compatible)
- Two general purpose serial ports (Serial A and Serial B)
- VGA graphics

Management Processor (MP) Functionality

- Dedicated I/O channel on the system's core I/O bus (33MHz, 32-bit PCI) with a private IPMB connection to a separate baseboard management controller
- Dedicated 10/100Base-T LAN console and embedded web console access
- DB-25 serial port - multiplexed (using W cable) into RS-232 ports: local ASCII console, remote/modem console, and general purpose
- Password protected console ports with configurable remote access control
- Console mirroring between all local, modem, LAN, and WEB consoles
- Remote power up and power down control via IPMI commands or simplified system console and control interface
- Event notification to system console - provides connectivity, information, and support for email, pager, and/or HP response centers
- Access to multiple I2C busses for CPU and memory status, fan and temperature status/control, power supply status, subsystem inventory, and LED indicator panel
- Interface to system monitoring and diagnostic hardware via internal IC busses
- Secure Sockets Layer (SSL) security on web console
- Complete sensor data records (SDR), system event log (SEL), field replaceable unit (FRU) inventory, and forward progress logs (FPL) accessible via IPMI commands or simplified system console interface
- Support for IPMI 1.0 via direct serial connection or LAN transport

System Console Configurations

- - The HP Integrity cx2620's integrated Management Processor provides five methods for console connections
 1. SSL-secured web console accessible through the 10/100Base-T management LAN
 2. Standard telnet connections accessible through the management LAN
 3. Local console access via null-modem serial connection
 4. Remote console access via external modem
 5. VGA graphics console - supported on Linux, and HP-UX

Internal Disk and Media Drives

- The HP Integrity cx2620 supports up to three internal low profile hot-plug drives
- A dual channel US320 SCSI channel provides independent channels for the internal disks - two disks on one channel and one disk on a second channel. Split SCSI channels provide enhanced high availability - one channel can fail without impacting the disks on the other channel
- Support by MirrorDisk/UX across disk drives and independent channels
- The Smart Array 6402 SCSI RAID card is available for hardware RAID under the Linux operating system. Currently, the hp factory does not load the operating system in a RAID configuration. Customers should order internal RAID cables (A9827A) and re-load their operating system if internal RAID is desired.
- 73 GB 15K, 146 GB 15K and 300GB 15K hot-plug Ultr320 SCSI disks are supported
- Optional optical media drives include a DVD-ROM (A9919B) and DVD+RW AD348B).

Configuration

HP Integrity cx2620 Power Subsystem

- The HP Integrity cx2620 provide a high level of integrated power protection
- N+1 redundant hot swap power supplies (N=1)
- N+1 redundant -48VDC power feed (N=1)
- Power monitoring and control via integrated management processor

Technical Specifications

Server model number cx2620

Server product number AB401A, AB402A

Supported Processors 1.6GHz Intel Itanium2 single core processor
1.4GHz Intel Itanium 2 dual core processor
Cache single-core 3MB
Cache dual-core 12MB
Floating point yes, included
Coprocesor

System Memory Minimum memory 1GB
Maximum memory 32GB

Internal Disks Maximum disk mechanisms 3
Maximum disk capacity 900GB

Standard Integrated I/O Ultra320 SCSI-LVD 2 Channel
10/100/1000Base-T 2
(RJ-45 connector)
RS232 serial ports 5
10/100Base-T Yes
Management port (RJ-45 connector)
VGA graphics Yes
USB 4

I/O Buses and Slots Total PCI-X/PCI Slots 4 (Full length)
All four slots are 133MHz, 64-bit slots on dedicated PCI-X buses capable of 0.5 GB/s throughput, with one capable of 1.0 GB/s throughput.

Technical Specifications

PCI I/O Cards (Optional - Max 4 full length)

NOTE: Select up to four (4) cards from the list below in any combination unless otherwise noted. All 4 slots are full length.

		HP-UX	Red Hat	
Storage Network Adapters Cards	Dual Port 2Gbps Fibre Channel Adapter	•	•	A6826A
	Dual Port 2Gbps FC and Dual Port 1000BT Adapter	•		AB465A
SCSI Adapter Cards for External Storage	PCI-X Dual-channel Ultra320 SCSI adapter card	•	•	A7173A
RAID Adapters Cards	Smart Array Cache Controller 6402 U320 - For external storage only (Max 3)	•	•	A9890A
Local Area Network (LAN) Adapter Cards	PCI-X Dual Port GigE-TX adapter card for HP-UX and OpenVMS	•		A7012A
	PCI-X Dual Port GigE-TX adapter card for Linux and Windows		•	A9900A
	Single Port GigE-SX adapter card for HP-UX and OpenVMS	•		A6847A
	Single Port GigE-SX adapter card for Linux and Windows		•	A7073A
	PCI-X Dual Port GigE-SX adapter card for Linux and Windows		•	A9899A
	4-port 1000B-T	•		AB545A
	HP PCI-X 133MHz 10GbE SR Fiber Adapter. Max 1	•		AB287A
	Win/Linux 4-port 1000Base-T Gigabit Adapter AD145A requires RHEL AS 4 for Linux support		•	AD145A
	Win/Linux 133MHz 10Gigabit Ethernet SR Fiber Adapter		•	AD144A

Supported Operating Environments	HP-UX 11i V2
	Debian GNU/Linux with HP Telco Extensions
	Red Hat Enterprise Linux version 4 Update 4 or later

Electrical Characteristics	Power supply specification	DC input power	-48VDC
		Nominal input operation range	-40VDC to -60VDC
		Inrush current	25A
		Power supplies	2 required, N+1 Hot swappable
			@-48VDC
	System Power draw	Input power	580 watts - input line
		Typical Heat dissipation	1,826 BTUs/hour
		Input current	12A @ -48VDC

Technical Specifications

Site Preparation	Site planning and installation included	No
	Chassis depth	20.0 in (508 mm)
	Chassis width	17.32 in (440 mm)
	Chassis height	7.00 in (178 mm)
	Rack depth (inches/mm)	23.6 in (600 mm)
	Rack width (inches/mm)	19.0 in (482 mm)
	Rack height (EIA/inches/mm)	4U/7.0 in (172 mm)
	Weight (lbs/kg) maximum	62 lbs (27.7 kg)
	Weight w/o power & disk removed	49.5lbs (22.1 kg)
Regulatory Compliance	NEBS	NEBS level 3 (as specified in Telcordia SR-3580) NEBS 2000 form factor, Seismic Zone 4
	Electromagnetic interference	Complies with FCC rules and Regulations, Part 15 as a Class A digital device. Manufacturer's Declaration to EN55022 Level A, VCCI Registered, Class A, Korea RLL
	Safety	UL Listed, CSA Certified, UL GS Mark compliant with EN 60950 and EN 41003

© Copyright 2007 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

Intel and Itanium are registered trademarks or trademarks of Intel Corporation in the U.S. and/or other countries.

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.