HP ProLiant
Server Booklet

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Meet the new HP ProLiant Gen8

With over 150 design innovations, ProLiant Gen8 servers help you eliminate common problems that can cause failures, downtime and data loss.

Intelligent Provisioning: Get your systems online 3x faster with a fully integrated system & OS configuration tool

Active Health System: 24/7 Mission Control for your server delivering maximum uptime through automated monitoring, diagnostics and alerting

Smart Update: Breakthrough system maintenance tool with one-click simplicity that systematically updates servers and blade infrastructures at the scale of your data center

Thermal Discovery Services: Reduce energy usage and increase compute capacity

Location Discovery Services: Optimize workload placement with servers that self-identify and inventory themselves

Power Discovery Services: Eliminates power configuration errors, precisely tracks power usage by rack and server by server, while eliminating manual record keeping

Insight Online: The industry's first cloud-based, IT management and support portal

Designed-in Quality: Intelligent system components help administrators virtually eliminate common problems that cause failures, downtime and data loss.

Hassle-free Serviceability: Over 150 design innovations to increase your productivity and confidence during setup, upgrade and repair.

Intuitive Simplicity: Simple and consistent design philosophy and user interface delivers an intuitive, efficient experience.

HP ProActive Insight architecture
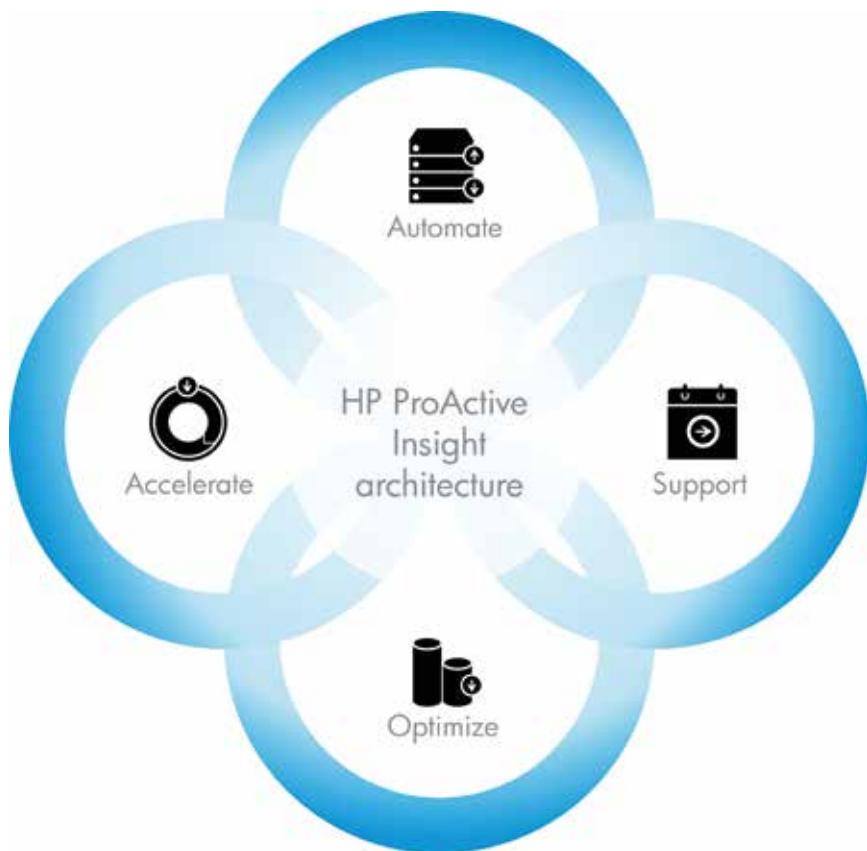
HP brings intelligence to Converged Infrastructure

At HP, we believe it's time for a new way forward. For decades,IT systems have been getting incrementally faster, smaller, and more affordable. In the cloud era, they need to become infinitely
more intelligent.
This goal is at the heart of Project Voyager, a two-year, $300 million HP engineering and development initiative to eliminate many manual tasks across the IT lifecycle.
Though this initiative, HP is fundamentally redefining the expectations and economics of the data center by creating systems so intelligent they virtually take care of themselves. The next generation of the HP ProLiant server family is the first step on this far-reaching mission.

HP ProLiant Gen8—the world's most self sufficient servers

HP ProLiant Gen8 servers are built for the new and emerging realities in today's data centers.
With a wide range of embedded automation and intelligent management features, these are the world's most selfsufficient servers.
Powered by the HP ProActive Insight architecture, next-generation ProLiant servers continuously analyze thousands of system parameters to optimize application performance and proactively improve uptime. All the while, they provide your organization with insight into virtually every aspect of your IT infrastructure.

HP ProLiant Gen8 servers Proactive Service and Support

HP Insight Online transforms the support experience. It combines system monitoring, asset management, and service warranty information together into the industry's first comprehensive cloud-based support portal.

Personalized dashboard, event & support tracking, proactive warranty & contract management
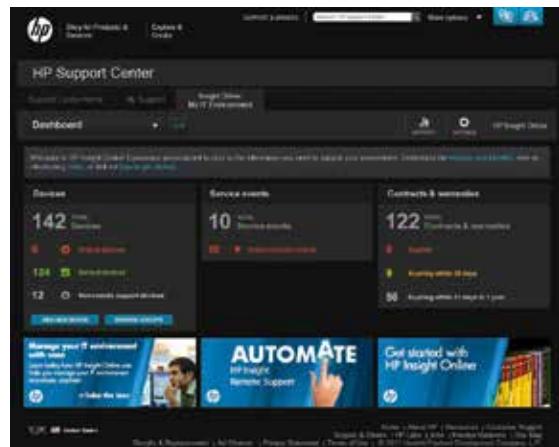
HP Insight Online
Experience the industry's first cloud-based IT management and support portal.
HP Insight Online transforms the support experience. It combines system monitoring, asset management, and service warranty information together into the industry's first comprehensive cloud-based support portal. With Insight Online, manually managing paper contracts and warranties is a thing of the past. You can now easily track and proactively monitor these online, saving as much as 90 percent in time and resources versus doing it the manual way.

Proactive services
Improve infrastructure uptime and performance with innovative new services based on the HP ProActive Insight architecture.
With the industry's first proactive services designed for industrystandard environments combined with ProActive Insight technologies, HP delivers unique support and services to help you avoid unplanned outages and streamline your operations. For example, the new "directto-expert" support process delivers instant access to HP server experts for faster problem resolution. This approach also helps you optimize system performance with firmware and software update guidance and allows you to identify opportunities to reduce operating costs.

HP ServiceONE advantage
Leverage local expertise backed by HP's global resources.
Project implementations can be nerve-wracking, but with HP ServiceONE partners, you can feel confident that your project will be delivered on time and on budget. Staffed by HP-certified architects and engineers, HP ServiceONE partners meet HP's highest standards, including a commitment to client satisfaction and continuous improvement. HP ServiceONE partners provide the highest levels of local expertise backed by HP's global resources, and act as a single point of contact for complex solutions.

Essential infrastructure management
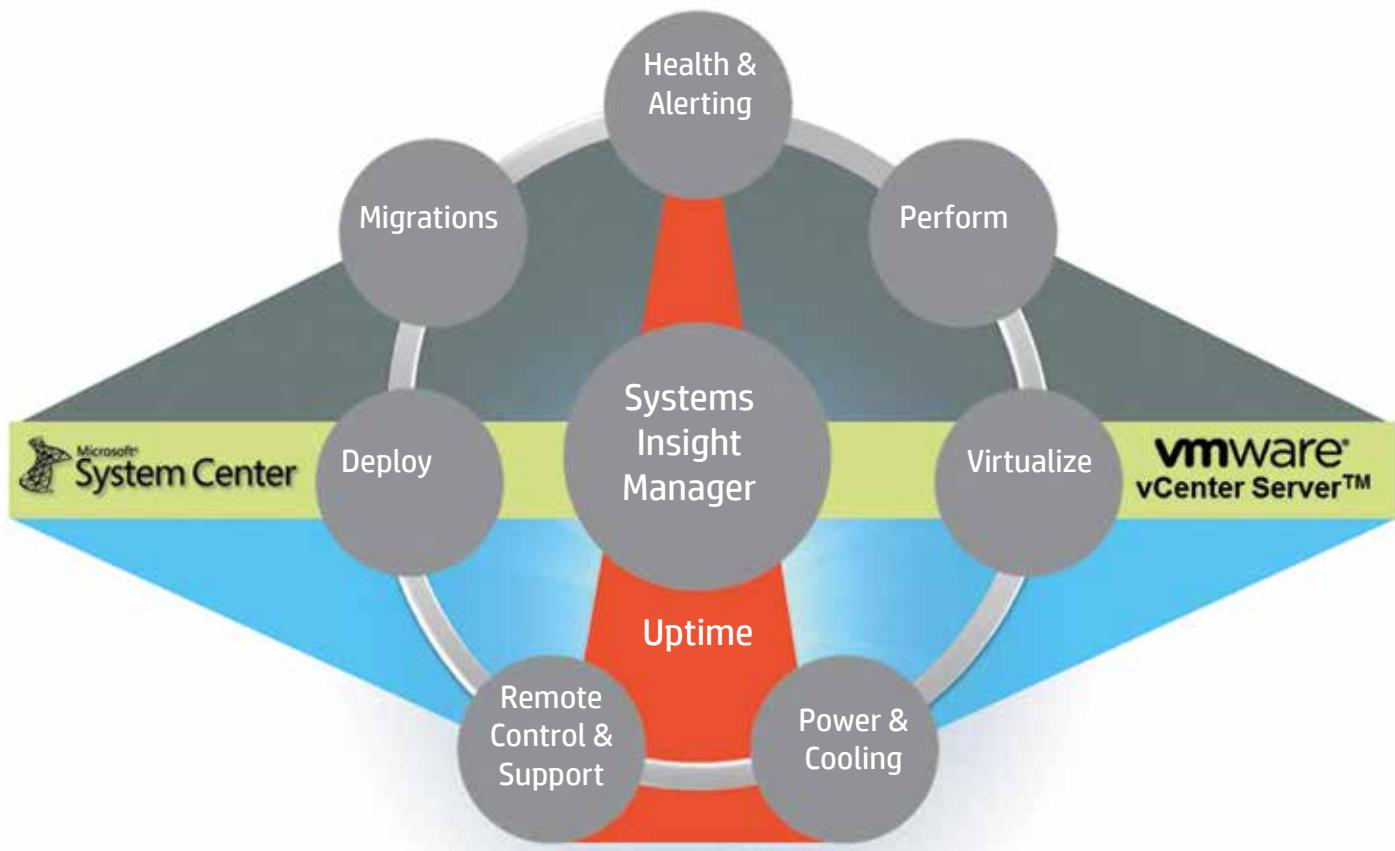
Server Migrations over iSCSI and FCoE environment.

Boot-from-SAN from an FCoE converged network adapter (CNA) has become a de facto capability for
CloudSystem Matrix servers to load an operating system from a FCoE target on the SAN. And with HP Insight Control 7, server
migrations over FCoE and iSCSI environments are now possible. Support for FCoE and iSCSI gives the customer the ability to expand
their network capabilities, while fully leveraging investments in existing FC infrastructure.

Server Migrations across Linux SAN environments

Customers with Insight Control server migrations can now perform migrations to a destination server with source disks being
migrated to Linux SAN disks and also allowing customers to boot-from-SAN in Linux environment.

