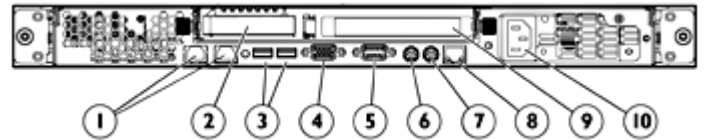
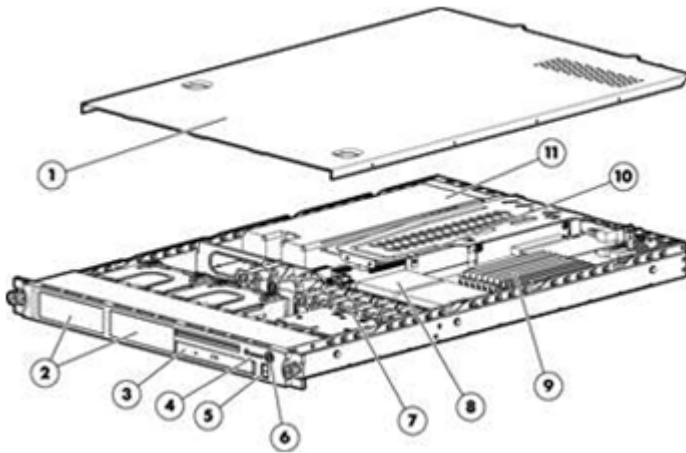


Overview



Hot Plug SAS/SATA Models

Front View:

1. Access panel
2. Two Non-Hot Plug SATA 3.5" Hard Drive Bays or Two Hot Plug SAS/SATA 3.5" Hard Drive
3. Optional CD- or DVD-ROM drive
4. System LEDs
5. USB Port
6. Power on/off
7. System Fans
8. Quad-Core and Dual-Core Intel® Xeon® Processors (Supports up to Two)
9. PC2-5300 Fully Buffered DIMMs (DDR2-667) memory slots
10. Expansion Slots:
Non-Hot Plug Models - Two available PCI-Express slots
Hot-Plug Models - One available PCI-Express slot
11. Power Supply (650 Watts)
12. SAS/SATA Hot Plug Backplane (Hot Plug SAS/SATA Model)

Rear View:

1. Two GbE LAN ports for NIC 1 and NIC 2 (RJ-45)
2. Low-Profile PCI Express x8/PCI-X riser board slot cover
3. Rear USB ports
4. Video Port
5. Serial Port
6. PS/2 Keyboard Port
7. PS/2 Mouse Port
8. LO100i 10/100 Mbps LAN port for IPMI management (RJ-45)
9. Standard height/full-height PCI Express x16/PCI-X riser board
10. Power Supply Cable Socket

What's New

- Support for:
 - Quad-Core Intel® Xeon® processor X5365 (3.0 GHz, 120 W, 1333MHz Front Side Bus FSB)
 - Quad-Core Intel® Xeon® processor L5335 (2.00 GHz, 50 W, 1333MHz FSB, Low Voltage)

At A Glance

- Processors:
 - Supports up to two Quad-Core and Dual-Core Intel® Xeon® processors: 5300 and 5100 sequence
 - Quad-Core Intel® Xeon® processors 5300 sequence with 8MB Level 2 cache
 - Dual-core Intel® Xeon® processor 5100 sequence with 4MB Level 2 cache
 - Intel® 5000X Chipset

Overview

- **Memory:**
 - Supports up to 32 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) with Advanced ECC
- **Internal Drive Support:**
 - Supports up to two:
 - Non-Hot Plug Serial ATA (SATA) 3.5" hard drives; or
 - Hot Plug Serial Attached SCSI (SAS/Serial ATA (SATA) 3.5" hard drives
 - Internal storage capacity of up to 1.5TB (2 x 750GB Hot Plug 3.5" SATA hard drives), 1 TB (2 x 500 Non-Hot Plug SATA hard drives) or 600GB (2 x 300GB Hot Plug 3.5" SAS hard drives)
- **Network Controller:**
 - Two embedded NC320i PCIe Gigabit Server Adapters
- **Storage Controllers:**
 - HP Embedded SATA RAID Controller on Non-Hot Plug SATA Models
 - HP 8 Internal Port SAS HBA with RAID 0,1 on Hot Plug SAS/SATA Models
 - HP Smart Array E500 Controller
 - HP Smart Array E200 Controller
 - HP SC11Xe Host Bus Adapter
 - HP SC44Ge Host Bus Adapter
- **Expansion Slots:**
 - Non-Hot Plug Models:
 - Two available PCI Express slots:
 - Slot 1: full-length/full-height PCI-Express x16
 - Slot 2: low-profile/half-height PCI-Express x8
 - Hot Plug Models:
 - One available PCI-Express slot:
 - Slot 1: full-length/full-height PCI-Express x16
 - Slot 2: low-profile/half-height PCI-X slot populated by the SAS/SATA storage controller
- **Management:**
 - IPMI 2.0 support
 - HP Lights Out 100i Remote Management with new licensed key activated upgrades for Virtual KVM and virtual media support
 - ROM Setup Utility
- **USB Ports:**
 - Four USB ports (two front, two rear)
- **Optical Drive:**
 - Support for one (optional): CD-ROM, DVD-ROM, DVD RW, DVD/CD RW
- **Power Supply:**
 - 650W Power Supply (Non-Hot Plug, Autoswitching)
- **Additional Features:**
 - Support for:
 - NVIDIA Quadro FX3500 256MB PCIe graphics card
 - NVIDIA Quadro FX1500 256MB PCIe graphics card
- **Form Factor:**
 - 1U rack models
- **Deployment/Serviceability:**
 - Tool-less access to all system components for easy in rack serviceability
- **Warranty:** This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners. Hardware diagnostic support and repair is available for one year from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Certain restrictions and exclusions apply. SATA hard drives have a one year warranty.
 - Server Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support with next business day response. Additional

