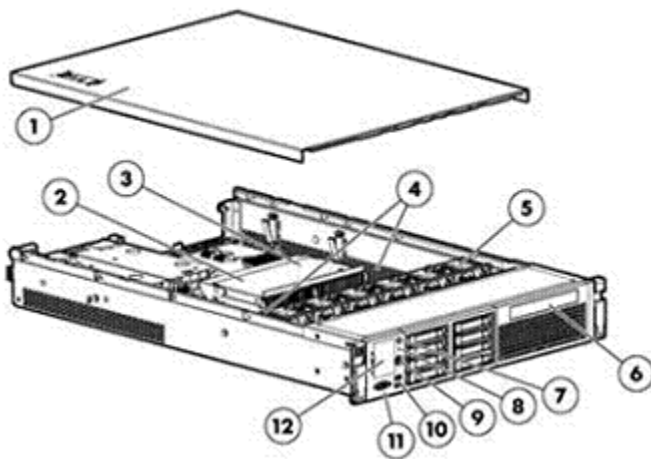
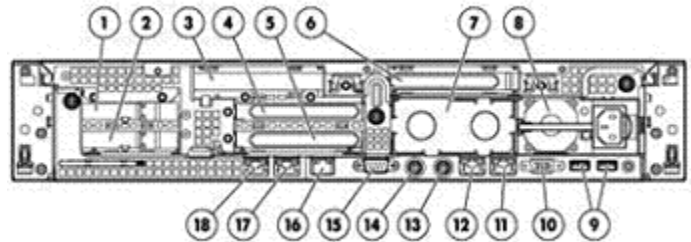


Overview



Front View:

1. Quick removal access panel
2. Intel Quad-Core Processor (Performance models include two processors)
3. Second Intel Quad-Core Processor
4. Eighteen slots: DDR3 Registered (RDIMM) or Unbuffered (UDIMM) memory
5. Hot-plug fans, full N+1 redundancy
6. Slim Optical Bay (SATA DVD-RW Optical Drive included on Performance models)
7. UID LED button
8. Health LED
9. Power On/Standby button and system power LED
10. USB connectors (2)
11. Video connector
12. Systems Insight Display



Rear View:

1. PCI slot 5
2. PCI slot 6
3. PCI slot 4
4. PCI slot 2
5. PCI slot 3
6. PCI slot 1
7. Power supply 2
8. Power supply 1
9. USB connectors (2)
10. Video connector
11. NIC 1 connector
12. NIC 2 connector
13. Mouse connector
14. Keyboard connector
15. Serial connector
16. iLO2 connector
17. NIC 3 connector
18. NIC 4 connector

At A Glance

The HP ProLiant DL380 G6 Server continues to deliver on its heritage of engineering excellence with increased flexibility and performance, enterprise-class uptime and manageability, 2-socket Intel Xeon performance, and 2U density for a variety of applications.

Processors:

- Up to 2 Quad-Core or Dual-Core Intel® Xeon® processor 5500 sequence)
- Intel® 5520 Chipset

Memory:

- Up to 144GB, using PC3-8500R DDR3 Registered (RDIMM) memory, operating at 800MHz when fully populated at 3 DIMMs per Channel in 18 slots
- NOTE:** If only one processor is installed, only half the DIMM slots are available
- Up to 24GB, using PC3-10600E DDR3 Unbuffered (UDIMM) memory, operating at 1066MHz when fully populated at 2 DIMMs per Channel in 12 slots

Storage Controller:

- Entry Models: HP Smart Array P410i/Zero Memory Controller (RAID 0/1/1+0)
- Base Models: HP Smart Array P410i/256 MB Controller (RAID 0/1/1+0/5/5+0)
- Performance Models: HP Smart Array P410i/512 MB BBWC Controller (RAID 0/1/1+0/5/5+0)
- High Efficiency: HP Smart Array P410i/Zero Memory Controller (RAID 0/1/1+0)

Overview

- Available upgrades: 256MB, 512MB with BBWC, Battery kit upgrade (for BBWC), and Smart Array Advanced Pack (SAAP)
- **Internal Drive Support:**
 - Standard (8) small form factor (SFF) hot-plug drive bays to support Serial-attached SCSI (SAS) and Serial ATA (SATA) drives
 - Optional second drive cage for additional (8) SFF drive bays (total 16)
 - Optional cage for (6) Large Form Factor SAS/SATA hard drive bays
 - Slimline media bay supporting Optical Drive (ships standard on performance models)
- **Network Controller:**
 - Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) with TCP/IP Offload Engine, including support for Accelerated iSCSI
- **Expansion Slots:**
 - Six available PCI-Express Gen2 slots, optional mixed PCI-X / PCI-Express or x16 PCI configurations available (see "Standard Features -Expansion Slots" section for more details)
- **Ports:**
 - USB 2.0 support
 - 5 total ports: (2) ports up front; (2) ports in back; (1) port internal
 - 1 internal Secure Digital (SD) slot
- **Integrated Hypervisors** (Optional):
 - VMware 3i virtualization technology
 - Citrix XenServer virtualization technology
- **Redundancy:**
 - Fully redundant hot plug fans (N+1)
 - Hot plug power supply with optional redundancy (Included in Performance models)
- **Power Sources:**
 - Dual Common Slot Bay for Right Sized, Hot plug and Redundant Power options
 - HP 1200W CS HE Silver Power Supply (optional)
 - HP 750W CS HE Gold Power Supply (standard on some models)
 - HP 460W CS HE Gold Power Supply (standard on some models)
 - HP 48V DC Power Supply (optional)
- **Management:**
 - HP Insight Control suite delivers essential management, including proactive health management, lights out remote control, optimization of power usage, rapid server deployment, performance analysis, vulnerability scanning and patch management and virtual machine management. Now with Dynamic Power Capping technology, ICE can potentially triple the capacity of your data center by reclaiming trapped power and cooling capacity. For more information, go to www.hp.com/go/ice.
 - HP ProLiant Onboard Administrator (powered by the Integrated Light-Out 2 management processor) for simplified server setup, health monitoring and recovery, power and thermal control, and lights-out remote administration
 - Integrated Lights-Out 2 Advanced unlocks the full capabilities of the ProLiant Onboard Administrator with high performance Integrated Remote Console, multi-user console sharing, video record and replay, and virtual media, including virtual folders for rapid server updates.
 - System Insight Display on the front bezel for quick and easy server diagnostics
- **Form Factor:**
 - Rack (2U), (3.5-inch); Depth 27.25 inches (69.98 cm)
- **Operating Systems and Virtualization Software Support for ProLiant Servers:**
 - Supports Windows, RHEL, SLES, OEL, Solaris, NetWare, VMware, and HP Citrix Essentials for XenServer
- **Deployment/Serviceability:**
 - Quick Deploy Rail System includes sliding universal rails, an ambidextrous cable management arm and quick release levers for fast and easy serviceability
 - Tool-less access to all system components for easy in rack serviceability
 - Customer Self Repair (CSR): HP products are designed with many CSR parts to minimize repair time and allow for greater flexibility in performing defective parts replacement
- **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

Overview

agreements. SATA hard drives have a one-year warranty. SAS Enterprise drives have a three-year warranty.

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>

Standard Features

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

Processor
One of the following
depending on Model

- Quad-Core Processors**
- Intel® Xeon® Processor X5570 (2.93 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)
 - Intel® Xeon® Processor X5560 (2.80 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)
 - Intel® Xeon® Processor X5550 (2.66 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)
 - Intel® Xeon® Processor E5540 (2.53 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)
 - Intel® Xeon® Processor E5530 (2.40 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)
 - Intel® Xeon® Processor E5520 (2.26 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)
 - Intel® Xeon® Processor E5506 (2.13 GHz, 4MB L3 Cache, 80W, DDR3-800)
 - Intel® Xeon® Processor E5504 (2.00 GHz, 4MB L3 Cache, 80W, DDR3-800)
 - Intel® Xeon® Processor L5520 (2.26 GHz, 8MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2)
 - Intel® Xeon® Processor L5506 (2.13 GHz, 4MB L3 Cache, 60W, DDR3-800)
- Dual-Core Processors**
- Intel® Xeon® Processor E5502 (1.86 GHz, 4MB L3 Cache, 80W, DDR3-800)
- NOTE:** HT indicates that the processor model supports Intel® Hyper-Threading Technology.
NOTE: Turbo indicates the maximum potential frequency increment when using Intel® Turbo Boost Technology, with 4, 3, 2, and 1 cores active.
NOTE: DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
NOTE: For the Intel 5500 Series, the letter preceding the model number indicates the performance/wattage of the processor. "X" denotes High Performance/Wattage; "E" denotes Enterprise Performance/Wattage (Mainstream); and "L" denotes Lower Wattage.
NOTE: Up to 2 processors supported. Performance configurations include two processors. Mixing different processor models is not supported.

Cache Memory
One of the following
depending on Model

- 8MB (1 x 8MB) Level 3 cache
- NOTE:** All processor models except for those identified below.
- 4MB (1 x 4MB) Level 3 cache
- NOTE:** For processors E5506/L5506/E5504/E5502.

Chipset

- Intel® 5520 Chipset
- NOTE:** For more information regarding Intel chipsets, please see the following URL:
<http://www.intel.com/products/server/chipsets/>.

Upgradeability

- Upgradeable to 2 processors (8 cores)

Memory Protection

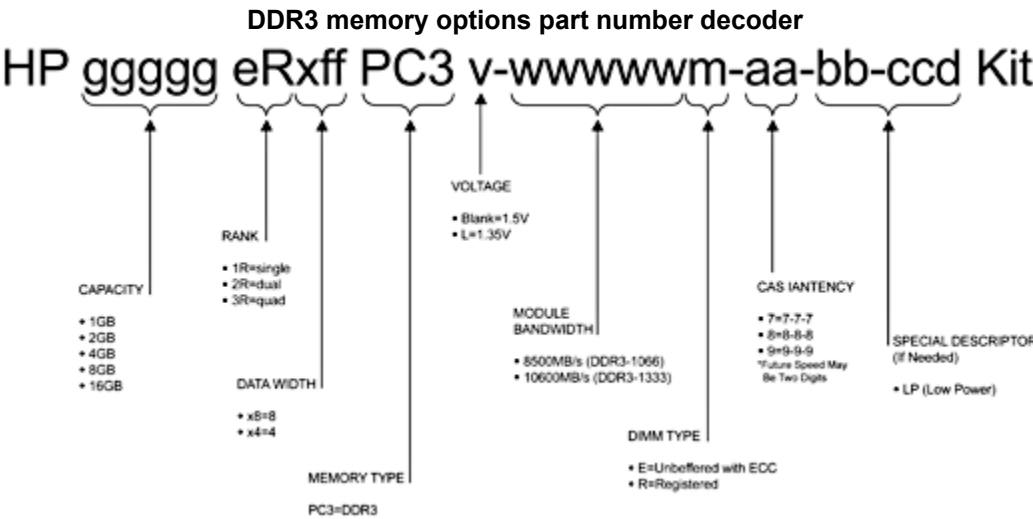
- Advanced ECC (multi-bit error protection)
- Mirroring mode
- Lockstep mode

Standard Features

Memory

Type	DDR3 Registered (RDIMM) and Unbuffered (UDIMM)
Standard (Performance Models)	12 GB (6 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
Standard (Base Models)	6 GB (3 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
Standard (Entry Models)	4 GB (2 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
Standard (High Efficiency Models)	4 GB (2 x 2 GB) PC3-10600E (DDR3-1333) Unbuffered DIMMs
Maximum (RDIMM)	144 GB (18 x 8 GB) for Registered Memory configurations
Maximum (UDIMM)	24 GB (12 x 2 GB) for Unbuffered Memory configurations

NOTE: If only one processor is installed, only half the DIMM slots are available
NOTE: Depending on the memory configuration and processor model, the memory speed may run at 1333MHz, 1066MHz, or 800MHz. Please see the Online Memory Configuration Tool at: www.hp.com/go/ddr3memory-configurator.



Network Controller	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) with TCP/IP Offload Engine, including support for Accelerated iSCSI
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Expansion Slots

NOTE: The system board has 2 PCI connectors, but the below riser cards have the actual PCI slots, to which PCI cards attach.

