QuickSpecs
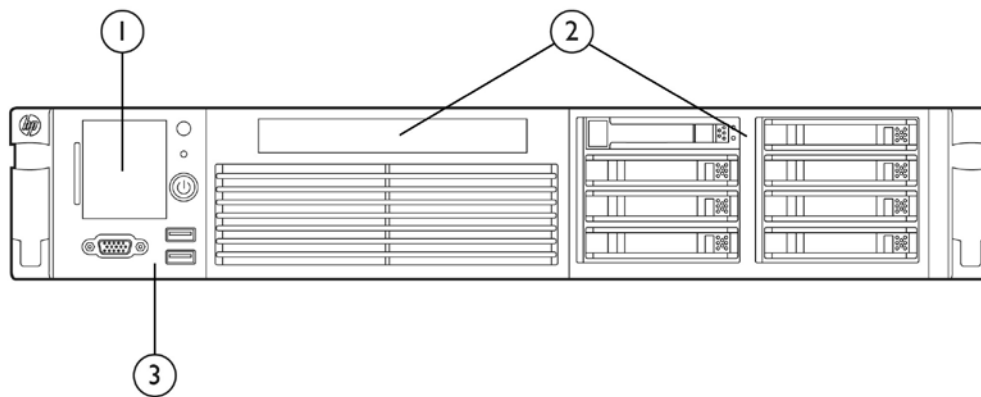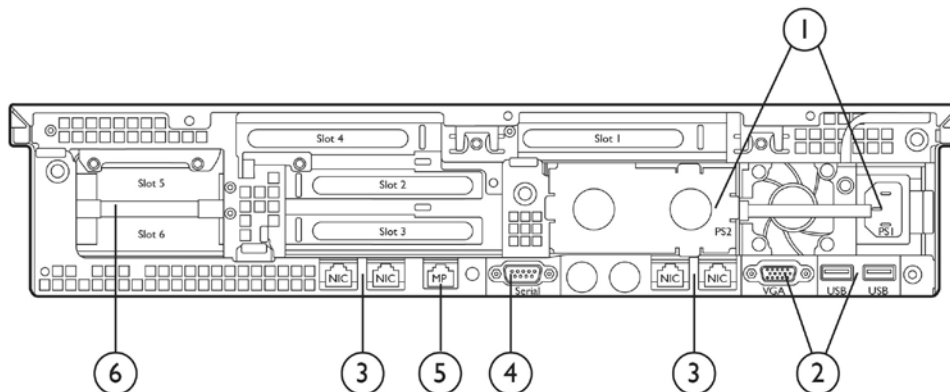
Overview

HPE Integrity rx2800 i2 Server

You are under constant pressure to deliver more with less, even in the face of declining budgets and spending constraints - while your IT department requires higher performing systems for their more demanding workloads. You need an affordable UNIX server that you can install quickly and justify easily. The HPE Integrity rx2800 i2 Server is the economical and easy way to boost performance in your mission-critical data center or remote office, compared to the previous 2U Integrity servers. With compact scaling you can run entry-class UNIX workloads with outstanding performance and scalability. Out-of-the-box savings lowers your TCO with performance, floor space and energy efficiencies. State-of-the-art management tools help you simplify administration, ease serviceability, enable remote management, and improve overall IT staff productivity-and the 2U rx2800 i2 Server integrates seamlessly into existing rack infrastructures.

HPE Integrity rx2800 i2 Server: Front View

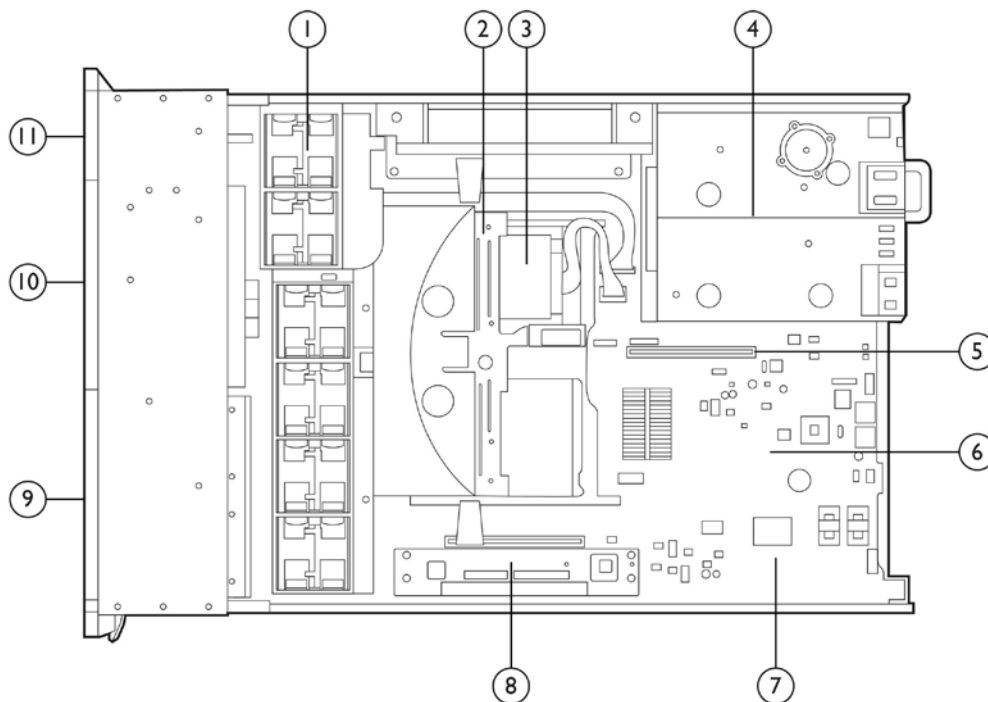1. Systems Insight Display
2. 1 DVD & 8 HDDs
3. Front Panel Console (KVM)

