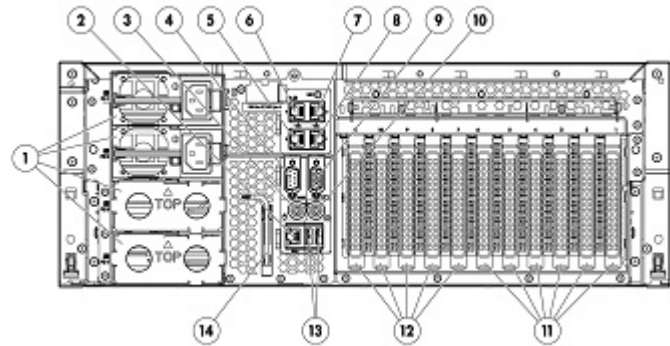
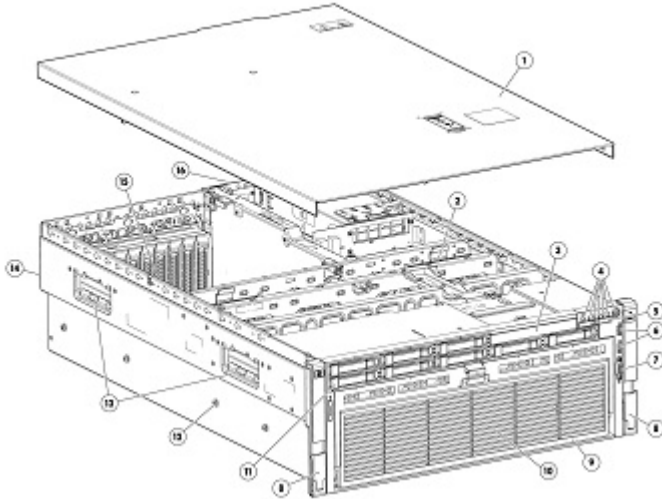


Overview

Powered by latest AMD Opteron® 8 and 12 core processors, the HP ProLiant DL585 G7 is positioned as the leading price performance 4P multi-core rack mount server with the expansion capabilities to make it ideal for server virtualization, server consolidation, multi-tiered enterprise application, and corporate infrastructure applications.



Front View:

1. Quick Removal Access Panel
2. 4 Hot Plug Redundant Fans Standard on all models
3. Slimline Drive (DVD Drive optional)
4. Front Panel LED Display and Power Button
5. Slide-out Systems Insight Display
6. Two front accessible USB 2.0 ports
7. One front video port
8. Quick release levers for fast server access
9. Front accessible Processor and memory drawer
10. Support for up to four AMD Opteron processors
11. Support for up to eight hot plug Small Form-Factor (SFF) SAS/ Serial ATA (SATA)/Solid State drives
12. Universal Tool-less "Snap In" Sliding Rail Solution
13. Server Lifting Handles
14. 4U (7" Height) Rack Form Factor
15. Up to eleven available PCI Express/PCI-X Internal Expansion Slots

Rear View:

1. Hot Plug Redundant Power supplies (2 or 4 ship depending on the model)
2. Integrated Lights-Out 3 port
3. Mouse port
4. Serial port
5. Gigabit NIC Ports
6. Gigabit NIC Ports
7. Gigabit NIC Ports
8. Gigabit NIC Ports
9. Video port
10. Keyboard port
11. PCI-Express or PCI-X option (slots 1-6)
12. PCI-Express slots (slots 7-11)
13. Two USB ports
14. Service tool

What's New

- Support for new HP hard drives, UPS and NIC

Standard Features

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

Processor

Two or four of the following depending on Model

Twelve-Core Processors

- AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/105W) Processor
- AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) Processor
- AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) Processor
- AMD Opteron™ 6168 (1.9GHz/12-core/12MB/80W) Processor
- AMD Opteron™ 6164HE (1.7GHz/12-core/12MB/65W) Processor
- AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/65W) Processor
- AMD Opteron™ 6176 (2.3GHz/12-core/12MB/80W) Processor
- AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) Processor

Eight-Core Processors

- AMD Opteron™ 6128 (2.0GHz/8-core/12MB/80W) Processor
- AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/65W) Processor
- AMD Opteron™ 6136 (2.4GHz/8-core/12MB/80W) Processor
- AMD Opteron™ 6140 (2.6GHz/8-core/12MB/80W) Processor

NOTE: Processor wattage references reflect Average CPU Power (ACP). For more information on ACP visit: <http://www.amd.com/powernow>.

NOTE: Up to 2.4GHz clock speed.

Cache Memory 12MB (1 x 12MB) Level 3 cache

Chipset AMD SR5690/SP5100

Upgradeability Upgradeable to quad (4) processors
NOTE: To upgrade from 2P to 4P CPU/Memory secondary option kit needs to be bought separately. Exact part number is mentioned in the options section.
 4P models already have this kit configured.

Memory Protection Advanced ECC capabilities

Memory

Type	PC3-10600R Registered DDR3 (1333MHz)
Standard (Performance Models)	64GB (16x4GB) of PC3-10600 (DDR3-1333)
Standard (Base Models)	32GB (8x4GB) of PC3-10600 (DDR3-1333)
Maximum	512GB

NOTE: Max memory is based on the maximum capacity of the AMD architecture.

Network Controller HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter

Expansion Slots

NOTE: Up to 11 FL/FH I/O slots. 2 PCI-E 2.0x16 and 3 PCI-E 2.0 x8 slots standard.

Expansion Slots (Main IO Board standard)

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	N/A	N/A	N/A	N/A	

Standard Features

2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A
7	PCI-Express	x8	x16	Full Length/Full Height
8	PCI-Express	x8	x16	Full Length/Full Height
9	PCI-Express	x16	x16	Full Length/Full Height
10	PCI-Express	x8	x16	Full Length/Full Height
11	PCI-Express	x16	x16	Full Length/Full Height

Expansion Slots with IO Expander (combination PCI-X, PCI-e and 300W GPU)

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCI-X	64-bit	N/A	Full Length/Full Height	
2	PCI-X	64-bit	N/A	Full Length/Full Height	
3	PCI-Express	x4	x8	Full Length/Full Height	
4	PCI-Express	x8	x16	Full Length/Full Height	
5	PCI-Express	x8	x16	Full Length/Full Height	
6	PCI-Express	x16	x16	Full Length/Full Height	
7	PCI-Express	x8	x16	Full Length/Full Height	
8	PCI-Express	x8	x16	Full Length/Full Height	
9	PCI-Express	x16	x16	Full Length/Full Height	
10	PCI-Express	x8	x16	Full Length/Full Height	
11	PCI-Express	x16	x16	Full Length/Full Height	

Expansion Slots with I/O Expander (standard PCI-e option)

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCI-Express	x8	x16	Full Length/Full Height	
2	PCI-Express	x8	x16	Full Length/Full Height	
3	PCI-Express	x16	x16	Full Length/Full Height	
4	PCI-Express	x8	x16	Full Length/Full Height	

Standard Features

5	PCI-Express	x8	x16	Full Length/Full Height
6	PCI-Express	x16	x16	Full Length/Full Height
7	PCI-Express	x8	x16	Full Length/Full Height
8	PCI-Express	x8	x16	Full Length/Full Height
9	PCI-Express	x16	x16	Full Length/Full Height
10	PCI-Express	x8	x16	Full Length/Full Height
11	PCI-Express	x16	x16	Full Length/Full Height

Storage Controller One of the following depending on Model

Performance Models	HP Smart Array P410i/1G FBWC Controller
Base Models	HP Smart Array P410i/512MB FBWC Controller
The Flash Backed Write Cache (FBWC) increases cache data retention capabilities from two days of existing battery backed write cache (BBWC) to infinite data retention.	
<ul style="list-style-type: none"> • Standard on all Base Models • Transportable data protection • Increases overall controller performance 	

Internal Storage Devices

Diskette Drive	None
Optical Drives	Slimline DVD Drive Standard on some models - ejectable for security and serviceability
Hard Drives	None standard
Hard Disk Drive Backplane	Internal SAS backplane supports up to eight SFF hard disk drives
Drive Bays	Up to 8 Small Form Factor drive bays total

Maximum Internal Storage

Hot Plug SFF SAS	8TB	8 x 1TB
Hot Plug SFF SATA	8TB	8 x 1TB
Hot Plug SFF SSD	960GB	8 x 120GB
Hot Plug SFF SAS SSD	6.4TB	8 x 800GB

NOTE: There is an extra internal SSD slot available as well

Interfaces

Serial	1
Video	1 front, 1 rear
Network RJ-45 (Ethernet)	4
iLO 3 Remote Management	1
Keyboard	1
Pointing Device (Mouse)	1
USB 2.0 Ports	6 total: 2 front; 2 rear; 2 internal
NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html	

Standard Features

Industry Standard Compliance	ACPI 2.0. Compliant PCI 2.0 Compliant PXE Support WOL Support Physical Address Extension (PAE) Support Microsoft® Logo certifications USB 2.0 Support
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Server Power Cords	NOTE: If customers require a local power cord, they can check the power cord matrix for the appropriate county specific sku. Please see the following power cord matrix for details: http://www.hp.com/go/powercordmatrix
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Power Supply	1200W AC Power Supply NOTE: Two Hot Plug Power Supplies ships standard with 2P Models. Four Hot Plug Power Supplies ship standard with 4P Models.
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System Fans	4 Hot plug, redundant fans (individually removable)
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Required Cabling	For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl585
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Operating Systems and Virtualization Software Support for ProLiant Servers	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Oracle Solaris VMware Citrix XenServer NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from HP, please visit our OS Support Site at: www.hp.com/go/ossupport and our driver download site www.hp.com/support/DL585G7
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Graphics	Integrated ATI RN-50 1600x1280x64K 16M color (32 MB DDR1 memory)
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Form Factor	Rack (4U = 7 inches), ships with sliding rails and cable management system Space saving form factor (4U) provides space efficiencies while providing maximum deployment flexibility
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Standard Features

HP Insight management software

Managing the growing number of servers can be complex and expensive for your organization. IT managers need to address changing business needs with tools that meet the challenges of managing today's complex Datacenters.