Primary Riser (Standard)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	1	PCIe Gen2	X8	X16	7	Full Length, Full Height Slot	
	2	PCIe Gen2	X4	X8	10	Half Length, Full Height Slot	
	3	PCIe Gen2	X4	X8	13	Half Length, Full Height Slot	

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
** Indicates the number of physical electrical lanes running to the connector.

PCIe Riser	Expansion	Technology	Bus	Connector	Bus	Form Factor	Notes
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Standard Features

(Optional Secondary)	Slots #		Width**	Width	Number*	
	4	PCIe Gen2	X8	X16	16	Full length, full height slot
	5	PCIe Gen2	X4	X8	20	Half length, half height slot
	6	PCIe Gen2	X4	X8	23	Half length, half height slot

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** Indicates the number of physical electrical lanes running to the connector.

PCIe/PCI-X Riser (Optional Primary)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	1	PCI-X (133MHz)	64-bit	N/A	7	Full length, Full Height	
	2	PCI-E Gen2	X8	X16	11	Half Length, Full Height	
	3	PCI-E Gen2	X4	X8	15	Half Length, Full Height	

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** Indicates the number of physical electrical lanes running to the connector.

PCIe/PCI-X Riser (Optional Secondary)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	4	PCI-X (133MHz)	64-bit	Not applicable	19	Full length, Full height slot	
	5	PCI-E Gen2	X8	X16	23	Half Length, Half Height	
	6	PCI-E Gen2	X4	X8	27	Half Length, Half Height	

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** Indicates the number of physical electrical lanes running to the connector.

x16 PCIe Riser (Optional Primary)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	1	PCIe Gen2	x16	x16	13	Full Length, Full Height slot	Supports up to 225W; single wide cards only

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** Indicates the number of physical electrical lanes running to the connector.

x16 PCIe Riser (Optional Secondary)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
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Standard Features

4	PCIe Gen2	x16	x16	16	Full Length, Full Height slot	Supports up to 225W; single wide cards only
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* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

** Indicates the number of physical electrical lanes running to the connector.

Storage Controller
One of the following depending on Model

Entry Models	HP Smart Array P410i/Zero Memory Controller (RAID 0/1/1+0)
Base Models	HP Smart Array P410i/256 MB Controller (RAID 0/1/1+0/5/5+0)
Performance Models	HP Smart Array P410i/512 MB BBWC Controller (RAID 0/1/1+0/5/5+0/6)
High Efficiency Models	HP Smart Array P410i/Zero Memory Controller (RAID 0/1/1+0)
Available upgrades: 256MB, 512MB with BBWC, Battery kit upgrade (for BBWC), and Smart Array Advanced Pack (SAAP).	

Storage

Diskette Drive	None Standard
Optical Drive	None Standard on Entry, High Efficiency, and Base Models
One of the following depending on Model	HP Slim SATA DVD RW Optical Drive Standard on Performance Models
Hard Drives	None Standard

Maximum Internal Storage

Hot Plug SFF SAS	4.80TB	16 x 300GB
Hot Plug LFF SAS	6.0TB	6 x 1TB

Interfaces

Serial	1
Pointing Device (Mouse)	1
Graphics	1
Keyboard	1
VGA	2 (1 front, 1 back)
Network RJ-45	2
iLO remote management port	1
SD slot	1
USB 2.0 Ports	5 total: 2 front, 2 back, 1 internal
NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html .	

Graphics

Integrated ATI ES1000, 32MB video standard
<ul style="list-style-type: none">16 bit color: maximum resolution of 1600 x 120032 bit color: maximum resolution of 1280 x 1024

NOTE: Maximum resolution available via iLO 2 remote console is 1280 x 1024.



Standard Features

Form Factor	Rack (2U); Height 3.38-inch (8.59 cm); Width: 17.25 (44.54 cm); Depth: 27.25 inches (69.98 cm)
HP Insight Control Suite	<p>HP Insight Control suite delivers essential management, including proactive health management, lights out remote control, optimization of power usage, rapid server deployment, performance analysis, vulnerability scanning and patch management and virtual machine management.</p> <p>HP Insight Control suite installs and licenses the following components by default using a wizard-based integrated installer:</p> <ul style="list-style-type: none">• HP Systems Insight Manager• HP iLO Advanced Pack• HP Insight Rapid Deployment software• HP Insight Power Manager software• HP Insight Performance Manager module• HP Insight Vulnerability and Patch Manager module• HP Insight Virtual Machine Manager software for ProLiant <p>Additional Insight Software standalone products and management tools included on the Insight Software media kit can be installed manually:</p> <ul style="list-style-type: none">• HP Insight Server Migration software for ProLiant NOTE: HP Insight Server Migration software for ProLiant is licensed separately from Insight Control suite.• HP Insight Remote Support Standard• HP Insight Remote Support Advanced (previously Service Essentials Remote Support Pack) <p>NOTE: HP Insight Server Migration software for ProLiant can be installed from the SMP CD included in the Insight Software media kit.</p> <p>NOTE: For additional product and licensing information about HP Insight Control suite, visit: http://www.hp.com/go/ice.</p> <p>NOTE: As of Feb. 1, 2009, HP iLO Power Management Pack is being discontinued. Customer can either purchase HP Insight Control suite which contains all the components of IPMP or the standalone components which include iLO Advanced, Insight Power Manager software and System Insight Manager.</p> <p>HP Insight Control Environment for Linux (ICE-Linux) provides comprehensive discovery, imaging & deployment, monitoring, and management for Linux-based ProLiant server platforms. Built on the industry-leading HP Systems Insight Manager framework, this solution integrates open source technology with experience leveraged from HP's Linux products in HP ICLE and HP XC Clusters, while providing paths to the future with developing management technologies.</p> <p>HP Insight Control suite and most HP Insight Software products include a 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.</p>

Standard Features

HP ProLiant Onboard Administrator

HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP ProLiant Onboard Administrator functions without additional software, and can be accessed from any location via a web browser. It works hand-in-hand with HP Systems Insight Manager, Insight Control, and Insight Dynamics - VSE suite helping customers unlock the value of the ProLiant platform and deliver the highest possible quality of IT service to the business.

Capabilities of the HP ProLiant Onboard Administrator embedded in ProLiant ML/DL servers include, but are not limited to the following:

- Rom-based Setup Utility (RBSU) and Option Rom Configuration for Arrays (ORCA)
 - IML and iLO event logging
 - Automatic Server Recovery (ASR)
 - OS independent hardware health status
 - Present server power consumption
 - Virtual Unit ID control
 - Remote serial console
 - Virtual power button control
 - Dynamic Sector Repairing (with Smart Array controller)
 - Drive Parameter Tracking (with Smart Array controller)
 - Hot Spare Boot
- NOTE:** Upon the event of a failed processor in a multi-processing environment, the system will automatically reboot and attempt to use the remaining good processor.

Unlock the full remote administration capabilities of HP ProLiant Onboard Administrator with Integrated Lights-Out 2 Advanced.

Server Management Stand Alone Software Products

HP Systems Insight Manager	HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible standards-based environment to centrally manage servers, storage and other infrastructure devices, (both HP and non-HP) across multiple operating system platforms. For additional information, please see: www.hp.com/go/insight
HP Insight Rapid Deployment software	HP Insight Rapid Deployment Software (RDP) extends HP Systems Insight Manager with a complete deployment solution for HP ProLiant servers. RDP provides a central location to configure server hardware, deploy Windows, Linux and VMware ESX operating environments and install HP ProLiant Support Pack drivers using images and scripted profiles. For more information, visit: http://www.hp.com/go/rdp .
HP Insight Server Migration software for ProLiant	Upgrading, replacing, or virtualizing your existing server? Effortlessly transition to new virtual or physical HP ProLiant servers or BladeSystem with automated, accurate and affordable migration of OS, application and data. HP Insight Server Migration software for ProLiant automates the manual processes required for migrating servers between physical or virtual platforms, whether migrating to VMware or Microsoft or Citrix virtual machines. SMP allows all of the following migrations: <ul style="list-style-type: none">● physical to ProLiant● physical to virtual● virtual to virtual● virtual to ProLiant NOTE: For more information, visit: http://www.hp.com/go/migrate .
HP Insight Dynamics - VSE suite for ProLiant	The HP Insight Dynamics - VSE suite for ProLiant is advanced infrastructure management software that allows you to analyze and optimize your adaptive infrastructure to manage physical and virtual resources in the same way. HP Insight Dynamics - VSE gives you a



Standard Features

powerful toolkit to accelerate complex technology projects and simplify daily operations. It enables you to plan capacity and power continuously balance across physical and virtual resources, ensure cost-effective high availability and provision infrastructure consistently. HP Insight Orchestration, an optional extension to Insight Dynamics - VSE, 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. HP Insight Recovery, also an optional extension for Insight Dynamics - VSE, enables cost-effective disaster recovery for physical and virtual environments. Application environments can 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>,
<http://www.hp.com/go/insightorchestration>,
<http://www.hp.com/go/insightrecovery>

HP Integrated Lights-Out (iLO) Advanced Pack	Unlocks the full capabilities of the ProLiant Onboard Administrator with comprehensive remote control including Virtual KVM remote graphical console, power management capabilities such as power measurement, regulation, and capping, new iLO Text Console, automatic and on-demand video recording of server events, global team collaboration for up to four remote users, virtual media (floppy, CD/DVD, USB key), virtual folders, and enterprise security (directory services and two-factor authentication). For additional information, please see: www.hp.com/go/iLO
HP Insight Power Manager software (IPM)	Upgrades the single-server remote management capabilities of iLO Select/Advanced to include centralized reporting and policy-based management of power consumption and thermal output provided by the Insight Power Manager. IPM unifies all of this functionality within a single user interface - HP Systems Insight Manager. For additional information, please see: www.hp.com/go/ipm

NOTE: Flexible and volume quantity license kits are available for Insight Software products. Refer to: <http://www.hp.com/servers/proliantessentials> or the various Insight Software product QuickSpecs for more information.

Core Infrastructure Management	HP Foundation Pack	<p>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.</p> <p>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:</p> <p>www.hp.com/go/foundation.</p> <p>The foundation pack includes:</p> <ul style="list-style-type: none">• HP SmartStart• HP Management• HP ProLiant Firmware Maintenance <p>SmartStart version supported (minimum): SmartStart 8.20 http://www.hp.com/servers/smartstart</p>
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NOTE: In an effort to support reducing our environmental impact, the



Standard Features

Insight Management Providers (WBEM)

HP ProLiant Essentials Foundation Pack 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.

The HP Insight Management WBEM Providers leverage the rich set of base-level instrumentation provided by the system management controllers and drivers, I/O controllers and drivers, and system firmware interfaces delivering in-depth hardware management, including hardware inventory data, system state, and event notifications.

Key Benefits Include:

- Heightened Security
 - Single integrated Security Model
 - Built using industry standard secure protocols and encryption algorithms (SSL, SSH)
 - Reduce the number of entry points into internal network
- Reduced complexity of setup and configuration
- Delivers standards-based management across vendor platforms
- Robust in-depth and usable data that is provided to the HP System Management Homepage and Central Management Console
- Guaranteed event delivery
- Reduces overall load on the server by smaller agent footprint and maintenance burden
- Provides in-depth hardware management, inventory data, system state, and event notifications

The Insight Management Providers are included on ProLiant Support Packs.

For additional information about the Management Providers please visit <http://www.hp.com/go/HPwbem>

Insight Management Agents (SNMP)

The Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers.

Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the HP Insight Rapid Deployment software.

For additional information about the Management Agents and the HP System Management Homepage please visit the management Web site at: <http://www.hp.com/servers/manage>.

Subscriber's Choice

Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides software and driver change notifications for ProLiant products. Sign up at: <http://www.hp.com/go/subscriberschoice> and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.

ProLiant Support Packs and ROMPaq, software

The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available through ProLiant Support Packs the HP Insight Rapid Deployment Software, SmartStart or downloaded from software and drivers download pages website at: <http://www.hp.com/go/support>.

Standard Features

HP Serviceguard for Linux (SGLX)

HP Serviceguard for Linux provides high availability clustering for Linux applications running on HP Integrity, HP ProLiant and other supported industry-standard servers. Serviceguard for Linux reduces planned and unplanned downtime and delivers efficient, continuous access to business-critical applications - with all of the enterprise features you expect from HP.