Overview

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 a brief, printer friendly data sheet that describes this product and informs you of the essential capabilities and specifications, please visit: <http://h71028.www7.hp.com/ERC/downloads/4AA0-6065ENW.pdf>

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 Intel® Xeon® processor X5365 (3.0 GHz, 120 W, 1333MHz Front Side Bus FSB)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Quad-Core Intel® Xeon® processor X5355 (2.66 GHz, 120 W, 1333MHz Front Side Bus FSB)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Quad-Core Intel® Xeon® processor E5345 (2.33 GHz, 80 W, 1333MHz FSB)

Quad-Core Intel® Xeon® processor E5335 (2.00 GHz, 80 W, 1333MHz FSB)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Quad-Core Intel® Xeon® processor L5335 (2.00 GHz, 50 W, 1333MHz FSB, Low Voltage)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Quad-Core Intel® Xeon® processor L5320 (1.86GHz, 50W, 1066MHz FSB, Low Voltage)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Quad-Core Intel® Xeon® processor E5320 (1.86 GHz, 80 W, 1066MHz FSB)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Quad-Core Intel® Xeon® processor E5310 (1.60 GHz, 80 W, 1066MHz FSB)

Dual-Core Intel® Xeon® processor 5160 (3.00 GHz, 80 W, 1333MHz FSB)

Dual-Core Intel® Xeon® processor 5150 (2.66 GHz, 65 W, 1333MHz FSB)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Dual-Core Intel® Xeon® processor 5148 (2.33 GHz, 40 W, 1333MHz FSB, Low Voltage)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Dual-Core Intel® Xeon® processor 5140 (2.33 GHz, 65 W, 1333MHz FSB)

Dual-Core Intel® Xeon® processor 5130 (2.0 GHz, 65 W, 1333MHz FSB)

NOTE: Available through Configure To Order only. See Factory Integration Models section for more details.

Dual-Core Intel® Xeon® processor 5110 (1.60 GHz, 65 W, 1066MHz FSB)

Upgradeability

Upgradeable to two processors

Upgradeable to Xeon® Series 5300 Quad-Core, or 5100 Dual-Core processors (Please contact your regional sales support to determine quad core upgradeability. Some of the earlier shipping models may not support this upgrade)

Chipset

Intel® 5000X Chipset

Standard Features

Cache Memory 8MB (2 x 4MB) Level 2 cache (5300 sequence)
 4MB (1 x 4MB) Level 2 cache (5100 sequence)

Memory Protection Memory mirroring with Advanced ECC capabilities

Memory Type PC2-5300 Fully Buffered DIMMs (DDR2-667)
 Standard 1 GB (2 x 512 MB)
 Maximum 32 GB (8 x 4 GB)

Network Controller Two embedded NC320i PCIe Gigabit Server Adapters

Expansion Slots #	Technology	Width	Connector Width	Bus Number*	Form Factor	Notes
1	PCI Express 2.0	X16	X16	1	Full length, full height slot	Standard-Reserved slot for Smart Array P400 Controller
1	PCI-X	133/100MHz	N/A	5	Full length, full height slot	Options - 100MHz bus speed operates when 2 PCI-X cards are populated
2	PCI Express 2.0	X4	X8	6	Low-profile slot	Recommended for XX Card
2	PCI-X	133/100MHz	N/A	5	Low-profile slot	Options - 100 MHz bus speed operates when 2 PCI-X cards are populated

NOTE: All slots can accept universal keyed PCI cards

* Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.

** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).

*** PCI-X bus speed will be 133MHz when only one PCI-X card is installed. It will be 100MHz when both slots have PCI-X cards installed.

Standard Features

Storage Controller	Non-Hot Plug SATA Models	HP Embedded SATA RAID Controller (integrated into the south-bridge) supporting SW RAID 0,1
	Hot Plug SAS/SATA Models	HP 8 Internal Port SAS HBA with RAID 0,1

NOTE: A diskette drive is needed to install storage controller drivers during a Windows operating system installation from a CD.