New enhancements to SIM for Health & Alerting

With IC 7.0 there is no need to install software agents on ProLiant servers. Instead HP SIM will discover the iLO management engine
and its associated host server without requiring installation of the Insight Management agents or WBEM providers. iLO will detect
core error conditions within the server and report those error conditions as SNMP alerts to SIM (or other management consoles).
iLO will detect error conditions for subsystems like: Embedded SmartArray SAS controllers, CPU, Memory, Power Supply, Fans,
Temperature Failure

New enhancements to Insight Control power management

IPD for Blades will extend the current Intelligent Power Discovery (IPD) solution for ProLiant G6 and G7 servers to HP BladeSystems
attached to iPDUs. Customers will no longer have to manually create/edit the rack in ICpm to add the powered by connections for
their blade systems that can be automatically discovered. Underutilized server report will help identify unused or underutilized
machines waste data center resources. This ICpm enhanced report helps identify such machines to aid in planning either their reti-
rement or repurposing for something useful.

New enhancements to Insight Control Integration with VMware and Microsoft Management tools

Above and beyond delivering our Gen8 server embedded capabilities in VMware vCenter, the next release HP insight Control for
VMware server will go out with a User Interface refresh to make it even more easy to manage your Converged Infrastructure.
This powerful new UI will include deeper inventory information and implement the concept of actions, a set of important tasks
grouped together that you can execute to control your environment such as firmware deployment or storage provisioning.
Insight Control for Microsoft System Center supports the new Gen8 servers, including agentless monitoring from within the System
Center console. A key new feature is the ability to monitor health and get hardware based alerts on ProLiant servers running Linux
and VMware.

What's New

- Provision infrastructure and applications in minutes for physical and virtual.
- Reduce TCO up to 56% with built-in infrastructure life-cycle management.
- Integrated by design; includes support of heterogeneous environments.

At A Glance

Updates for version 7.1 Update 1, include these new benefits:

Faster evolution from virtualization to Cloud by importing an existing Virtual Machine as a Matrix-managed serviceUnique bursting capabilities to SAVVIS
- Save time and reduce errors by importing an existing, running VM without having to re-configure
- VMware ESX only, with certain restrictions

New Matrix product structure provides increased choice & flexibility
- Transition from fixed based unit SKU to modular base unit configuration
- Increased choice of power options
- Expanded support across a wider set of BladeSystem offerings

- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/13297_div/13297_div.html

Part. No.	Description
Step 1:	Select Required HP Intelligent Rack Series
Step 2:	Select Required HP CloudSystem Matrix Starter Kit
Step 3:	Choose Additional Recommended Factory Integratable Options
Step 4:	Choose Additional Options for Factory Integration
Step 5:	Choose Additional Support Options

Server Booklet   HP ProLiant BL420c Generation 8 (Gen8) Server Blade

Overview
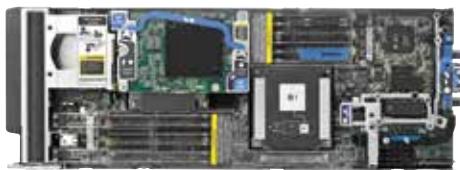
What's New

- Redefining the term "entry-level" in the blade market, the BL420c Gen8 provides breakthrough server blade economics for essential enterprise workloads.
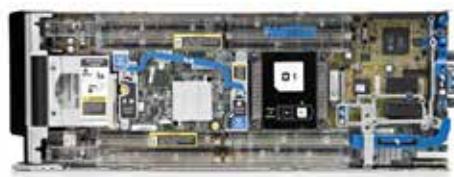
At A Glance

- Processor:
    - Up to two (2) Multi-Core (4, 6 or 8 Core) Intel® Xeon® E5-2400 series processors, **up to 2.40 GHz** and **up to 95W**
    - Intel® C600 Series Chipset; Intel® E5-2400 Processor Family

- Memory:
    - Twelve (12) DDR3, LRDIMM/RDIMM/UDIMM up to 1600MHz, Maximum memory **384GB** @ 1333MHz at **1.35V**
    - HP RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance

- Storage Controller:
    - One (1) Dynamic Smart Array B320i or P220i with 512MB FBWC, (RAID 0 and 1)

- Internal Drive Support:
    - Two (2) 2.5" hot plug SAS, SATA, SSD bays; SAS/SATA/SDD may be mixed

- Network Controller:
    - One (1) FlexibleLOM connector for choice of 1GbE, 10GbE, Flex-10 or FlexFabric networking options
    - One (1) port for the HP iLO Management Engine, dedicated

- Mezzanine Support:
    - Two (2): x8 PCIe 3.0 Type A, x16 PCIe 3.0 Type B (supports Type A and Type B)

- Internal Media/Security Support:
    - One (1) Internal USB 2.0 port
    - One (1) internal Micro SDHC card slot
    - One (1) internal TPM 1.2 module connector (optional)

- Warranty:
    - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

- QuickSpecs:
    - http://h18000.www1.hp.com/products/quickspecs/14324_div/14324_div.html

Part. No.	Description
668356-B21	ProLiant BL420c Gen8 E5-2450 (2.1GHz, 20MB, 95W), 8 core, 2P, 24GB (6x4GB) RDIMM, P220i, 554FLB
668357-B21	ProLiant BL420c Gen8 E5-2430 (2.1GHz, 15MB, 95W), 6 core, 1P, 12GB (3x4GB) RDIMM, B320i SAS, 361FLB
668359-B21	ProLiant BL420c Gen8 E5-2403 (1.8GHz, 10MB, 80W), 4 core, 1P, 12GB (3x4GB) RDIMM, B320i SAS, 361FLB
668358-B21	ProLiant BL420c Gen8 E5-2450L (1.8GHz, 20MB, 70W), 8 core, 1P, 12GB (3x4GB) RDIMM, B320i SAS, 361FLB

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK066E	UK070E	UK074E
6 Hour Call-To-Repair, 24x7, HW Support	UK067E	UK071E	UK075E
4-Hour, 24x7, Proactive Care Service	U3B14E	U3B15E	U3B16E

Server Booklet

Overview

What's New

- The BL460c Gen8 is designed for a very wide variety of mainstream business to HPC scale-out apps for small, medium and enterprise data centers. Key workloads include virtualization, IT infrastructure (file & print, networking, security, systems mgmt), web infrastructure (web serving, streaming media), and collaborative (e-mail, workgroup).

At A Glance

- Processor:
    - Up to two (2) Multi-Core (2, 4, 6 or 8 Core) Intel® Xeon® E5-2600 series processors, **up to 3.0 GHz** and **130W**
    - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
    - Sixteen (16) DDR3, RDIMM/LRDIMM/UDIMM up to 1600MHz, Maximum memory **512GB** @ 1333MHz at **1.35V**
    - HP RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - One (1) HP Smart Array P220i Controller with 512MB FBWC, (RAID 0 and 1)
- Internal Drive Support:
    - Two (2) 2.5" hot plug SAS, SATA, SSD bays; SAS/SATA/SDD may be mixed
- Network Controller:
    - One (1) FlexibleLOM connector for choice of 10GbE, Flex-10 or FlexFabric networking options
    - One (1) port for the HP iLO Management Engine, dedicated
- Mezzanine Support:
    - Two (2) PCIe Gen3: (1) x16 Type A; (1) x16 Type B (supports Type A and Type B)
- Internal Media/Security Support:
    - One (1) Internal USB 2.0 port
    - One (1) internal Micro SDHC card slot
    - One (1) internal TPM 1.2 module connector (optional)

- Warranty:
    - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14208_div/14208_div.html

Part. No.	Description
666157-B21	ProLiant BL460c Gen8 E5-2670 (2.60GHz, 20MB, 115W), 8 core, 2P, 64GB (8x8GB) RDIMM, 554FLB
666158-B21	ProLiant BL460c Gen8 E5-2660 (2.20GHz, 20MB, 95W), 8 core, 2P, 64GB (8x8GB) RDIMM, 554FLB
666163-B21	ProLiant BL460c Gen8 E5-2650L (1.80GHz, 20MB, 70W), 8 core, 1P, 32GB (4x 8GB) RDIMM, 554FLB
666160-B21	ProLiant BL460c Gen8 E5-2640 (2.50GHz, 15MB, 95W), 6 core, 1P, 32GB (4x 8GB) RDIMM, 554FLB
666161-B21	ProLiant BL460c Gen8 E5-2620 (2.00GHz, 15MB, 95W), 6 core, 1P, 16GB (4x 4GB) RDIMM, 554FLB

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK066E	UK070E	UK074E
6 Hour Call-To-Repair, 24x7, HW Support	UK067E	UK071E	UK075E
4-Hour, 24x7, Proactive Care Service	U3B14E	U3B15E	U3B16E

Server Booklet   HP ProLiant BL465c Generation 8 (Gen8) Server Blade

Overview

Version 14 - September, 2012

What's New

- The first server blade to deliver over 2'000 cores per rack
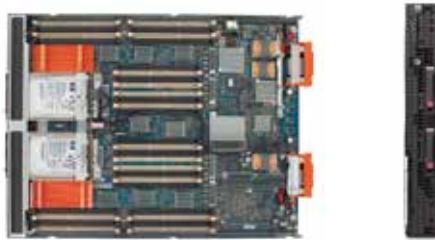
At A Glance

- Processor:
  - Up to two (2) Multi-Core (4, 8, 12 or 16 Core) AMD Opteron™ 6200 Series processors, **up to 3.30 GHz** and **115W**
  - AMD SR5690 and SP5100 chipsets

- Memory:
  - Sixteen (16) DDR3, RDIMM/LRDIMM/ULVDIMM up to 1600MHz, Maximum memory **512GB** @ 1333MHz
  - Up to 20% less power using LV DDR3-1333 RDIMMs with no impact to performance.

- Storage Controller:
  - One (1) HP Smart Array P220i Controller with 512MB FBWC, (RAID 0 and 1)

- Internal Drive Support:
  - Two (2) 2.5" hot plug SAS, SATA, SSD bays

- Network Controller:
  - One (1) FlexibleLOM connector for choice of 10GbE, Flex-10 or FlexFabric networking options
  - One (1) port for the HP iLO Management Engine, dedicated

- Mezzanine Support:
  - Two (2) PCIe 2.0: (1) x8 Type A; (1) x16 Type B (supports Type A and Type B)

- Internal Media/Security Support:
  - One (1) Internal USB 2.0 port
  - One (1) internal Micro SDHC card slot
  - One (1) internal TPM 1.2 module connector (optional)

- Warranty:
  - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

- QuickSpecs:
  - http://h18000.www1.hp.com/products/quickspecs/14325_div/14325_div.html

Part. No.	Description
634969-B21	ProLiant BL465c Gen8 6276 (2.30GHz, 16MB L3, 115W), 16 core, 1P, 16GB (2x 8GB) RDIMM, 554FLB LOM
634972-B21	ProLiant BL465c Gen8 6272 (2.10GHz, 16MB L3, 115W), 16 core, 1P, 16GB (2x 8GB) RDIMM, 554FLB LOM
634977-B21	ProLiant BL465c Gen8 6238 (2.60GHz, 16MB L3, 115W), 12 core, 1P, 16GB (2x 8GB) RDIMM, 554FLB LOM

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK066E	UK070E	UK074E
6 Hour Call-To-Repair, 24x7, HW Support	UK067E	UK071E	UK075E
4-Hour, 24x7, Proactive Care Service	U3B14E	U3B15E	U3B16E