HPE Integrity rx2800 i2 Server: Rear View

1. 2x Power Supplies
2. Rear VGA & USB
3. 4x 1G LANs
4. RS232 port
5. iLO3 LAN
6. 6x I/O Slots

Hewlett Packard Enterprise

Overview

HPE Integrity rx2800 i2 Server: Inside View

1. 6 system fans

2. Internal USB
3. 2 Processor Sockets
4. 2 PSUs
   [ICH10, Gromit XE & RN50 video controller under PSUs]
5. Chipset
6. 2 full-length PCIe cards
   [2 half length PCIe under full-length card]

7. 2 low profile PCIe
   [p410i RAID controller under low profile PCIe cards]
8. 24 DDR3 Memory Modules in four Memory Expansion Boards
9. 8 Hard Drives
10. DVD-ROM or DVD+RW

11. Front IO & SID

At A Glance

Standard System Features

- HP-UX 11i version 3 September 2010 Release
- HPE p410i SAS RAID Controller integrated on system board. Supports internal RAID 0, 1, 5, and 6. Optional 512MB Cache/ Super Capacitor kit (AM252A) for RAID 0 and RAID 1; AM252A is required for RAID 5 and RAID 6.
- Quad port 10/100/1000Base-TX LAN (with auto speed sensing; RJ 45 connector, Wake On LAN support) integrated on system board
- One 6-slot Memory Expansion Board (AM246A)
- Integrity Integrated Lights Out 3 (iLO3) Management Processor and factory installed Integrity iLO3 Advanced Pack license
- Telnet and web console via 10/100/1000Base-TX management LAN (RJ 45 connector)
- One RS 232 serial port for general purpose
- Factory integration of processors, memory, disk drives, removable media, I/O cards, and HPE Universal 10000 G2 series racks.
- Rackmountable into 19 inch cabinets-HPE Universal 10000 Series G2 racks as well as many third party racks, including field integration into existing HPE System E racks
- Optional stand alone pedestal mount
- Three year warranty with next business day on site
- NEBS Level 3 Certified (GR-63-CORE, GR-1089-CORE)

Standard Features

Minimum System Capacities	• One 64 bit Intel Itanium processor: Either dual core 1.6 GHz/10 MB on-chip L3 cache 9310 processor, or quad core 1.33 GHz/16 MB on-chip L3 cache 9320 processor, or quad core 1.60 GHz/20 MB on-chip L3 cache 9340. • One I/O Riser Board. Choice of PCIe 3-Slot Riser Board with one full-length/full-height x8 speed/x16 connector slot and two half-length/full-height x4 speed/x8 connectors slots; or PCIe 2-Slot Riser Board with one full-length/full-height x8 speed/x16 connector slot and one half-length/full-height x8speed/x16connector slots. • 4 GB PC3 10600 Registered CAS9 memory module. **NOTE:** Memory modules are DIMM pairs. **NOTE: Double Chip Spare is not supported when 2GB DIMMs are installed in the system.** • Six DIMM slots • One hot swap power supply
Maximum Server Capacities	• Two 64 bit Intel Itanium processors: Either dual core 1.6 GHz/10 MB on-chip L3 cache 9310 processor, or quad core 1.33 GHz/16 MB on-chip L3 cache 9320 processor, or quad core 1.60 GHz/20 MB on-chip L3 cache 9340. • 384 GB PC3 10600 Registered CAS9 memory module. **NOTE:** Memory modules are DIMM pairs. **NOTE:** Double Chip Spare is not supported when 2GB DIMMs are installed in the system. • Twenty-four DIMM slots • Two hot swap power supplies, providing N+N protection for power supplies and power input • Two I/O Riser Boards. Choice of PCIe 3-Slot Riser Board with one full-length/full-height x8 speed/x16 connector slot and two half-length/full-height x4 speed/x8 connectors slots; or PCIe 2-Slot Riser Board with one full-length/full-height x8 speed/x16 connector slot and one half-length/full-height x8speed/x16connector slots. • One internal DVD ROM or DVD+RW drive • Eight internal hot plug Serial Attached SCSI (SAS) disks for up to 7.2 TB
High Availability	• N+N Hot swap cooling (not available with OFS [Office Friendly Server] system) • One Hot swap power supply standard-optional second hot swap power supply for N+N protection (two included in OFS systems for reduction of acoustics) • Advanced ECC protected DDR3 memory • Memory double chip spare to overcome single DRAM chip failures. **NOTE:** Not supported when 2-GB DIMMs are installed in the system. • Dynamic Processor resilience and deallocation (DPR) • UPS power management • Hot Plug internal disks • Integrated HPE p410i SAS RAID Controller integrated on system board. Supports internal RAID 0, 1, 5, and 6. Optional 512MB Cache/Super Capacitor kit for RAID 0, 1, and 5; required for Raid 6 • Journal file system with HPE UX • Auto reboot • HPE Serviceguard for HPE UX • HPE Serviceguard Extension for RAC for HPE UX • HPE Serviceguard Extension for SAP for HPE UX • Serviceguard Manager for HPE UX • HPE Event Monitoring Service • HA Monitors for HPE UX • HA Toolkits for HPE UX • HPE Mirrordisk/UX • Extended Campus Cluster, HPE Metrocluster, and HPE Continentalclusters for HPE UX • HPE System Insight Manager (SIM) for proactive fault management • NEBS Level 3 Certified (GR-63-CORE, GR-1089-CORE)