HP provides management solutions that are designed to simplify a server's installation, configuration and maintenance throughout the entire server lifecycle. This provides the customer with higher levels of operational efficiency and highly reliable systems:

<http://www.hp.com/go/foundation>.

The foundation pack includes:

- HP SmartStart
- HP Management DVD
- HP ProLiant Smart Update Firmware DVD

SmartStart version supported (minimum): SmartStart 8.50

<http://www.hp.com/servers/smartstart>

NOTE: In an effort to support reducing our environmental impact, the HP Insight Foundation Suite for ProLiant media will be available as a selectable option for this server at time of order of a CTO SKU. This will allow customers to order the number of media kits that best meet their needs and eliminate receiving unnecessary duplicate media.

HP Integrated Lights-Out (iLO)

HP Integrated Lights-Out (iLO) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP iLO functions without additional software and can be accessed from any location via a web browser. HP iLO works hand-in-hand with HP Systems Insight Manager, Insight Control suites, and Insight Dynamics for ProLiant, helping customers unleash the value of the ProLiant platform and deliver the highest possible quality of IT service. For more information, visit:

www.hp.com/go/iLO

Intelligent Manageability

HP Systems Insight Manager software
SmartStart
Redundant ROM
Remote Flash ROM
Management Agents
Integrated Management Log (IML)
Automatic Server Recovery-2 (ASR-2)
ROM-Based Setup Utility (RBSU)
Dynamic Sector Repairing (with Smart Array Controllers)
Drive Parameter Tracking (with Smart Array Controllers)
Pre-Failure Warranty (covers processors, SAS hard drives and memory)
Redundant/adaptive load balancing NIC Support

Standard Features

Security

- Power-on password
- Keyboard password
- Diskette drive control enable/disable
- Diskette boot control enable/disable
- External USB port enable/disable
- Network Server Mode
- Serial interface control
- Administrator's password
- Removable optical drive

Warranty

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

NOTE: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>.

Optional Features

HP Insight management software

HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console.

Two versions of Insight Control are available, to serve environments requiring either a Linux-based or a Windows-based central management server: HP Insight Control for Linux, and HP Insight Control. See www.hp.com/go/insightcontrol

HP Insight Control includes one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: <http://www.hp.com/services/insight>.

HP Insight Dynamics for ProLiant

HP Insight Dynamics for ProLiant, a product option, is an integrated command center that enables IT Staff personnel to continuously analyze and optimize a converged infrastructure, while automating and reducing the cost of common data center tasks by as much as 40 percent. As a powerfully integrated by design toolkit to accelerate complex technology projects and simplify daily operations that ultimately enable IT Staff personnel to dynamically keep pace with the organizations changing business requirements. It enables them to plan capacity and power continuously, balance across physical and virtual resources, and ensure cost-effective high availability. It also enables IT organizations to provision infrastructure consistently and automatically from pools of shared resources using a self-service portal. Resources provisioned can range from a single virtual machine to complex multi-tier environments and their associated physical and virtual resource requirements. In addition to the previous functional benefits, it also provides a cost-effective disaster recovery for physical and virtual environments that works with HP Continuous Access software for both the Enterprise Virtual Array and the XP storage array allowing application environments to be reactivated in minutes with the touch of a button to a remote location.

NOTE: For more information, visit: <http://www.hp.com/go/insightdynamics>

High Performance Clusters

HP Cluster Platforms

HP Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and Novell SLES, as well as Microsoft Windows HPC Server. A Cluster Platform Configurator simplifies ordering. <http://www.hp.com/go/clusters>

HP HPC Interconnects

High Performance Computing (HPC) interconnect technologies are available for this server as part of the HP Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by HP when integrated within an HP cluster. Flexible, validated solutions can be defined with the help of configuration tools. <http://www.hp.com/techservers/clusters/ucp/index.html>

HP Cluster Management Utility

HP Cluster Management Utility (CMU) is an HP-licensed and HP-supported suite of tools that are used to manage large-scale Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. <http://www.hp.com/go/cmu>

HP HPC Linux Value Pack

HP HPC Linux Value Pack (Value Pack) is an HP-licensed and HP-supported specially priced software bundle for the development and

Optional Features

deployment of applications on HPC Cluster Platforms. Value Pack includes the Platform HPC Enterprise Edition suite of tools including the LSF workload scheduler, the HP-MPI parallelization library. Also included are the HP Unified Parallel C compiler and the HP Shmem library, as well as the execution environments for the libraries and compiler. [HP HPC Linux Value Pack](#)

Solutions

Designed for enterprise customers running compute- or I/O intensive database and transaction applications, as well as data centers using virtualization and consolidation to reduce server sprawl, the rack optimized 4-processor HP ProLiant DL585 G7 server delivers maximum performance and high availability for highly complex, business critical applications. Specifically, the HP ProLiant DL585 G7 would be excellent for running the following types of applications:

Typical Usage:

- x86 virtualization and consolidation projects
- Electronic Design Automation (EDA)/Semiconductor
- Financial
- Large database applications
- ERP / CRM
- Petrochemical
- Life Science and Material Science
- Video Rendering

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

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>.

HP Enterprise Configurator

The HP eConfigure Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance. For additional information please visit: <http://www.hp.com/products/configurator>

Service and Support

Service and Support

HP Technology Services for Industry Standard Servers and BladeSystem

Capitalizing on HP ProLiant server and HP BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know HP infrastructure hardware and software best - the experienced professionals at HP Services.

What HP ProLiant and BladeSystem Services can do for you

HP ProLiant and BladeSystem Services can help you design, deploy, test, integrate, support, and manage IT and infrastructure solutions. This way, HP proposes services solutions that include more than just uplift of base warranty. You can get the support you need by choosing from one of a number of service packaged solutions we have designed to address wider set of customer support needs.

HP Technology Services meets business challenges with services offered in three packages - **Optimized Care Package, Standard Care Package, and Basic Care Package** - available for each product group. Such packaged solutions enable customers to optimize technology operations, minimize risk and drive better business outcomes with easy-to-buy, easy-to-use scalable support packages for servers, storage, networking and software.

Optimized Care

Optimized Care Package: Supports maintaining servers at optimum performance availability

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP 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>

HP Installation and Startup for Insight Control Software

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA0-9972ENW.pdf>

3-Year HP Critical Advantage

Provides end-to-end infrastructure support solution for business critical applications running on virtualized/x86 infrastructures, enabling the customers to cost effectively build, operate, and continuously improve their IT environment

<http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA3-1772ENW>

Additional Services: Microsoft or Linux or VMware education courses + Facility & technology environmental assessment services + Energy Efficiency Design, Factory Express

Service and Support

Standard Care

Standard Care Package: Package that maintains high level of server availability

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP 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>

HP Installation and Startup for Insight Control Software

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf>

3-Year HP 6 hour Hardware Support Onsite Call-to-Repair Service

Provides an IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 hours of the initial service request to the HP Global Solution Center

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EN.pdf>

3-Year , HP 24x7 Software Support for Insight Control

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6645EEEE.pdf>

Additional Services: Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware Installation & Start Up, and Software Support; Install and Startup Services for Insight Control; Microsoft or Linux or VMware education courses; +30 Proactive Select Credits, Factory Express

Basic Care

Basic Care Package: delivers minimum recommended support service level

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP 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>

HP Installation and Startup for Insight Control Software

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf>

3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf>

3-Year , HP 24x7 Software Support for Insight Control

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6645EEEE.pdf>

Additional Services: Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware Installation & Start Up and Software Support); +10 Proactive Select Credits, Factory Express

Service and Support

Insight Remote Support The packages include HP Insight Remote Support that uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnoses, and problem resolution. It is available at no additional cost to all warranty, HP Care Pack Service, and service agreement customers.

For more information To learn more on HP ProLiant servers and HP BladeSystem servers, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: <http://www.hp.com/services/proliant>

Pre-configured Models

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

NOTE: Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

NOTE: HP does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

NOTE: If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

NOTE: Not all models are available in all regions. Check with your local country HP offices for availability.

Performance Models

<p>HP ProLiant DL585 G7 6172 4P 32GB-R P410i/1GB FBWC 8 SFF 1200W RPS Perf IC Svr 583108-xx1</p>	<p>Processors Cache Memory Memory Network Controller Storage Controller Hard Drives Internal Storage Optical Drive Power Supply Fans Integrated Lights Out Insight Control Form Factor Warranty</p>	<p>(4) AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) Processors 12MB (1 x 12MB) L3 cache 32GB (8x4GB) of PC3-10600 (DDR3-1333) NOTE: 48 slots DIMM slots. HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter Embedded HP Smart Array P410i/1G FBWC Controller None ship standard Up to 8TB of internal storage (SFF SAS) None ship standard Four 1200W Power Supplies standard 4 Hot plug, redundant fans (individually removable) Integrated Lights-Out 3 (iLO 3) ships standard HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates 4U Rack Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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<p>HP ProLiant DL585 G7 6174 4P 64GB-R P410i/1GB FBWC 8 SFF 1200W RPS Perf IC Svr 601362-xx1</p>	<p>Processors Cache Memory Memory Network Controller Storage Controller Hard Drives Internal Storage Optical Drive Power Supply Fans Integrated Lights Out Insight Control Form Factor Warranty</p>	<p>(4) AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) Processors 12MB (1 x 12MB) L3 cache 64GB (16x4GB) of PC3-10600 (DDR3-1333) NOTE: 48 slots DIMM slots. HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter Embedded HP Smart Array P410i/1G FBWC Controller None ship standard Up to 8TB of internal storage (SFF SAS) None ship standard Four 1200W Power Supplies standard 4 Hot plug, redundant fans (individually removable) Integrated Lights-Out 3 (iLO 3) ships standard HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates 4U Rack Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p>
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<p>HP ProLiant DL585 G7 6180SE 4P 64GB-R P410i/1GB FBWC 8 SFF 1200W RPS Perf IC Svr</p>	<p>Processors Cache Memory Memory</p>	<p>(4) AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) Processors 12MB (1 x 12MB) L3 cache 64GB (16x4GB) of PC3-10600 (DDR3-1333)</p>
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Pre-configured Models