Storage	Optical Drives:	
	DVD-ROM	8x IDE (ATAPI) DVD-ROM drive, slim (optional)
	CD-ROM	24x IDE (ATAPI) CD-ROM drive (optional)
	DVD RW	8x IDE (ATAPI) DVD-ROM drive, slim (optional)
	DVD/CD RW	24x IDE (ATAPI) CD-ROM drive (optional)
	Diskette Drives	Via USB only
	Drive Bays:	
Non-Hot Plug SATA	Up to 2 non-hot plug SATA 3.5" drives	
Hot-Plug SAS/SATA	Up to 2 hot plug SAS/SATA 3.5" drives	

Maximum Internal Storage	Non-Hot Plug SATA	1TB	2 x 500GB
	Hot Plug SATA	1.5TB	2 x 750GB
	Non-Hot Plug SAS	600GB	2 x 300GB
	Hot Plug SAS	600GB	2 x 300GB

Interfaces	Parallel	None
	Network RJ-45 (Ethernet)	2 10/100/1000 NIC ports (plus 1 dedicated for the HP ProLiant Lights Out 100i Remote Management)
	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	USB	4 (two front, two rear)
		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 on the system board: 1280 x 1024 at 8bpp (bits per pixel) or $2^8 = 256$ colors or 1024 x 768 at 16bpp (bits per pixel) or $2^{16} = 65536$ or 64k colors
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Form Factor	Rack (1U), (1.75 in/4.45 cm)
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Standard Features

Server Management Stand Alone Software Product and ProLiant Essentials	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.
	Rapid Deployment Pack (RDP)	Rapid Deployment Pack (RDP) extends HP Systems Insight Manager with a complete deployment solution for select HP ProLiant 100 series 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/servers/rdp NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to: http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information.
	HP Lights-Out 100i Remote Management	HP Lights-Out 100i Remote Management delivers affordable, entry level remote management capabilities for HP ProLiant 100 Series servers with embedded LO100i. It allows customers or their service providers to remotely manage ProLiant 100 Series servers remotely over a LAN or the Internet and consists of the following: <ul style="list-style-type: none">● LO100i Standard is embedded remote management and provides basic remote control via telnet, browser, and IPMI 2.0 and SMASH● LO100i Select Pack License are upgrades for essential, secure, remote control, serial console and virtual media● LO100i Advanced Pack License are upgrades for all the features of LO100i Select plus Virtual KVM (graphical hardware-based, remote console) NOTE: Flexible and volume quantity (AKA) license kits are available for both the Lights-Out 100i Select and Lights-Out 100 Advanced Pack licenses as well as Electronic License To Use (E-LTU). AKA Tracking licenses require a 100 unit minimum forecast at initial contract signing. For these additional part numbers, please refer to each software products' QuickSpecs at this link for more information: http://h18004.www1.hp.com/products/servers/management/remotemgmt.html .

Core Infrastructure Management	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.
	ROMPaq software and latest drivers	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available through ProLiant Support Packs or downloaded from software and drivers download pages website at: http://www.hp.com/go/support .

Standard Features

Industry Standard Compliance	ACPI V2.0 Compliant PCI 2.2 Compliant PXE Support WOL Support Microsoft® Logo certifications IPMI 2.0 Compliant
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Manageability HP Lights-Out 100i Standard providing the following OS-independent remote control capabilities:

- Virtual power
- System event log access
- System health
- Remote Serial console (serial redirection)
- Browser, Telnet access
- SM-CLP compliant
- IPMI 2.0 compliant

HP Lights-Out 100i Select Pack providing license key activated upgrades to the following:

- Virtual media (Floppy and CD)
- Secure Socket Layer Encryption
- Secure Shell Encryption

HP Lights-Out 100i Advanced Pack providing license key activated upgrades to the following:

- Virtual KVM (KVM over IP functionality embedded on the system board) plus all of the LO100i Select Pack features above.
-

Security Power-on password
Setup password

Server Power Cords One Highline IEC Power cord ships standard (for connection to a Power Distribution Unit)
NOTE: Rack models ship standard with an IEC cable.

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:
<ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf>

Power Supply 650 Watts, auto-switching, PFC (Power Factor Correcting)

System Fans 6 system fans ship standard; Non-hot plug, Non-redundant

Standard Features

OS Support

Microsoft Windows® 2000 Server (32-bit)
Microsoft Windows 2000 Advanced Server (32-bit)
Microsoft Windows 2003 and Microsoft Windows 2003/R2 Standard Edition (32-bit)
Microsoft Windows 2003 and Microsoft Windows 2003/R2 Enterprise Edition (32-bit)
Microsoft Windows 2003 and Microsoft Windows 2003/R2 Web Edition (32-bit)
Microsoft Windows 2003 and Microsoft Windows 2003/R2 for Extended Systems Standard Edition (64-bit)
Microsoft Windows 2003 and Microsoft Windows 2003/R2 for Extended Systems Enterprise Edition (64-bit)
Microsoft Windows 2008
Red Hat Enterprise Linux
SUSE Linux Enterprise Server

NOTE: For more complete and up-to-date information of all supported OSes for ProLiant, certification information and how to buy server operating systems from HP please visit the OS product site at: <http://h18004.www1.hp.com/products/servers/software/OEM.html>.