Server Booklet

Overview

What's New

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At A Glance

- Processor:
  - Up to two (2) Multi-Core (4, 6, 8 or 10 Core) Intel® Xeon® E7-2800 series processors **up to 2.40 GHz** and **130W**
  - Intel® 7500 chipset
- Memory:
  - Thirty-two (32) DDR3, RDIMM up to 1066MHz, Maximum memory **1TB @ 1066MHz**
  - Double Device Data Correction (DDDC) (BL620c G7 Intel Xeon E7-2800/8867L models)
- Storage Controller:
  - One (1) HP Smart Array P410i, (RAID 0 and 1), 512MB and 1GB flash backed write cache (FBWC) option
- Internal Drive Support:
  - Two (2) 2.5" hot plug SAS, SATA, SSD bays; SAS/SATA/SDD may be mixed
- Network Controller:
  - Four (4) embedded HP NC553i 10Gb FlexFabric CNA
  - One (1) network adapter dedicated to iLO 3 Management
- Mezzanine Support:
  - Three (3) PCIe Gen2: (1) x4 Type A; (2) x8 Type B (supports Type A and Type B)
- Internal Media/Security Support:
  - ne (1) Internal USB 2.0 port
  - One (1) internal Micro SDHC card slot
  - One (1) internal TPM 1.2 module connector (optional)

- Warranty:
  - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/13747_div/13747_div.html

Part. No.	Description
643763-B21	ProLiant BL620c G7 E7-2860 (2.26GHz, 24MB L3, 130W), 10 core, 1P, 32GB (4 x 8GB) RDIMM
643764-B21	ProLiant BL620c G7 E7-2850 (2.00GHz, 24MB L3, 130W), 10 core, 1P, 32GB (4 x 8GB) RDIMM
643765-B21	ProLiant BL620c G7 E7-2830 (2.13GHz, 24MB L3, 105W), 8 core, 1P, 32GB (4 x 8GB) RDIMM

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK117E
6 Hour Call-To-Repair, 24x7, HW Support	UK110E	UK114E	UK118E
4-Hour, 24x7, Proactive Care Service	U3B32E	U3B33E	U3B34E

Server Booklet
HP ProLiant BL660c Generation 8 (Gen8) Server Blade

Overview
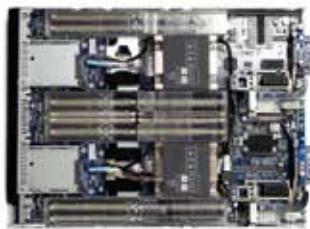
What's New

- The ProLiant BL660c Gen8 is a new server blade that offers the ideal 4-socket dense form factor without compromising on performance, scalability, and expandability

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At A Glance

- Processor:
    - Up to four (4) Multi-Core (4, 6 or 8 Core) Intel® Xeon® E5-4600 series processors **up to 2.90 GHz** and **up to 130W**
    - Intel® C600 Series Chipset

- Memory:
    - Thirty-two (32) DDR3, RDIMM/LRDIMM up to 1600MHz, Maximum memory **1TB** @ 1333MHz at **1.35V**
    - HP RDIMMs at 1.35V (vs 1.5V) saving 15-20% power per DIMM without affecting performance

- Storage Controller:
    - One (1) HP Smart Array P220i Controller with 512MB FBWC, (RAID 0 and 1)

- Internal Drive Support:
    - Two (2) 2.5" hot plug SAS, SATA, SSD bays

- Network Controller:
    - Two (2) FlexibleLOM options include FlexFabric, Flex-10, 10GbE Ethernet, and 1Gb Ethernet.
    - One (1) port for the HP iLO Management Engine, dedicated

- Mezzanine Support:
    - Three (3) PCIe Gen3: (1) x8 Type A; (2) x16 Type B (supports Type A and Type B)

- Internal Media/Security Support:
    - One (1) Internal USB 2.0 port
    - One (1) internal Micro SDHC card slot
    - One (1) internal TPM 1.2 module connector (optional)

- Warranty:
    - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14394_div/14394_div.html

Part. No.	Description
679114-B21	ProLiant BL660c Gen8 E5-4650 (2.70GHz, 20MB L3, 130W), 8 core, 4P, 128GB (16 x 8GB) RDIMM, 554FLB LOM
679115-B21	ProLiant BL660c Gen8 E5-4620 (2.20GHz, 16MB L3, 95W), 8 core, 4P, 128GB (16 x 8GB) RDIMM, 554FLB LOM
679116-B21	ProLiant BL660c Gen8 E5-4617 (2.90GHz, 15MB L3, 130W), 6 core, 4P, 128GB (16 x 8GB) RDIMM, 554FLB LOM

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK117E
6 Hour Call-To-Repair, 24x7, HW Support	UK110E	UK114E	UK118E
4-Hour, 24x7, Proactive Care Service	U3B32E	U3B33E	U3B34E

Server Booklet

Overview

What's New

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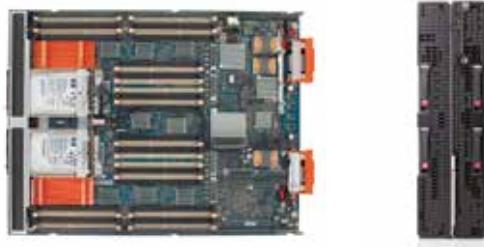
At A Glance

- **Processor:**
  - Up to four (4) Multi-Core (4, 6, 8 or 10 Core) Intel® Xeon® E7-4800 series processors **up to 2.40 GHz** and **130W**
  - Intel® 7500 chipset

- **Memory:**
  - Sixty-four (64) DDR3, RDIMM up to 1066MHz, Maximum memory **2TB @ 1066MHz**
  - Double Device Data Correction (DDDC) (BL680c G7 Intel Xeon E7-4800/8867L models)

- **Storage Controller:**
  - One (1) HP Smart Array P410i Cont., (RAID 0 and 1), 512MB and 1GB flash backed write cache (FBWC) option

- **Internal Drive Support:**
  - Four (4) 2.5" hot plug SAS, SATA, SSD bays; SAS/SATA/SDD may be mixed

- **Network Controller:**
  - Six (6) embedded HP NC553i 10Gb FlexFabric CNA
  - One (1) network adapter dedicated to iLO 3 Management

- **Mezzanine Support:**
  - Seven (7) PCIe Gen2: (2) x4 Type A; (1) x8 Type A; (4) x8 Type B (supports Type A and Type B)

- **Internal Media/Security Support:**
  - One (1) Internal USB 2.0 port
  - One (1) internal Micro SDHC card slot
  - One (1) internal TPM 1.2 module connector (optional)

- **Warranty:**
  - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

- **QuickSpecs:**
  - http://h18004.www1.hp.com/products/quickspecs/13742_div/13742_div.html

Part. No.	Description
643780-B21	ProLiant BL680c G7 E7-4860 (2.26GHz, 24MB L3, 130W), 10 core, 2P, 64GB (8 x 8GB) RDIMM
643781-B21	ProLiant BL680c G7 E7-4850 (2.00GHz, 24MB L3, 130W), 10 core, 2P, 64GB (8 x 8GB) RDIMM
643782-B21	ProLiant BL680c G7 E7-4830 (2.13GHz, 24MB L3, 105W), 8 core, 2P, 64GB (8 x 8GB) RDIMM

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK117E
6 Hour Call-To-Repair, 24x7, HW Support	UK110E	UK114E	UK118E
4-Hour, 24x7, Proactive Care Service	U3B32E	U3B33E	U3B34E

Server Booklet

Overview
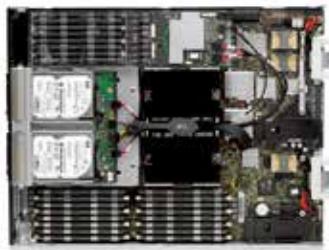
What's New

- Supports the latest 16 core AMD Opteron™ 6278 Processor

At A Glance

- **Processor:**
  - Up to four (4) Multi-Core (4, 8, 12 or 16 Core) AMD Opteron™ 6200 Series processors, **up to 3.30 GHz** and **115W**
  - AMD SR5690 and SP5100 chipsets

- **Memory:**
  - Up to **1TB** of PC3-8500 DDR3 RDIMM memory, at 1066 MHz when fully populated at 2 DIMMs per channel
  - Up to 256GB of PC3-10600 DDR3 RDIMM memory, at 1333 MHz when fully populated at 2 DIMMs per channel

- **Storage Controller:**
  - One (1) HP Smart Array P410i Controller with 1GB FBWC, (RAID 0 and 1)

- **Internal Drive Support:**
  - Two (2) 2.5" hot plug SAS, SATA, SSD bays; SAS/SATA/SDD may be mixed

- **Network Controller:**
  - Two (2) embedded HP NC551i 10Gb FlexFabric CNA
  - One (1) network adapter dedicated to iLO 3 Management

- **Mezzanine Support:**
  - Three (3) PCIe Gen2: (1) x8 Type A; (2) x8 Type B (supports Type A and Type B)

- **Internal Media/Security Support:**
  - One (1) Internal USB 2.0 port
  - One (1) internal Micro SDHC card slot
  - One (1) internal TPM 1.2 module connector (optional)

- **Warranty:**
  - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

- **QuickSpecs:**
  - http://h18000.www1.hp.com/products/quickspecs/13655_div/13655_div.html

Part. No.	Description
654799-B21	ProLiant BL685c G7 6276 (2.30GHz, 16MB L3, 115W) 16 core, 4P, 64GB (16 x 4 GB) RDIMM
654800-B21	ProLiant BL685c G7 6238 (2.60GHz, 16MB L3, 115W) 12 core, 4P, 64GB (16 x 4 GB) RDIMM
632993-B21	ProLiant BL685c G7 6176 (2.30GHz, 12MB L3, 80W) 12 core, 4P, 64GB (16 x 4 GB) RDIMM
518870-B21	ProLiant BL685c G7 6174 (2.20GHz, 12MB L3, 80W) 12 core, 4P, 64GB (16 x 4 GB) RDIMM
518873-B21	ProLiant BL685c G7 6136 (2.40GHz, 12MB L3, 80W) 8 core, 4P, 32GB (8 x 4 GB) RDIMM

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK117E
6 Hour Call-To-Repair, 24x7, HW Support	UK110E	UK114E	UK118E
4-Hour, 24x7, Proactive Care Service	U3B32E	U3B33E	U3B34E

Server Booklet

HP ProLiant WS460c Generation 8 (Gen8) Workstation Blade

Overview

Version 14 - September, 2012

Intel Inside Xeon

What's New

- Data center workstation computing redefined providing flexible high-end graphics solutions

At A Glance

- Processor:
  - Up to two (2) Multi-Core (2, 4, 6 or 8 Core) Intel® Xeon® E5-2600 series processors, **up to 3.0 GHz** and **130W**
  - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
  - Sixteen (16) DDR3, RDIMM/LRDIMM/UDIMM up to 1600MHz, Maximum memory **512GB** @ 1333MHz at **1.35V**
  - HP RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
  - One (1) HP Smart Array P220i Controller with 512MB FBWC, (RAID 0 and 1)
- Internal Drive Support:
  - Two (2) 2.5" hot plug SAS, SATA, SSD bays; SAS/SATA/SDD may be mixed
- Network Controller:
  - One (1) FlexibleLOM connector for choice of 10GbE, Flex-10 or FlexFabric networking options
  - One (1) port for the HP iLO Management Engine, dedicated
- Mezzanine Support:
  - Two (2) PCIe Gen3: (1) x16 Type A; (1) x16 Type B (supports Type A and Type B)
- Internal Media/Security Support:
  - HP NVIDIA Quadro 500 MXM graphics (via graphics mezzanine card), 1GB / DDR3, Cuda Cores 96
  - HP NVIDIA Quadro 1000 MXM graphics (via graphics mezzanine card), 2GB / DDR3, Cuda Cores 96
  - HP NVIDIA Quadro 3000 MXM graphics (via graphics mezzanine card), 2GB / GDDR5, Cuda Cores 240
- Warranty:
  - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/14409_div/14409_div.html