1200W RPS IC Server
633964-xx1

Network Controller	HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter
Storage Controller	Embedded HP Smart Array P410i, 1G FBWC Controller
Hard Drives	None ship standard
Internal Storage	Up to 8TB of internal storage
Optical Drive	None ship standard
Power Supply	Four 1200W Power Supplies standard
Fans	4 Hot plug, redundant fans (individually removable)
Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
Form Factor	4U Rack
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL585 G7
6176SE 4P 64GB-R
P410i/1GB FBWC 8 SFF
1200W RPS Perf IC Svr
601361-xx1

Processors	(4) AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/105W) Processors
Cache Memory	12MB (1 x 12MB) L3 cache
Memory	64GB (16x4GB) of PC3-10600 (DDR3-1333) NOTE: 48 slots DIMM slots.
Network Controller	HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter
Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller
Hard Drives	None ship standard
Internal Storage	Up to 8TB of internal storage (SFF SAS)
Optical Drive	None ship standard
Power Supply	Four 1200W Power Supplies standard
Fans	4 Hot plug, redundant fans (individually removable)
Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
Form Factor	4U Rack
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Base Models

HP ProLiant DL585 G7
6168 2P 32GB-R
P410i/512 FBWC 8 SFF
1200W RPS Base
Server
583105-xx1

Processors	(2) AMD Opteron™ 6168 (1.9GHz/12-core/12MB/80W) Processors
Cache Memory	12MB (1 x 12MB) L3 cache
Memory	32GB (8x4GB) of PC3-10600 (DDR3-1333) NOTE: 48 slots DIMM slots.
Network Controller	HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter
Storage Controller	Embedded HP Smart Array P410i/512MB FBWC Controller
Hard Drives	None ship standard
Internal Storage	Up to 8TB of internal storage (SFF SAS)
Optical Drive	None ship standard
Power Supply	Two 1200W Power Supplies standard
Fans	4 Hot plug, redundant fans (individually removable)
Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
Form Factor	4U Rack
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Pre-configured Models

Country Code Key	xx = 00	U.S.
	xx = 20	Brazil
	xx = 29	Japan
	xx = 37	AP
	xx = 42	Europe
	xx = AA	PRC

Configuration Information - Factory Integrated Models

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

NOTE: Configure-to-order (CTO) servers must start with a CTO Chassis.

NOTE: FIO indicates that this option is only available as a factory installable option.

Step 1: Base Configuration

HP Models HP ProLiant DL585 G7 Configure-to-order Server 590480-B21

Factory Integrated Models ship with:

HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter

Five standard PCI-express slots

HP Smart Array P410i/ Zero Memory Controller

Four redundant hot-plug fans

SFF SAS/SATA/SSD drive cage

HP Integrated Lights-Out 3 (iLO 3) management processor: integrated on system board

Rack (4U), 7-inch

NOTE: Power supplies need to be selected separately from Step 2 below.

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

HP Processors **NOTE:** If more than two processors are desired, select xxxxxx-L21 and additional processors would be xxxxxx-B21. 3P configurations are not supported

Twelve-Core Processors

HP DL585 G7 AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/105W) FIO 2-processor Kit 601351-L21

HP DL585 G7 AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) FIO 2-processor Kit 601353-L21

HP DL585 G7 AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) FIO 2-processor Kit 583109-L21

HP DL585 G7 AMD Opteron™ 6168 (1.9GHz/12-core/12MB/80W) FIO 2-processor Kit 583106-L21

HP DL585 G7 AMD Opteron™ 6164HE (1.7GHz/12-core/12MB/65W) FIO 2-processor Kit 601357-L21

HP DL585 G7 AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/65W) FIO 2-processor Kit 633971-L21

HP DL585 G7 AMD Opteron™ 6176 (2.3GHz/12-core/12MB/80W) FIO 2-processor Kit 633967-L21

HP DL585 G7 AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) FIO 2-processor Kit 633965-L21

Eight-Core processors

HP DL585 G7 AMD Opteron™ 6136 (2.4GHz/8-core/12MB/80W) FIO 2-processor Kit 601355-L21

HP DL585 G7 AMD Opteron™ 6128 (2.0GHz/8-core/12MB/80W) FIO 2-processor Kit 583103-L21

HP DL585 G7 AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/65W) FIO 2-processor Kit 633973-L21

HP DL585 G7 AMD Opteron™ 6140 (2.6GHz/8-core/12MB/80W) FIO 2-processor Kit 633969-L21

HP Memory **NOTE:** HP Memory selection requires a minimum quantity 2.

HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit 593907-B21

Configuration Information - Factory Integrated Models

	HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593911-B21
	HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604500-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593913-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604502-B21
	HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	593915-B21
HP Power Supplies	HP 1200W Common Slot Silver Hot Plug Power Supply Kit	500172-B21
	HP 1200W Common Slot Platinum Hot Plug Power Supply Kit	578322-B21
	NOTE: Option Kit contain optional power supply, an IEC power cable and PDU IEC cables.	

Step 3: Choose Additional Factory Integratable Options (only one of the following from each list unless otherwise noted)

Advanced Memory Configuration	HP Online Spare FIO Memory	339773-B21
	NOTE: At least two matching memory kits must be selected from Step 2 above.	
HP Storage Controllers	HP Smart Array P212/256 BBWC 1-ports Int/1-ports Ext PCIe x8 FIO SAS Controller	491191-B21
	HP Smart Array P411/256 BBWC 2-ports Ext PCIe x8 FIO SAS Controller	491193-B21
HP Insight Software	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	582765-B21
	HP Insight Control for Linux including 1yr 24x7 Support ML/DL Bundle 1 Server FIO License	TC203A

Step 4: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Core Options" and "Additional Options" section below.

Core Options

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

HP Unique Options	HP DL585 G7 PCI-E Riser Card NOTE: Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8	590485-B21
	HP DL585 G7 PCI-E/X Riser Card NOTE: Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X	590487-B21
	HP DL585 G7 CPU Memory Secondary Upgrade Option NOTE: Adds processor sockets 3 and 4.	590489-B21

HP Processors

NOTE: Processor kits contain two processors each.

Twelve-Core Processors

HP DL585 G7 AMD Opteron™ 6164HE (1.7GHz/12-core/12MB/65W) 2-processor Kit	601357-B21
HP DL585 G7 AMD Opteron™ 6168 (1.9GHz/12-core/12MB/80W) 2-processor Kit	583106-B21
HP DL585 G7 AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) 2-processor Kit	583109-B21
HP DL585 G7 AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) 2-processor Kit	601353-B21
HP DL585 G7 AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/105W) 2-processor Kit	601351-B21
HP DL585 G7 AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/65W) 2-processor Kit	633971-B21
HP DL585 G7 AMD Opteron™ 6176 (2.3GHz/12-core/12MB/80W) 2-processor Kit	633967-B21
HP DL585 G7 AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) 2-processor Kit	633965-B21

Eight-Core Processors

HP DL585 G7 AMD Opteron™ 6136 (2.4GHz/8-core/12MB/80W) 2-processor Kit	601355-B21
HP DL585 G7 AMD Opteron™ 6128 (2.0GHz/8-core/12MB/80W) 2-processor Kit	583103-B21
HP DL585 G7 AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/65W) 2-processor Kit	633973-B21
HP DL585 G7 AMD Opteron™ 6140 (2.6GHz/8-core/12MB/80W) 2-processor Kit	633969-B21

HP Memory

NOTE: DIMM banks are active only when the corresponding processor socket is populated.

NOTE: Memory must be installed in like-pairs, i.e. two of the same size.

Registered DIMMs (RDIMMs)

HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593907-B21
HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593911-B21
HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604500-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593913-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604502-B21
HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	593915-B21

Upgrade Options

HP DL585 G7 CPU Memory Secondary Upgrade Option NOTE: Adds processor sockets 3 and 4.	590489-B21
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Core Options

HP Optical Drives

NOTE: Optical drives are ejectable.

HP Slim 12.7mm SATA DVD-ROM Optical Drive

481041-B21

HP Slim 12.7mm SATA DVD-RW Optical Drive

481043-B21

HP Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Enterprise 3yr Warranty Hard Drive

619291-B21

HP 600GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive

581286-B21

HP 450GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive

581284-B21

HP 300GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive

507127-B21

HP 146GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive

512547-B21

HP 146GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive

507125-B21

HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive

512545-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive

605835-B21

HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) Dual Port Midline 1yr Warranty Hard Drive

507610-B21

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive

625609-B21

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive

507750-B21

SATA Hot Plug SFF (2.5-inch) Entry (ETY) Drives

HP 250GB 3G SATA 5.4K rpm SFF (2.5-inch) Entry 1yr Warranty Hard Drive

460355-B21

NOTE: SATA drives have a 1 year warranty. Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html (Worldwide)

SATA Hot Plug Midline (MDL) Solid State Drives

HP 60GB 3G SATA SFF (2.5-inch) Midline 1yr Warranty Solid State Drive

572071-B21

HP 120GB 3G SATA SFF (2.5-inch) Midline 1yr Warranty Solid State Drive

572073-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13415_div/13415_div.html (Worldwide)

6G SAS Hot Plug Enterprise Performance Solid State Drives

HP 400GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive

632494-B21

Core Options

HP 200GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive 632492-B21

6G SAS Hot Plug Enterprise Mainstream Solid State Drives

HP 800GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive 632506-B21

HP 400GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive 632504-B21

HP 200GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive 632502-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/14038_div/14038_div.html (Worldwide)

HP Networking

Gigabit Ethernet adapters

HP NC112T PCI Express Gigabit Server Adapter 503746-B21

HP NC360T PCI-E Dual Port Gigabit Server Adapter 412648-B21

HP NC365T 4-port Ethernet Server Adapter 593722-B21

HP NC373F PCI-E Multifunction 1000SX Gigabit Svr Adapter 394793-B21

HP NC373T PCI-E Multifunction Gigabit Server Adapter 394791-B21

HP NC375T PCI Express Quad Port Gigabit Server Adapter 538696-B21

HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter 458492-B21

10 Gigabit Ethernet adapters

NOTE: No more than two 10GbE I/O devices are supported in a single ProLiant server.

NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

HP NC522SFP Dual Port 10GbE Gigabit Server Adapter 468332-B21

HP NC523SFP 10Gb 2-port Server Adapter 593717-B21

HP NC524SFP Dual Port 10GbE Module 489892-B21

HP NC550SFP Dual Port 10GbE Server Adapter 581201-B21

HP NC552SFP 10Gb 2-port Ethernet Server Adapter 614203-B21

HP 10 GbE PCI-e G2 Dual Port Network Interface Card 516937-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs.

HP InfiniBand

HP InfiniBand 4X DDR PCI-E 0 Memory Dual Port HCA 483513-B21

QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA 583211-B21

HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA 592520-B21

HP InfiniBand 4X DDR ConnectX-2 PCIe G2 Dual Port HCA 592521-B21

Core Options

HP I/O Expansion Options

HP DL585 G7 PCI-E Riser Card

590485-B21

NOTE: Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8

Suggested Slot placement:

1. Slot 3 PCIe2 x 16 (16,8,4,2,1)
2. Slot 6 PCIe2 x 16 (16,8,4,2,1)
3. Slot 9 PCIe2 x 16 (16,8,4,2,1)
4. Slot 11 PCIe2 x 16 (16,8,4,2,1)

HP DL585 G7 PCI-E/X Riser Card

590487-B21

NOTE: Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X

Suggested Slot placement:

1. Slot 6 PCIe2 x 16 (16,8,4,2,1)
2. Slot 9 PCIe2 x 16 (16,8,4,2,1)
3. Slot 11 PCIe2 x 16 (16,8,4,2,1)

HP Power Supplies

NOTE: Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at:

www.hp.com/go/hppoweradvisor.

HP 1200W Common Slot Silver Hot Plug Power Supply Kit

500172-B21

HP 1200W Common Slot Platinum Hot Plug Power Supply Kit

578322-B21

NOTE: Option Kits contains optional power supply, an IEC power cable and PDU IEC cables.

Additional Options

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

HP Insight Software	HP Insight Control	
	HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	452148-B22
	HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License	T9074BAE
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Electronic License	TC278AAE
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Tracking License	TC275A

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

NOTE: Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at:

<http://www.hp.com/go/insightupdates>.

NOTE: For additional license options please see the Insight Control QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html

HP Insight Control for Linux

HP Insight Control for Linux including 1yr 24x7 Support Electronic License	TC213AAE
HP Insight Control for Linux including 1yr 24x7 Support Single Server License	TC209A
HP Insight Control for Linux Media Kit	TC208A

NOTE: Media pack DVD contains the ISO image for HP Insight Control for Linux, HP Systems Insight Manager, HP Insight Control power management, HP Insight Control virtual machine management, and an integrated installer. Servers must be acquired separately.

NOTE: Licenses ship without media. The Media Kit for Insight Control for Linux can be ordered separately, or can be downloaded at: <http://www.hp.com/go/ic-linux> (click on Download button).

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single set of activation keys.

NOTE: For additional License Kits, including electronic licensing options, please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html

HP Integrated Lights-Out (iLO) Advanced

HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
HP iLO Advanced including 1yr 24x7 Technical Support and Updates Electronic License	TA850AAE
HP Insight Software Media Kit	436222-B21

NOTE: Insight Software DVD media without licenses. Contains HP Systems Insight Manager, HP Insight Control, HP Insight Dynamics, HP Insight Control for Microsoft System Center, and Virtual Connect Enterprise Manager software. Uses an integrated installer to perform quick and accurate software installation and updates.

NOTE: This license allows 1 server to be deployed and managed via HP iLO Advanced. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service.

NOTE: Electronic software is available in all countries except China and Japan.

Additional Options

Customers in China and Japan should order the physical equivalent.

NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html

HP Insight Control server deployment

HP Insight Control Server Deployment including 1yr 24x7 Support Electronic License T9082AAE

HP Insight Control Server Deployment including 1yr 24x7 Support Single Server License 452151-B21

NOTE: Licenses ship without media. The Insight Control Media Kit can be ordered separately, or can be downloaded at:

<http://www.hp.com/go/insightupdates>.

NOTE: Electronic licenses can be used to purchase multiple licenses with a single activation key, and is available in all countries except China and Japan. Customers in China and Japan should order the physical equivalent.

NOTE: Customer will receive a license entitlement certificate, which must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service.

NOTE: For additional license kits please see the Insight Control QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/12631_div/12631_div.html

High Performance Clusters

HP Cluster Management Utility

HP Cluster Management Utility Compute Node Flexible License QL803A

NOTE: This part number can be used to purchase one certificate for multiple licenses with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key.

HP Cluster Management Utility License and Media 433257-B21

NOTE: Order a minimum of one license per cluster to purchase media including software and documentation, which will be delivered to the customer, and also licenses CMU management. No license key is delivered or required.

NOTE: For additional license kits please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/12612_div/12612_div.html

HP HPC Linux Value Pack

HP High Performance Computing Linux Value Pack 1 Processor Flexible License TC293B

NOTE: This part number can be used to purchase one certificate for multiple licenses with a single activation key. Each license is for one socket (a.k.a. processor). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key.

HP High Performance Computing Linux Value Pack Media Kit TC294A

NOTE: This part number can be used to purchase media including software and documentation, which will be delivered to the customer.

NOTE: For additional license kits please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/13485_div/13485_div.html

Additional Options

HP Graphics Options	<p>HP DL580/DL585/DL980 G7 Power Cable Kit 631660-B21</p> <p>NOTE: The HP ProLiant DL585 G7 can support up to 4 (225W) or 3 (300W) Graphic Cards and/or GPGPU Accelerator Options.</p> <p>NOTE: An option kit will be required per Graphic Card and/or GPGPU Accelerator Options.</p> <p>NOTE: Depending on the number of GPGPUs required, customers will need to purchase one of the following I/O expansion boards: HP DL585G7 PCI-E Option Kit PN: 590485-B21 (Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8. OR the HP DL585G7 PCI-E/X Option Kit: PN: 590487-B21 (Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X).</p>
HP I/O Accelerator Options	<p>HP 160GB Single Level Cell PCIe ioDrive for ProLiant Servers 600278-B21</p> <p>NOTE: A low-profile PCI bracket is included for use in low-profile slots.</p> <p>HP 320GB Multi Level Cell PCIe ioDrive for ProLiant Servers 600279-B21</p> <p>NOTE: A low-profile PCI bracket is included for use in low-profile slots.</p> <p>HP 320GB Single Level Cell PCIe ioDrive Duo for ProLiant Servers 600281-B21</p> <p>HP 640GB Multi Level Cell PCIe ioDrive Duo for ProLiant Servers 600282-B21</p> <p>HP 1.28TB Multi Level Cell PCIe IO Accelerator 641027-B21</p> <p>NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13587_div/13587_div.html (Worldwide)</p>
HP Security - TPM	<p>HP Trusted Platform Module Option 488069-B21</p> <p>NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: www.hp.com/go/TPM.</p> <p>NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.</p> <p>NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.</p>
HP Storage Controllers SAS Controllers	<p>Smart Array P212 Controller</p> <p>HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller 462828-B21</p> <p>HP Smart Array P212/256 1-ports Int/1-ports Ext PCIe x8 SAS Controller 462834-B21</p> <p>Smart Array P410 Controller</p> <p>HP Smart Array P410/256 2-ports Int PCIe x8 SAS Controller 462862-B21</p> <p>HP Smart Array P410/512 BBWC 2-ports Int PCIe x8 SAS Controller 462864-B21</p> <p>HP Smart Array P410/512 FBWC 2-ports Int PCIe x8 SAS Controller 578230-B21</p> <p>HP Smart Array P410/1G FBWC 2-ports Int PCIe x8 SAS Controller 572532-B21</p> <p>Smart Array P411 Controller</p> <p>HP Smart Array P411/256 2-ports Ext PCIe x8 SAS Controller 462830-B21</p> <p>HP Smart Array P411/512 BBWC 2-ports Ext PCIe x8 SAS Controller 462832-B21</p> <p>HP Smart Array P411/512 FBWC 2-ports Ext PCIe x8 SAS Controller 578229-B21</p> <p>HP Smart Array P411/1G FBWC 2-ports Ext PCIe x8 SAS Controller 572531-B21</p>

Additional Options

Smart Array P812 Controller

HP Smart Array P812/1G FBWC 2-ports Int/4-ports Ext PCIe x8 SAS Controller 487204-B21

Optional Upgrades

HP 512MB P-Series Battery Backed Write Cache Upgrade 462967-B21

NOTE: Supported on HP Smart Array P411 Controller only.