Standard Features

Security	• TPM (Trusted Platforms Module) option available • Separate LAN for system management • Password protection on console port • Disablement of remote console ports • SSL encryption on web console
Manageability-Monitor	• Integrity Integrated Lights Out 3 (iLO3) Management Processor and factory installed Integrity iLO 3 Advanced Pack license • HPE System Insight Manager (SIM) • HPE Servicecontrol suite for HP-UX servers including tools for system administration, asset management, and fault management • HP-UX kernel configuration for easy, dynamic kernel parameter changes
Manageability-Optimize	• Process Resource Manager for HP-UX resource management • HPE UX Workload Manager for HP-UX workload management based upon service level objectives • HPE OpenView GlancePlus Pack

Ordering and Configuration

Processor Configuration	The HPE Integrity rx2800 i2 is a symmetrical multiprocessing (SMP) server supporting up to two high performance 64 bit Itanium processors. Processor speeds cannot be mixed within the same system.

Processor Details

Dual core series 9300 Itanium processors:
- Dual-core 1.6-GHz with 10.0-MB Level 3 Cache 9310 processor

Quad core series 9300 Itanium processor:
- Quad core 1.33 GHz with 16 MB Level 3 Cache 9320 processor
- Quad core 1.60 GHz with 20 MB Level 3 Cache 9340 processor

All processors support:
- Level 2 Cache: 512KB Instruction/256 KB Data per core
- Level 1 Cache: 32 KB per core; 16KB (I)/16KB (D)
- Single bit cache error correction
- 50 bit physical addressing
- 64 bit virtual addressing
- 4 GB maximum page size
- Error protection on all major data structures
- Intel Hyper Threading
- Intel Advanced Thermal Management (Foxton/VFM)
- Intel Cache Safe Technology

Server product numbers

HP Integrity rx2800 i2 Office Friendly Server	AH396A
HP Integrity rx2800 i2 Carrier-grade DC Server	AT112A

Server Form Factor

Please refer to the HPE 10000 Series G2 Rack Best Practices Guide for information on rack deployment, stabilization and transportation **http://www.hpe.com/go/rackandpower**

HPE Integrity rx2800 Racking Kit	AM227A

Field Rack Kit   B01

Includes rails and cable management arm.

Factory Rack Integration   0D1

For factory rack integration, a rack cabinet must appear in the same section of the order. The slides and cable management arm will be installed with the server in the rack cabinet when factory rack integration is ordered.

HP Integrity rx2800 Stand Alone Pedestal Kit	AM251A
HPE Integrity rx26/2800 Rack Support Shelf Kit	AB469A

NOTE: If the N+N power supply is ordered standalone the power supply will ship with two cords; one connects the system to the rack PDU and one enables connection to a wall socket. The cord that connects the system power supply to the PDU has an IEC 13 end, which plugs into the system power supply's IEC 14 socket, and an IEC 14 end, which plugs into the PDU's IEC 13 socket. The localized cord that connects the system power supply directly to the wall socket has an IEC 13 end, which plugs into the system power supply's IEC 14 socket, and a country specific end, which plus into the wall socket. This localized

Ordering and Configuration

Memory Configuration	The HPE Integrity rx2800 i2 supports DDR (double data rate) SyncDRAM (synchronous dynamic random access memory) DIMMs with ECC and chip spare protection. The HPE Integrity rx2800 i2 supports a maximum of twenty-four DIMM slots. The base server comes standard with 6 DIMM slots (one 6 slot memory riser, AM246A). Up to 18 additional DIMM slots can be added by ordering up to 3 additional of the optional AM246A 6-slot memory riser. A maximum of 384 GB is supported (24×16GB DIMMs).

Memory Loading Rules and Performance Guidelines

- Memory must be installed in groups of two DIMMs, also known as pairs or modules
- Each memory pair must consist of DIMMs of the same type: same capacity/density, same organization, same number of ranks, and same speed
- Memory is ordered in modules (pairs) of 4 GB (2×2GB); 8 GB (2×4GB); 16GB (2x8GB); or 32GB (2x16GB)
- Minimum memory is 4 GB (2×2GB).
  NOTE: 2GB DIMMs do not support double chip spare. Anytime 2GB DIMMs are installed in the system, double chip sparing is not supported.
- Maximum memory is 384-GB, using twelve (12) 32 GB (2×16GB) memory pairs
- Alternate DIMM pairs between memory risers. If both processor sockets are populated, alternate DIMMs between processors.
- For best performance, all DIMM slots should be populated with the same size DIMM.