Part. No.	Description
678275-B21	ProLiant WS460c Gen8 E5-2637 (3.00GHz, 20MB L3, 80W), 2 core, 2P, 4x4GB, one HP NVIDIA Q3000M/2GB
678274-B21	ProLiant WS460c Gen8 E5-2670 (2.60GHz, 20MB L3, 115W), 8 core, 2P, 4x4GB, two HP NVIDIA Q1000M/2GB

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UR336E	UR346E	UR356E
6 Hour Call-To-Repair, 24x7, HW Support	UR338E	UR348E	UR358E
4-Hour, 24x7, Proactive Care Service	U3C18E	U3C19E	U3C20E

Server Booklet

Overview

What's New

- Support for NHP LFF CTO Chassis
- Includes HP Dynamic Smart Array B120i controller

At A Glance

- Processor:
  - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.00 GHz** and **up to 130W**
  - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
  - Twenty-four (24) RDIMM/LVRDIMM/ UDIMM/LRDIMM up to 1600MHz, Maximum memory **384GB @ 1066MHz**
  - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
  - One (1) Integrated Dynamic Smart Array B120i (RAID 0, 1, 1+0) optional RAID 5 with 512 MB FBWC
- Internal Drive Support:
  - Eight (8) 2.5" hot plug bays or four (4) 3.5" hot plug bays or non hot plug bays; SAS/SATA and SSD Support
- Network Controller:
  - One (1) HP NC361i Integrated dual Multifunction Gigabit Srv. Adapter, opt. FlexibleLOM (4x1GbE or 2x 10Gb)
  - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
  - Two (2) PCI-Express Gen 3 expansion slots:
  - 1x x16 Gen3 full-length, full-height slot, 1x FlexibleLOM Slot
- Internal Media/Security Support:
  - USB 2.0: Front: (2), Rear: (4), Internal: (1)
  - One (1) Front Mini-Video connector/ one (1) Rear standard video (not active simultaneously)
  - One (1) internal SD-HC Card slot , one (1) internal TPM 1.2 module connector (optional)
- Warranty:
  - Server Warranty includes 3 year Next Day Parts replacement, 0-Years Labor, 0-Years Onsite support
- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/14282_div/14282_div.html

Part. No.	Description
662084-421	ProLiant DL160 Gen8 E5-2640 (2.50GHz, 15MB L3, 95W), 2P, 6 core, 4x4GB, P420i/1GB/FBWC, SFF
662083-421	ProLiant DL160 Gen8 E5-2620 (2.00GHz, 15MB L3, 95W), 1P, 6 core, 2x4GB, Integrated B120i, LFF
662082-421	ProLiant DL160 Gen8 E5-2603 (1.80GHz, 10MB L3, 80W), 1P, 6 core, 1x4GB, Integrated B120i, LFF

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U9510E	U9513E	U9515E
6 Hour Call-To-Repair, 24x7, HW Support	U9511E		
4-Hour, 24x7, Proactive Care Service	U3A18E	U3A19E	U3A20E

Server Booklet

Overview

What's New

- Support for 6200 series processors
- Support for PC3-12800R (DDR3-1600) Registered CAS-11 Memory DIMMs

At A Glance

- Processor:
  - Up to two (2) AMD 4, 8, 12 or 16-Core, 6200 series processors with 16MB Level 3 cache, up to 3.30 GHz
  - AMD SR5670 Northbridge and SP5100 Southbridge

- Memory:
  - Up to 384GB, using 8x6 GB + 16x16 GB Registered memory per channel, operating at 1066MHz in 24 slots.
  - Up to 64GB, using 4GB Dual-Rank (UDIMM) memory per channel, operating at 1066MHz in 16 slots.

- Storage Controller:
  - One (1) HP Smart Array B110i SATA RAID (RAID 0/1)

- Internal Drive Support:
  - Up to 8 SFF SAS/SATA hot plug hard disk drives or up to 4 LFF SAS/SATA, SSD Support

- Network Controller:
  - Two (2) embedded NC362i Dual Port GbE Server Adapter
  - One (1) additional, Onboard Administrator featuring Lights Out 100i, IPMI 2.0

- Expansion Support:
  - Slot 1: half-length/full height PCI-Express x16 Gen2
  - Slot 2: half-length/low-profile PCI-Express x4 (Internal ONLY) Gen2

- Internal Media/Security Support:
  - One (1) internal USB 2.0 connector for security key devices and USB drive keys
  - Two (2) front, Two (2) back
  - One (1) Rear SD Port optional (optional)

- Warranty:
  - Server Warranty includes 3 year Next Day Parts replacement, 0-Years Labor, 0-Years Onsite support

- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/13238_div/13238_div.html

Part. No.	Description
663809-421	ProLiant DL165 G7 6274 (2.20GHz, 16MB L3, 115W), 16 core, 2P, 8x2GB, P410, 8 SFF Hot Plug
663808-421	ProLiant DL165 G7 6272 (2.10GHz, 16MB L3, 115W), 16 core, 1P, 4x2GB, P410, 4 LFF Hot Plug
663807-421	ProLiant DL165 G7 6234 (2.40GHz, 16MB L3, 115W), 12 core, 1P, 2x2GB, 4 LFF Non Hot Plug

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U9510E	U9513E	U9515E
6 Hour Call-To-Repair, 24x7, HW Support	U9511E		
4-Hour, 24x7, Proactive Care Service	U3A18E	U3A19E	U3A20E

Server Booklet

Overview

What's New

- The latest 1P rack server, HP ProLiant DL320e Gen8 Server series, is a new entry level rack-optimized platform, ideal for single-application IT infrastructure, web and edge-of-network applications

At A Glance

- Processor:
    - (1) Intel® Xeon® E3-1200 v2/i3/Pentium Series, 2/4 Cores, **up to 3.70 GHz** and **up to 87W**
    - Intel® C204 Series Chipset
- Memory:
    - Four (4) DDR3, UDIMM up to 1333MHz ECC, Maximum memory **32GB @ 1333MHz**
    - Always use HP qualified DIMM
- Storage Controller:
    - One (1) Integrated Dynamic Smart Array B120i (RAID 0/1) controller, No FBWC support
- Internal Drive Support:
    - up to 4 LFF Hot plug or Non hot plug SATA/SAS or up to 8 SFF Hot Plug SATA/SAS Hard Drives
- Network Controller:
    - One (1) HP Integrated Ethernet 1Gb 2-port 330i Adapter
    - One (1) port for the HP iLO Management Engine, dedicated
- Expansion Support:
    - Two (2) internal PCI Express slots:
    - 1x x16 Gen3 full-length, full-height slot and 1x x8 Gen2 half-length, low profile slot
- Internal Media/Security Support:
    - USB 2.0: (2) ports up front; (4) ports in back; (1) port optional internal
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module connector (optional)
- Warranty:
    - Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14326_div/14326_div.html

Part. No.	Description
675422-421	ProLiant DL320e Gen8 E3-1240v2 (3.40GHz, 8MB L3, 69W), 1P, 4 core, 2x4GB, B120i, 330i NIC, 4 LFF
675421-421	ProLiant DL320e Gen8 E3-1220v2 (3.10GHz, 8MB L3, 69W), 1P, 4 core, 1x4GB, B120i, 330i NIC, 4 LFF

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U6E99E	U6F19E	U6F39E
6 Hour Call-To-Repair, 24x7, HW Support	U6F05E	U6F57E	U6F59E
4-Hour, 24x7, Proactive Care Service	U6F03E	U6F23E	U6F43E

Server Booklet

Overview

Version 14 - September, 2012

What's New

- Essential features packed in a 1U footprint to deliver the key elements for file and print and single application workloads.

At A Glance

- Processor:
    - Up to two (2) Intel® Xeon® E5-2400 series processors, **up to 2.40 GHz** and **up to 95W**
    - Intel® C600 Series Chipset; Intel® E5-2400 Processor Family
- Memory:
    - Twelve (12) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **384GB @ 1333MHz**
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - One (1) Integrated Dynamic Smart Array B120i or B320i (RAID 0, 1, 1+0), optional RAID 5 with 512 MB FBWC
- Internal Drive Support:
    - Up to eight (8) 2.5" hot plug bays; or up to four (4) 3.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
    - One (1) Embedded 1GbE 4-port 366i Network Adapter, 10GbE NIC options supported.
    - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
    - Two (2) PCI-Express expansion slots:
    - 1x x16 Gen3 Full-height, half-length slot and 1x x8 Gen2 low profile slot
- Internal Media/Security Support:
    - USB 2.0: (2) ports up front; (4) ports in back; (1) port internal (secure)
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module connector (optional)
- Warranty:
    - Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14327_div/14327_div.html

Part. No.	Description
668815-421	ProLiant DL360e Gen8 E5-2430 (2.20GHz, 20MB L3, 95W), 2P, 8 core, 6x4GB, P420/1GB/FBWC, 366i NIC
668814-421	ProLiant DL360e Gen8 E5-2407 (2.20GHz, 15MB L3, 95W), 1P, 6 core, 2x4GB, B320i/512MB/FBWC, 366i NIC
668813-421	ProLiant DL360e Gen8 E5-2403 (1.80GHz, 10MB L3, 80W), 1P, 4 core, 1x4GB, B120i/ZM, 366i NIC, SAS
668812-421	ProLiant DL360e Gen8 E5-2403 (1.80GHz, 10MB L3, 80W), 1P, 4 core, 1x4GB, B320i/ZM, 366i NIC, SATA

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U6D59E	U6D79E	U6D99E
6 Hour Call-To-Repair, 24x7, HW Support	U6D65E	U6D85E	U6E05E
4-Hour, 24x7, Proactive Care Service	U6G82E	U6G89E	U6G96E

Server Booklet

Overview

What's New

- The HP ProLiant DL380e Gen8 sets the next generation standards of 2U 2-socket rack servers for the industry.