NOTE: For an up-to-date listing of the latest software and drivers available for your server, please select your server: <http://h20000.www2.hp.com/bizsupport/TechSupport/Product.jsp?lang=en&cc=us&taskId=135&prodTypeId=15351&prodCatId=241435>.

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 5,350 sq cm (830 square inches) 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 7 cm (2.75 inches)

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/dl140.

Telco Rack Support

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>

Standard Features

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 MSAxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: <http://www.hp.com/go/factory-express>.

HP Enterprise Configurator

The HP eCo-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.

Service and Support

HP Care Pack Services provide total care and support expertise with committed response designed to meet your IT and business needs.

HP Care Pack services include coverage for the HP branded hardware options qualified for the server that are purchased at the same time or afterward and internal to the enclosure. It 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 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 Service** -3 Year, 9x5 Next Business Day coverage, excluding HP holidays only
- **Deployment Service** - Hardware Installation only

Enhanced Service - Optimize service level to increase IT performance and availability

- **Support Service** - 3 Year 13x5 Same Business Day, 4-Hour response coverage
- **Deployment Service** - Installation and Start-up only

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.

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 DL140 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, Rev E and Rev F adapters

Models

Non Hot Plug Serial ATA (SATA) Models

<p>HP DL140G3 E5345 417748-001</p> <p>HP DL140G3 E5310 417746-001</p> <p>HP DL140G3 5160 417759-001</p> <p>HP DL140G3 5140 417757-001</p> <p>HP DL140G3 5110 417756-001</p>	<p>Processor(s) <i>One of the following depending on model</i></p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> <p>Internal Storage</p> <p>Optical Drive</p> <p>Form Factor</p>	<p>(1) Quad-Core Intel® Xeon® processor E5345 (2.33 GHz, 80 W, 1333 MHz FSB)</p> <p>(1) Quad-Core Intel® Xeon® processor E5310 (1.60 GHz, 80 W, 1066 MHz FSB)</p> <p>(1) Dual-Core Intel® Xeon® processor 5160 (3.00 GHz, 80 W, 1333 MHz FSB)</p> <p>(1) Dual-Core Intel® Xeon® processor 5140 (2.33 GHz, 65 W, 1333 MHz FSB)</p> <p>(1) Dual-Core Intel® Xeon® processor 5110 (1.60 GHz, 65 W, 1066 MHz FSB)</p> <p>8MB (2 x 4MB) Level 2 cache (5300 sequence) 4MB (1 x 4MB) Level 2 cache (5100 sequence)</p> <p>1 GB (2 x 512 MB) PC2-5300 DDR2 Fully Buffered DIMMs (667MHz) with Advanced ECC capabilities</p> <p>Two embedded NC320i PCIe Gigabit Server Adapters</p> <p>HP Embedded SATA RAID Controller</p> <p>80GB NHP SATA HDD</p> <p>1TB maximum (2 x 500GB Non-Hot plug 3.5" SATA hard drives)</p> <p>Optional CD-ROM, DVD-ROM, DVD RW, DVD/CD RW</p> <p>Rack (1U)</p>
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Hot Plug Serial ATA (SATA)/Serial Attached SCSI (SAS) Models

<p>HP DL140G3 E5345 417749-001</p> <p>HP DL140G3 E5310 417747-001</p> <p>HP DL140G3 5160 417755-001</p> <p>HP DL140G3 5140 417754-001</p> <p>HP DL140G3 5110 417753-001</p>	<p>Processor(s) <i>One of the following depending on model</i></p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> <p>Internal Storage</p> <p>Optical Drive</p> <p>Form Factor</p> <p>Availability</p>	<p>(1) Quad-Core Intel® Xeon® processor E5345 (2.33 GHz, 80 W, 1333 MHz FSB)</p> <p>(1) Quad-Core Intel® Xeon® processor E5310 (1.60 GHz, 80 W, 1066 MHz FSB)</p> <p>(1) Dual-Core Intel® Xeon® processor 5160 (3.00 GHz, 80 W, 1333 MHz FSB)</p> <p>(1) Dual-Core Intel® Xeon® processor 5140 (2.33 GHz, 65 W, 1333 MHz FSB)</p> <p>(1) Dual-Core Intel® Xeon® processor 5110 (1.60 GHz, 65 W, 1066 MHz FSB)</p> <p>8MB (2 x 4MB) Level 2 cache (5300 sequence) 4MB (1 x 4MB) Level 2 cache (5100 sequence)</p> <p>1 GB (2 x 512 MB) PC2-5300 DDR2 Fully Buffered DIMMs (667MHz) with Advanced ECC capabilities</p> <p>Two embedded NC320i PCIe Gigabit Server Adapters</p> <p>HP 8 Internal Port SAS HBA with RAID</p> <p>None ship standard (up to 2 Hot Plug SATA or SAS drives supported)</p> <p>1.5TB max. (2 x 750GB Hot Plug 3.5" SATA hard drives) or 600GB (2 x 300GB Hot Plug 3.5" SAS hard drives)</p> <p>Optional CD-ROM, DVD-ROM, DVD RW, DVD/CD RW</p> <p>Rack (1U)</p> <p>Hot Plug Hard Drives</p>
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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: This product offering does not support HP Factory Express Server Configuration Level 1.