HP 512MB Flash Backed Write Cache 534916-B21

HP 256MB P-series Cache Upgrade 462968-B21

HP 1GB Flash Backed Cache 534562-B21

HP Smart Array Advanced Pack including 1yr 24x7 Technical Support and Updates Single Server License 516471-B21

NOTE: This part number can be used to purchase a single license or to order multiple licenses with a single activation key. Customers will receive a license entitlement certificate via e-mail. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HP Software Technical Support Services.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13203_div/13203_div.html
(Smart Array P212 Controller)

http://h18000.www1.hp.com/products/quickspecs/13201_div/13201_div.html
(Smart Array P410 Controller)

http://h18000.www1.hp.com/products/quickspecs/13202_div/13202_div.html
(Smart Array P411 Controller)

http://h18000.www1.hp.com/products/quickspecs/13558_div/13558_div.html
(Smart Array P812 Controller)

http://h18000.www1.hp.com/products/quickspecs/13200_div/13200_div.html
(Smart Array Advanced Pack)

SAS HBA

HP Modular Smart Array SC08e 2-ports Ext PCIe x8 SAS Host Bus Adapter 614988-B21

NOTE: This is a 2 x4 External Port HBA

NOTE: This is only approved for the HP P2000 G3 SAS Modular Smart Array.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18004.www1.hp.com/products/quickspecs/13651_div/13651_div.html
(SC08e 6Gb HBA)

SCSI HBA

HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter 412911-B21

NOTE: Recommended HBA for SCSI tape drive connect.

NOTE: Please see the following QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html
(SC11Xe HBA)

NOTE: Please refer to the HBA QuickSpecs for additional information at:

<http://www.hp.com/products/hba>.

Additional Options

HP Tape Backup

NOTE: For the complete range of StorageWorks tape drives, autoloaders, libraries and media see: <http://www.hp.com/go/tape>. For hardware and software compatibility of HP tape backup products see: <http://www.hp.com/go/connect>.

NOTE: Connection using HP Smart Array P212/Zero Memory Controller (PN 462828-B21) recommended.

HP StorageWorks DAT 320 USB in 1U Rack-mount Kit	AP835B
HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader	AK377A
NOTE: Requires HP 1U Tape Autoloader Rack Kit (AH166A) for rack installation.	
HP StorageWorks LTO-5 Ultrium 3280 SAS Internal Tape Drive	EH899A
NOTE: For installation into 3U SAS rack kit (AG576B). No peripheral bay available for installation into the server.	
HP StorageWorks 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader	BL536A
NOTE: Requires HP 1U Tape Autoloader Rack Kit (AH166A) for rack installation.	
HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Tape Library	AK378A
HP StorageWorks MSL2024 1 LTO-5 Ultrium 3000 SAS Tape Library	BL537A
HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Tape Library	AK380A
HP StorageWorks MSL4048 2 LTO-5 Ultrium 3000 SAS Tape Library	BL538A
HP StorageWorks MSL8096 2 LTO-4 Ultrium 1760 SAS Tape Library	AK382A
HP StorageWorks MSL8096 2 LTO-5 Ultrium 3000 SAS Tape Library	BL539A

HP Disk Backup

NOTE: For the complete range of D2D Backup Systems see: <http://www.hp.com/go/d2d>. For the complete range of RDX drives and media see: <http://www.hp.com/go/rdx>. For hardware and software compatibility of HP disk backup products see: <http://www.hp.com/go/connect>.

HP D2D Backup Systems with Backup Data Deduplication

HP StorageWorks D2D2504i Backup System EJ002B

NOTE: 3.0TB of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended.

HP StorageWorks D2D4009i Backup System EH939A

NOTE: 7.5TB of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended.

HP StorageWorks D2D4112 Backup System EH993B

NOTE: 9.0TB (expandable to 18.0TB) of useable network disk backup capacity. Fibre Channel SAN connected appliance. Direct server attach is not supported, requires connection via SAN fabric.

HP RDX Removable Disk Backup Systems USB

NOTE: For installation into 1U USB Rack-Mount Kit (A8007A). No peripheral bay available for drive installation into the server.

HP StorageWorks RDX500 Internal Removable Disk Backup System AJ934A

NOTE: 500GB of disk capacity per data cartridge.

HP StorageWorks RDX1000 Internal Removable Disk Backup System BV847A

NOTE: For installation into 1U USB Rack-Mount Kit (A8007A). No peripheral bay available for drive installation into the server. 1 TB of disk capacity per data cartridge.

Additional Options

HP Storage Options

Storage Fibre Channel HBA

NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: <http://h18006.www1.hp.com/storage/saninfrastructure/hba.html>

Brocade Fibre Channel HBAs

HP StorageWorks 41B PCIe 4Gb Fibre Channel Single Port Host Bus Adapter AP767A

HP StorageWorks 42B PCIe 4Gb Fibre Channel Dual Port Host Bus Adapter AP768A

HP StorageWorks 82B PCIe 8Gb Fibre Channel Dual Port Host Bus Adapter AP770A

HP StorageWorks 81B PCIe 8Gb Fibre Channel Single Port Host Bus Adapter AP769A

Emulex Fibre Channel HBAs

HP StorageWorks 81E 8Gb Single Port PCI-e Fibre Channel Host Bus Adapter AJ762A

HP StorageWorks 82E 8Gb Dual Port PCI-e Fibre Channel Host Bus Adapter AJ763A

HP StorageWorks FC2142SR 4Gb PCIe Host Bus Adapter A8002A

HP StorageWorks FC2242SR 4Gb PCIe DC Host Bus Adapter A8003A

QLogic Fibre Channel HBAs

HP StorageWorks 81Q PCI-e Fibre Channel Host Bus Adapter AK344A

HP StorageWorks 82Q 8Gb Dual Port PCI-e Fibre Channel Host Bus Adapter AJ764A

HP StorageWorks FC1142SR 4Gb PCIe Host Bus Adapter AE311A

HP StorageWorks FC1242SR 4Gb PCIe DC Host Bus Adapter AE312A

Storage SCSI HBA

HP StorageWorks U320e SCSI Dual Channel Host Bus Adapter AH627A

NOTE: Recommended HBA for MSL SCSI Tape Library connect.

Converged Network Adapter

HP StorageWorks CN1000E Dual Port Converged Network Adapter AW520A

HP CN1000Q Dual Port Converged Network Adapter BS668A

HP Disk Storage Systems

MSA SAN Storage Arrays

HP StorageWorks MSA60 Array 418408-B21

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/12627_div/12627_div.html

HP StorageWorks MSA70 Array 418800-B21

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/12652_div/12652_div.html

Disk Enclosures

HP StorageWorks D2600 Disk Enclosure AJ940A

HP StorageWorks D2700 Disk Enclosure AJ941A

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/13404_div/13404_div.html (Worldwide)

Additional Options

HP Uninterruptible Power Systems

HP Rack-mountable UPS

HP R1500 G2 UPS

HP R1500 G2 1440VA Low Voltage NA 1U Rackmount Uninterruptible Power System AF419A

HP R1500 G2 1440VA INTL 1U Rackmount Uninterruptible Power System AF418A

HP R1500 G2 1200kVA Low Voltage JP 1U Rackmount Uninterruptible Power System AF421A

NOTE: Please see QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/12507_div/12507_div.html
(Worldwide)

HP R1500 G3 Uninterruptible Power Supply (UPS)

HP R1.5kVA G3 1U NA Uninterruptible Power System AF469A

HP R1.5kVA G3 1U JP/TW Uninterruptible Power System AF470A

HP R1.5kVA G3 1U INTL Uninterruptible Power System AF471A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/14059_div/14059_div.html
(Worldwide)

HP R/T3000 Uninterruptible Power System (UPS)

HP R/T3000 3300VA High Voltage NA/JPN 2U Rackmount Uninterruptible Power System AF453A

HP R/T3000 3300VA INTL 2U Rackmount Uninterruptible Power System AF454A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13417_div/13417_div.html
(Worldwide)

HP R/T3000 G2 Uninterruptible Power System (UPS)

HP R/T3000 G2 2U L530 Low Voltage NA/JP Uninterruptible Power System AF466A

HP R/T3000 G2 2U L620 High Voltage NA/JP Uninterruptible Power System AF467A

HP R/T3000 G2 2U Detachable Cord High Voltage INTL Uninterruptible Power System AF468A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/14058_div/14058_div.html
(Worldwide)

HP Rack-Mountable R5500 UPS

HP R5500 6000VA INTL 3U Rackmount Uninterruptible Power System AF416A

HP R5500 5000kVA NA/JP 3U Rackmount Uninterruptible Power System AF426A

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/11871_div/11871_div.html
(Worldwide)

NOTE: For additional information on HP Uninterruptible Power Systems please go to: www.hp.com/servers/rackups.

NOTE: For additional information on sizing your server, please reference:

<http://www.upssizer.com>.

NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link:

www.hp.com/products/powercords.

Additional Options

HP Power Distribution Units	HP Monitored Power Distribution Unit: Half Rack Version		
	HP Single Input 1 Phase 24A Monitored Power Distribution Unit	AF914A	
	HP Single Input 1 Phase 32A Monitored Power Distribution Unit	AF915A	
	HP Monitored Power Distribution Unit: Full Rack Version		
	HP Single Input 3 Phase 24A Monitored Power Distribution Unit	AF504A	
	HP Single Input 1 Phase 40A Monitored Power Distribution Unit	AF506A	
	HP Single Input 3 Phase 16A Monitored Power Distribution Unit	AF508A	
	HP Single Input 1 Phase 32A INT Monitored Power Distribution Unit	AF510A	
	NOTE: Please see the following QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12118_div/12118_div.html (Worldwide)		
	Modular Power Distribution Units 1U/0U (Up to 32 outlets)		
NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).			
HP 24A High Voltage Modular Power Distribution Unit	252663-D72		
HP 40A High Voltage NA/JP Modular Power Distribution Unit	252663-D73		
HP 32A High Voltage Modular Power Distribution Unit	252663-B31		
HP 16A High Voltage Modular Power Distribution Unit	252663-B24		
NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements.			
NOTE: Please see the following QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html (Worldwide)			
NOTE: For additional information on HP Power Distribution Units including accessories please go to: www.hp.com/go/pdu .			
NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords .			