At A Glance

- Processor:
  - Up to two (2) Intel® Xeon® E5-2400 series processors, **up to 2.40 GHz** and **up to 95W**
  - Intel® C600 Series Chipset; Intel® E5-2400 Processor Family
- Memory:
  - Twelve (12) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **384GB @ 1333MHz**
  - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
  - One (1) Integrated Dynamic Smart Array B120i or B320i (RAID 0, 1, 1+0), optional RAID 5 with 512 MB FBWC
- Internal Drive Support:
  - up to Twenty-seven (27) 2.5" hot plug bays or up to fourteen (14) 3.5" hot plug bays, SAS/SATA/SSD Support
- Network Controller:
  - One (1) Embedded 1GbE quad-port 366i Network Adapter, 10GbE NIC options supported.
  - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
  - Primary Riser (x8 FL/FH;x16 HL/FH;x8 HL/FH;x8 Gen2 LP)/Primary Riser SAS (x8 FL/FH;x16 HL/FH;x8 Gen2 LP)
  - Optional Secondary Riser available; 2 slot riser (x16 FL/FH, x16 HL/FH)
- Internal Media/Security Support:
  - USB 2.0: (2) ports up front; (4) ports in back; (1) port internal (secure)
  - 1 internal SD-HC Card slot
  - 1 internal TPM 1.2 module connector (optional)
- Warranty:
  - Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.
- QuickSpecs:
  - http://h18000.www1.hp.com/products/quickspecs/14328_div/14328_div.html

Part. No.	Description
668669-421	ProLiant DL380e Gen8 E5-2450 (2.10GHz, 20MB L3, 95W), 2P, 8 core, 6x4GB, P420i/1GB/FBWC, 8 SFF
668666-421	ProLiant DL380e Gen8 E5-2407 (2.20GHz, 10MB L3, 80W), 1P, 4 core, 2x4GB, B320i/512MB/FBWC, 8 SFF
668665-421	ProLiant DL380e Gen8 E5-2407 (2.20GHz, 10MB L3, 80W), 1P, 4 core, 2x4GB, B320i/512MB/FBWC, 8 LFF
648256-421	ProLiant DL380e Gen8 E5-2403 (1.80GHz, 10MB L3, 80W), 1P, 4 core, 1x4GB, B320i, 8 SFF
668668-421	ProLiant DL380e Gen8 E5-2420 (1.90GHz, 15MB L3, 95W), 1P, 6 core, 3x4GB, P420i/1GB/FBWC, **25 SFF**

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U6E29E	U6E49E	U6E69E
6 Hour Call-To-Repair, 24x7, HW Support	U6E35E	U6E55E	U6E75E
4-Hour, 24x7, Proactive Care Service	U6G61E	U6G68E	U6G75E

Overview

What's New

- 10 SFF Drive Cage in CTO

At A Glance

- Processor:
    - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.30 GHz** and **up to 130W**
    - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
    - Twenty-four (24) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **768GB @ 1066MHz**
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - Integrated HP Smart Array P420i RAID Controller
- Internal Drive Support:
    - Eight (8) 2.5" hot plug bays, Optional four (4) 3.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
    - One (1) FlexibleLOM connector for choice of 1GbE or 10GbE networking options
    - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
    - Two PCI-Express Gen 3 expansion slots:
    - 1x x16 Gen3 Half-length, full-height slot and 1x x8 Gen3 Low profile slot
- Internal Media/Security Support:
    - USB 2.0: Front: (2), Rear: (4), Internal: (1)
    - One (1) Front Mini-Video connector/ one (1) Rear standard video (not active simultaneously)
    - One (1) internal SD-HC Card slot , one (1) internal TPM 1.2 module connector (optional)
- Warranty:
    - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
    - http://h18000.www1.hp.com/products/quickspecs/14211_div/14211_div.html

Part. No.	Description
646905-421	ProLiant DL360p Gen8 E5-2690 (2.90GHz, 20MB L3, 135W), 2P, 8 core, 4x8GB, P420i/2GB/FBWC, 331FLR
646904-421	ProLiant DL360p Gen8 E5-2650 (2.00GHz, 20MB L3, 95W), 2P, 8 core, 4x8GB, P420i/2GB/FBWC, 331FLR
646902-421	ProLiant DL360p Gen8 E5-2640 (2.50GHz, 15MB L3, 95W), 1P, 6 core, 4x4GB, P420i/1GB/FBWC, 331FLR
646901-421	ProLiant DL360p Gen8 E5-2630 (2.30GHz, 15MB L3, 95W), 1P, 6 core, 4x4GB, P420i/1GB/FBWC, 331FLR
644199-421	ProLiant DL360p Gen8 E5-2630 (2.30GHz, 15MB L3, 95W), 2P, 6 core, 4x4GB, P420i/1GB/FBWC, 331FLR

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U4497E	U8116E	U8082E
6 Hour Call-To-Repair, 24x7, HW Support	U4498E	U9736E	U9735E
4-Hour, 24x7, Proactive Care Service	U2Z86E	U2Z87E	U2Z88E

Server Booklet

Overview

What's New

- Releasing the new 12LFF and 25SFF CTO chassis
- Support for HyperCloud memory, 12 DIMMs per processor must be populated.

At A Glance

- Processor:
    - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.30 GHz** and **up to 130W**
    - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
    - Twenty-four (24) DDR3, RDIMM/UDIMM/LRDIMM/HDIMM up to 1600MHz, Maximum **768GB** @ 1066MHz
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - Integrated HP Smart Array P420i RAID Controller
- Internal Drive Support:
    - (8, 16 or 25) 2.5" hot plug bays /(8 or 12) 3.5" hot plug bays , SAS/SATA and SSD Support
- Network Controller:
    - One (1) FlexibleLOM connector for choice of 1GbE or 10GbE networking options
    - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
    - Primary Riser (1x x16 Gen3 FL/FH; 1x x8 Gen3 HL/FH; 1x x4 Gen2 HL/FH)
    - Optional Secondary Riser available; 3 slot riser (x16, x8, x8) or 2 slot (x16, x16)
- Internal Media/Security Support:
    - USB 2.0: (2) ports up front; (4) ports in back; (1) port internal
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module connector (optional)
- Warranty:
    - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
    - http://h18000.www1.hp.com/products/quickspecs/14212_div/14212_div.html

Part. No.	Description
662257-421	ProLiant DL380p Gen8 E5-2690 (2.90GHz, 20MB L3, 135W), 2P, 8 core, 4x8GB, P420i/2GB FBWC, 554FLR
642105-421	ProLiant DL380p Gen8 E5-2665 (2.40GHz, 20MB L3, 115W), 2P, 8 core, 4x8GB, P420i/2GB FBWC, 554FLR
642106-421	ProLiant DL380p Gen8 E5-2650 (2.00GHz, 20MB L3, 95W), 2P, 8 core, 4x8GB, P420i/2GB FBWC, 331FLR
642107-421	ProLiant DL380p Gen8 E5-2640 (2.50GHz, 15MB L3, 95W), 1P, 6 core, 4x4GB, P420i/1GB FBWC, 331FLR
677278-421	ProLiant DL380p Gen8 E5-2630 (2.30GHz, 15MB L3, 95W), 2P, 6 core, 4x4GB, P420i/1GB FBWC, 331FLR

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U4545E	U8118E	U8084E
6 Hour Call-To-Repair, 24x7, HW Support	U4546E	U9738E	U9737E
4-Hour, 24x7, Proactive Care Service	U2Z50E	U2Z51E	U2Z52E

Server Booklet

Overview

Version 14 - September, 2012

What's New

- With enhanced innovations in performance, feature flexibility, and management capabilities, the DL385p Gen8 is the price/performance choice for your virtualization, database, and high performance computing workloads.

At A Glance

- Processor:
    - Up to two (2) AMD 4, 8, 12, or 16-Core, 6200 series with 16MB Level 3 cache, **up to 3.30 GHz** and **up to 140W**
    - AMD SR5690 Northbridge and SP5100 Southbridge
- Memory:
    - Twenty-four (24) DDR3, RDIMM/LRDIMM/ULVDIMM up to 1600MHz, Maximum memory **768GB @ 800MHz**
    - Up to 20% less power using LV DDR3-1333 RDIMMs with no impact to performance.
- Storage Controller:
    - Integrated HP Smart Array P420i RAID Controller
- Internal Drive Support:
    - (8, 16 or 25) 2.5" hot plug bays /(8 or 12) 3.5" hot plug bays , SAS/SATA and SSD Support
- Network Controller:
    - One (1) FlexibleLOM connector for choice of 1GbE or 10GbE networking options
    - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
    - Six available PCI-Express slots:
    - Optional mixed PCI-X / PCI-Express or x16 PCI configurations available
- Internal Media/Security Support:
    - 6 total ports: (2) ports in front; (2) ports in back; (1) port internal; (1) port internal for usb tape drive
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module connector (optional)
- Warranty:
    - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14329_div/14329_div.html

Part. No.	Description
642135-421	ProLiant DL385p Gen8 6272 (2.10GHz, 16MB, 115W), 16 core, 2P, 4x 8GB, P420i/2GB FBWC, 25 SFF, 331FLR
642136-421	ProLiant DL385p Gen8 6238 (2.60GHz, 16MB, 115W), 12 core, 2P, 4x 8GB, P420i/1GB FBWC, 8 SFF, 331FLR
642137-421	ProLiant DL385p Gen8 6212 (2.60GHz, 16MB, 115W), 8 core, 1P, 2x8GB, P420i/512MB FBWC,12 LFF, 331FLR

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U4545E	U8118E	U8084E
6 Hour Call-To-Repair, 24x7, HW Support	U4546E	U9738E	U9737E
4-Hour, 24x7, Proactive Care Service	U2Z50E	U2Z51E	U2Z52E

Server Booklet

Overview
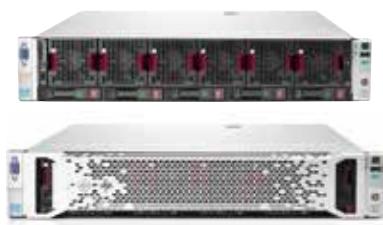
Version 14 - September, 2012

What's New

- The new ProLiant DL560 Gen8, a concentrated 4P in a dense 2U form factor server, without compromising on performance, scalability, and expandability. Delivering the #1 virtualization performance record

At A Glance

- Processor:
    - Up to four (4) Intel® Xeon® E5-4600 series processors, **up to 2.90 GHz** and **up to 130W**
    - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
    - Forty-eight (48) DDR3, RDIMM/LRDIMM up to 1600MHz, Maximum memory **1.5TB** @ 1600MHz
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - Integrated HP Smart Array P420i RAID Controller
- Internal Drive Support:
    - Five (5) 2.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
    - One (1) FlexibleLOM connector for choice of 1GbE or 10GbE networking options
    - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
    - Primary Riser (1x x16 Gen3 FL/FH; 1x x8 Gen3 HL/FH; 1x x4 Gen2 HL/FH)
    - Optional Secondary Riser available; 3 slot riser (x16, x8, x8) or 2 slot (x16, x16)
- Internal Media/Security Support:
    - USB 2.0: (2) ports up front; (4) ports in back; (1) port internal
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module (optional)
- Warranty:
    - Server warranty includes 3-year Parts, 3-year Labor, 3-year on-site support.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14395_div/14395_div.HTML

Part. No.	Description
686784-421	ProLiant DL560 Gen8 E5-4640 (2.40GHz, 20MB L3, 95W), 8 core, 4P, 8x8GB, P420i/2GB FBWC, 530FLR LOM
686785-421	ProLiant DL560 Gen8 E5-4610 (2.40GHz, 15MB L3, 95W), 6 core, 2P, 4x8GB, P420i/1GB FBWC, 331FLR LOM
686786-421	ProLiant DL560 Gen8 E5-4603 (2.00GHz, 10MB L3, 95W), 4 core, 4P, 2x8GB, P420i/ZM, 331FLR LOM

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK118E
6 Hour Call-To-Repair, 24x7, HW Support	UP729E	UP730E	UP731E
4-Hour, 24x7, Proactive Care Service	U2Z68E	U2Z69E	U2Z70E

Server Booklet

Overview

What's New

• Flexible technologies provides customer choice in networking with either a Broadcom or Qlogic solution.