NOTE: FIO indicates that this option is a Factory Installable Option.

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

Non-Hot Plug Model

HP ProLiant DL140 G3 Non- Hot Plug SATA Rack CTO Chassis 409023-B21

Factory Integrated Model ships with:

Two integrated Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)

Two available PCI-Express slots:

Slot 1: full-length/full-height PCI-Express x16

Slot 2: low-profile/half-height PCI-Express x8

(**NOTE:** Optional PCI-X option kit includes: Slot 1: full-length/full-height PCI-X 100; Slot 2: low-profile/half-height PCI-X 100. PCI-X slots are 64 bits; 133 MHz capable if only one PCI-X card is installed in the server)

HP Embedded SATA RAID Controller

650 Watt Power Supply

One Highline IEC Power Cord

6 Non-Hot Plug Fans

Rack (1U), (1.75 in / 4.45 cm)

HP ProLiant DL140 G3 Hot Plug SAS/SATA Rack CTO Chassis 409024-B21

Factory Integrated Model ships with:

Two integrated Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)

One available PCI-Express slot:

Slot 1: full-length/full-height PCI-Express x16

Slot 2: low-profile/half-height PCI-X slot populated by the SAS/SATA storage controller

(**NOTE:** Optional PCI-X option kit includes: Slot 1: full-length/full-height PCI-X 100; and Slot 2: low-profile/half-height PCI-X 100. PCI-X slots are 64 bits; 133 MHz capable if only one PCI-X card is installed in the server)

One HP SAS/SATA Host Cable Kit

One Hot Plug Backplane Option Kit

650 Watt Power Supply

One Highline IEC Power Cord

6 Non-Hot Plug Fans

Rack (1U), (1.75 in / 4.45 cm)

Configuration Information - Factory Integrated Models

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

Processors	Quad-Core Intel® Xeon® processor X5365 (3.0 GHz, 120W, 1333MHz Front Side Bus, FSB)	452997-L21
	Quad-Core Intel® Xeon® processor X5355 (2.66 GHz, 120 W, 1333 MHz FSB) FIO BASE	409279-L21
	Quad-Core Intel® Xeon® processor E5345 (2.33 GHz, 80 W, 1333 MHz FSB) FIO BASE	409159-L21
	Quad-Core Intel® Xeon® processor E5335 (2.00 GHz, 80 W, 1333 MHz FSB) FIO BASE	442992-L21
	Quad-Core Intel® Xeon® processor L5335 (2.00GHz, 50W, 1333 MHz FSB) FIO BASE	453475-L21
	Quad-Core Intel® Xeon® processor L5320 (1.86GHz, 50W, 1066 MHz FSB) FIO BASE	442995-L21
	Quad-Core Intel® Xeon® processor E5320 (1.86 GHz, 80 W, 1066 MHz FSB) FIO BASE	409157-L21
	Quad-Core Intel® Xeon® processor E5310 (1.60 GHz, 80 W, 1066 MHz FSB) FIO BASE	409278-L21
	Dual-Core Intel® Xeon® processor 5160 (3.00 GHz, 80 W, 1333 MHz FSB) FIO BASE	417786-L21
	Dual-Core Intel® Xeon® processor 5150 (2.66 GHz, 65 W, 1333 MHz FSB) FIO BASE	417784-L21
	Dual-Core Intel® Xeon® processor 5148 (2.33 GHz, 40 W, 1333 MHz FSB) FIO BASE	433253-L21
	Dual-Core Intel® Xeon® processor 5140 (2.33 GHz, 65 W, 1333 MHz FSB) FIO BASE	417774-L21
	Dual-Core Intel® Xeon® processor 5130 (2.0 GHz, 65 W, 1333 MHz FSB) FIO BASE	417772-L21
	Dual-Core Intel® Xeon® processor 5110 (1.60 GHz, 65 W, 1066 MHz FSB) FIO BASE	417770-L21

Memory	1 GB FBD PC2-5300 2X512 Kit	397409-B21
	2 GB FBD PC2-5300 2x1GB LP Kit	461826-B21
	2 GB FBD PC2-5300 2X1GB Kit	397411-B21
	4 GB FBD PC2-5300 2X2GB Kit	397413-B21
	8 GB FBD PC2-5300 2X4GB Kit	397415-B21