This high availability clustering solution is designed to protect applications and services from a wide variety of software and hardware failures, monitoring the health of each server (node) and quickly responding to failures such as those that affect system processes, system memory, LAN media and adapters, and application processes.

For the most recent list of Linux distributions & kernels, servers and storage supported with Serviceguard for Linux, please see:
ftp://ftp.compaq.com/pub/products/servers/ha/linux/SGLX_Certification_Matrix.pdf

The following is a quick summary of HP Serviceguard for Linux features and support:

- Supported Virtual Machines
 - SG/LX in HP Integrity Virtual Machines guests
 - SG/LX in VMware ESX guests
 - SG/LX in Red Hat and SUSE Xen hosts (DOM0)
- Application Integration Toolkits
 - HP Serviceguard for Linux Oracle Database Toolkit
 - HP Serviceguard Extension for SAP on Linux (SGeSAP/LX)
 - Free Application Integration Toolkits:
 - Apache
 - MySQL
 - NFS
 - PostgreSQL
 - Samba
 - Tomcat
 - Sendmail
- Disaster Tolerant Solutions
 - HP Serviceguard for Linux Extended Distance Cluster (XDC) extends cluster distances up to 100 km, utilizes software RAID mirroring for data replication and is storage array independent
 - HP StorageWorks XP/EVA Cluster Extension Software for Linux (CLX) works seamlessly with HP Serviceguard for Linux, HP StorageWorks Continuous Access, and HP Disk Arrays to automate failover and failback between sites
- Software updates are distributed by HP Services to customers with support contracts

NOTE: For additional information including software and server support on HP Serviceguard for Linux, visit: <http://www.hp.com/go/sglx> or see the HP Serviceguard for Linux QuickSpecs.
NOTE: HP Serviceguard for Linux products for HP ProLiant and select 3rd party x86 class servers include 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/swsupport>.

Industry Standard Compliance

ACPI 2.0 Compliant
PCI 2.2 Compliant
WOL Support
Microsoft® Logo certifications
USB 2.0 Support



Standard Features

Security

- Power-on password
- Keyboard password
- Diskette drive control
- Diskette boot control
- QuickLock, Network Server Mode
- Parallel and serial interface control
- Administrator's password

Security - Trusted Platform Module

Trusted Platform Module option kit

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

NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.

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.

Server Power Cords

High voltage power cord ships standard with all part numbers.

NOTE: HP ProLiant DL servers no longer ship standard with a 12-foot NEMA 5-15P to C13 power cords (227099-001) that allow connection to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to PDU's in data center racks so they now ship standard with only a PDU 6-foot C-14 to C13 power cord (142258-001). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the 12-foot NEMA 5-15 to C13 power cord (227099-001) must be ordered separately. Also available: 110 volt 6-Foot NEMA 5-15p to C13 (AF556A).

UPS and PDU Power Cord Matrix

Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units:

<http://h18004.www1.hp.com/products/servers/proliantstorage/power-protection/index.html>

Power Supply

HP has a new design for ProLiant power. The new Common Slot Power Supply bay. This design provides the customer with commonality in power supplies across multiple platforms to save on the cost of spares and allows HP to offer multiple power solutions to fit the customers' needs. Many HP ProLiant Servers come with Common Slot, High Efficiency and Right-Size Power Supplies. Common Slot (CS) designates commonality of the power supply across multiple ProLiant servers. HP's new Common Slot power supplies are designed for highest efficiency to provide power efficiency without degrading performance of the ProLiant. Power Supplies will have efficiency ratings up to 92%. There are three Right Size power options available, depending on the configuration of your server. To make sure you select the correct power supply to meet your configuration, we suggest that you use the HP [Power Advisor](#) to decide the "Right-Size" for your configuration. All HP Common Slot power sources are UL, CE Mark Compliant, Hot Plug and Redundant.

Standard Features

Common Slot ProLiant	<p>It is highly recommended that you use the HP Power Advisor in defining the "Right-Size" power supply for your needs. HP offers four Power Supply Options:</p> <ul style="list-style-type: none">• 460Watts, Common Slot, 92% Efficiency• 750Watts, Common Slot, 92% Efficiency• 1200Watts, Common Slot, 90% Efficiency• 1200Watts, -48V DC, Common Slot <p>HP's ProLiant Common Slot Power supplies (460W & 750W) meet multiple Energy Efficiency Initiatives. Climate Savers Computing Initiative GOLD, ECOS Consulting 80PLUS GOLD and plans on offering models that meet the Energy Star for Server requirements when they are published.</p> <p>HP's ProLiant Common Slot Power supplies (1200W) meet multiple Energy Efficiency Initiatives. Climate Savers Computing Initiative Bronze, ECOS Consulting 80PLUS Bronze Power Supply requirements.</p> <p>Redundant Power: Optional (1+ 1 or n+n redundant) power supplies can be purchased through power supply option kits (see Redundant Options for part numbers).</p>
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System Fans	<p>Fully redundant hot plug fans ship standard (N+1).</p> <p>NOTE: One processor models include four fans. Two processor models include six fans.</p>
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Operating Systems and Virtualization Software Support for ProLiant Servers	<p>Microsoft Windows Server</p> <p>Microsoft Windows Server Hyper-V</p> <p>Red Hat Enterprise Linux (RHEL)</p> <p>SUSE Linux Enterprise Server (SLES)</p> <p>Oracle Enterprise Linux (OEL)</p> <p>Solaris 10 for x86/x64 based Systems</p> <p>NetWare</p> <p>VMware</p> <p>HP Citrix Essentials for XenServer</p> <p>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, please visit our Support Matrix at: http://www.hp.com/go/ossupport and our driver download page www.hp.com/support/DL380G6.</p>
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Standard Features

Rack Airflow Requirements

Rack 10000 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 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 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: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: www.hp.com/servers/dl380.

Rack Kit

The HP ProLiant DL380 quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000*, 9000, 10000 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.

* High Airflow Inserts (High Air Flow Rack Door Insert for the 7142 Rack (single) - PN: 327281-B21; or High Air Flow Rack Door Insert for the 7142 Rack (6-pack) - PN: 327281-B22) are required to support the HP ProLiant DL380 in 7000 series racks. The DL380 Cable Management Arm is not supported on 7000 series racks.

NOTE: Cable management arm must be removed to access hot-plug power supplies when the cable management arm is mounted on the right.

Telco Rack Support

DL380 Telco Rack Kit:

Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions: <http://www.racksolutions.com/hp/>.

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, EVA7xxx,,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>.

Standard Features

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

Service and Support

HP Care Pack services include coverage for the HP branded hardware options qualified for the server and purchased at the same time or afterward that are internal to the enclosure. This also includes the 22" and smaller external monitors and tower UPS options up to 3kVA. These items will be covered at the same service level and for the same coverage period as the server. Coverage of UPS Battery is not included, and standard warranty terms & conditions apply. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

To fully capitalize on your HP ProLiant servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions, provides a range of support services designed to meet the varying needs of your business. Whether an SMB, or large global corporation, HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Recommended Service - simplify ProLiant solution implementation, maintenance, and management.

- **Support:** 3-Year 4-Hour response 24x7 Same Business Day Coverage only
- **Deployment Service:** Installation and Start up only

Enhanced Service - optimize service level to increase IT performance and availability.

- **Support:** 3-Year Support Plus 24 only

Refer to the information on "Installation & Start-Up" for service on ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet; to be delivered on a scheduled basis 8am-5pm, M-F, excluding HP holidays.

NOTE: For a complete listing of service offerings and information visit:

<http://www.hp.com/services/proliantservices>

<http://www.hp.com/go/proliant/carepack>

HPC Interconnects

NOTE: High Performance Computing (HPC) interconnect technologies are available for the DL380 under the Cluster Platform product portfolio. These high-speed interconnects are fully supported by HP when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPC Clusters with InfiniBand, Gigabit Ethernet or Myrinet Interconnects:
<http://www.hp.com/techservers/clusters/ucp/index.html>

HPC Interconnect	InfiniBand	PCI-X and PCI-Express adapters
	Gigabit Ethernet	Use embedded ports
	Myrinet XP	PCI-X Rev D and Rev E adapters

Models

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

HP DL380 G6 Performance Models Quad-Core Models HP DL380G6 X5560 491315-xx1 HP DL380G6 X5550 491316-xx1	Processor(s)	(2) Intel® Xeon® Processor X5560 (2.80 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3) (2) Intel® Xeon® Processor X5550 (2.66 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)
	Two of the following depending on Model	
	Cache Memory	8MB (1 x 8MB) Level 3 cache
	Memory	12 GB (6 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
	Network Controller	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P410i/512MB with BBWC
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays Optional: 16 SFF SAS/SATA HDD Bays
	Optical Drive	HP Slim SATA DVD RW drive
	Power Supply	(2) 750W Hot Plug Power Supplies
	Fans	(6) (N+1 redundancy standard)
	Form Factor	Rack (2U), Height 3.38-inch (8.59 cm); Width: 17.25 (44.54 cm); Depth: 27.25 inches (69.98 cm)

HP DL380 G6 Performance Models with ICE standard Quad-Core Models HP DL380G6 X5560 470065-067 US 470065-071 APJ 470065-072 EURO HP DL380G6 X5550 470065-068 APJ 470065-069 EURO	Processor(s)	(2) Intel® Xeon® Processor X5560 (2.80 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3) (2) Intel® Xeon® Processor X5550 (2.66 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)
	Two of the following depending on Model	
	Cache Memory	8MB (1 x 8MB) Level 3 cache
	Memory	12 GB (6 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
	Network Controller	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P410i/512MB with BBWC
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays Optional: 16 SFF SAS/SATA HDD Bays
	Optical Drive	HP Slim SATA DVD RW drive
	Power Supply	(2) 750W Hot Plug Power Supplies
	Fans	(6) (N+1 redundancy standard)
	Insight Control Environment (ICE)	ICE 24x7 support
	Form Factor	Rack (2U), Height 3.38-inch (8.59 cm); Width: 17.25 (44.54 cm); Depth: 27.25 inches (69.98 cm)

Models

HP DL380 G6 Base Models Quad-Core Models HP DL380G6 E5540 491332-xx1 HP DL380G6 E5530 491324-xx1 HP DL380G6 E5520 491325-xx1	Processor(s)	(1) Intel® Xeon® Processor E5540 (2.53 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) (1) Intel® Xeon® Processor E5530 (2.40 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) (1) Intel® Xeon® Processor E5520 (2.26 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)
	Cache Memory	8MB (1 x 8MB) Level 3 cache
	Memory	6 GB (3 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
	Network Controller	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P410i/256MB Controller
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays Optional: 16 SFF SAS/SATA HDD Bays
	Optical Drive	None ship standard
	Power Supply	(1) 460W Hot Plug Power Supply
	Fans	(4) (N+1 redundancy standard)
	Form Factor	Rack (2U), Height 3.38-inch (8.59 cm); Width: 17.25 (44.54 cm); Depth: 27.25 inches (69.98 cm)

HP DL380 G6 High Efficiency Models Quad-Core Models HP DL380G6 L5520 491335-xx1	Processor(s)	(1) Intel® Xeon® Processor L5520 (2.26 GHz, 8MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2)
	Cache Memory	8MB (1 x 8MB) Level 3 cache
	Memory	4 GB (2 x 2 GB) PC3-10600E (DDR3-1333) Unbuffered DIMMs
	Network Controller	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P410i/Zero Memory Controller
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays Optional: 16 SFF SAS/SATA HDD Bays
	Optical Drive	None ship standard
	Power Supply	(1) 460W Hot Plug Power Supply
	Fans	(4) (N+1 redundancy standard)
	Form Factor	Rack (2U), Height 3.38-inch (8.59 cm); Width: 17.25 (44.54 cm); Depth: 27.25 inches (69.98 cm)

Models

HP DL380 G6 Entry Models Quad-Core Models HP DL380G6 E5504 491505-xx1	Processor(s)	(1) Intel® Xeon® Processor E5504 (2.00 GHz, 4MB L3 Cache, 80W, DDR3-800)
	Cache Memory	4MB (1 x 4MB) Level 3 cache
	Memory	4 GB (2 x 2 GB) PC3-10600R (DDR3-1333) Registered DIMMs
	Network Controller	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array P410i/Zero Memory Controller
	Hard Drive	None ship standard
	Internal Storage	Standard: 8 SFF SAS/SATA HDD Bays Optional: 16 SFF SAS/SATA HDD Bays
	Optical Drive	None ship standard
	Power Supply	(1) 460W Hot Plug Power Supply
	Fans	(4) (N+1 redundancy standard)
	Form Factor	Rack (2U), Height 3.38-inch (8.59 cm); Width: 17.25 (44.54 cm); Depth: 27.25 inches (69.98 cm)

Country Code Key	XX=00	U.S.
	XX=20	Brazil
	XX=29	Japan
	XX=37	APD
	XX=42	Euro
	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 CTO product offerings and requirements.