At A Glance

• Processor:
    • Supports up to four Intel® Xeon® Processor E7
    • Industry Standard Intel® 7500 chipset with four high-speed interconnects up to 6.4GT/s

• Memory:
    • Up to 2 TB of DDR3 memory, supported by (64) slots
    • Can be configured in Mirrored, Online Spare, or Advanced ECC modes

• Storage Controller:
    • Integrated HP Smart Array P410i with optional 512MB FBWC or 1GB FBWC Controller, RAID 0/1/1+0/5/5+0

• Internal Drive Support:
    • Support for up to 8 hot plug SFF SAS/SATA/SSD drives

• Network Controller:
    • One (1) embedded NC375i Quad Port Multifunction Gigabit; opt. Dual Port 10GbE upg. (replaces two 1G ports)
    • One (1) additional embedded 10/100 network adapter dedicated to iLO 3 management

• Expansion Support:
    • Up to 11 slots supported; all full-length/full-height
    • Standard: 2 PCI-E 2.0 x8, 3 PCI-E 2.0 x4

• Internal Media/Security Support:
    • USB 2.0: (2) ports up front; (2) ports in back; (2) port internal
    • 1 internal SD-HC Card slot
    • 1 internal TPM 1.2 module connector (optional)

• Warranty:
    • Server warranty includes 3-year Parts, 3-year Labor, 3-year on-site support.

• QuickSpecs:
    • http://h18004.www1.hp.com/products/quickspecs/13669_div/13669_div.HTML

Part. No.	Description
643063-421	ProLiant DL580 G7 E7-4870 (2.40GHz, 30MB L3, 130W), 10 core, 4P, 128 GB DDR3, P410i/1GB FBWC
643064-421	ProLiant DL580 G7 E7-4850 (2.00GHz, 24MB L3, 130W), 10 core, 4P, 128 GB DDR3, P410i/1GB FBWC
696729-421	ProLiant DL580 G7 E7-4870 (2.40GHz, 30MB L3, 130W), 10 core, 4P, 128 GB DDR3, P410i/1GB FBWC, NIC BC
696730-421	ProLiant DL580 G7 E7-4850 (2.00GHz, 24MB L3, 130W), 10 core, 4P, 128 GB DDR3, P410i/1GB FBWC, NIC BC

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK118E
6 Hour Call-To-Repair, 24x7, HW Support	UP729E	UP730E	UP731E
4-Hour, 24x7, Proactive Care Service	U2Z68E	U2Z69E	U2Z70E

Server Booklet

Overview

Version 14 - September, 2012

What's New

- Support for 6204 4-core 3.30GHz processor
- Support for 4GB, 8GB, and 16GB 1600MHz DIMMs

At A Glance

- Processor:
    - Up to four (4) Multi-Core (4, 8, 12 or 16-Core) AMD Opteron™ 6200 Series **up to 3.30GHz** and **up to 115W**
    - AMD SR5690 and SP5100 chipsets

- Memory:
    - Up to **1TB** of PC3-10600 DDR3 Registered (RDIMM) memory, (32GB + 16GB + 16GB) x16
      NOTE: Max memory is based on the maximum capacity of the AMD architecture

- Storage Controller:
    - Integrated HP Smart Array P410i controller with optional 512MB or 1GB FBWC, Supports RAID 0/1/1+0/5/5+0

- Internal Drive Support:
    - Support for up to 8 hot plug SFF SAS/SATA/SSD drives

- Network Controller:
    - One (1) embedded NC375i Quad Port Multifunction Gigabit; opt. Dual Port 10GbE upg. (replaces two 1G ports)
    - One (1) additional embedded 10/100 network adapter dedicated to iLO 3 management

- Expansion Support:
    - Up to 11 slots supported; all full-length/full-height
    - Standard: 2 PCI-E 2.0 x16, 3 PCI-E 2.0 x8

- Internal Media/Security Support:
    - USB 2.0: (2) ports up front; (2) ports in back; (1) port internal
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module connector (optional)

- Warranty:
    - Server warranty includes 3-year Parts, 3-year Labor, 3-year on-site support.

- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/13373_div/13373_div.html

Part. No.	Description
653745-421	ProLiant DL585 G7 6282SE (2.60GHz, 16MB L3, 105W), 16 core, 4P, 128GB (16x8GB), P410i/1GB/FBWC, IC
653746-421	ProLiant DL585 G7 6276 (2.30GHz, 16MB L3, 105W), 16 core, 4P, 128GB (16x8GB), P410i/1GB/FBWC, IC
653747-421	ProLiant DL585 G7 6272 (2.10GHz, 16MB L3, 115W), 16 core, 4P, 64GB (16x4GB), P410i/1GB/FBWC, IC
653748-421	ProLiant DL585 G7 6236 (2.30GHz, 16MB L3, 80W), 12 core, 2P, 32GB (8x4GB), P410i/1GB/FBWC

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UK109E	UK113E	UK118E
6 Hour Call-To-Repair, 24x7, HW Support	UP729E	UP730E	UP731E
4-Hour, 24x7, Proactive Care Service	U2Z68E	U2Z69E	U2Z70E

Server Booklet

Overview

What's New

- Updated product skus for memory and power supply
- Updated Max 11 limits on I/O Cards
- Support for MLC Solid State Drives (SSD), Support for HP IO Accelerators Gen2 (MLC)

At A Glance

- **Processor:**
  - Up to 8 Intel® Xeon® 7500/6500 processors or up to 8 Intel® Xeon® Processor E7 series, **up to 2.40GHz**
  - Industry Standard Intel® 7500 chipset / Hewlett-Packard DL980 G7 Node Controller

- **Memory:**
  - Up to 4TB of DDR3 Registered (RDIMM) memory in 128 slots
  - DDR3-1066/1333/ 800 RDIMMs (Advanced Memory Protection capable with Mirrored, or Online Spare)

- **Storage Controller:**
  - Integrated Smart Array P410i RAID with optional 1GB flash backed write cache (FBWC). RAID 0/1/1+0/5/5+0

- **Internal Drive Support:**
  - Support for up to 8 hot plug SFF SAS drives

- **Network Controller:**
  - One (1) embedded NC375i Quad Port Multifunction Gigabit opt. Dual Port 10GbE upg. (replaces two 1G ports)
  - One (1) additional embedded 10/100 network adapter dedicated to iLO 3 management

- **Expansion Support:**
  - Up to 16 slots supported;
  - Standard: (2) PCI-E Gen2 x8; (3) PCI-E Gen2 x4 | Optional full height/full length and low profile I/O backplanes

- **Internal Media/Security Support:**
  - USB 2.0: (2) ports up front; (2) ports in back; (2) ports internal
  - 1 internal SD-HC Card slot
  - 1 internal TPM 1.2 module connector (optional)

- **Warranty:**
  - Server warranty includes 3-year Parts, 3-year Labor, 3-year on-site support.

- **QuickSpecs:**
  - http://h18000.www1.hp.com/products/quickspecs/13708_div/13708_div.html
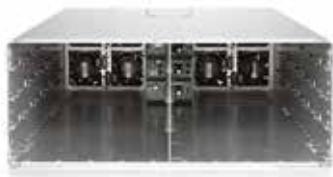
Part. No.	Description
AM447A	ProLiant DL980 G7 E7-4870 (2.40GHz, 30MB L3, 130W) 10 core, 4P, 256GB (32x8GB), P410i/512MB FBWC
AM448A	ProLiant DL980 G7 E7-2860 (2.26GHz, 24MB L3, 130W) 10 core, 4P, 128GB (16x8GB), P410i/512MB FBWC
AM449A	ProLiant DL980 G7 E7-2830 (2.13GHz, 24MB L3, 105W) 8 core, 4P, 128GB (16x8GB), P410i/512MB FBWC

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UV298E	UV299E	UV300E
6 Hour Call-To-Repair, 24x7, HW Support	UV295E	UV296E	UV297E
4-Hour, 24x7, Proactive Care Service	U3Q24E	U3Q25E	U3Q26E

Server Booklet

HP ProLiant s6500 Chassis

Overview
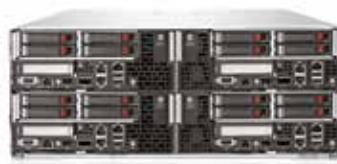
Version 14 - September, 2012

What's New

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At A Glance

* The HP ProLiant s6500 chassis can accommodate up to eight half-width or four full width servers gives you the ability to mix and match server nodes, and also allows for single node serviceability (SNS)-making it an extremely flexible chassis. This, in other words, means that you can add or remove compute capacity based on your business needs. The highly efficient multi-node chassis with shared power and cooling components, including energy efficient fans and optional hot-plug redundant PSU helps reduce power consumption when compared to previous generation servers.

* **Chassis Redundancy and Efficiency:**
    * Right-sized HP ProLiant power supplies from 460 Watts, 750 Watts to 1200 Watts at 94% efficiency
    * Support for hot plug redundant or non redundant fans
    * Ability to mix and match half width server trays in one chassis
    * Single node serviceability allows you to serve one tray while the other trays continue to operate
    * Chassis uses shared power and cooling for better efficiencies

* **Warranty:**
    * Server Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support with next business day response
* **QuickSpecs:**
    * http://h18004.www1.hp.com/products/quickspecs/13713_div/13713_div.html

Product Name	HP ProLiant s6500 2/1200 Non Redundant Fan Chassis	HP ProLiant s6500 3/1200 Redundant Fan Chassis	HP ProLiant s6500 w/o Fans 4U Configure-to-order Chassis (CTO)
SKU Part Numbers	629235-B21	629236-B21	614167-B21
Servers per Enclosure	Up to 8	Up to 8	Up to 8
System Fans Features	Non redundant	Hot plug redundant	redundant or non redundant
Power Supply Type	(2) 1200 Watt	(3) 1200 Watt	N/A
Form Factor	4U	4U	4U

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UR402E	UR410E	UR418E
6 Hour Call-To-Repair, 24x7, HW Support	UR404E	UR412E	UR420E
4-Hour, 24x7, Proactive Care Service	U3C72E	U3C73E	U3C74E

Server Booklet

HP ProLiant SL230s Generation 8 (Gen8)

Overview

Version 14 - September, 2012

What's New

- Created 2 new SKU's for SFF Hot Plug HDD Cages to allow 1 front hot plug HDD while leaving the other open for FlexibleLOM or LP slot.