Supported Memory Options	HP rx2800 i2 4GB (2x2GB) PC3-10600 Registered CAS-9 Memory Kit	AM229A
	NOTE: 2GB DIMMs do not support double chip spare. Anytime 2GB DIMMs are installed in a system, double chip spare will not be supported.	
	HP rx2800 i2 8GB (2x4GB) PC3-10600 Registered CAS-9 Memory Kit	AM230A
	HP rx2800 i2 16GB (2x8GB) PC3-10600 Registered CAS-9 Memory Kit	AM231A
	HP rx2800 i2 32GB (2x16GB) PC3-10600 Registered CAS-9 Memory Kit	AT067A
	HP Integrity rx2800 i2 6-slot Memory Expansion Board	AM246A
	NOTE: Maximum of three additional (1 in base system) supported.	

Server Form Factors and Rack Configuration	The HPE Integrity rx2800 i2 is a 2U server. It comes in 3 form factors: Rack-Optimized, OFS (Office Friendly Server) and pedestal versions. The rack-optimized and OFS versions have different base model product numbers; the rack optimized version is AH395A; the OFS version is AH396A. The pedestal version consists of the rack-optimized version plus the pedestal foot; AM251A. The pedestal foot allows the server to be deployed in a non-rack environment. Please note that the OFS version includes the pedestal foot.

The OFS is a pedestal form factor with reduced acoustics for workstation replacement and/or office environments. Note that the OFS does not support redundant fans. The OFS does support redundant power in limited configurations; 1 processor and 12 DIMMs, or 2 processors and 8 DIMMs.

In addition, the HPE Integrity rx2800 i2 server offers a NEBS Level 3 DC powered option, which enables equipment operability in network facility environments. NEBS compliance is a requirement for Telecom Carriers and their Equipment Providers that are seeking to install equipment in central offices. They view compliance as key to ensuring personnel safety, protection of property, and operational reliability. There are three distinct certification levels specified in SR-3580, Network Equipment-Building System (NEBS) Criteria Levels. All carrier-grade (CG) products released by HPE are evaluated to the NEBS Level 3 criteria, which provides the maximum assurance of equipment operability in network facility environments. The Physical Components are described in GR-63-CORE, while the Electromagnetic Compatibility (EMC) and Safety components are described in GR-1089-CORE.

Ordering and Configuration

Please note that the pedestal version does not have the reduced acoustics of the OFS version, because it is based on the rack-optimized version. The pedestal foot is not factory installed; it comes as a kit that must be assembled on site.

The rack mounted version of the rx2800 i2 is supported in HPE 10000 Series G2 cabinets. For factory integration order the Universal Rack Kit, AM227A, with 0D1 feature code. Sliding mounts and a cable management arm will be installed with the server in a factory integrated rack.

The HPE Integrity rx2800 i2 can be installed in the field with the Universal Rack Kit (AM227A with B01 feature code). This kit contains the slide mounts, cable management arm, and all other hardware needed to mount an rx2800 i2 into a 19 inch cabinet.

Refer to the 10000 Series G2 Rack Best Practices Guide for information on rack deployment, stabilization, and transportation. Go to **http://www.hp.com/go/rackandpower** for more information.

Non-HPE Cabinets HP Integrity rx2800 i2 Racking Kit (AM227A) contains adjustable slide rails, allowing the server to be mounted in cabinets that use the four post EIA mounting system.

Once the server is mounted in a non HPE cabinet, it must meet some simple criteria to ensure that HPE field personnel can fully support the rack environment.

- **Anti Tip**-The rack/cabinet must be solidly anchored to the floor both front and rear. This is usually accomplished by anti tip feet or by direct bolting to the floor.
- **Air Flow**-The HPE Integrity rx2800 i2 uses front to back airflow to cool the unit. Thus a cabinet cannot have a solid front or rear door. Solid doors may have to be removed or changed to an open perforation pattern.
- **Cable Strain Relief**-A proper method of strain relief must be used. This may force the elimination of the rear door in some cases.
- **Front and Rear Access**-For proper cooling and ease of service access, Hewlett Packard Enterprise recommends 32 inches of unobstructed floor space in the front and rear of rack installations. This recommendation applies to both Hewlett Packard Enterprise and third party racks and cabinets.

I/O Architecture

HPE Integrity rx2800 i2 Supported I/O Cards

I/O Card	Product Number	Length/ Height	Boot Support	Maximum Cards	Special Notes
HP1-port 8Gb PCIe FC SR QLogic HBA	AH400A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE 2-port 8Gb PCIe FC SR QLogic HBA	AH401A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE PCIe 1-port 8Gb FC SR Emulex HBA	AH402A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE PCIe 2-port 8Gb FC SR Emulex HBA	AH403A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity SN1000Q	B9F23A	Half-Length/	Yes	6	6 with 2 AM228A IO Riser