NOTE: HP does not allow factory integration of options into standard models listed above. Configure-to-order servers must start with a CTO Chassis.

NOTE: FIO indicates that this option only available as a Factory Installable Option.

Step 1: Base Configuration (choose one of the following configurable models)

Models	HP DL380R06 CTO Chassis	494329-B21
	Factory Integrated Model ships with:	
	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters	
	Smart Array P410i Controller	
	I/O slots - 3 Slots come standard:	
	<ul style="list-style-type: none">Slot 1 - FL/FH x8 PCIE (x16 connector)Slot 2 - HL/FH x4 PCIE (x8 connector)Slot 3 - HL/FH x4 PCIE (x8 connector)<ul style="list-style-type: none">Additional Slots may be added via selections from the PCI Information and Options subsection	
	System Fans - 4 (2 additional fans included with second processor)	
	Drive Cage - 8-SFF (Second SFF drive cage optional)	
	USB - 2 Rear, 2 Front, 1 Internal, 1 SD slot	
	Server Management - (iLO2) (embedded)	
	NOTE: Power Supply not included - choose from Options section	
	HP DL380R06 LFF CTO Chassis	516919-B21
	Factory Integrated Model ships with:	
	Two HP NC382i Dual Port Multifunction Gigabit Server Adapters	
	Smart Array P410i Controller	
	I/O slots - 3 Slots come standard:	
	<ul style="list-style-type: none">Slot 1 - FL/FH x8 PCIE (x16 connector)Slot 2 - HL/FH x4 PCIE (x8 connector)Slot 3 - HL/FH x4 PCIE (x8 connector)<ul style="list-style-type: none">Additional Slots may be added via selections from the PCI Information and Options subsection	
	Drive Cage - 6-LFF	
	System Fans - 4 (2 additional fans included with second processor)	
	USB - 2 Rear, 2 Front, 1 Internal, 1 SD slot	
	Server Management - (iLO2) (embedded)	
	NOTE: Power Supply not included - choose from Options section	

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

Processors	Quad-Core Processors	
	Intel® Xeon® Processor E5504 (2.00 GHz, 4MB L3 Cache, 80W, DDR3-800), FIO	492136-L21
	Intel® Xeon® Processor E5506 (2.13 GHz, 4MB L3 Cache, 80W, DDR3-800), FIO	492131-L21
	Intel® Xeon® Processor L5506 (2.13 GHz, 4MB L3 Cache, 60W, DDR3-800), FIO	500089-L21
	Intel® Xeon® Processor E5520 (2.26 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2), FIO	492239-L21



Configuration Information - Factory Integrated Models

	Intel® Xeon® Processor L5520 (2.26 GHz, 8MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2), FIO	500087-L21
	Intel® Xeon® Processor E5530 (2.40 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2), FIO	492237-L21
	Intel® Xeon® Processor E5540 (2.53 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2), FIO	492244-L21
	Intel® Xeon® Processor X5550 (2.66 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3), FIO	492234-L21
	Intel® Xeon® Processor X5560 (2.80 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3), FIO	492232-L21
	Intel® Xeon® Processor X5570 (2.93 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3), FIO	500094-L21
	Dual-Core Processors	
	Intel® Xeon® Processor E5502 (1.86 GHz, 4MB L3 Cache, 80W, DDR3-800), FIO	500085-L21
Base Memory	Registered DIMMs (RDIMMs)	
	HP 2GB 2Rx8 PC3-10600R-9 Kit	500656-B21
	HP 4GB 2Rx4 PC3-10600R-9 Kit	500658-B21
	HP 4GB 4Rx8 PC3-8500R-7 LP Kit	500660-B21
	HP 8GB 2Rx4 PC3-8500R-7 Kit	516423-B21
	HP 8GB 2Rx4 PC3-10600R-9 Kit	500662-B21
	Unbuffered with ECC DIMMs (UDIMMs)	
	HP 1GB 1Rx8 PC3-10600E-9 Kit	500668-B21
	HP 2GB 2Rx8 PC3-10600E-9 Kit	500670-B21
	NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator .	
	NOTE: Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: www.hp.com/go/proliant-energy-efficient .	
Power Supplies	NOTE: Refer to HP Power Advisor when selecting a power supply for your configuration, www.hp.co/go/hppoweradvisor . Many HP ProLiant Servers now offer new power options, including Common Slot Power Supplies. These power supplies come in multiple power ratings and higher efficiency levels to offer the Right Size solution to fit your configuration. This provides improved power delivery and the advantage of reclaiming lost power. 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/proliant-energy-efficient " or www.hp.com/go/hppoweradvisor	516914-B21
	HP 460W CS HE Power Supply Kit	503296-B21
	HP 750W CS HE Power Supply Kit	512327-B21
	HP 1200W CS HE Power Supply Kit	500172-B21
	HP 1200W-48V DC Common Slot Power Supply	437573-B21
	NOTE: DC power supplies contain a -48V DC power cord designed for in rack DC power rectifiers.	
	NOTE: Option Kits contain optional power supply, an IEC power cable and PDU IEC cables.	

Configuration Information - Factory Integrated Models

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

Controllers	NOTE: If Additional Memory Cache Module or Controller is Required please pick one of the following:	
	HP 256 MB P-series cache module FIO	534108-B21
	NOTE: Available for P410i only.	
	512MB BBWC	462967-B21
	NOTE: When used with the embedded HP Smart Array P410i controller, this battery module also requires a 24 inch SFP Battery Cable (496029-B21).	
	HP Smart Array P212/256 MB w/ Battery FIO	491191-B21
	HP Smart Array P410/256 MB w/ Battery FIO	491195-B21
Integrated hypervisor (iHV)	HP Smart Array P411/256 MB w/ Battery FIO	491193-B21
	NOTE: HP VMware ESXi free download from www.software.hp.com - select Virtualization	
	HP VMware 3i Enterprise 2p Lic SW	430341-B21
	NOTE: For additional information and options kits, please see the QuickSpecs at: www.hp.com/go/vmware .	
	NOTE: HP XenServer Select Edition free Download from: http://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPXS	
	HP Essentials -XenServer Platinum Nm Lic	530753-B21
	HP ProLiant Virtual Console Full License	508293-B21
Performance Packs	XenServer HP Ent Upg iSW Lic	464676-B21
	HP Citrix Essentials for XenServer Enterprise Edition	508294-B21
	NOTE: For additional information and options kits, please see the HP Citrix Essentials for XenServer QuickSpecs at www.hp.com/go/citrix	
	The HP ProLiant DL380 performance packs are necessary to configure a HP ProLiant DL380 Performance Model. HP ProLiant DL380 Performance model includes the latest performance technologies and enterprise class availability features pre-installed for convenience and value. The performance pack includes a 2nd processor and a redundant power supply.	
	NOTE: Must also select Slimline SATA DVD RW Optical Drive (481043-B21) to achieve parity to DL380 High Performance Models.	
	HP DL380G6 2.6 HPM FIO Perf Pack	500583-B21
	HP DL380G6 2.8 HPM FIO Perf Pack	500584-B21

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. Contact your local sales representative for additional information.

DL380 G6 Unique Options	HP StorageWorks RDX160 Removable Disk Backup System DL Server Module	AP724A
	NOTE: Mounts in DL380 G6 second drive cage slot (160GB of Disk Storage)	
	HP StorageWorks RDX320 Removable Disk Backup System DL Server Module	AP725A
	NOTE: Mounts in DL380 G6 second drive cage slot (320GB of Disk Storage)	
	HP StorageWorks RDX500 Removable Disk Backup System DL Server Module	AP726A
	NOTE: Mounts in DL380 G6 second drive cage slot (500GB of Disk Storage)	
	HP 8SFF CAGE 380G6	516914-B21
	NOTE: Second drive cage installation replaces internal optical bay.	
	NOTE: Second drive cage requires second controller or HP SAS Expander Card (468406-B21).	
	HP DL380G6 3 Slot PCI-E Riser Kit	500579-B21

Processors

Quad-Core Processors

Intel® Xeon® Processor E5504 (2.00 GHz, 4MB L3 Cache, 80W, DDR3-800)	492136-B21
Intel® Xeon® Processor E5506 (2.13 GHz, 4MB L3 Cache, 80W, DDR3-800)	492131-B21
Intel® Xeon® Processor L5506 (2.13 GHz, 4MB L3 Cache, 60W, DDR3-800)	500089-B21
Intel® Xeon® Processor E5520 (2.26 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)	492239-B21
Intel® Xeon® Processor L5520 (2.26 GHz, 8MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2)	500087-B21
Intel® Xeon® Processor E5530 (2.40 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)	492237-B21
Intel® Xeon® Processor E5540 (2.53 GHz, 8MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2)	492244-B21
Intel® Xeon® Processor X5550 (2.66 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)	492234-B21
Intel® Xeon® Processor X5560 (2.80 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)	492232-B21
Intel® Xeon® Processor X5570 (2.93 GHz, 8MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3)	500094-B21

Dual-Core Processors

Intel® Xeon® Processor E5502 (1.86 GHz, 4MB L3 Cache, 80W, DDR3-800)	500085-B21
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Core Options

Memory	Registered DIMMs (RDIMMs)	
	HP 2GB 2Rx8 PC3-10600R-9 Kit	500656-B21
	HP 4GB 2Rx4 PC3-10600R-9 Kit	500658-B21
	HP 4GB 4Rx8 PC3-8500R-7 LP Kit	500660-B21
	HP 8GB 2Rx4 PC3-8500R-7 Kit	516423-B21
	HP 8GB 2Rx4 PC3-10600R-9 Kit	500662-B21
	Unbuffered with ECC DIMMs (UDIMMs)	
	HP 1GB 1Rx8 PC3-10600E-9 Kit	500668-B21
	HP 2GB 2Rx8 PC3-10600E-9 Kit	500670-B21
	NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator . NOTE: Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: www.hp.com/go/proliant-energy-efficient	
Optical Drives	HP Slim SATA DVD RW Optical Drive	481043-B21
	NOTE: Included in performance models.	
	HP Slim SATA DVD-ROM Optical Drive	481041-B21
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.	
	SAS Hot Plug SFF Enterprise (ENT) Drives	
	HP 300GB 6G SAS 10K SFF DP ENT HDD	507127-B21
	HP 300GB 3G SAS 10K SFF DP ENT HDD	492620-B21
	HP 146GB 6G SAS 10K SFF DP ENT HDD	507125-B21
	HP 146GB 3G SAS 10K SFF DP ENT HDD	418367-B21
	HP 146GB 3G SAS 15K SFF DP ENT HDD	504062-B21
	HP 72GB 3G SAS 15K SFF DP ENT HDD	418371-B21
	HP 72GB 3G SAS 10K SFF DP ENT HDD	384842-B21
	HP 36GB 3G SAS 15K SFF DP ENT HDD	418369-B21
	NOTE: SAS Enterprise drives have a 3-year warranty. Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)	
	SATA Hot Plug SFF Entry (ETY) Drives	
	HP 250GB 3G SATA 5.4K SFF ETY HDD	460355-B21
	HP 120GB 1.5G SATA 5.4K SFF ETY HDD	458924-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)	
	SAS Hot Plug 3.5" Enterprise (ENT) Drives	
	HP 450GB 3G SAS 15K 3.5" DP ENT HDD	454232-B21
	HP 400GB 3G SAS 10K 3.5" DP ENT HDD	459508-B21
	HP 300GB 3G SAS 15K 3.5" DP ENT HDD	416127-B21
	HP 146GB 3G SAS 15K 3.5" DP ENT HDD	384854-B21
	HP 72GB 3G SAS 15K 3.5" DP ENT HDD	384852-B21

Core Options

SAS Hot Plug 3.5" Midline (MDL) Drives

HP 1TB 3G SAS 7.2K 3.5" DP MDL HDD	461137-B21
HP 750GB 3G SAS 7.2K 3.5" DP MDL HDD	461135-B21

SATA Hot Plug 3.5" Midline (MDL) Drives

HP 1TB 3G SATA 7.2K 3.5" MDL HDD	454146-B21
HP 750GB 3G SATA 7.2K 3.5" MDL HDD	458930-B21
HP 500GB 3G SATA 7.2K 3.5" MDL HDD	458928-B21
HP 250GB 3G SATA 7.2K 3.5" MDL HDD	458926-B21
HP 160GB 3G SATA 7.2K 3.5" MDL HDD	458945-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)

Communications

HP NC112T PCIe Gigabit Server Adapter	503746-B21
HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
HP NC364T PCI Express Quad Port Gigabit Server Adapter	435508-B21
NOTE: Does not support Windows 2000.	
HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
HP NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21
HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter	458492-B21
HP NC522SFP Dual Port 10GbE Server Adapter	468332-B21

NOTE: A minimum of two gigabyte (2 GB) of server memory is required per each NC522SFP adapter.