At A Glance

- Processor:
  - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.00 GHz** and **up to 130W**
  - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
  - Sixteen (16) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **256GB @ 1600MHz**
  - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
  - Integrated HP H220i Host Bus Adapter
- Internal Drive Support:
  - Two (2) 3.5" or four (4) 2.5" non-hot plug bays, Optional: Two (2) 2.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
  - One (1) Integrated HP NC361i Dual Port Gigabit Server Adapter
  - One (1) port FlexibleLOM connector for choice of 1GbE, 10GbE or InfiniBand options
  - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
  - Two (2) PCI-e Gen3 expansion slots:
  - (1) Half-length, full-height x16 slot and (1) low-profile x16 slot.
- Internal Media/Security Support:
  - USB 2.0: Internal: (1)
  - One (1) internal microSD Card slot , One (1) internal TPM 1.2 module connector (optional)
- Warranty:
  - Server Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support with next business day response.
- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/14231_div/14231_div.html

Part. No.	Description
659041-B21	ProLiant SL230s Gen8 1U left half width tray, E5-2670 (2.60 GHz, 20MB L3 Cache, 115W), 8 core, 2P, 2x4GB
659049-B21	ProLiant SL230s Gen8 1U right half width tray, E5-2670 (2.60 GHz, 20MB L3 Cache, 115W), 8 core, 2P, 2x4GB

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UR402E	UR410E	UR418E
6 Hour Call-To-Repair, 24x7, HW Support	UR404E	UR412E	UR420E
4-Hour, 24x7, Proactive Care Service	U3C72E	U3C73E	U3C74E

Server Booklet

Overview

What's New

- SL250s Gen8 will now support PCIe Gen3 on all slots, including GPU slots

At A Glance

- Processor:
  - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.00 GHz** and **up to 130W**
  - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
  - Sixteen (16) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **256GB @ 1600MHz**
  - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
  - Integrated HP H220i Host Bus Adapter
- Internal Drive Support:
  - Four (4) 2.5" hot plug bays; Optional: Four (4) 2.5" non-hot plug bays if no GPU, SAS/SATA and SSD Support
- Network Controller:
  - One (1) Integrated HP NC361i Dual Port Gigabit Server Adapter
  - One (1) port FlexibleLOM connector for choice of 1GbE, 10GbE or InfiniBand options
  - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
  - Four (4) PCI-Express Gen2 expansion slots:
  - (3) x16 half-length/low-profile (Configurable GPU option); (1) x8 half-length/low-profile
- Internal Media/Security Support:
  - USB 2.0: Front: (2), Internal: (1)
  - One (1) internal microSD Card slot, One (1) internal TPM 1.2 module connector (optional)
- Warranty:
  - Server Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support with next business day response.
- QuickSpecs:
  - http://h18004.www1.hp.com/products/quickspecs/14232_div/14232_div.html

Part. No.	Description
659042-B21	ProLiant SL250s Gen8 2U left half width tray, E5-2665 (2.40 GHz, 20MB L3 Cache, 115W), 8 core, 2P, 2x4GB
659050-B21	ProLiant SL250s Gen8 2U right half width tray, E5-2665 (2.40 GHz, 20MB L3 Cache, 115W), 8 core, 2P, 2x4GB

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UR402E	UR410E	UR418E
6 Hour Call-To-Repair, 24x7, HW Support	UR404E	UR412E	UR420E
4-Hour, 24x7, Proactive Care Service	U3C72E	U3C73E	U3C74E

Server Booklet

Overview

What's New

- The HP ProLiant SL270s Gen8 Server is part of the HP ProLiant SL6500 Scalable System of server solutions optimized for the Hyperscale and High Performance Computing market segments. The 4U half-width tray is designed and optimized for extreme GPU configurations, ideal for the HPC market.

At A Glance

- Processor:
    - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.00 GHz** and **up to 115W**
    - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
    - Sixteen (16) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **256GB @ 1600MHz**
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - Integrated HP Dynamic Smart Array B320i Controller
- Internal Drive Support:
    - Eight (8) 2.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
    - One (1) Integrated HP NC361i Dual Port Gigabit Server Adapter
    - One (1) port FlexibleLOM connector for choice of 1GbE, 10GbE or InfiniBand options
    - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Expansion Support:
    - Nine (9) PCI-Express Gen3 expansion slots:
    - (8) x16 full-length/full-high (GPU only); (1) x8 half-length/low-profile
- Internal Media/Security Support:
    - USB 2.0: Front: (2), Internal: (1)
    - One (1) internal microSD Card slot, One (1) internal TPM 1.2 module connector (optional)
- Warranty:
    - Server Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14405_div/14405_div.html

Part. No.	Description
659043-B21	ProLiant SL270s Gen8 4U left half width tray, E5-2660 (2.20 GHz, 20MB L3 Cache, 95W), 8 core, 2P, 2x4GB
659051-B21	ProLiant SL270s Gen8 4U right half width tray, E5-2660 (2.20 GHz, 20MB L3 Cache, 95W), 8 core, 2P, 2x4GB

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UR402E	UR410E	UR418E
6 Hour Call-To-Repair, 24x7, HW Support	UR404E	UR412E	UR420E
4-Hour, 24x7, Proactive Care Service	U3C72E	U3C73E	U3C74E

Server Booklet

Overview

What's New

- Given the massive explosion of data in data centers over the last decade, and the rapid adoption of technologies by users and enterprises for utilizing this data, the storage landscape faces major challenges in areas of space, cabling, power consumption and operations.

At A Glance

- Processor:
    - Up to two (2) Intel® Xeon® E5-2400 series processors, **up to 2.40 GHz** and **up to 95W**
    - Intel® C600 Series Chipset; Intel® E5-2400 Processor Family
- Memory:
    - Twelve (12) DDR3, RDIMM up to 1333MHz, Maximum memory **192GB @ 1333MHz**
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - Integrated HP Dynamic Smart Array B120i for Server Disk / HP Smart Array P420i Controller for DAS Disk
- Internal Drive Support:
    - Two (2) 2.5" hot plug bays Server; Sixty (60) 3.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
    - One (1) Integrated HP NC361i Dual Port Gigabit Server Adapter (available in both 1GbE and 10GbE I/O Module)
    - One (1) Integrated HP Ethernet 10Gb 2P 544i Adapter (Dual port ConnectX-3 10GbE or QDR IB)
    - One (1) port for the HP iLO Management Engine, Optionally 1GbE dedicated
- Expansion Support:
    - One (1) PCI-Express Gen2 expansion slots:
    - (1) x8 low-profile
- Internal Media/Security Support:
    - USB 2.0: Front: (2), Internal: (1)
    - One (1) internal microSD Card slot
- Warranty:
    - Server Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14406_div/14406_div.html

Part. No.	Description
	Only CTO Configurations are available at Launch

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U7J63E	U7J85E	U7K07E
6 Hour Call-To-Repair, 24x7, HW Support	U7J71E	U7J93E	U7K15E
4-Hour, 24x7, Proactive Care Service	U7J65E	U7J87E	U7K09E

Server Booklet

Overview

What's New

- Given the massive explosion of data in data centers over the last decade, and the rapid adoption of technologies by users and enterprises for utilizing this data, the storage landscape faces major challenges in areas of space, cabling, power consumption and operations.

At A Glance

- Processor:
    - Up to two (2) AMD Opteron™ 4200, 6/8 cores, **up to 3.30 GHz** and **up to 95W**
    - AMD® SP5100 Chipset
- Memory:
    - Twelve (12) DDR3, RDIMM up to 1600MHz, Maximum memory **192GB @ 1600MHz**
    - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
    - Integrated HP Dynamic Smart Array B120i for Server Disk / HP Smart Array P420i Controller for DAS Disk
- Internal Drive Support:
    - Two (2) 2.5" hot plug bays Server; Sixty (60) 3.5" hot plug bays, SAS/SATA and SSD Support
- Network Controller:
    - One (1) Integrated HP NC361i Dual Port Gigabit Server Adapter (available in both 1GbE and 10GbE I/O Module)
    - One (1) Integrated HP Ethernet 10Gb 2P 544i Adapter (Dual port ConnectX-3 10GbE or QDR IB)
    - One (1) port for the HP iLO Management Engine, Optionally 1GbE dedicated
- Expansion Support:
    - One (1) PCI-Express Gen2 expansion slots:
    - (1) x8 low-profile
- Internal Media/Security Support:
    - USB 2.0: Front: (2), Internal: (1)
    - One (1) internal microSD Card slot
- Warranty:
    - Server Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support with next business day response.
- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14406_div/14406_div.html

Part. No.	Description
	Only CTO Configurations are available at Launch

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U7J63E	U7J85E	U7K07E
6 Hour Call-To-Repair, 24x7, HW Support	U7J71E	U7J93E	U7K15E
4-Hour, 24x7, Proactive Care Service	U7J65E	U7J87E	U7K09E

Server Booklet

Overview

What's New

- AMD Turion™ II Neo N40L (1.5GHz)
- Microsoft SBS Essentials 2011 OS pre-install

At A Glance

- Processor:
    - AMD Turion™ II Neo N40L (1.5GHz)
    - AMD RS785E/SB820M chipset
- Memory:
    - Two (2) DIMM slots
    - 2GB (1x2GB) Standard/8GB Maximum, using PC
- Storage Controller:
    - Embedded AMD SATA controller with RAID 0, 1; Embedded AMD eSATA controller
- Internal Drive Support:
    - 4 Internal HDD Support, Internal SATA storage capacity of up to 8.0TB (4 x 2TB LFF NHP SATA drives)
- Network Controller:
    - One (1) Embedded NC107i PCI Express Gigabit Ethernet Server Adapter
- Mezzanine Support:
    - Slot 1: PCI-Express Gen2 x16 connector with x16 link
    - Slot 2: PCI-Express Gen2 x1 connector with x1 Link
    - Slot 2-2: PCI-Express x4 slot for optional management card
- Internal Media/Security Support:
    - Seven (7) USB 2.0 ports: 4 front , 2 rear, 1 internal (for tape)
    - eSATA Gen2 one (1) rear
- Warranty:
    - Server Warranty includes 1 year Next Day Parts replacement, 0-Years Labor, 0-Years Onsite support.
- QuickSpecs:
    - http://h18006.www1.hp.com/products/quickspecs/13716_div/13716_div.HTML

Part. No.	Description
658553-421	HP ProLiant Micro Server (1.50 GHz, 2MB L2 Cache, 15W), 2 core, 1P, 1x2GB, 1x250GB NHP LFF SATA
658552-421	HP ProLiant Micro Server (1.50 GHz, 2MB L2 Cache, 15W), 2 core, 1P, 1x4GB, 2x500GB NHP LFF SATA, SBS Ess
664447-425	HP ProLiant Micro Server (1.50 GHz, 2MB L2 Cache, 15W), 2 core, 1P, 1x4GB, no Disk, NHP LFF SATA

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	UR482E	UR496E	UR502E
6 Hour Call-To-Repair, 24x7, HW Support	UR483E	UR498E	UR504E
4-Hour, 24x7, Proactive Care Service	UR484E	UR500E	UR506E

Server Booklet

Overview
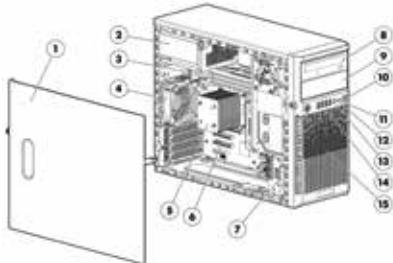
What's New

- The HP ProLiant ML310e Gen8 is perfect entry server for growing business. It provides an affordable and steadfast solution to small and medium business for small and medium business who are budget conscious and who have no in-house IT resources.

At A Glance

- Processor:
    - (1) Intel® Xeon® E3-1200 v2/i3/Pentium Series, 2/4 Cores, **up to 3.60 GHz** and **up to 69W**
    - Intel® C204 Series Chipset

- Memory:
    - Four (4) DDR3, UDIMM up to 1600MHz, Maximum memory **32GB @ 1600MHz**
    - HP SmartMemory, UDIMM is supported at 2DPC@1333 at 1.35V.