Configuration Information - Factory Integrated Models

Hard Drive	<p>Serial-ATA (SATA) Non-Hot Plug Hard Drives (To be used with Non-Hot Plug CTO Chassis Models Only)</p> <p>HP 80GB 1.5G SATA 7.2K NHP 3.5" HDD 383410-B21</p> <p>HP 160GB 1.5G SATA 7.2K NHP 3.5" HDD 411275-B21</p> <p>HP 250GB 1.5G SATA 7.2K NHP 3.5" HDD 411276-B21</p> <p>HP 500GB 1.5G SATA 7.2K NHP 3.5" HDD, FIO* 404469-B21</p> <p><i>*Factory Integrated Only</i></p> <p>Serial-ATA (SATA) Hot Plug Hard Drives (To be used with SAS/SATA Hot Plug CTO Chassis Models Only)</p> <p>HP 80GB SATA 7.2K Hot Plug 3.5" HDD 349237-B21</p> <p>HP 160GB SATA 7.2K Hot Plug 3.5" HDD 349238-B21</p> <p>HP 250GB SATA 7.2K Hot Plug 3.5" HDD 349239-B21</p> <p>HP 500GB SATA 7.2K Hot Plug 3.5" HDD 395473-B21</p> <p>HP 750GB SATA 7.2K Hot Plug 3.5" HDD 432341-B21</p> <p>Serial-Attached SCSI (SAS) Hot Plug Hard Drives (To be used with SAS/SATA Hot Plug CTO Chassis Models Only)</p> <p><i>NOTE: A SAS HBA or Array Controller is required.</i></p> <p>HP 72GB 3G SAS 15K 3.5" SP HDD 375870-B21</p> <p>HP 146GB 3G SAS 15K 3.5" SP HDD 375872-B21</p> <p>HP 300GB 3G SAS 15K 3.5" SP HDD 431944-B21</p>
<hr/>	
Storage Controllers	<p>SAS HBA</p> <p>HP 8 Internal Port SAS HBA with RAID 347786-B21</p> <p><i>NOTE: For use with Hot Plug SAS/SATA CTO Chassis models. Required only when upgrading from a non-hot plug to a hot-plug model.</i></p> <p><i>NOTE: The selection HP 8 Internal Port SAS HBA with RAID requires the purchase of the PCI-X Riser Option kit (P/N 409347-B21)</i></p> <p>HP SC44Ge Host Bus Adapter 416096-B21</p> <p><i>NOTE: SAS HBA</i></p> <p>SAS Controllers</p> <p>HP Smart Array E200 Controller</p> <p>HP Smart Array E200/128 BBWC Controller 411508-B21</p> <p><i>NOTE: Selection of the E500 with the E200 will prevent installation of the E500 battery-backed write cache module.</i></p> <p>128-MB BBWC (Battery-Backed Write Cache) Enabler 351580-B21</p> <p>HP Smart Array E500 Controller</p> <p>HP Smart Array E500/256MB Controller (Standard RAID 0,1, 1+0) 435129-B21</p> <p><i>NOTE: Selection of the E500 with the E200 will prevent installation of the E500 battery-backed write cache module.</i></p> <p>256MB Battery-backed write cache upgrade for RAID 5 support 383280-B21</p> <p><i>NOTE: when installing a battery-backed write cache module, the HP Smart Array E500 must be installed in the full-length PCI slot</i></p> <p>SCSI Controller</p> <p>HP Single Channel U320 SCSI Controller 374654-B21</p>

Configuration Information - Factory Integrated Models

SCSI HBA

HP SC11Xe Host Bus Adapter

412911-B21

NOTE: U320 HBA with tape support only.

Step 3: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Options" section below. Some options may not be available for factory integration. Please contact an HP sales representative for additional information.

Options

Server Management Stand Alone Software Product and ProLiant Essentials

NOTE: Electronic licensing options are available for Insight Control suites and select ProLiant Essentials software products. Please see the appropriate Insight Control and ProLiant Essentials QuickSpecs for additional information.

Deploy

ProLiant Essentials Rapid Deployment Pack

ProLiant Essentials Rapid Deployment Pack 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 ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.html

Control

Integrated Lights-Out 100i Select Pack and Advanced Pack

HP Lights Out 100i Select Pack 1-Server License 413111-B21

HP Lights Out 100i Advanced Pack 1-Server License 413115-B21

NOTE: Flexible and volume quantity (AKA) license kits are available for both the Lights-Out 100i Select and Lights-Out 100i Advanced Pack licenses as well as Electronic License To Use (E-LTU). AKA Tracking licenses require a 100 unit minimum forecast at initial contract signing. For these additional part numbers, please refer to QuickSpecs at this link for more information:

<http://h18004.www1.hp.com/products/servers/management/remotemgmt.html>

NOTE: For additional ProLiant Integrated Light-Out Select Pack and Advanced Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12087_na/12087_na.html

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

NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: <http://www.hp.com/servers/proliantessentials>.