HP Rack Series	HP Rack 10000 G2 Series (Carbon/Graphite Metallic)		
	HP 10642 G2 Pallet Universal Rack	AF001A	
	HP 10642 G2 Shock Universal Rack	AF002A	
	HP 10642 G2 1200mm deep Shock Rack	AF092A	
	HP 10647 G2 1200mm deep Shock Rack	AF094A	
	NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed.		
	NOTE: Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html (Worldwide)		
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower .		
	NOTE: The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 G2 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.		
	CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment: Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the		

Additional Options

required 64 percent open area for ventilation). Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 2.75 inches (7 cm).

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

NOTE: Quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 G2 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

HP Intelligent Power Distribution Units (iPDU)

iPDU Core Units

HP 24A NA/JP Core Only Intelligent Modular Power Distribution Unit	AF520A
HP 40A NA/JP Core Only Intelligent Modular Power Distribution Unit	AF521A
HP 24A 3 Phase NA/JP Core Only Intelligent Modular Power Distribution Unit	AF522A
HP 40A 3 Phase NA/JP Core Only Intelligent Modular Power Distribution Unit	AF533A
HP 48A 3 Phase NA/JP Core Only Intelligent Modular Power Distribution Unit	AF523A
HP 32A Intl Core Only Intelligent Modular Power Distribution Unit	AF525A
HP 16A 3 Phase Intl Intelligent Modular Power Distribution Unit	AF526A
HP 32A 3 Phase Intl Intelligent Modular Power Distribution Unit	AF527A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13650_div/13650_div.html
(Worldwide)

HP Rack Options

Keyboards and Monitors

HP TFT7600 G2 KVM Console Rackmount Keyboard US Monitor	AZ870A
HP TFT7600 G2 KVM Console Rackmount Keyboard UK Monitor	AZ871A
HP TFT7600 G2 KVM Console Rackmount Keyboard DE Monitor	AZ872A
HP TFT7600 G2 KVM Console Rackmount Keyboard FR Monitor	AZ873A
HP TFT7600 G2 KVM Console Rackmount Keyboard IT Monitor	AZ874A
HP TFT7600 G2 KVM Console Rackmount Keyboard ES Monitor	AZ875A
HP TFT7600 G2 KVM Console Rackmount Keyboard DK Monitor	AZ876A
HP TFT7600 G2 KVM Console Rackmount Keyboard NO Monitor	AZ877A
HP TFT7600 G2 KVM Console Rackmount Keyboard SE/FI Monitor	AZ878A
HP TFT7600 G2 KVM Console Rackmount Keyboard CH Monitor	AZ879A
HP TFT7600 G2 KVM Console Rackmount Keyboard PT Monitor	AZ880A
HP TFT7600 G2 KVM Console Rackmount Keyboard BE Monitor	AZ881A
HP TFT7600 G2 KVM Console Rackmount Keyboard JP Monitor	AZ882A
HP TFT7600 G2 KVM Console Rackmount Keyboard RU Monitor	AZ883A
HP TFT7600 G2 KVM Console Rackmount Keyboard Intl Monitor	AZ884A
HP TFT7600 G2 KVM Console Rackmount Keyboard US TAA Monitor	AZ885A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13731_div/13731_div.html
(Worldwide)

HP TFT7600 Rackmount Keyboard 17in US Monitor	AG052A
HP TFT7600 Rackmount Keyboard 17in UK Monitor	AG053A
HP TFT7600 Rackmount Keyboard 17in DE Monitor	AG054A

Additional Options

HP TFT7600 Rackmount Keyboard 17in ES Monitor	AG057A
HP TFT7600 Rackmount Keyboard 17in CH Monitor	AG061A
HP TFT7600 Rackmount Keyboard 17in BE Monitor	AG063A
HP TFT7600 Rackmount Keyboard 17in JP Monitor	AG064A
HP TFT7600 Rackmount Keyboard 17in RU Monitor	AG065A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/12417_div/12417_div.html
(Worldwide)

HP 1U US Rackmount Keyboard with USB	AG072A
HP 1U UK Rackmount Keyboard with USB	AG073A
HP 1U DE Rackmount Keyboard with USB	AG074A
HP 1U FR Rackmount Keyboard with USB	AG075A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/12465_div/12465_div.html
(Worldwide)

HP Server Console Switches	
HP Server Console 0x2x8 Port Analog Switch	AF616A
HP Server Console 0x2x16 Port Analog Switch	AF617A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/11834_div/11834_div.html
(Worldwide)

HP Server Console Switch G2 with Virtual Media & CAC

HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13475_div/13475_div.html
(Worldwide)

HP IP Console Switch G2 with Virtual Media & CAC

HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/13474_div/13474_div.html
(Worldwide)

Additional Options

HP USB and SD Options	HP USB 2-Button Optical Scroll Mouse	DC172B
	HP USB 04 Standard Keyboard	DT528A#ABA
	HP 4GB Secure Digital High Capacity Flash Media Kit	580387-B21
	NOTE: Blank SD media device is supported for use with VMware and Citrix. SD media must be installed in the internal slot of the ProLiant server. Learn more at: http://www.hp.com/go/proliantvirtualization .	
	HP 2GB USB Flash Media Drive Key Kit	608447-B21
	NOTE: HP qualified blank USB key for use with HP ProLiant servers that support the VMware virtualization environment and other HP value-add software like SmartStart. HP recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HP VMware Getting Started Guide for installation instructions.	

HP Care Pack Services Hardware Services On-site Service

HP 3 year 4 hour 13x5 ProLiant DL58x Hardware Support	U4607E
HP 3 year 4 hour 24x7 ProLiant D58x Hardware Support	U4608E
6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number)	
HP 3 year 6 hour 24x7 Call to Repair ProLiant DL58x Hardware Support	U4609E
Installation & Start-up Services	
HP Install ProLiant DL58x Service	U4617E
HP Startup ProLiant DL58x Service	U4618E
HP Installation and Startup for Insight Control Server Deployment - previously Rapid Deployment Pack	U5683E
Support Plus	
HP 3 year Support Plus Microsoft ProLiant DL58x Service	U4619E
Support Plus 24	
HP 3 year Support Plus 24 Microsoft ProLiant DL58x Service	U4620E
HP 3 year Support Plus 24 SuSE ProLiant DL58x Service	U6316E
NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack	

Memory

NOTE: Standard memory configurations listed do not apply to "Factory Integrated Models."

HP ProLiant DL585 G7 Models

Memory Configurations

- This server supports DDR3 2GB, 4GB, 8GB, and 16GB memory modules across 48 memory sockets.
- For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator

Advanced ECC memory

- Advanced ECC memory is the memory protection mode for this server. In Advanced ECC, the server does not fail because of correctable memory errors. The server provides notification if the level of correctable errors exceeds a pre-defined threshold rate.
- Advanced ECC provides additional protection over standard ECC because it is possible to correct certain memory errors that would otherwise be uncorrectable and result in a server failure.
- Whereas standard ECC can correct single-bit memory errors, Advanced ECC can correct single-bit memory errors and multi-bit memory errors if all failed bits are on the same DRAM device on the memory module.

Population order

- The two tables below represent the memory module population order for one processor. The population order for the other processors is identical. SR denotes Single Rank, DR denotes Dual Rank, and QR denotes Quad Rank.
- All memory modules must follow the population order shown in these two tables for all the processors with the following exception:
- QR memory modules must be installed only in memory sockets 2, 5, 8, and 11, while following the population order for those memory sockets.

Processor memory socket	1	2	3	4	5	6
Rank support per memory socket	SR/DR	SR/DR/QR	SR/DR	SR/DR	SR/DR/QR	SR/DR
Population order	A	I	E	C	K	G
Processor memory channel	A	A	A	B	B	B
Processor memory socket	7	8	9	10	11	12
Rank support per memory socket	SR/DR	SR/DR/QR	SR/DR	SR/DR	SR/DR/QR	SR/DR
Population order	B	I	F	D	L	H
Processor memory channel	C	C	C	D	D	D

Population rules

- When installing memory modules, observe the following population rules:
- Use only HP memory modules listed in this document.
- Advanced ECC is not available if x4 and x8 memory modules are mixed in channels (A and B), (C and D), or both, but standard ECC is still available. Advanced ECC is available if x4 and x8 memory modules are mixed in memory channels (A and C), (B and D), or both.

Memory

While adhering to the memory population rules ("Population rules" - see above), performance can be improved by following the guidelines below:

- Memory modules may be installed one at a time per processor, but installing two at a time per processor provides for additional performance, installing four at a time per processor provides for better performance, and installing equal amounts of memory for all processors provides for best performance.
- Install all memory modules of the same speed on the same processor for best performance.
- Install all memory modules of the same voltage on the same processor for best power.

Memory bus speed

Depending on the quantity and native speed of memory modules installed, memory bus speeds can be 1333 MHz, 1066 MHz, 800 MHz, or 667 MHz. Memory bus speeds can be different for each processor.

To determine memory bus speeds, do the following:

Within RBSU, select the Power Management Options menu > Advanced Power Management Options menu > Maximum Memory Bus Frequency menu.

Memory modules per channel	QR	SR or DR	Memory module native speed	Memory bus speed (standard-voltage memory module)	Memory bus speed (low-voltage memory module)
1		1	SR 1333 MHz DR 1333 MHz DR 1066 MHz	1333 MHz	1066 MHz
1	1		QR 1066 MHz	1066 MHz	1066 MHz
2		2	SR 1333 MHz DR 1333 MHz DR 1066 MHz	1333 MHz	1066 MHz
2	1	1	SR 1333 MHz DR 1333 MHz DR 1066 MHz QR 1066 MHz	800 MHz	800 MHz
3		3 SR	SR 1333 MHz	1066 MHz	1066 MHz
3		3 DR	DR 1333 MHz DR 1066 MHz	1066 MHz	800 MHz
3		3 mixed	SR 1333 MHz DR 1333 MHz DR 1066 MHz	1066 MHz	800 MHz
3	1	2	SR 1333 MHz DR 1333 MHz DR 1066 MHz QR 1066 MHz	800 MHz	667 MHz

Select one of the following menu options:

- Auto (default) - The memory bus speed is set to what is shown in the following table. If the native speed of the installed memory module is slower than the memory bus speed, the memory bus speed is set to the memory module native speed
- 800 MHz-The memory bus speed is set to 800 MHz regardless of the quantity of memory modules installed, unless the table above reflects a slower memory bus speed.