- Storage Controller:
    - One (1) Integrated Dynamic Smart Array B120i (RAID 0/1) controller, No FBWC support

- Internal Drive Support:
    - up to 4 LFF Non Hot plug / Hot plug SATA/SAS or up to 8 SFF Hot Plug SATA/SAS Hard Drives

- Network Controller:
    - One (1) HP Integrated Ethernet 1Gb 2-port 330i Adapter
    - One (1) port for the HP iLO Management Engine, dedicated (Optional)

- Expansion Support:
    - Four (4) internal PCI Express slots:
    - 1x x16 / 1x x8 full-length, full-height Gen3; 1x x8 full-length, full-height Gen2, 1x x4 half-length, full-height

- Internal Media/Security Support:
    - USB 2.0: (4) ports up front; (4) ports in back; (2) port internal
    - 1 internal SD-HC Card slot
    - 1 internal TPM 1.2 module connector (optional)

- Warranty:
    - Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

- QuickSpecs:
    - http://h18004.www1.hp.com/products/quickspecs/14339_div/14339_div.html

Part. No.	Description
674787-421	ProLiant ML310e Gen8 E3-1240v2 (3.40GHz, 8MB L3, 69W), 1P, 4 core, 1x4GB, B120i, 4 LFF Hot Plug
674786-421	ProLiant ML310e Gen8 E3-1220v2 (3.10GHz, 8MB L3, 69W), 1P, 4 core, 1x2GB, B120i, 4 LFF Hot Plug

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U6F69E	U6F89E	U6G09E
6 Hour Call-To-Repair, 24x7, HW Support	U6F75E	U6F95E	U6G15E
4-Hour, 24x7, Proactive Care Service	U6F73E	U6F93E	U6G13E

Server Booklet

Overview

Version 14 - September, 2012

What's New

- Added support for Intel Pentium 1403 processor
- Added four new memory options and HP Ethernet 10Gb 2P 560SFP+ Adapter

At A Glance

- **Processor:**
  - Up to two (2) Intel® Xeon® E5-2400 series processors, **up to 2.40 GHz** and **up to 95W**
  - Intel® C600 Series Chipset; Intel® E5-2400 Processor Family
- **Memory:**
  - Twelve (12) DDR3, RDIMM/UDIMM up to 1600MHz, Maximum memory **192GB @ 1333MHz**
  - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- **Storage Controller:**
  - One (1) Integrated Dynamic Smart Array B120i controller (RAID 0, 1, 1+0), optional RAID 5 with FBWC
- **Internal Drive Support:**
  - up to twenty-four (24) 2.5" hot plug bays or up to eighteen (18) 3.5" hot plug bays, SAS/SATA and SSD Support
- **Network Controller:**
  - One (1) Embedded 1GbE dual-port 361i Network Adapter, 10GbE NIC options supported.
  - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- **Expansion Support:**
  - 6 PCIe slots
  - 4 PCIe 3.0 and 2 PCIe 2.0 I/O slots
- **Internal Media/Security Support:**
  - USB 2.0: (4) ports up front; (4) ports in back; (2) port internal
  - 1 internal SD-HC Card slot
  - 1 internal TPM 1.2 module connector (optional)
- **Warranty:**
  - Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response
- **QuickSpecs:**
  - http://h18004.www1.hp.com/products/quickspecs/14340_div/14340_div.html

Part. No.	Description
648377-421	ProLiant ML350e Gen8 E5-2420 (1.90GHz, 15MB L3, 95W), 1P, 6 core, 1x8GB, P420/1GB FBWC, 6 LFF Hot Plug
648376-421	ProLiant ML350e Gen8 E5-2407 (2.20GHz, 10MB L3, 80W), 1P, 4 core, 1x4GB, P210i/512MB FBWC, 4 LFF NHP
648375-421	ProLiant ML350e Gen8 E5-2403 (1.80GHz, 10MB L3, 80W), 1P, 4 core, 1x2GB, P210i/ZM, 4 LFF NHP

HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U6C89E	U6D09E	U6D29E
6 Hour Call-To-Repair, 24x7, HW Support	U6C95E	U6D15E	U6D35E
4-Hour, 24x7, Proactive Care Service	U6C93E	U6D13E	U6D33E

Server Booklet

Overview
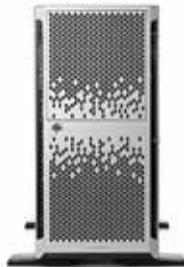
Version 14 - September, 2012

What's New

- Support for HP 3rd Graphic Card Power Cable Kit, and new HBA, Tape Storage and UPS support
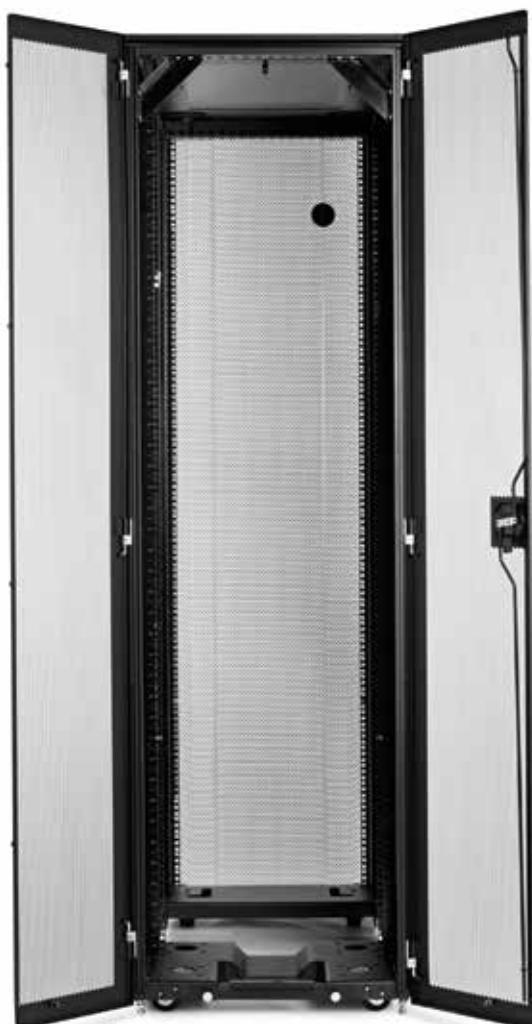
## At A Glance

- Processor:
  - Up to two (2) Intel® Xeon® E5-2600 series processors, **up to 3.30 GHz** and **up to 130W**
  - Intel® C600 Series Chipset; Intel® E5-2600 Processor Family
- Memory:
  - Twenty-four (24) DDR3, RDIMM/UDIMM/LRDIMM up to 1600MHz, Maximum memory **384GB @ 1600MHz**
  - RDIMMs at 1.35V (vs1.5V) saving 15-20% power per DIMM without affecting performance
- Storage Controller:
  - Integrated HP Smart Array P420i RAID Controller
- Internal Drive Support:
  - Up to twentyfour (24) 2.5" hot plug bays / eightteen (18) 3.5" hot plug bays , SAS/SATA and SSD Support
- Network Controller:
  - One (1) HP Embedded 1Gb Ethernet 4-port 331i Adapter
  - One (1) port for the HP iLO Management Engine, 1GbE dedicated
- Mezzanine Support:
  - Nine (9) total expansion slots. Three PCI-Express x16 Gen3 (x16 speed); One PCI-Express x16 Gen3 (x8 speed); Four PCI-Express x8 Gen3 (x4 speed); One PCI-Express x8 Gen2 (x4 speed)
- Internal Media/Security Support:
  - USB 2.0: (4) ports up front; (4) ports in back; (2) port internal
  - 1 internal SD-HC Card slot
  - 1 internal TPM 1.2 module connector (optional)
- Warranty:
  - Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
- QuickSpecs:
  - http://h18000.www1.hp.com/products/quickspecs/14226_div/14226_div.html

Part. No.	Description
678237-421	ProLiant ML350p Gen8 E5-2650 (2.00GHz, 20MB L3, 95W), 2P, 8 core, 4x4GB, P420i/2GB FBWC, Tower SFF
646678-421	ProLiant ML350p Gen8 E5-2640 (2.50GHz, 15MB L3, 95W), 2P, 6 core, 4x4GB, P420i/2GB FBWC, Rack SFF
646677-421	ProLiant ML350p Gen8 E5-2630 (2.30GHz, 15MB L3, 95W), 1P, 6 core, 2x4GB, P420i/1GB FBWC, Rack SFF
646676-421	ProLiant ML350p Gen8 E5-2620 (2.00GHz, 15MB L3, 95W), 1P, 6 core, 2x4GB, P420i/512MB FBWC, Tower SFF
646675-421	ProLiant ML350p Gen8 E5-2609 (2.40GHz, 10MB L3, 80W), 1P, 4 core, 1x4GB, P420i/ZM, Tower LFF

| HP Care Pack - Service Description	3 Year	4 Year	5 Year
4-Hour, 24x7, Onsite Response, HW Support	U4513E	U8115E	U8081E
6 Hour Call-To-Repair, 24x7, HW Support	UP705E	UP706E	UP707E
4-Hour, 24x7, Proactive Care Service	U3A78E	U3A79E	U3A80E

HP Intelligent Series Racks
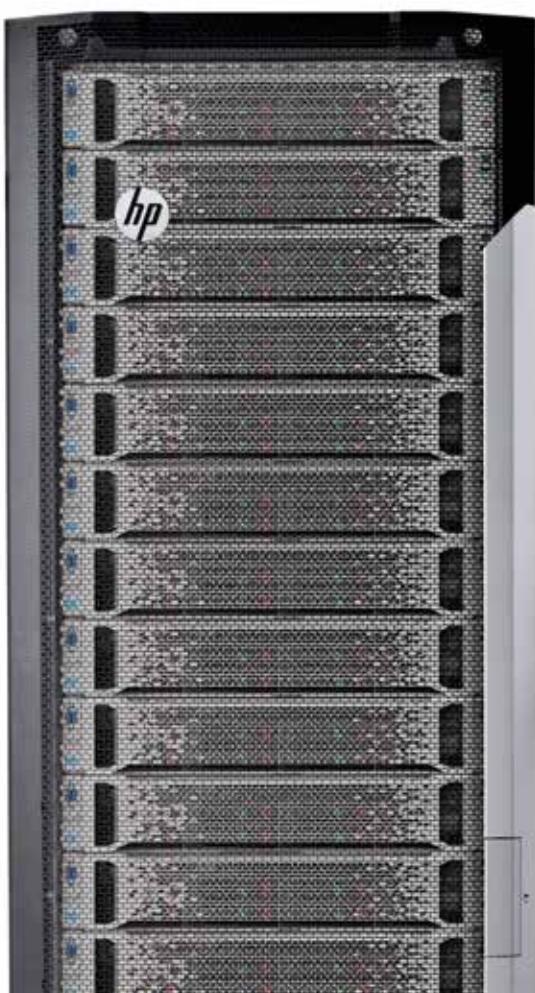
The HP Intelligent Series Rack family is the next generation of enterprise-class racks designed to meet the current and future requirements of demanding data-centers.

It offers innovative intelligence capabilities for asset management, unparalleled structural integrity, cooling and cable management advances, and a wide choice of power and switching options.

The HP Intelligent Series is the first rack family to offer location discovery intelligence for advanced asset management.

This new capability integrates with HP Lights-Out Management (iLO) and HP Intelligent Power Distrubution Units (iPDU) to communicate to the datacenter manager the U space, row, and rack location of each server and also helps to manage and place the desired workload by carefully mapping where it needs to be placed.

Gen8 Model Transition Guidelines

ML350 G6	
ML/DL370 G6	ML350p Gen8
DL380 G6/G7	DL380p Gen8
DL360 G6/G7	DL360p Gen8
DL385 G6/G7	DL385p Gen8

BL2x220c	SL230s Gen8
BL280c	BL420c Gen8
BL460c	BL460c Gen8
BL490c	
BL465c	BL465c Gen8
WS460c	WS460c Gen8

SL390s G7 1U	SL230s Gen8
SL390s G7 2U	SL250s Gen8
SL390s G7 4U	SL270s Gen8

	DL360e Gen8
DL160 G6	DL160 Gen8
DL180 G6	DL380e Gen8

DL120 G7	
DL320 G6	DL320e Gen8

ML150 G6	
ML330 G6	ML350e Gen8
ML110 G6	ML310e Gen8

Learn more
www.hp.com/ch/proliant

Version 14.0, September 2012
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