Options

Processor	Quad-Core Intel® Xeon® processor X5365 (3.0 GHz, 120W, 1333MHz FSB)	452997-B21
	Quad-Core Intel® Xeon® processor X5355 (2.66 GHz, 120 W, 1333 MHz FSB) Option Kit	409279-B21
	Quad-Core Intel® Xeon® processor E5345 (2.33 GHz, 80 W, 1333 MHz FSB) Option Kit	409159-B21
	Quad-Core Intel® Xeon® processor E5335 (2.00 GHz, 80 W, 1333 MHz FSB) Option Kit	442992-B21
	Quad-Core Intel® Xeon® processor L5335 (2.00GHz, 50W, 1333 MHz FSB, Low Voltage) Option Kit	453475-B21
	Quad-Core Intel® Xeon® processor L5320 (1.86 GHz, 50W, 1066 FSB) Option Kit	442995-B21
	Quad-Core Intel® Xeon® processor E5320 (1.86 GHz, 80 W, 1066 MHz FSB) Option Kit	409157-B21
	Quad-Core Intel® Xeon® processor E5310 (1.60 GHz, 80 W, 1066 MHz FSB) Option Kit	409278-B21
	Dual-Core Intel® Xeon® processor 5160 (3.00 GHz, 80 W, 1333 MHz FSB) Option Kit	417786-B21
	Dual-Core Intel® Xeon® processor 5150 (2.66 GHz, 65 W, 1333 MHz FSB) Option Kit	417784-B21
	Dual-Core Intel® Xeon® processor 5148 (2.33 GHz, 40 W, 1333 MHz FSB, Low Voltage) Option Kit	433253-B21
	Dual-Core Intel® Xeon® processor 5140 (2.33 GHz, 65 W, 1333 MHz FSB) Option Kit	417774-B21
	Dual-Core Intel® Xeon® processor 5130 (2.00 GHz, 65 W, 1333 MHz FSB) Option Kit	417772-B21
	Dual-Core Intel® Xeon® processor 5110 (1.60 GHz, 65 W, 1066 MHz FSB) Option Kit	417770-B21
	Memory (FBDIMMs)	1 GB FBD PC2-5300 2 X 512 Kit
2 GB FBD PC2-5300 2 x 1 GB LP Kit		461826-B21
2 GB FBD PC2-5300 2 X 1 GB Kit		397411-B21
4 GB FBD PC2-5300 2 X 2 GB Kit		397413-B21
8 GB FBD PC2-5300 2 X 4 GB Kit		397415-B21

Options

Hard Drives

Serial-ATA (SATA) Non-Hot Plug Hard Drives (Non-Hot Plug Models Only)

HP 80GB 1.5G SATA 7.2K NHP 3.5" HDD	383410-B21
HP 160GB 1.5G SATA 7.2K NHP 3.5" HDD	411275-B21
HP 250GB 1.5G SATA 7.2K NHP 3.5" HDD	411276-B21

NOTE: When purchasing systems with the 500GB Non-Hot Plug SATA drives, please reference the Configuration Information Section of this QuickSpecs to order via Configuration to Order.

Serial-ATA (SATA) Hot Plug Hard Drives (SAS/SATA Hot Plug Models Only)

NOTE: A SAS HBA or Array Controller is required.

HP 80GB SATA 7.2K Hot Plug 3.5" HDD	349237-B21
HP 160GB SATA 7.2K Hot Plug 3.5" HDD	349238-B21
HP 250GB SATA 7.2K Hot Plug 3.5" HDD	349239-B21
HP 500GB SATA 7.2K Hot Plug 3.5" HDD	395473-B21
HP 750GB SATA 7.2K Hot Plug 3.5" HDD	432341-B21

Serial-Attached SCSI (SAS) Hot Plug Hard Drives (SAS/SATA Hot Plug Models Only)

HP 72GB 3G SAS 15K 3.5" DP HDD	384852-B21
HP 72GB 3G SAS 15K 3.5" SP HDD	375870-B21
HP 146GB 3G SAS 15K 3.5" DP HDD	384854-B21
HP 146GB 3G SAS 15K 3.5" SP HDD	375872-B21
HP 300GB 3G SAS 15K 3.5" DP HDD	416127-B21
HP 300GB 3G SAS 15K 3.5" SP HDD	431944-B21

NOTE: The purchase of SAS HBA or array controller is required.

Graphic Cards

NVIDIA Quadro FX3500 256MB PCIe	435681-B21
NVIDIA Quadro FX1500 256MB PCIe	435703-B21

NOTE: Graphic cards are supported on Windows 2003 and Linux Operating Systems.

Optical Drives

DVD-ROM Drive (optional)	361040-B21
24x CD-ROM Drive (optional)	349046-B21
DVD-RW Drive (optional)	395498-B21
DVD/CD RW Drive (optional)	377402-B21
Multibay II DVD/CD-RW Combo Drive	PA850A

NOTE: When purchasing the Multibay II DVD/CD-RW Combo Drive, (P/N PA850A), the USB 2.0 Multibay II Cradle (P/N PA509A) is required.

USB 2.0 MultiBay II Cradle, External	PA509A
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NOTE: When purchasing the Multibay II DVD/CD-RW Combo Drive, (P/N 850A), the USB 2.0 Multibay II Cradle, (P/N PA509A) is required.

Options

Storage Controllers

SAS HBA

HP 8 Internal Port SAS HBA with RAID 347786-B21

NOTE: For use with Hot Plug SAS/SATA models. Required only when upgrading from a non-hot plug to a hot plug model.