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

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

Riser Cage Options

HP DL380G6 3 Slot PCI-E Riser Kit	500579-B21
HP DL385G5p PCI-X Riser Kit	494322-B21
HP PCI x16 Riser Kit	494323-B21

Redundant Options

CAUTION: In ProLiant Servers that have more than one power slot (bay), only same size power supplies are recommended. If non-matched power supplies are inserted you will get errors and operation will fail.

HP 460W CS HE Power Supply Kit	503296-B21
HP 750W CS HE Power Supply Kit	512327-B21
HP 1200W CS HE Power Supply Kit	500172-B21
HP 1200W-48V DC Common Slot Power Supply	437573-B21

NOTE: DC power supplies contain a -48V DC power cord designed for in rack DC power rectifiers.

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

Additional Options

HP Insight Control Suite

NOTE: Electronic licensing options are available for Insight Control suites software products. Please see the appropriate Insight Control QuickSpecs for additional information. www.hp.com/go/ice

HP Insight Control Suite

HP Insight Control suite, No Media 1-Server License including 1 year of 24x7 Technical Support and Updates 452148-B22

NOTE: This part number can be purchased as a single license or as multiple licenses with a single activation key. Customer 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). Includes one year of 24 x 7 HP Software Technical Support and Update Service.

HP Insight Software Media Kit 436222-B21

NOTE: Insight Software DVD media without licenses. Contains Insight Manager and Insight Software products and components licensed by Insight Control suite. Uses an integrated installer to perform quick and accurate software installation and updates.

NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html

HP Insight Control Linux Edition

HP Insight Control Environment for Linux, Media pack (DVD) - No licenses included 464422-B22

NOTE: This optional Media pack DVD contains the ISO image for HP Insight Control Environment for Linux, HP System Insight Manager, HP Insight Power Manager, HP Insight Virtual Machine Manager software for ProLiant, and an integrated installer. Servers must be acquired separately.

NOTE: This Media pack is optional because the latest ISO image and latest updates may be downloaded at no cost from: <http://www.hp.com/go/ice-linux> (click on Download button).

HP Insight Control Environment for Linux, No Media, 1-Server license, including one year of 24x7 Technical Support and Updates 464423-B22

NOTE: This part number can be used to purchase one (1) license with a single activation key. 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 and Update Service.

NOTE: One certificate is shipped for each license.

NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html

Server Management Stand Alone Software

NOTE: Electronic licensing options are available for select software products. Please see the appropriate Insight Software standalone product QuickSpecs for additional information.

Deploy

HP Insight Rapid Deployment software

HP Insight Rapid Deployment software No Media 1-Server License including 1 year of 24x7 Technical Support and Updates 452151-B21

NOTE: This license allows 1 server to be deployed and managed via RDP. 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: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.html



Additional Options

HP Insight Server Migration software for ProLiant

HP Insight Server Migration software for ProLiant, No Media, Physical / Virtual to ProLiant Single Migration License, including 1 year of 24x7 Technical Support and Updates 460750-B21

NOTE: This license allows 1 physical to ProLiant or virtual to ProLiant migration. Customer will receive a printed license entitlement certificate and documentation 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 and Update Service.

HP Insight Server Migration software for ProLiant, No Media, Physical / Virtual to Virtual Single Migration License, including 1 year of 24x7 Technical Support and Updates 460753-B21

NOTE: This license allows 1 physical to virtual or virtual to virtual migration. Customer will receive a printed license entitlement certificate and documentation 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 and Update Service.

HP Insight Server Migration software for ProLiant, No Media, 1-Year Unlimited Migration License, including 1 year of 24x7 Technical Support 460756-B21

NOTE: This license allows unlimited migrations (physical to ProLiant, physical to virtual, virtual to virtual, and virtual to ProLiant) for one year. Customer will receive a printed license entitlement certificate and documentation 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: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12855_div/12855_div.html

Monitor

HP Insight Dynamics-VSE suite for ProLiant

HP Insight Dynamics-VSE with Insight Control Environment, 1-server license including 1 year of 24x7 Technical Support and Updates 483527-B21

NOTE: This license supports HP ProLiant ML/DL servers and c-Class Blade servers. Customer will receive a printed license entitlement certificate via physical shipment.

HP Insight Dynamics-VSE without Insight Control Environment, 1-server license including 1 year of 24x7 Technical Support and Updates 483531-B21

NOTE: This license supports HP ProLiant ML/DL and c-Class Blade servers. Customer will receive via email a receipt and link to a license entitlement certificate.

NOTE: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/13050_div/13050_div.html

Control

Integrated Lights-Out Advanced Pack

HP Integrated Lights-Out Advanced Pack, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates 512485-B21

NOTE: For additional License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html

HP Insight Control Environment iLO Advanced Upgrade, No Media, 1-Server License including one year of 24x7 support 506503-B21

NOTE: For use in environments where iLO Advanced Pack is already installed and licensed. 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 and Update Service.

NOTE: For additional License Kits, please see the QuickSpecs at:



Additional Options

http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html

Optimize

HP Insight Power Manager software (IPM)

HP Insight Power Manager software, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates 452677-B21

NOTE: Customers purchasing this upgrade must already have an iLO Advanced or Select license on each managed server. 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 and Update Service.

NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12623_div/12623_div.html

HP Insight Virtual Machine Manager software for ProLiant

HP Insight Virtual Machine Manager software for ProLiant, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates 452153-B21

NOTE: 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 and Update Service.

NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.html

NOTE: Flexible and volume quantity license kits are available for Value Packs. Refer to: <http://www.hp.com/servers/proliantessentials> or the various QuickSpecs for more information.

Drive Cage Options	HP 8SFF CAGE 380G6	516914-B21
	NOTE: Second drive cage installation replaces internal optical bay. NOTE: Second drive cage requires second controller or HP SAS Expander Card (468406-B21).	

Secure Digital (SD) Memory Cards	HP Photosmart 2GB Secure Digital (SD) Card	L1877A
	HP Photosmart 4GB Secure Digital High Speed Card (SDHC)	L1878A#707

Security	HP Trusted Platform Module Option Kit	488069-B21
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Storage Controllers	SAS Controllers	
	Smart Array P800 Controller	
	HP Smart Array P800/512 BBWC Controller	381513-B21
	Smart Array P212 Controller	
	HP Smart Array P212/Zero Memory Controller	462828-B21
	HP Smart Array P212/256 MB Controller	462834-B21
	256 MB Cache	462968-B21
	Smart Array P410 Controller	
	HP Smart Array P410/256 MB Controller	462862-B21
	Battery Kit (for Battery Backed Write Cache)	462969-B21
	HP Smart Array P410/512 MB with BBWC Controller	462864-B21
	512MB BBWC	462967-B21
	NOTE: When used with the embedded HP Smart Array P410i controller, this battery module also requires a 24 inch SFP Battery Cable (496029-B21).	



Additional Options

Smart Array P411 Controller

HP Smart Array P411/256 MB Controller	462830-B21
HP Smart Array P411/512 MB with BBWC Controller	462832-B21
512MB BBWC	462967-B21

NOTE: When used with the embedded HP Smart Array P410i controller, this battery module also requires a 24 inch SFP Battery Cable (496029-B21).

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

http://h18000.www1.hp.com/products/quickspecs/12616_div/12616_div.html
(Smart Array P800 Controller)

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)

HP Smart Array Advanced Pack

HP Smart Array Advanced Pack No Media 1-Server license including 1yr 24x7 Technical Support	516471-B21
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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 additional information:

http://h18000.www1.hp.com/products/quickspecs/13200_div/13200_div.html

SAS Controller Options

HP SAS Expander Card	468406-B21
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NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18004.www1.hp.com/products/quickspecs/13232_div/13232_div.html
(SAS Expander Card)

SAS HBA

HP SC08Ge Host Bus Adapter	488765-B21
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NOTE: For use with additional 8 SFF drive cage (516914-B21).

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

http://h18004.www1.hp.com/products/quickspecs/13082_div/13082_div.html
(SC08Ge HBA)

SCSI HBA

HP SC11Xe Host Bus Adapter	412911-B21
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NOTE: Recommended HBA for SCSI tape drive connect.

NOTE: Please see the QuickSpecs for additional information:

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

Additional Options

Power Cords

NOTE: HP ProLiant servers ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs).		
Nema 5-15P to IEC320-C13, North America low voltage (6 ft/2 m)		AF556A
Power Cord, Euro, 10A 250 V Straight (6 ft/1.83 m)		AF568A
Power Cord, UK, 10A 250 V Straight (6 ft/1.83 m)		AF570A
Power Cord, Danish, 10A 250 V Straight (6 ft/1.83 m)		AF566A
Power Cord, Swiss, 10A 250 V Straight (6 ft/1.83 m)		AF565A
Power Cord, Italian, 10A 250 V Straight (6 ft/1.83 m)		AF571A
Power Cord, South Africa, 10A 250 V Straight (8.2 ft/2.5 m)		AF567A

HPC Specific Options

HP IB 4X QDR PCI-e G2 Dual Port HCA	517721-B21
NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html	

Tape Drives

NOTE: For the complete listing of Tape Drive offerings, please see: http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html	
USB Rack-Mount Tape Solutions	
HP StorageWorks 1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive	AG703A
NOTE: Pre-configured with one DAT 160 USB tape drive.	
SAS Rack-Mount Tape Solutions	
NOTE: HP recommends purchasing the HP Smart Array P212 Controller (462828-B21) for a dedicated SAS HBA for tape.	
HP StorageWorks 1U SAS Rack-Mount Kit with one LTO-4 Ultrium 1760	EH946A
NOTE: Pre-configured with one LTO-4 Ultrium 1760 SAS tape drive.	
HP StorageWorks 1U SAS Rack-Mount Kit	AE459A
NOTE: Supports up to (2) half-height SAS tape drives.	
HP StorageWorks LTO-2 Ultrium 448 SAS Internal Tape Drive	DW085A
NOTE: Mounts inside the 1U SAS Rack-Mount Kit (AE459A).	
HP StorageWorks LTO-3 Ultrium 920 SAS Internal Tape Drive	EH847A
NOTE: Mounts inside the 1U SAS Rack-Mount Kit (AE459A).	
NOTE: For an up-to-date listing of the latest O/S and software support details for HP tape drives, please visit: http://www.hp.com/go/connect .	