NOTE: There may be more than one memory bus speed menu option.

NOTE: LVDIMM support is dependent on the ROM version

Memory

Memory Installation Example

These memory installation example shows the memory sockets associated with the first processor only. This can be applied toward the memory sockets associated with the other processor also.

4 RDIMMs per processor

- Standard memory: 4x4GB RDIMMs (16GB per processor)
- Optional memory: Adding 8x8GB RDIMMs to standard memory (80GB per processor)
- Maximum memory: Replacing standard memory with 4x16GB QR RDIMMs and 8x8GB DR RDIMMs (maximum of 128GB per processor)

Processor memory socket	1	2	3	4	5	6
Standard Memory	4GB			4GB		
Optional Memory	4GB	8GB	8GB	4GB	8GB	8GB
Maximum Memory	8GB	16GB	8GB	8GB	16GB	8GB

Processor memory socket	7	8	9	10	11	12
Standard Memory	4GB			4GB		
Optional Memory	4GB	8GB	8GB	4GB	8GB	8GB
Maximum Memory	8GB	16GB	8GB	8GB	16GB	8GB

The following memory options are available from HP:

Memory

NOTE: DIMM banks are active only when the corresponding processor socket is populated.

Registered DIMMs (RDIMMs)

HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit 593907-B21

HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit 593911-B21

HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit 604500-B21

HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit 593913-B21

HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit 604502-B21

HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit 593915-B21

NOTE: Memory must be installed in like-pairs, i.e. two of the same size.

NOTE: Memory bus speeds will operate as follows: 2-4 DIMMs at 800MHz; 6 at 667MHz; 8 at 533MHz.

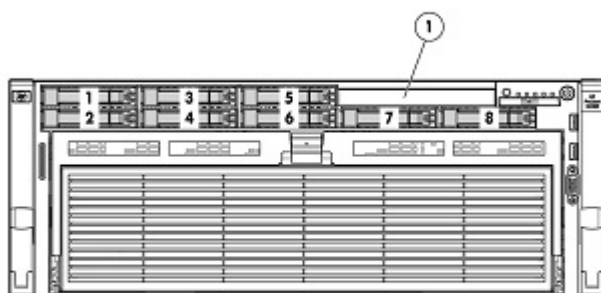
Upgrade Options

HP DL585 G7 CPU Memory Secondary Upgrade Option 590489-B21

NOTE: Adds processor sockets 3 and 4.

Storage

1-8 Eight SFF SAS hot plug hard drive bays



Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
Slimline DVD-ROM drive	Up to 1	1	Integrated SATA
HP Slim SATA DVD RW Optical Drive	Up to 1	1	Integrated SATA

Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
900GB 6G SAS 10K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller
600GB 6G SAS 10K			HP Smart Array P212/256 MB Controller
450GB 6G SAS 10K			HP Smart Array P410/256 MB Controller
300GB 6G SAS 10K			HP Smart Array P410/512 MB BBWC Controller
146GB 6G SAS 15K			HP Smart Array P410/512 MB FBWC Controller
146GB 6G SAS 10K			HP Smart Array P410/1G FBWC Controller
72GB 6G SAS 15K			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache
			HP Smart Array P411/512MB Flash Backed Write Cache
	HP Smart Array P812/512 BBWC Controller		

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
1TB 6G SAS 7.2K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller
500GB 6G SAS 7.2K			HP Smart Array P212/256 MB Controller

Storage

HP Smart Array P410/256 MB Controller
 HP Smart Array P410/512 MB BBWC Controller
 HP Smart Array P410/512 MB FBWC Controller
 HP Smart Array P410/1G FBWC Controller
 HP Smart Array P411/256 MB Controller
 HP Smart Array P411/512 MB BBWC Controller
 HP Smart Array P411/1G Flash Backed Write Cache
 HP Smart Array P411/512MB Flash Backed Write Cache
 HP Smart Array P812/512 BBWC Controller

SATA Hot Plug SFF (2.5-inch) Entry (ETY) Drives

	Quantity Supported	Position Supported	Controller
250GB 3G SATA 5.4K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller
120GB 1.5G SATA 5.4K			HP Smart Array P212/256 MB Controller
			HP Smart Array P410/256 MB Controller
			HP Smart Array P410/512 MB BBWC Controller
			HP Smart Array P410/512 MB FBWC Controller
			HP Smart Array P410/1G FBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache
			HP Smart Array P411/512MB Flash Backed Write Cache
			HP Smart Array P812/512 BBWC Controller

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
1TB 3G SATA 7.2K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller
500GB 3G SATA 7.2K			HP Smart Array P212/256 MB Controller
160GB 3G SATA 7.2K			HP Smart Array P410/256 MB Controller
			HP Smart Array P410/512 MB BBWC Controller
			HP Smart Array P410/512 MB FBWC Controller
			HP Smart Array P410/1G FBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache
			HP Smart Array P411/512MB Flash Backed Write Cache
			HP Smart Array P812/512 BBWC Controller

SATA Hot Plug Midline (MDL) Solid State Drives

	Quantity Supported	Position Supported	Controller
60GB 3.0G SATA SSD	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller
120GB 3.0G SATA SSD			HP Smart Array P212/256 MB Controller
			HP Smart Array P410/256 MB Controller
			HP Smart Array P410/512 MB BBWC Controller
			HP Smart Array P410/512 MB FBWC Controller
			HP Smart Array P410/1G FBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache
			HP Smart Array P411/512MB Flash Backed Write Cache
			HP Smart Array P812/512 BBWC Controller

Storage

6G SAS Hot Plug Enterprise Performance Solid State Drives

	Quantity Supported	Position Supported	Controller
200GB 6G SAS SLC SFF	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller
400GB 6G SAS SLC SFF			HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache HP Smart Array P812/512 BBWC Controller

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
60 Modular Smart Array	Up to 4	External	HP Smart Array P211/256 MB Controller
	Up to 8	External	HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache Controller
70 Modular Smart Array	Up to 2	External	HP Smart Array P211/256 MB Controller
	Up to 4	External	HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache Controller
D2600 Disk Enclosure	Up to 4	External	HP Smart Array P211/256 MB Controller
	Up to 8	External	HP Smart Array P411/256MB BBWC Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache Controller
D2700 Disk Enclosure	Up to 2	External	HP Smart Array P211/256 MB Controller
	Up to 4	External	HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
			HP Smart Array P411/1G Flash Backed Write Cache Controller
			HP Smart Array P812/1G Flash Backed Cache Controller

Maximum Storage Capacity - (External Enclosures Attached)

Internal	8TB (8 x 1TB SFF SAS/SATA Drives)
External	192TB (8 D2600 enclosures @ 12 drives per enclosure x 2TB SATA)
Total	200TB

Maximum Storage Capacity - (External Enclosures Attached)

Internal	8TB (8 x 1TB SFF SAS/SATA Drives)
External	100TB (4 D2700 enclosures @ 25 drives per enclosure x 1TB SATA)
Total	108TB

Storage

Tape and Disk-Based Backup

NOTE: For the complete range of tape drives, autoloaders, libraries and media, including the internal fitting models, see: <http://www.hp.com/go/tape>. For the complete range of D2D Backup Systems see: <http://www.hp.com/go/d2d>. For the complete range of \RDX drives and media see: <http://www.hp.com/go/rdx>. For hardware and software compatibility of HP disk and tape backup products see: <http://www.hp.com/go/connect>.

	Position Supported	Controller	Controller Part Number
HP SCSI Tape Drives LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 920 LTO-3 Ultrium 960 LTO4 Ultrium 1760 LTO-4 Ultrium 1840 DAT 40 DAT 72 DAT 160 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	412911-B21
HP USB Tape Drives DAT 40 DAT 72 DAT 160 DAT 320 1U USB Rack-Mount Kit	External	USB 2.0 Port	N/A
HP SAS Tape Drives DAT 160 DAT 320 LTO-2 Ultrium 448 LTO-3 Ultrium 920 LTO-4 Ultrium 1760 LTO-4 Ultrium 1840 LTO-5 Ultrium 3000 LTO-5 Ultrium 3280 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	462828-B21
HP SCSI Tape Autoloaders DAT 72x10 Autoloader 1/8 G2 Autoloader	External	HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	412911-B21
HP SCSI Tape Libraries, External MSL2024 MSL4048 MSL8096 MSL6000	External	HP StorageWorks U320e SCSI Dual Channel Host Bus Adapter NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	AH627A
HP SAS Tape Autoloaders and Libraries 1/8 G2 Autoloader MSL2024 MSL4048	External	HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	462828-B21



Storage

MSL8096

<p>HP Fibre Channel Tape Libraries MSL2024 MSL4048 MSL8096 MSL6000</p>	<p>External</p>	<p>Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for connectivity information and the supported Fibre Channel HBAs shown in this QuickSpecs.</p>	<p>N/A</p>
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<p>HP USB RDX Removable Disk Backup System RDX160 RDX320 RDX500 RDX750 RDX1TB</p>	<p>External</p>	<p>USB 2.0 Port</p>	<p>N/A</p>
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<p>HP D2D Backup Systems, iSCSI D2D2503i D2D4004i</p>	<p>External</p>	<p>Embedded Network Controller. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended.</p>	<p>N/A</p>
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<p>HP D2D Backup Systems, Fibre Channel D2D4000fc</p>	<p>External</p>	<p>Direct server attach is not supported, requires connection via SAN fabric. See: http://www.hp.com/go/connect</p>	<p>N/A</p>
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Power Specifications