Ordering and Configuration

1p 16GB FC HBA		Low-Profile or Full-Height			Cards
HPE Integrity SN1000Q 2p 16GB FC HBA	B9F24A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity PCIe 2p P411/256MB SAS Controller	AM311A	Half-Length/ Low-Profile or Full-Height	Yes	3	Only supported in Primary PCIe IO Riser card. 3 with 1 AM228A IO Riser Card
HPE Integrity SA 812/1GB PCIe SAS Controller	AM312A	Half-Length/ Low-Profile or Full-Height	Yes	1	Only supported in Primary PCIe IO Riser card.
HPE rx2800 i2 SA 512MB Cache/SuperCapacitor Kit	AM252A	N/A	N/A	1	Required for RAID 5 and RAID 6 configurations
HPE Integrity CN1100E PCIe 2-port Converged Network Adapter Supports FCOE and 10Gb Ethernet	AT111A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity NC552SFP 2P 10GbE Adapter	AT118A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity 10GbE -SR 2p PCIe Adapter	AM225A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity 10GbE -LR 2p PCIe Adapter	AM232A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity 10GbE -CR 2p PCIe Adapter	AM233A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE PCIe 2 port 1000Base T card	AD337A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE PCIe 2 port 1000Base SX card	AD338A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
PCIe 4 port HPE NC364T Gbit Adapter	AD339A	Half-Length/ Low-Profile or Full-Height	Yes	6	6 with 2 AM228A IO Riser Cards
HPE Integrity 4X QDR CX-2 PCI-e G2 DP HCA	AT083A	Half-Length/LP or FH	Yes	2	2 with 2 AM228A IO Riser Cards
HPE PCIe 2-port 8Gb FibreChannel and 2-port 1/10Gb Ethernet Adapter	AT094A	Half-Length/ Low-Profile or Full-Height	Yes	4	
HPE PCIe 1-port 4Gb Fibre Channel and 1-port 1000BaseT Adapter	AD221A	Half-Length/Full-Height	Yes	4	
HPE PCIe 2p 4Gb FC AND 2p 1000BT Adapter	AD222A	Half-Length/Full-Height	Yes	4	
HPE PCIe 2p 4Gb FC AND	AD393A	Half-	Yes	4	

Ordering and Configuration

2p 1000BSX Adapter		Length/Full-Height			
HPE Integrity rx2800 i2 2D Graphics Adapter	AH423A	Half-Length/Full-Height		2	Must be installed in a Full-Height x16 connector slot

Accessory Products	HP Integrity Thin Client Bundles	AB300E

NOTE: AB300E includes T5550 Thin-Client console, a 17inch Display and keyboard/mouse.

Displays	HPE Compaq LE1711 17-inch LCD Monitor	EM886AA
	HPE Compaq LE1911 19-inch LCD Monitor	EM887AA
	HPE Compaq LA2205wg 22-inch Widescreen LCD Monitor	NM274AA
	HPE Compaq LA2405wg 24-inch Widescreen LCD Monitor	NL773AA

Keyboard	HPE USB Standard Keyboard	DT528A
	HPE USB OpenVMS Keyboard and 3-Button Mouse	AB552A

Internal Supported Storage Devices	**Internal Disk Drives** (Optional - Maximum 8)	
	HP Integrity 73GB 15k SAS Drive	AD379A
	HPE Integrity 146GB 15K SAS SFF Hard Disk Drive	AM302A
	HPE Integrity 300GB 10K SAS SFF Hard Disk Drive	AM244A
	HP Integrity 300GB 12G SAS 15K SFF (2.5in) Enterprise 3yr Warranty Hard Drive	B9F30A
	HP Integrity 450GB 12G SAS 15K SFF (2.5in) Enterprise 3yr Warranty Hard Drive	B9F31A
	HP Integrity rx2800 i2 450GB 10K SAS SFF Hard Disk Drive	AM316A
	HP Integrity 600GB 12G SAS 15K SFF (2.5in) Enterprise 3yr Warranty Hard Drive	B9F32A
	HP Integrity rx2800 i2 600GB 10K SAS SFF Hard Disk Drive	AM317A
	HP Integrity 900GB 10K SAS SFF Hard Disk Drive	AT069A
	HPE Integrity 1.2TB 6G SAS 10K SFF Hard Disk Drive	AT146A

12G SAS Hot Plug Enterprise Performance Solid State Drives

HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in Enterprise Mainstream 3yr Wty Solid State Drive		B9F50A
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in Enterprise Mainstream 3yr Wty Solid State Drive		B9F51A
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in Enterprise Mainstream 3yr Wty Solid State Drive		B9F52A

RAID

HPE Integrity RAID 0 Factory Configuration	AM238A
HPE Integrity RAID 1 Factory Configuration	AM239A
HPE rx2800 i2 factory configured RAID 5 , requires 3 identical drives minimum, only 3 drives will be configured.	AM240A

Ordering and Configuration

Removable Media Drive (Optional - Maximum 1)*

HPE Integrity rx2800 Slimline DVD-ROM Internal Optical Drive	AM242A
HPE Integrity rx2800 Slimline DVD+RW External Optical Drive	AM243A

Integrated Multi-function Core I/O	The integrated multi-function I/O provides core I/O functionally and includes the management processor, which provides remote management and high availability monitoring capabilities.