Additional Options

Disk-Based Backup	RDX Removable Disk Backup	
	HP StorageWorks RDX160 Removable Disk Backup System DL Server Module	AP724A
	NOTE: Mounts in DL380 G6 media bay (160GB of Disk Storage)	
	HP StorageWorks RDX320 Removable Disk Backup System DL Server Module	AP725A
	NOTE: Mounts in DL380 G6 media bay (320GB of Disk Storage)	
	HP StorageWorks RDX500 Removable Disk Backup System DL Server Module	AP726A
	NOTE: Mounts in DL380 G6 media bay (500GB of Disk Storage)	
	NOTE: Please see the HP RDX Removable Disk Backup System QuickSpecs for additional information:	
	http://h18000.www1.hp.com/products/quickspecs/13036_div/13036_div.html	
	D2D Backup	
Tape Autoloaders	HP StorageWorks D2D2502i Backup System	EJ001A
	NOTE: 2 TB raw capacity/1.5 TB useable capacity.	
	HP StorageWorks D2D2504i Backup System	EJ002A
	NOTE: 4 TB raw capacity/3 TB useable capacity.	
	NOTE: Please see the HP D2D Backup Systems QuickSpecs for additional information: http://www.hp.com/go/d2d	
	HP StorageWorks 1/8 G2 Tape Autoloader	
	HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader	AK377A
	HP StorageWorks 1/8 G2 LTO-3 Ultrium 920 SAS Autoloader	AH558A
	HP StorageWorks 1/8 G2 Tape Autoloader Rack Kit	AH166A
	NOTE: Required to install the 1/8 G2 Autoloaders in a standard 19-inch rack; includes rails and rackmount instructions.	
Tape Libraries	HP StorageWorks MSL2024 Tape Library	
	HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library	AK378A
	HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library	AH559A
	HP StorageWorks MSL4048 Tape Library	
	HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library	AK380A
	HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library	AH560A
	NOTE: Please reference the MSL Tape Library QuickSpecs at:	
	http://www.hp.com/go/automation for additional information needed to create a complete solution;	
	reference current compatibility information at:	
	http://www.hp.com/go/ebs .	

Additional Options

High Availability Cluster Options	HP Serviceguard for Linux	
	HP Serviceguard for Linux on HP ProLiant and other third-party x86 Servers - Physical Media Kit	519353-B21
	NOTE: This kit contains media only.	
	HP Serviceguard for Linux on HP ProLiant and other third-party x86 Servers Single-Server License	519354-B21
	Licensed per Server	
	NOTE: This license allows Serviceguard for Linux to be installed on 1 server. 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 and Update Service.	
	HP Serviceguard for Linux - Flexible-Quantity License (for HP ProLiant and other third-party x86 servers)	519355-B21
	Licensed per Server	
	NOTE: This part number can be used to purchase multiple licenses with a single activation key. 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 and Update Service.	
	HP Serviceguard Linux Oracle Database Toolkit for HP ProLiant/x86 Servers	463833-B21
Licensed per cluster		
Includes media and One Year 24x7 Software Support & Updates		
HP Serviceguard Extension for SAP on Linux for HP ProLiant/x86 Servers		463834-B21
Licensed per physical server		
Includes media and One Year 24x7 Software Support & Updates		
HP Serviceguard Linux Extended Distance Cluster (XDC) for HP ProLiant/x86 Servers		463835-B21
Licensed per physical server		
Includes media and One Year 24x7 Software Support & Updates		
NOTE: The above is not a complete list of all HP Serviceguard for Linux product numbers For a detailed list of supported configuration/certification options for HP Serviceguard for Linux please refer to the HP Serviceguard for Linux Configuration & Ordering Guide available at: http://www.hp.com/go/sglx/info .		
NOTE: HP Serviceguard for Linux products running on x86 platforms now include one year of 24 x 7 Software Technical Support and Updates. Please see the Support Information section of the HP Serviceguard for Linux QuickSpecs for details.		
NOTE: For additional information including a complete list of Product Numbers for HP Serviceguard for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html (Worldwide)		

Additional Options

StorageWorks Options	StorageWorks Fibre Channel HBA	
	NOTE: For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html	
	HP StorageWorks FC2142SR 4Gb PCI-e HBA	A8002A
	HP StorageWorks FC2242SR Dual Channel 4Gb PCI-e HBA	A8003A
	HP StorageWorks FC1142SR 4Gb PCI-e HBA	AE311A
	HP StorageWorks FC1242SR Dual Channel 4Gb PCI-e HBA	AE312A
	HP StorageWorks 81Q 8Gb PCI-e FC HBA	AK344A
	HP StorageWorks 81E 8Gb PCI-e FC HBA	AJ762A
	HP StorageWorks 82E 8Gb Dual-port PCI-e FC HBA	AJ763A
	HP StorageWorks 82Q 8Gb Dual Port PCI-e FC HBA	AJ764A
	HP StorageWorks FC2143 4Gb PCI-X 2.0 FC HBA	AD167A
	HP StorageWorks FC2243 Dual Channel 4Gb PCI-X 2.0 FC HBA	AD168A
	HP StorageWorks FC1143 4Gb PCI-X 2.0 FC HBA	AB429A
	HP StorageWorks FC1243 Dual Channel 4Gb PCI-X 2.0 FC HBA	AE369A
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HP StorageWorks 50 Modular Smart Array	HP StorageWorks 50 Modular Smart Array	364430-B21
	NOTE: Please see the QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html (Worldwide)	
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HP StorageWorks 60 Modular Smart Array	HP StorageWorks 60 Modular Smart 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 (Worldwide)	
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HP StorageWorks 70 Modular Smart Array	HP StorageWorks 70 Modular Smart Array	418800-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12652_div/12652_div.html (Worldwide)	
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HP StorageWorks 2000sa Modular Smart Array	HP 2012sa Single Controller Modular Smart Array	AJ752A
	HP 2012sa Dual Controller Modular Smart Array	AJ753A
	NOTE: Please see the QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/13045_div/13045_div.html (Worldwide)	

Additional Options

Uninterruptible Power Systems - Rack	HP R1500 G2 UPS	
	HP, R1.5kVA UPS, 1U, NA	AF419A
	HP, R1.5kVA UPS, 1U, INTL	AF418A
	HP, R1.5kVA UPS, 1U, JPN/TW	AF421A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12507_div/12507_div.html (Worldwide)	
	HP R3000v Uninterruptible Power System	
	HP R3000v UPS	AF444A
	NOTE: The R3000v is available in China and India only.	
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13129_div/13129_div.html (Worldwide)	
	NOTE: For additional information on HP Uninterruptable Power Systems please go to: www.hp.com/servers/rackups .	
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HP Monitored Power Distribution Unit (PDU)	HP Monitored Power Distribution Unit: Full Rack Version	
	HP 17.3 kVA S2324 Monitored PDU- dual input, 3Ø24A (NA/JPN)	AF503A
	HP 8.6 kVA S1324 Monitored PDU- single input, 3Ø, 24A (NA/JPN)	AF504A
	HP 16.6 kVA S2140 Monitored PDU- dual input, 1Ø, 40A (NA/JPN)	AF505A
	HP 8.3 S1140 Monitored PDU- single input, 1Ø, 40A (NA/JPN)	AF506A
	HP 22.1 kVA S2316 Monitored PDU- dual input, 3Ø, 16A (INTL)	AF507A
	HP 11 kVA S1316 Monitored PDU- single input, 3Ø, 16A (INTL)	AF508A
	HP 14.7 kVA S2132 Monitored PDU- dual input, 1Ø, 32A (INTL)	AF509A
	HP 7.3 kVA S1132 Monitored PDU- single input, 1Ø, 32A (INTL)	AF510A
	HP Monitored Power Distribution Unit: Half Rack Version	
	HP 4.9 kVA S124 Monitored PDU- single input, 1Ø, 24A (NA/JPN)	AF914A
	HP 7.3 kVA S132 Monitored PDU- single input, 1Ø, 32A (INTL)	AF915A
		NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12118_div/12118_div.html (Worldwide)
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USB Options	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	1.44MB External USB Floppy Drive	DC141B
	HP USB 04 Standard Keyboard	DT528A#ABA
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HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled	358254-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.html (Worldwide)	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower .	

Additional Options

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)	10642 G2 (42U) Rack Cabinet - Pallet	AF001A
	10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A
	10642 G2 (42U) Rack Cabinet - Crated	AF003A
	10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet	AF004A
	10636 G2 (36U) Rack Cabinet - Pallet	AF011A
	10636 G2 (36U) Rack Cabinet - Shock Pallet	AF012A
	10636 G2 (36U) Rack Cabinet - Crated	AF013A
	10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet	AF014A
	10622 G2 (22U) Rack Cabinet - Pallet	AF021A
	10622 G2 (22U) Rack Cabinet - Shock Pallet	AF022A
	10642 G2 (42U) Rack Cabinet 1200mm Deep - Shock Pallet	AF034A
	10642 G2 (42U) Rack Cabinet 1200mm Deep - Pallet	AF038A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	AF041A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet	AF042A
	10647 G2 (47U) Rack Cabinet - Pallet	AF031A
	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	10647 G2 (47U) Rack Cabinet 1200mm Deep - Shock Pallet	AF044A
	NOTE: Due to handling and shipping requirements, AF044A is only orderable through HP Factory Express. It is not for direct sales. Customer site surveys are required before an order is approved. CTO orders may require additional lead time.	
	10647 G2 (47U) Rack Cabinet 1200mm Deep - Pallet	AF045A
	NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed.	
	NOTE: xxxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels).	
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information:	
	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 .	

Keyboards and Monitors	TFT7600 Rackmount Keyboard Monitor US	AG052A
	TFT7600 Rackmount Keyboard Monitor UK	AG053A
	TFT7600 Rackmount Keyboard Monitor GR	AG054A
	TFT7600 Rackmount Keyboard Monitor FR	AG055A
	TFT7600 Rackmount Keyboard Monitor IT	AG056A
	TFT7600 Rackmount Keyboard Monitor SP	AG057A
	TFT7600 Rackmount Keyboard Monitor DEN	AG058A
	TFT7600 Rackmount Keyboard Monitor NOR	AG059A
	TFT7600 Rackmount Keyboard Monitor SE/FI	AG060A
	TFT7600 Rackmount Keyboard Monitor SWI	AG061A
	TFT7600 Rackmount Keyboard Monitor PORT	AG062A
	TFT7600 Rackmount Keyboard Monitor BEL	AG063A
	TFT7600 Rackmount Keyboard Monitor JPN2	AG064A
	TFT7600 Rackmount Keyboard Monitor RUS	AG065A
	TFT7600 Rackmount Keyboard Monitor INTL	AG066A

Additional Options

1U Rackmount Keyboard with USB, US	AG072A
1U Rackmount Keyboard with USB, UK	AG073A
1U Rackmount Keyboard with USB, GR	AG074A
1U Rackmount Keyboard with USB, FR	AG075A
1U Rackmount Keyboard with USB, ITL	AG076A
1U Rackmount Keyboard with USB, SP	AG077A
1U Rackmount Keyboard with USB, DEN	AG078A
1U Rackmount Keyboard with USB, NOR	AG079A
1U Rackmount Keyboard with USB, SE/FI	AG080A
1U Rackmount Keyboard with USB, SWI	AG081A
1U Rackmount Keyboard with USB, PORT	AG082A
1U Rackmount Keyboard with USB, BEL	AG083A
1U Rackmount Keyboard with USB, JPN2	AG084A
1U Rackmount Keyboard with USB, RUS	AG085A
1U Rackmount Keyboard with USB, INTL	AG086A

NOTE: For additional information regarding Rack Options, please see the following URL: <http://www.hp.com/go/rackandpower>.

HP KVM Switch Options

2x1x16 IP Console Switch with Virtual Media	AF601A
4x1x16 IP Console Switch with Virtual Media	AF602A
2x16 Server Console Switch with Virtual Media	AF600A
PS/2 Virtual Media Interface Adapter, 1 pack	AF604A
NOTE: Requires PS/2 and one USB port on server.	
Server console switch 0x2x8	AF616A
Server console switch 0x2x16	AF617A
PS/2 Interface Adapter, 1 pack	262588-B21
PS/2 Interface Adapter, 8 pack	262587-B21
NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm .	
HP 1x4 Console Switch	AF611A
HP PS2 Server Console Cable, 6 foot, 2-Pack	AF612A
HP USB Server Console Cable, 6 foot, 2-Pack	AF613A

NOTE: Required for supporting USB peripherals.
NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: <http://www.hp.com/go/kvm>.