HP 1200W Common Slot Silver Hot Plug Power Supply Kit							
Part Number	500172-B21						
Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.7	9.0	7.0	6.8	6.4	9.1	5.9
Maximum Rated Input Wattage Rating (Watts)	930	1034	1348	1348	1348	1348	1348
Maximum Rated VA (Volt-Amp)	970	1079	1406	1406	1406	1406	1406
Efficiency (%)	86	87	89	89	89	89	89
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3174	3530	4600	4600	4600	4600	4600

HP 1200W Common Slot Platinum Hot Plug Power Supply Kit							
Part Number	578322-B21						
Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.3	8.6	6.7	6.5	6.1	5.8	5.6
Maximum Rated Input Wattage Rating (Watts)	889	989	1290	1290	1290	1290	1290
Maximum Rated VA (Volt-Amp)	927	1031	1345	1345	1345	1345	1345
Efficiency (%)	90	91	93	93	93	93	93
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3033	3375	4403	4403	4403	4403	4403

NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor

Technical Specifications

System Unit	Dimensions (H x W x D) 6.94" x 19.0" x 27.55" (17.6cm x 48.3cm x 70.0cm) (with bezel)									
	Weight (approximate)	<table border="0"> <tr> <td style="padding-right: 20px;">Maximum</td> <td>100.0 lb (45.4 kg)</td> </tr> <tr> <td colspan="2">(all hard drives, power supplies, DIMMs and processors installed)</td> </tr> <tr> <td style="padding-right: 20px;">Minimum</td> <td>66.0 lb (30.0 kg)</td> </tr> <tr> <td colspan="2">(one hard drive, two power supplies, four DIMMs and two processors installed)</td> </tr> </table>	Maximum	100.0 lb (45.4 kg)	(all hard drives, power supplies, DIMMs and processors installed)		Minimum	66.0 lb (30.0 kg)	(one hard drive, two power supplies, four DIMMs and two processors installed)	
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(all hard drives, power supplies, DIMMs and processors installed)										
Minimum	66.0 lb (30.0 kg)									
(one hard drive, two power supplies, four DIMMs and two processors installed)										
	Input Requirements (per power supply)	<table border="0"> <tr> <td style="padding-right: 20px;">Rated Line Voltage</td> <td>100 - 127 VAC, 200 - 240 VAC</td> </tr> <tr> <td style="padding-right: 20px;">Rated Input Current</td> <td>12 A (at 100 VAC), 8 A (at 200 VAC)</td> </tr> <tr> <td style="padding-right: 20px;">Rated Input Frequency</td> <td>50 to 60 Hz</td> </tr> <tr> <td style="padding-right: 20px;">Rated Input Power</td> <td>1161 W (at 100 VAC), 1598 W (at 240 VAC)</td> </tr> </table>	Rated Line Voltage	100 - 127 VAC, 200 - 240 VAC	Rated Input Current	12 A (at 100 VAC), 8 A (at 200 VAC)	Rated Input Frequency	50 to 60 Hz	Rated Input Power	1161 W (at 100 VAC), 1598 W (at 240 VAC)
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	BTU Rating	<table border="0"> <tr> <td style="padding-right: 20px;">Maximum</td> <td>3960 BTU/hr (at 100 VAC), 5450 BTU/hr (at 200 VAC)</td> </tr> </table>	Maximum	3960 BTU/hr (at 100 VAC), 5450 BTU/hr (at 200 VAC)						
Maximum	3960 BTU/hr (at 100 VAC), 5450 BTU/hr (at 200 VAC)									
	Power Specifications	<p>NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor</p> <ul style="list-style-type: none"> • Click on the system of interest. Example: DL585 G7 • Follow the instructions of the next screens 								
	Power Supply Output (per power supply)	<table border="0"> <tr> <td style="padding-right: 20px;">Rated Steady-State Power</td> <td>910 W (low line), 1300 W (high line)</td> </tr> <tr> <td style="padding-right: 20px;">Maximum Peak Power</td> <td>910 W (low line), 1300 W (high line)</td> </tr> </table>	Rated Steady-State Power	910 W (low line), 1300 W (high line)	Maximum Peak Power	910 W (low line), 1300 W (high line)				
Rated Steady-State Power	910 W (low line), 1300 W (high line)									
Maximum Peak Power	910 W (low line), 1300 W (high line)									
	System Inlet Temperature	<table border="0"> <tr> <td style="padding-right: 20px;">Operating</td> <td>10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).</td> </tr> <tr> <td style="padding-right: 20px;">Non-operating</td> <td>-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).</td> </tr> </table>	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).				
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Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).									
	Relative Humidity (non-condensing)	<table border="0"> <tr> <td style="padding-right: 20px;">Operating</td> <td>10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.</td> </tr> <tr> <td style="padding-right: 20px;">Non-operating</td> <td>5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.</td> </tr> </table>	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.				
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	Altitude	<table border="0"> <tr> <td style="padding-right: 20px;">Operating</td> <td>3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).</td> </tr> </table>	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).						
Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).									

Technical Specifications

	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise		Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
	Idle	
	L WAd	6.8 B (with PCI-E)
	L pAm	NA dBA
	Operating	
	L WAd	6.8 B (with PCI-E)
	L pAm	NA dBA
Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1
		NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

Integrated Lights-Out 3 (iLO 3) integrated on system board	Architecture	PCI Express based health and remote management ASIC
	Processor	PCI Express RISC processor core running at 250MHz
	Upgradeability	Option firmware upgradeable via Flash ROM.
	Interfaces	One Ethernet Sideband connection (10/100/1000 Mb/s) One Ethernet network connection (10/100Mb/s)
	Memory	128-MB RAM with ECC
	Operating System Support	Microsoft Windows 2008 R2 Microsoft Windows 2008 (32 bit and 64 bit) Microsoft Windows Server 2008 Standard Edition (32bit and 64bit) Microsoft Windows Server 2008 Enterprise Edition (32bit and 64bit) Microsoft Windows Server 2003 and Windows Server 2003 R2, and Windows Server 2003 for Extended Systems Standard Edition, Enterprise Edition Red Hat Enterprise Linux 5.4 (32 bit and 64 bit) SUSE Linux Enterprise Server 11 (32bit and 64bit) SUSE Linux Enterprise Server 10 (32bit and 64bit) VMware ESX 4.0 VMware ESX 3.5.0
	Client System Support	Microsoft Windows 7 Microsoft Windows XP Professional Edition Microsoft Windows Vista Business and Ultimate Editions Red Hat Enterprise Desktop 5.00 SUSE Linux Enterprise Desktop 11 SUSE Linux Enterprise Desktop 10

Technical Specifications

Client Browser Support	Microsoft Internet Explorer 8 Microsoft Internet Explorer 7 Microsoft Internet Explorer 6 Firefox 3.5 (on supported Windows and Linux systems) Firefox 3.0 (on supported Windows and Linux systems)
Command Line Support	Secure Shell and serial port access Secure Socket Layer Secure Shell version 2
Security	Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface AES encryption of video RC4 encryption of video
Directory Support Services	Active Directory v1.0 (Windows 2003)
Driver Support	HP ProLiant iLO3 Management Controller Driver Package
Management protocols supported	SNMP, IPMI 2.0 (system and LAN interface), DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP), HP RIBCL XML

Smart Array P410i Controller

Dimensions	Embedded
Disk Drive and Enclosure Interface - Transfer rate	6Gb/s SAS (Serial Attached SCSI) 3Gb/s SATA (Serial ATA)
SAS Connectors	2 internal 4X connectors
Cache Memory Speed	DDR2-800MHz with 40 or 72-bit wide bus
Server Interface	x4 PCIe 2.0 provides 2GB/s maximum bandwidth
SAS Speed	8 6Gb/s SAS links provide 4.8GB/s maximum bandwidth
Cache Memory	Zero Memory RAID has no cache memory 40-bit 256MB ECC protected cache (battery upgrade available) 72-bit 512MB BBWC or 72-bit 512MB and 1G FBWC
Logical Drives Supported	Zero Memory, Up to 2 logical volumes (8 physical drives) Up to 64 logical drives with cache
Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
RAID Support	RAID 6, 6+0 (Advanced Data Guarding) NOTE: RAID 6, 6+0 can be enabled with one of the following combinations: <ul style="list-style-type: none"> • 256 MB cache, Battery kit and Smart Array Advanced Pack License key option upgrades • 512 MB BBWC/FBWC and Smart Array Advanced Pack License key option upgrades • 1G FBWC and Smart Array Advanced Pack License key option upgrades RAID 5, 5+0 (Distributed Data Guarding) NOTE: A minimum of 256 MB cache is required to enable RAID 5, 5+0 support RAID 1+0 (Striping & Mirroring) RAID 0 (Striping), RAID 1 (Mirroring)

Technical Specifications

HP NC375i Integrated Quad Port Multifunction Gigabit Server Adapter	Network Interface	10/100/1000-T	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
		IEEE 802.3ad 1000Base-TX	
		IEEE 802.1p 100Base-TX	
		IEEE 802.1q 100Base-TX	
	Data Transfer Method	PCI Express 2.0 x8	
	Controller	Qlogic/NetXen NX3031	
	Network Transfer Rate	10Base-T (Full-Duplex)	20 Mb/s
100Base-TX (Full-Duplex)		200 Mb/s	
1000Base-TX (Full-Duplex)		2000 Mb/s	
Connector	RJ-45		
Cable Support	10Base-T	Categories 3, 4, or 5 UTP; up to 328 ft (100 m)	
	10/100/1000 Base-TX	Category 5 UTP up to 328 ft (100 m)	

Environment-friendly Products and Approach	End-of-life Management and Recycling	<p>Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.</p> <p>The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.</p>
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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.