Core I/O	- Two 2-port Intel 82575 10/100/1000BaseTX LAN chips with RJ 45 connector-Supports LAN boot for operating system installation and wake on LAN capability - HPE 410i 6Gb SAS RAID Controller, supports up to 8 internal SAS disk drives. - May select factory configured RAID. The maximum of eight disks can be configured for RAID 0, 1, and 5 in any combination. RAID 0 requires 1 drive, RAID 1 requires two identical HDDs, and RAID5 requires three identical HDDs. Optional AM252A SA 512MB Cache/Battery kit is available with RAID configurations; AM252A is required for RAID 5,6 configurations. - Four USB 2.0 style A ports (USB 1.1 compatible); two front port, two rear ports - One general purpose serial port on rear of system - Telnet and web console via 10/100/1000Base-TX management LAN (RJ 45 connector) - Two VGA ports; one front, one rear

Integrity Integrated Lights Out (iLO) **Management Processor Functionality**	- Dedicated 10/100/1000Base-TX LAN port for LAN console and embedded web console access - One RS 232 serial port for local console - Password protected console ports - Console mirroring between all local, modem, LAN, and web consoles - Remote power up and power down control - Configurable remote access control - Event notification to system console-Provides connectivity, information, and support for HPE UX tools (such as STM and EMS) to notify by email, pager and/or HPE response centers. - Interface to system monitoring and diagnostic hardware via an internal IC bus - Secure Sockets Layer security on web console - Integrity Integrated Lights Out (iLO3) Advanced Pack. Integrity Lights Out (iLO3) Advanced Pack provides additional remote management capabilities, including LDAP directory services, Virtual Media (CD, DVD, and ISO impage) for HP-UX and Windows, and Integrated Remote Console (Virtual Keyboard, Video, and Mouse) for Windows - The RN50 integrated chip provides basic graphic capabilities. One VGA port is supported, with optional connection from front or rear of the system.

System Console Configurations	The HPE Integrity rx2800 i2's integrated iLO3 Management Processor provides five methods for console connections. - SSL secured Web console accessible through the 10/100/1000Base-TX management LAN - Standard telnet connections accessible through the 10/100/1000Base-TX management LAN - Local VT100 or hpterm terminal, or VT100 or hpterm emulator via local RS 232 serial connection - Remote VT100 or hpterm terminal, or VT100 or hpterm emulator via external modem - VGA graphics console. Keyboard and mouse connections are provided by USB.

Internal Disk and Media Drives	- The HPE Integrity rx2800 i2 supports up to eight internal Serial Attached SCSI (SAS) 2.5 inch hot plug small form factor hard disk drives - An 8 internal port host bus adapter provides 8 ports, 1 port per SAS disk, for point to point connection from the adapter to the disk. This means that each disk has its own 6 GB link. - The maximum of eight disks can be configured for RAID 0, 1, 5 and 6 in any combination. RAID 0 requires one drive, RAID 1 requires two identical HDDs, RAID5 requires three identical HDDs, and

Ordering and Configuration

RAID 6 requires four identical HDDs. An optional SA 512MB Cache/Battery kit (AM252A) is available for all RAID options; it is required for RAID 5 and RAID 6. Factory configuration of a RAID set is available, except for RAID 6. Please see rx2800 i2 Ordering Menu for details.

- Mirrordisk/UX is available for software mirroring on all HDDs in HPE UX based systems.
- Cables required to connect the internal disk drives to the host bus adapter are shipped with the system; no need to order separately.
- 146-GB 10K, 300GB 10K, 300GB 15K, 450GB 10K, 450GB 15K, 600GB 10K, 600GB 15K and 900GB 10K Serial Attached SCSI (SAS) disks are supported.
- 200-GB, 400-GB and 800GB 12G Serial Attached SCSI (SAS) solid state drives (SSD) are supported.
- Optical media drives include a slimline DVD-ROM (AM242A) and a slimline DVD+RW (AM243A).

HPE Integrity Trusted Platform Module	The rx2800 i2 has an accessory option for an embedded security chip - the Trusted Platforms Module (TPM) - product number AM237A. HP-UX Trusted Computing Services (HP-UX TCS) provides software support for the TPM when running HP-UX 11i v3. By providing a low-cost embedded security chip option (known as a Trusted Platform Module), Hewlett Packard Enterprise has established a foundation for strong protection of sensitive information - including cryptographic keys. Built around industry standards, the Trusted Platform Module (TPM) provides a basis for key storage by securely generating and storing cryptographic keys. HP-UX 11i TCS takes this a step further by providing the necessary infrastructure for managing the TPM, as well as integrating it into select features such as HP-UX Encrypted Volumes and File Systems (EVFS).

Using HP-UX TCS with EVFS:

Using HP-UX TCS to make the unattended boot capability of EVFS more secure is an important example of how HP-UX TCS can be integrated with other applications to enhance security. For more information see the "Protecting EVFS Keys with HP-UX TCS" chapter in the "HP-UX Trusted Computing Services Administrators Guide" available in the HP-UX Trusted Computing Services section at:
http://docs.hp.com/en/internet.html

HPE Integrity rx2800 i2 Power Subsystem	The HPE Integrity rx2800 i2 provides a high level of integrated power protection:

- N+N redundant hot swap power supplies (AC or DC)
- N+N redundant AC or DC power input protection with electrical phase isolation
- Power monitoring and control

The HPE Integrity rx2800 i2 supports a second hot swap power supply for N+N protection. One AC power supply is shipped as a standard part of every AC system (AH395A and AH396A) and is required for correct operation. Two DC power supplies are shipped as a standard part of every DC system (AT112A). The hot swap design allows for the online replacement of a power supply when N+N=2 supplies are configured in the server.