Additional Options

HP Serial Console Server Options	HP 16 Port Serial Console Server (worldwide)	AF101A
	HP 48 Port Serial Console Server (worldwide)	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm .		
NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm .		

Service and Support Offerings (HP Care Pack Services)	Hardware Services On-site Service	
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	U4544E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4545E
	Hardware Services 6-Hour Call to Repair On-site Service	
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4546E
	Installation & Start-up Services	
	Hardware Installation, Electronic	U4554E
	Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic	U4555E
	Installation and Startup for Essentials Rapid Deployment Pack, Electronic	U5683E
	Support Plus	
	Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic	U4556E
	Support Plus 24	
	Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U4557E
	Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U6312E
	Onsite HW support 24x7, 4hr response and Red Hat ES Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U8334E
NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack		

Memory

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

DDR3 memory population guidelines

For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool:
www.hp.com/go/ddr3memory-configurator

Some DIMM installation guidelines are summarized below:

- For servers with eighteen (18) memory slots:
 - There are three (3) channels per processor; six (6) channels per server
 - There are three (3) DIMM slots for each memory channel; eighteen (18) total slots
 - Memory channel 1 consists of the three (3) DIMMs that are closest to the processor
 - Memory channel 3 consists of the three (3) DIMMs that are furthest from the processor
- DIMM slots that are white should be populated first
- Do not mix Unbuffered memory (UDIMMs) with Registered memory (RDIMMs)
- Do not install DIMMs if the corresponding processor is not installed
- If only one processor is installed in a 2CPU system, only half of the DIMM slots are available
- To maximize performance, balance the total memory capacity between all installed processors
- It is not required, but it is recommended to load the channels similarly if possible
- You can only have up to eight (8) ranks installed per channel
- You can only install two quad-rank DIMMs per channel
- You can only install two UDIMMs per channel; if available, the third slot in the channel must remain empty
- Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel
- Heaviest load (DIMM with most ranks) within a channel goes furthest from the chipset
- For memory mirroring mode, channel 3 must be unpopulated. Channels 1 and 2 are populated identically
- For lock-step mode, channel 3 must be unpopulated. DIMMs in channels 1 and 2 will be installed in pairs. The paired slots will be 1,4; 2,5; 3,6 on a 3DPC system or 1,4; 2,5; on a 2DPC system
- No mixing DIMM voltage; all DIMMs must be the same voltage

DIMM Type ->	Registered Dimms (RDIMMs)						Unbuffered with ECC DIMMs (UDIMMs)			
DIMM Rank ->	Dual Rank (2R)			Quad Rank (4R)			Single Rank (1R)	Dual Rank (2R)		
DIMM Capacity ->	2GB	4GB	8GB	2GB	4GB	8GB	1GB	2GB	1GB	2GB
DIMM Native Speed (MHz) ->	1333	1333	1067	*	1067	*	1333	*	*	1333

SLOTS THAT CAN BE POPULATED

18 slot servers	18	18	18	*	12	*	12	*	*	12

MAXIMUM CAPACITY (GB)

18 slot servers	36	72	144	*	48	*	12	*	*	24

POPULATED DIMM SPEED (MHz)

1 DIMM Per Channel	1333	1333	1067	*	1067	*	1333	*	*	1333
2 DIMM Per Channel	1067	1067	1067	*	800	*	1067	*	*	1067
3 DIMM Per Channel	800	800	800	*	*	*	*	*	*	*

* - not supported by HP at this time.

NOTES:

- Mixing DIMM speeds is allowed, but the system processor speed rules always override the DIMM capabilities
- If you do mix DIMM speeds, the memory bus will default to the minimum clock rate of all DIMMs in the system - even if the slower DIMM is on the other processor
- If you install 1x 1066MHz DIMM in channel 1 and 1x 1333MHz DIMM in channel 2, you still run at 1066MHz
- If you install 1x 1066MHz DIMM in channel 1 and 5x 1333MHz DIMMs with 1 DIMM Per Channel (DPC) in each of the



Memory

- other channels, you run at 1066MHz
- If you install 3DPC in one channel (if applicable) and 1DPC in all other channels, you run at 800MHz
- 95 Watt CPU's are required for 1333MHz DIMM speeds. All other CPU's are capable of up to 1067MHz
- References to the above MHz speeds are for the various speeds of DDR3 DIMMs; 1333 refers to DDR3-1333, etc.

DIMM slot and configuration diagrams

Basic memory slot & population diagram

- Population order; start with "A" first, "B" second, "C" third, etc.

18 DIMM SLOTS (9 per CPU node)					
	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G	1	G	Chnl 1
	2	D	2	D	
	3	A	3	A	
Chnl 2	4	H	4	H	Chnl 2
	5	E	5	E	
	6	B	6	B	
Chnl 3	7	I	7	I	Chnl 3
	8	F	8	F	
	9	C	9	C	

Standard memory configuration (1 CPU model)

- 6GB, consisting of three (3) 2GB dual-rank PC3-10600 RDIMMs

	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G; empty	1	G; empty	Chnl 1
	2	D; empty	2	D; empty	
	3	A; 2GB DIMM	3	A; empty	
Chnl 2	4	H; empty	4	H; empty	Chnl 2
	5	E; empty	5	E; empty	
	6	B; 2GB DIMM	6	B; empty	
Chnl 3	7	I; empty	7	I; empty	Chnl 3
	8	F; empty	8	F; empty	
	9	C; 2GB DIMM	9	C; empty	

Standard memory plus optional memory (1 CPU model)

- 54GB, consisting of three (3) 2GB RDIMMs plus six (6) 8GB RDIMMs
 - 3x 2GB dual-rank PC3-10600 RDIMMs
 - 6x 8GB dual-rank PC3-8500 RDIMMs

Memory

	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G; 8GB DIMM	1	G; empty	Chnl 1
	2	D; 8GB DIMM	2	D; empty	
	3	A; 2GB DIMM	3	A; empty	
Chnl 2	4	H; 8GB DIMM	4	H; empty	Chnl 2
	5	E; 8GB DIMM	5	E; empty	
	6	B; 2GB DIMM	6	B; empty	
Chnl 3	7	I; 8GB DIMM	7	I; empty	Chnl 3
	8	F; 8GB DIMM	8	F; empty	
	9	C; 2GB DIMM	9	C; empty	

Standard memory replaced with optional memory (1 CPU model)
RDIMM maximum configuration

- 72GB, consisting of nine (9) 8GB dual-rank PC3-8500 RDIMMs

	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G; 8GB DIMM	1	G; empty	Chnl 1
	2	D; 8GB DIMM	2	D; empty	
	3	A; 8GB DIMM	3	A; empty	
Chnl 2	4	H; 8GB DIMM	4	H; empty	Chnl 2
	5	E; 8GB DIMM	5	E; empty	
	6	B; 8GB DIMM	6	B; empty	
Chnl 3	7	I; 8GB DIMM	7	I; empty	Chnl 3
	8	F; 8GB DIMM	8	F; empty	

UDIMM maximum configuration (1 CPU model)

- 12GB, consisting of six (6) 2GB dual-rank PC3-10600 UDIMMs

	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G; empty	1	G; empty	Chnl 1
	2	D; 2GB DIMM	2	D; empty	
	3	A; 2GB DIMM	3	A; empty	
Chnl 2	4	H; empty	4	H; empty	Chnl 2
	5	E; 2GB DIMM	5	E; empty	
	6	B; 2GB DIMM	6	B; empty	
Chnl 3	7	I; empty	7	I; empty	Chnl 3
	8	F; 2GB DIMM	8	F; empty	
	9	C; 2GB DIMM	9	C; empty	

Memory

Standard memory replaced with optional memory (2 CPU model)
RDIMM maximum configuration

- 144GB, consisting of eighteen (18) 8GB dual-rank PC3-8500 RDIMMs

	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G; 8GB DIMM	1	G; 8GB DIMM	Chnl 1
	2	D; 8GB DIMM	2	D; 8GB DIMM	
	3	A; 8GB DIMM	3	A; 8GB DIMM	
Chnl 2	4	H; 8GB DIMM	4	H; 8GB DIMM	Chnl 2
	5	E; 8GB DIMM	5	E; 8GB DIMM	
	6	B; 8GB DIMM	6	B; 8GB DIMM	
Chnl 3	7	I; 8GB DIMM	7	I; 8GB DIMM	Chnl 3
	8	F; 8GB DIMM	8	F; 8GB DIMM	
	9	C; 8GB DIMM	9	C; 8GB DIMM	

UDIMM maximum configuration

- 24GB, consisting of twelve (12) 2GB dual-rank PC3-10600 UDIMMs

	CPU1		CPU2		
	slot #	population order	slot #	population order	
Chnl 1	1	G; empty	1	G; empty	Chnl 1
	2	D; 2GB DIMM	2	D; 2GB DIMM	
	3	A; 2GB DIMM	3	A; 2GB DIMM	
Chnl 2	4	H; empty	4	H; empty	Chnl 2
	5	E; 2GB DIMM	5	E; 2GB DIMM	
	6	B; 2GB DIMM	6	B; 2GB DIMM	
Chnl 3	7	I; empty	7	I; empty	Chnl 3
	8	F; 2GB DIMM	8	F; 2GB DIMM	
	9	C; 2GB DIMM	9	C; 2GB DIMM	

NOTE: Capacity references are rounded to the common Gigabyte values.

- 1GB = 1024MB
- 2GB = 2048MB
- 4GB = 4096MB
- 8GB = 8192MB

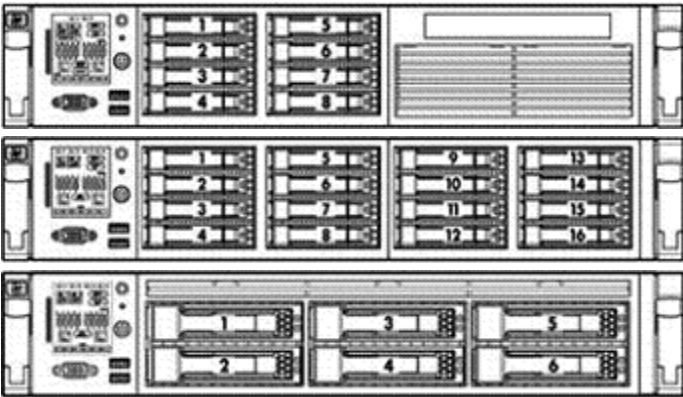
Memory

Following are memory options available from HP:

Memory	Registered DIMMs (RDIMMs)	
	HP 2GB 2Rx8 PC3-10600R-9 Kit	500656-B21
	HP 4GB 2Rx4 PC3-10600R-9 Kit	500658-B21
	HP 4GB 4Rx8 PC3-8500R-7 LP Kit	500660-B21
	HP 8GB 2Rx4 PC3-8500R-7 Kit	516423-B21
	HP 8GB 2Rx4 PC3-10600R-9 Kit	500662-B21
	Unbuffered with ECC DIMMs (UDIMMs)	
	HP 1GB 1Rx8 PC3-10600E-9 Kit	500668-B21
	HP 2GB 2Rx8 PC3-10600E-9 Kit	500670-B21

NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator.
NOTE: Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: www.hp.com/go/proliant-energy-efficient

Storage



- 1-8 Eight SFF SAS hot plug hard drive bays
- 1-16 Sixteen SFF SAS hot plug hard drive bays
NOTE: This configuration does not support optical drive.
- 1-6 Six LFF SAS hot plug hard drive bays
NOTE: This configuration does not support optical drive.

Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
HP Slim SATA DVD RW Optical Drive	Only 1 available removable media bay	Slimline bay	Integrated SATA NOTE: Optional
HP Slim SATA DVD-ROM Optical Drive	Only 1 available removable media bay	Slimline bay	Integrated SATA NOTE: Optional

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.

SAS Hot Plug SFF Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
300GB 3G SAS 10K DP	Up to 8	1-8	HP Smart Array P800/512 BBWC Controller
300GB 6G SAS 10K DP			HP Smart Array P212/Zero Memory Controller
146GB 6G SAS 10K DP			HP Smart Array P212/ 256 MB Controller
146GB 6G SAS 15K DP			HP Smart Array P410/256 MB Controller
146GB 3G SAS 15K DP			HP Smart Array P410/512 MB BBWC Controller
146GB 3G SAS 10K DP			HP Smart Array P411/256 MB Controller
72GB 6G SAS 15K DP			HP Smart Array P411/512 MB BBWC Controller
72GB 3G SAS 10K DP			
72GB 3G SAS 15K DP			
36GB 3G SAS 15K DP			

NOTE: Second SFF drive cage requires second controller or HP SAS Expander Card (PN 468406-B21).