The HPE Integrity rx2800 i2 provides an independent power input receptacle for each power supply (c13/C14 type). The independent design provides protection against losing the connection from a power cord or breaker. The HPE Integrity rx2800 i2 power cords should always be plugged into separate breakers whenever possible.
NOTE: It is highly recommended that the HPE Power Advisor tool is run to determine configuration specific power and cooling needs. The HPE Power Advisor is located at:
http://www.hp.com/go/hppoweradvisor

Services and Support

Support Services

HPE Technology Services for Integrity Servers

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

Protect your business beyond warranty with HPE Pointnext operational services

HPE Pointnext operational services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.

Recommended HPE Pointnext operational services for optimal satisfaction with your HPE product.

Optimized Care

HPE Proactive Care with 6 hour call-to-repair commitment, three year Care Pack Service

HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to Hewlett Packard Enterprise. This Care Pack Service combines three years' proactive reporting and advice with our highest level reactive coverage and enhanced escalation management, The Hewlett Packard Enterprise 24x7, six hour call-to-repair hardware commitment. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. Service includes 24x7 collaborative software support for leading industry standard software running on your HPE ProLiant server.
https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855enw.pdf

Standard Care

HPE Proactive Care with 24x7 coverage, three year Care Pack Service

HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to Hewlett Packard Enterprise. This Care Pack Service combines three years' proactive reporting and advice with our 24x7 coverage and enhanced escalation management, four hour hardware response time and two hour call back for software questions on leading industry standard software running on your HPE ProLiant server.
https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855enw.pdf

Basic Care

Foundation Care 24x7, three-year Care Pack Service

HPE Foundation Care 24x7 connects you to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. Hardware onsite response within four hours if needed; collaborative software included in this Care Pack service provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions.
https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Related Services

HPE Server Hardware Installation

Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf

Factory Express for Servers and storage

Services and Support

HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. For more information on Factory Express services for your specific server model please contact your sales representative or go to: **http://www.hp.com/go/factory-express**.

Data Privacy Services
Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services allow you to keep drives and other devices upon failure, our removal services provide convenient data sanitization and our recovery services allow you to safely retire IT assets and capture any remaining value from the hardware. **http://www.hp.com/services/dataprivacy**

Additional HPE Pointnext operational services can be found at: **http://www.hp.com/go/cpc**

eSupport

Get connected to Hewlett Packard Enterprise to improve your support experience
Prevent problems with innovative, automated monitoring tools and proactive services. Combining Proactive Care Services with our remote support technology such as Insight Online provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit:
http://www.hp.com/go/proactiveinsightexperience

HPE Support Center
Personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more **http://www.hp.com/go/hpsc**

The HPE Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Care Pack or Hewlett Packard Enterprise contractual support agreement.

*The Hewlett Packard Enterprise Support Center Mobile App is subject to local availability

Parts and Materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Additional Services Information

To learn more on HPE ProLiant servers, HPE BladeSystem servers and HPE StorageWorks storage products, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit

Services and Support

http://www.hp.com/services/proliant or **http://www.hp.com/services/bladesystem** or **http://www.hp.com/services/storage**

Technical Specifications

Supported Processors for Field Upgrades **NOTE:** Processor frequencies cannot be mixed within a system.	**1.6 GHz Dual core Intel Itanium 9310 Processor** (AH397A))	
	Cache - On chip Level 1	32-KB (16-KB Instruction/16-KB Data)
	Cache - On-Chip Level 2	512-KB Instruction/256-KB Data
	Cache - On-Chip Level 3	10-MB
	Floating point Coprocessor included	Yes
	1.33 GHz Quad core Intel Itanium 9320 Processor (AH398A)	
	Cache - On chip Level 1	32 KB (16-KB Instruction/16-KB Data)
	Cache - On-Chip Level 2	512 KB instruction/256 KB Data
	Cache - On-Chip Level 3	16 MB 4MB per core
	Floating point Coprocessor included	Yes
	1.60 GHz Quad core Intel Itanium 9340 Processor (AH399A)	
	Cache - On chip Level 1	32 KB (16-KB Instruction/16-KB Data)
	Cache - On-Chip Level 2	512 KB instruction/256 KB Data
	Cache - On-Chip Level 3	20 MB (5 MB per core)
	Floating point Coprocessor included	Yes

System Memory	**Minimum memory** (2 x 2GB DIMMs)	4 GB
	Maximum memory capacity (24x 16GB DIMMs)	384 GB

Internal Disks	**Maximum disk mechanisms**	8
	Maximum disk capacity	7.2 TB

Standard Integrated I/O	**Serial Attached SCSI** (SAS)	8 ports
	10/100/1000Base–TX (RJ 45 connector)	4 port
	RS-232 serial port (general purpose)	1
	10/100Base-T management port (RJ 45 connector)	Included
	VGA graphics	1 front/1 rear
	USB	2 front/2 rear

I/O Buses and Slots (Must select minimum 1 IO Riser Card/maximum 2 IO Riser Cards)	HP Integrity rx2800 i2 PCIe 3-Slot Riser Board	AM228A
	HPE Integrity rx2800 PCIe 2-slot Riser Board	AM245A

Technical Specifications

Maximum I/O Cards (See supported I/O table for product specifics)	Mass Storage	6
	LAN	6
	Multi-Function (Mass Storage / LAN)	4
	2D Graphics Adapter	2
Electrical Characteristics	**AC Input Specifications** (per power supply)	100-120 VAC 50/60 Hz 200-240 VAC 50/60 Hz 9.3 Amps max @ 100 VAC 6.6 Amps max @ 200VAC 1075W rated input power @ 108 VAC 1375W rated input power @ 180 VAC
	Hot swap Power supplies	1 included, 2nd for N+N
	Redundant AC power inputs	1 included, 2nd for N+N
	BTU Rating Maximum	4800 BTU/hr maximum @ 240 VAC 3400 BTU/hr maximum @ 120 VAC
	Power Supply Output	800W maximum @ 100 - 120 VAC 1200W maximum @ 200 - 240 VAC
	DC Input Specifications (per power supply)	-36 VDC to -72 VDC (-48 VDC nominal) <40A max @ -36 VDC
	Hot swap Power supplies	2 included, 2nd for N+N
	Redundant DC power inputs	2 included, 2nd for N+N
	BTU Rating Maximum	4800 BTU/hr
	Power Supply Output	1200W maximum
Site Preparation	**Site planning and installation included**	No **NOTE:** System is customer installable.
	Rack depth (inches/mm)	27.25 in (692 mm)
	Rack width (inches/mm)	19 in (482 mm)
	Rack height (EIA/inches/mm)	2U/ 3.5 in (89 mm)
	Rack weight (kg/lbs) **maximum**	66 lbs. (30 kg)
Environmental Characteristics	**Regulatory Model**	RSVLA-RC01
	Acoustics for Rackmount	7.0 Bels LwA @ 25°C (77°F)
	Acoustics for Office Friendly Version	6.0 Bels LwA
	Recommended Operating Temperature	18°C - 27°C (64°F - 81°F) up to 1500m (4900ft)*
	Allowable Operating Temperature	5°C - 35°C (41°F - 95°F) up to 1500m (4900ft)*
	Non-operating Temperature	-40°C - 80°C (-40°F - 175°F)
	Maximum rate of temperature change	20° C/hour
	Recommended Operating Humidity	5.5°C (42°F) dew point minimum to 60% RH or 15°C (50°F) dew point maximum; non-condensing
	Allowable Operating Humidity	20% RH - 80% RH, 21°C (70°F) maximum dew point; non-condensing
	Non-Operating Humidity, installed	8% RH - 90% RH, 29°C (84°F) maximum dew point; non-condensing

Technical Specifications

Non-Operating Humidity, Storage	8% RH - 90% RH, 32°C (90°F) maximum dew point; non-condensing
Operating altitude above sea level	3000m (10,000ft) maximum
Non-operating altitude above sea level	4500m (15,000 ft) maximum
Air Quality `	Airborne contaminants must be at the G1 level or less as defined in ISA Standard ISA-71.04-1985
Airflow	1360 CMH (800 CFM) minimum 3230 CMH (1900 CFM) maximum

*Maximum operating temperature range up to 1500m (4900ft). For higher altitudes, de-rate the maximum temperature by 2°C/300 m (3.6°F per every 985 ft). The Recommended Operating Range is recommended for continuous operation. Operating within the Allowable Operating Range is supported but may result in a decrease in system performance.

Regulatory Compliance	**Regulatory Model Number**	RSVLA-RC01
	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 1, Korea RLL, BMSI Taiwan
	Safety	UL Listed, CSA Certified, TUV GS Mark compliant with EN 60950 and EN 41003
	More detailed regulatory documents and certifications	**http://docs.hp.com/en/hw.html**

Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	**From Version 18 to 19**	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
17-Mar-2017	From version 17 to 18	Changed	Overview section was updated. Some other format changes applied to document.
21-Oct-2016	From version 16 to 17	Changed	Rebranding edition update
01-Jun-2015	Form Version 15 to 16	Removed	SKUs removed from Configuration section: AT088A, AT089A
01-Dec-2014	From Version 14 to 15	Added	Two new hard drives were added.1200-GB 10K RPM SAS 2.5" Small Form Factor Hot Plug Disk was added to Internal Supported Storage Devices.
		Changed	Service and Support was updated.
10-Dec-2013	From Version 13 to 14	Added	1200-GB 10K RPM SAS 2.5" Small Form Factor Hot Plug Disk was added to Internal Supported Storage Devices.
30-Sep-2013	From Version 12 to 13	Changed	Changes were made to the I/O Architecture Chart in the Configuration Information section.
31-May-2013	From Version 11 to 12	Added	A NOTE was added to the HPE Integrity rx2800 i2 Power Subsystem section.
28-Dec-2012	From Version 10 to 11	Changed	Service & Support, HPE Care Pack and Warranty Information: URL changed in Additional Services Information sections.
09-Jan-2012	From Version 9 to 10	Changed	Changes made within the Configuration section.
01-Sep-2011	From Version 8 to 9	Changed	Changes made within the Configuration and Technical Specifications sections.
30-Aug-2011	From Version 7 to 8	Changed	Changes made throughout the QuickSpecs.
09-Mar-2011	From Version 6 to 7	Changed	Changes made throughout the QuickSpecs.
16-Feb-2011	From Version 5 to 6	Added	Added a part number to the Accessory Products section.
18-Jan-2011	From Version 4 to 5	Added	Added the Accessory Products section.
10-Dec-2010	From Version 3 to 4	Added	Added three new Overview images.
11-Oct-2010	From Version 2 to 3	Changed	Changes made throughout the QuickSpecs.
11-Oct-2010	From Version 1 to 2	Added	Added the Overview image.

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