SATA Hot Plug SFF Entry (ETY) Drives

	Quantity Supported	Position Supported	Controller
250GB 3G SATA 5.4K	Up to 8	1-8	HP Smart Array P800/512 BBWC Controller
120GB 1.5G SATA 5.4K			HP Smart Array P212/Zero Memory Controller
			HP Smart Array P212/ 256 MB Controller
			HP Smart Array P410/256 MB Controller



Storage

HP Smart Array P410/512 MB BBWC Controller
HP Smart Array P411/256 MB Controller
HP Smart Array P411/512 MB BBWC Controller

NOTE: Second SFF drive cage requires second controller or HP SAS Expander Card (PN 468406-B21).

SAS Hot Plug 3.5" Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
450GB 3G SAS 15K DP	Up to 6	1-6	HP Smart Array P800/512 BBWC Controller
400GB 3G SAS 10K DP			HP Smart Array P212/Zero Memory Controller
300GB 3G SAS 15K DP			HP Smart Array P212/ 256 MB Controller
146GB 3G SAS 15K DP			HP Smart Array P410/256 MB Controller
72GB 3G SAS 15K DP			HP Smart Array P410/512 MB BBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller

SAS Hot Plug 3.5" Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
1TB 3G SAS 7.2K DP	Up to 6	1-6	HP Smart Array P800/512 BBWC Controller
750GB 3G SAS 7.2K DP			HP Smart Array P212/Zero Memory Controller
			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 P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller

SATA Hot Plug 3.5" Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
1TB 3G SATA 7.2K	Up to 6	1-6	HP Smart Array P800/512 BBWC Controller
750GB 3G SATA 7.2K			HP Smart Array P212/Zero Memory Controller
500GB 3G SATA 7.2K			HP Smart Array P212/ 256 MB Controller
250GB 3G SATA 7.2K			HP Smart Array P410/256 MB Controller
160GB 3G SATA 7.2K			HP Smart Array P410/512 MB BBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
50 Modular Smart Array	Up to 4	External	HP Smart Array P800/512 BBWC Controller
60 Modular Smart Array	Up to 4	External	HP Smart Array P212/Zero Memory Controller
	Up to 8	External	HP Smart Array P212/ 256 MB Controller
			HP Smart Array P800/512 BBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
70 Modular Smart Array	Up to 2	External	HP Smart Array P212/Zero Memory Controller
	Up to 4	External	HP Smart Array P212/ 256 MB Controller
			HP Smart Array P800/512 BBWC Controller
			HP Smart Array P411/256 MB Controller
			HP Smart Array P411/512 MB BBWC Controller
HP 2000sa Modular Smart Array Controller	Up to 4	External	HP SC08Ge Host Bus Adapter

Storage

Maximum Storage Capacity - (with MSA50, SAS HDD)

Internal	2.4TB (16 x 300GB SAS SFF with addition 8 SFF drive cage)
External	6.720TB (20 x 300GB SAS SFF)
Total	4.088TB

Maximum Storage Capacity - (with MSA50, SATA HDD)

Internal	4.0TB (16 x 250GB SAS SFF with additional 8 SFF drive cage)
External	5.0TB (20 x 250GB SAS SFF)
Total	9.0TB

Tape and Disk-Based Backup

NOTE: For a complete listing of compatible tape and disk-based backup offerings, please visit: www.hp.com/go/connect.

	Position Supported	Controller	Part Number
HP StorageWorks SCSI Tape Drives, External LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 960 LTO-3 Ultrium 920 LTO-4 Ultrium 1760 LTO-4 Ultrium 1840 DAT 40 DAT 72 DAT 160 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC11Xe Host Bus Adapter	412911-B21
HP StorageWorks USB Tape Drives, External DAT 40 USB DAT 72 USB DAT 160 USB 1U Rack-Mount Kit	External	USB 2.0 Port	N/A
HP StorageWorks SAS Tape Drives, External DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1760 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP Smart Array P212/Zero Memory Controller	462828-B21
HP StorageWorks SCSI Tape Automation, External DAT 72x10 Autoloader 1/8 G2 Autoloader MSL2024 MSL4048	External	HP SC11Xe Host Bus Adapter	412911-B21



Storage

MSL8096
MSL6000

HP StorageWorks SAS Tape Automation, External 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096	External	HP Smart Array P212/Zero Memory Controller	462828-B21
		NOTE: Please visit: http://www.hp.com/go/connect for details about minimum SAS controller firmware version and SAS cabling requirements.	
HP StorageWorks Fibre Tape Automation, External MSL2024 MSL4048 MSL8096 MSL6000	External	Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for detailed connectivity information.	N/A
HP StorageWorks RDX Removable Disk Backup System RDX160 RDX320 RDX500	Internal	USB 2.0 NOTE: RDX160 (AP724A), RDX320 (AP725A), or RDX500 (AP726A) are the required SKUs for mounting inside a HP ProLiant DL380 G6.	N/A
HP StorageWorks D2D Backup Systems D2D120 D2D130 D2D2500i D2D4000i	External	Embedded Network Controller	N/A

Power Specifications

HP 460W Power Supply Part Number - AC 460W PSU	503296-B21						
Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	208	200	220	230	240
Maximum Rated Output Wattage	460	460	460	460	460	460	460
Nominal Input Current (A rms)	5.5	4.5	2.6	2.5	2.4	2.3	2.2
Max Rated Input Wattage Rating (Watts)	526	520	505	505	503	503	503
Max. Rated VA (Volt-Amp)	548	542	527	527	524	524	524
Efficiency (%) at Max. Rated Output Wattage	87.5	88.5	91	91	91.5	91.5	91.5
Power Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Max. Inrush Current (A peak)	30	30	30	30	30	30	30
Max. Inrush Current duration (mS)	20	20	20	20	20	20	20
Maximum British Thermal Unit Rating (BTU-Hr)	1794	1773	1725	1725	1715	1715	1715

HP 750W Power Supply Part Number - AC 750W PSU	512327-B21						
Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	208	200	220	230	240
Maximum Rated Output Wattage	750	750	750	750	750	750	750
Nominal Input Current (A rms)	8.9	7.4	4.3	4.1	3.9	3.7	3.6
Max Rated Input Wattage Rating (Watts)	857	847	824	825	820	820	820
Max. Rated VA (Volt-Amp)	894	884	859	859	854	854	854
Efficiency (%) at Max. Rated Output Wattage	87.5	88.5	91	91	91.5	91.5	91.5
Power Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Max. Inrush Current (A peak)	30	30	30	30	30	30	30
Max. Inrush Current duration (mS)	20	20	20	20	20	20	20
Maximum British Thermal Unit Rating (BTU-Hr)	2925	2892	2812	2812	2797	2797	2797

Power Specifications

HP 1200W Power Supply Part Number - AC	500172-B21						
Operational Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	208	200	220	230	240
Maximum Rated Output Wattage	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
Max Rated Input Wattage Rating (Watts)	930	1034	1348	1348	1348	1348	1348
Max. Rated VA (Volt-Amp)	970	1079	1406	1406	1406	1406	1406
Efficiency (%) at Max. Rated Output Wattage	86	87	89	89	89	89	89
Power Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Max. Inrush Current (A peak)	30	30	30	30	30	30	30
Max. Inrush Current duration (mS)	20	20	20	20	20	20	20
Maximum British Thermal Unit Rating (BTU-Hr)	3174	3530	4600	4600	4600	4600	4600

HP 1200W PSU 48VDC Input Part Number	437573-B21		
Input Voltage Range (DCV)	36-72		
Frequency Range (Nominal) (Hz)	DC		
Nominal Input Voltage (VDC)	36	48	72
Maximum Rated Output Wattage	1200	1200	1200
Nominal Input Current (ACD)	38	28	19
Max Rated Input Wattage Rating (Watts)	1380	1350	1365
Max. Rated VA (Volt-Amp)	1380	1350	1365
Efficiency (%) at Max. Rated Output Wattage	87	89	88
Power Factor	N/A	N/A	N/A
Leakage Current (mA)	N/A	N/A	N/A
Max. Inrush Current (A peak)	20	25	35
Max. Inrush Current duration (mS)	1	1	3
Maximum British Thermal Unit Rating (BTU-Hr)	4713	4610	4662

NOTES: 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) (with bezel)		SFF Drives: 3.38 x 17.54 x 27.25 in (8.59 x 44.55 x 69.22 cm) LFF Drives: 3.38 x 17.54 x 29.25 in (8.59 x 44.55 x 74.30 cm)
	Weight (approximate)	Maximum (all hard drives, power supply, and processor installed)	60.00 lb (27.27 kg)
		Minimum (one hard drive, power supply, and processor installed)	47.18 lb (21.45 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
		Rated Input Current	For 1200 W Power Supply: 10 A (at 100 VAC), 4.9 A (at 200 VAC) For 750 W Power Supply: 8.9 A (at 100 VAC), 4.3 A (at 200 VAC) For 460 W Power Supply: 5.5 A (at 100 VAC), 2.6 A (at 200 VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	For 1200 W Power Supply: 930 W (at 100 VAC), 1348 W (at 200 VAC) For 750 W Power Supply: 857 W (at 100 VAC), 824 W (at 200 VAC) For 460 W Power Supply: 526 W (at 100 VAC), 505 W (at 200 VAC)
		BTU Rating	
		Maximum	For 1200 W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC) For 750 W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460 W Power Supply: 1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC)
	Power Specifications		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
	Power Supply Output (per power supply)	Rated Steady-State Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
Maximum Peak Power		For 1200 W Power Supply: 800 W (at 100 VAC),	



Technical Specifications

		900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
System Inlet Temperature	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).
Relative Humidity (non-condensing)	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.
Altitude	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).
	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). NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	
Emissions Classification (EMC)	Idle	1P SKU2P SKU
	LWAd	4.1 B4.7 B
	LpAm	22 dBA28 dBA
	Operating	1P SKU2P SKU
	LWAd	4.1 B4.7 B
	LpAm	22 dBA28 dBA
	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

Technical Specifications

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.

NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

Smart Array P410i Controller	Dimensions (not including bracket)	Low Profile PCIe Form Factor 7.5 in x 9.5 in x 2.25 in (19.05 cm x 24.13 cm x 5.72 cm)
	Disk Drive and Enclosure Interface - transfer rate	3G SAS (Serial Attached SCSI) 1.5G SATA (Serial ATA)
	SAS Connectors	2 internal (Mini-SAS) x8 wide port connectors
	Cache Memory Speed	DDR2-533MHz with 40 or 72-bit wide bus provides up to 4.2 GB/s maximum bandwidth.
	Server Interface	x8 2.5G PCIe 2.0 provides 2GB/s maximum bandwidth
	SAS Speed	x8 3G SAS provides 2.4GB/s maximum bandwidth
	Cache Memory	40-bit 256MB ECC protected cache (72-bit 512MB BBWC module upgrades available); transportable with battery-backed upgrade
	Logical Drives Supported	Up to 32 logical drives
	Maximum Logical Drive Capacity	Greater than 2TB
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
	RAID Support	RAID 6, 6+0 (Advanced Data Guarding) NOTE: The minimum of 256 MB cache, battery kit, and Smart Array Advanced Pack License Key upgrade is required to enable RAID 6, 6+0
		RAID 5, 5+0 (Distributed Data Guarding) NOTE: The 256 MB & Battery Kit upgrade is required to enable RAID 5, 5+0 support of the Smart Array P410i.
		RAID 1+0 (Striping & Mirroring)
		RAID 0 (Striping)
	Upgradeable Firmware	Upgradeable Firmware with Recovery ROM feature

Technical Specifications

HP NC382i Dual Port Multifunction Gigabit Server Adapters	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	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, four lanes (x4)	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half and Full-Duplex)	2000Mb/s
	Connector	Two RJ-45	
Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)	
	100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)	
	1000BaseTX	Category 5 or higher 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.