NOTE: The selection HP 8 Internal Port SAS HBA with RAID requires the purchase of the PCI-X Riser Option kit (P/N 409347-B21)

HP SC44Ge Host Bus Adapter 416096-B21

NOTE: SAS HBA.

SAS Controller

HP SAS/SATA Host Cable Kit 389650-B21

NOTE: For use with Hot Plug SAS/SATA models. Required only when upgrading from a non-hot plug to a hot plug model.

HP Smart Array E200 Controller

HP Smart Array E200/128 BBWC Controller 411508-B21

NOTE: Selection of the E500 with the E200 will prevent installation of the E500 battery-backed write cache module.

128-MB BBWC (Battery-Backed Write Cache) Enabler 351580-B21

HP Smart Array E500 Controller

HP Smart Array E500/256MB Controller (Standard RAID 0,1, 1+0) 435129-B21

NOTE: Selection of the E500 with the E200 will prevent installation of the E500 battery-backed write cache module.

256MB Battery-backed write cache upgrade for RAID 5 support 383280-B21

NOTE: when installing a battery-backed write cache module, the HP Smart Array E500 must be installed in the full-length PCI slot.

HP PCI-C Riser Board

HP PCI-X Riser Board Kit 409347-B21

Hot Plug Backplane

Hot Plug Backplane Option Kit

NOTE: Required when upgrading from a non-hot plug to a hot plug model.

SCSI Controller

64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 374654-B21

SCSI HBA

HP SC11Xe Host Bus Adapter 412911-B21

NOTE: U320 HBA with tape support only.

Options

Communications	HP NC110T PCI Express 1 Port Gigabit Server Adapter	434905-B21
	NOTE: Does not support Windows 2000.	
	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 NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter	394795-B21
NOTE: Supported on a Full Length-Full Height slot only.		
HP NC510C PCIe 10 Gigabit Server Adapter	414129-B21	
NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.		
HP NC510F PCIe 10 Gigabit Server Adapter	414126-B21	
NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510F adapter.		

HPC Specific Options	InfiniBand 4X PCI-E Dual Port Host Adapter	380298-B21
	InfiniBand 4X PCI-X Dual Port Host Adapter	380299-B21
	HP IB 4X DDR PCI-e Dual Port 0 Memory HCA	483513-B21
	HP IB 4X DDR PCI-e DUAL PORT HCA	448397-B21
	HP IB 4X DDR PCI-e Dual Port HCA	409376-B21
	Myrinet PCI 2XP Rev-E 4MB Network Interface Card	373983-B21
	Myrinet 2XP PCI-X, Fiber F-Series, 2MB NIC	390456-B21
	NOTE: For HPC interconnect adapters please see the HPC Interconnect section of this QuickSpecs.	

Rack Kits	1U Cable Management Arm	365403-B21
	NOTE: Package contains two cable management arms	

Options

Tape Drives

USB Tape Drives

HP StorageWorks 1U USB Rack-Mount Kit with one DAT 72 USB Tape Drive AG594A

HP StorageWorks 1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive AG703A

Ultrium External Tape Drive

HP StorageWorks Ultrium 232 Internal Tape Drive, (Carbonite) DW064A

NOTE: HP recommends combining this tape drive with the 1U SCSI Rack-Mount kit (A7445B) for a complete rack-mount solution.

Rack-Mount Tape Drive

HP StorageWorks 1U SCSI Rack-Mount kit A7445B

NOTE: The 1U Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with multiple Single-Ended and LVD SCSI tape drives including the DAT 24, DAT 40, DAT 72, DLT VS80, DLT VS160, Ultrium 215, Ultrium 232, Ultrium 448 and Ultrium 920 tape drives.

HP StorageWorks 1U USB Rack-Mount Kit A8007A

NOTE: The 1U USB Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the DAT 24 USB, DAT 40 USB and DAT 72 USB tape drives.

NOTE: When attaching to an external tape drive, autoloader or library, you must also purchase a HBA

NOTE: For a complete listing of HP tape drive offerings supported with the DL140 G3, visit:

<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

HP D2D Backup System

HP StorageWorks D2D110 Backup System EH880A

NOTE: 1TB of Disk Storage.

HP StorageWorks D2D110 Backup System with Data Protector Express Software Kit EH923A

NOTE: 1TB of Disk Storage.

HP StorageWorks D2D120 Backup System EH884A

NOTE: 2TB of Disk Storage.

HP StorageWorks D2D120 Backup System with Data Protector Express Software Kit EH924A

NOTE: 2TB of Disk Storage.

HP StorageWorks D2D130 Backup System EH950A

NOTE: 3TB of Disk Storage.

HP StorageWorks D2D130 Backup System with Data Protector Express Software Kit EH951A

NOTE: 3TB of Disk Storage.

HP StorageWorks D2D130 Backup System with LTO-3 Ultrium 920 SAS Tape Drive EH952A

NOTE: 3TB of Disk Storage.

NOTE: Please see the HP D2D Backup Systems QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/12651_na/12651_na.html

Options

StorageWorks Options	StorageWorks Fibre Channel HBA	
	NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html	
	HP StorageWorks 4 Gb PCI-X 2.0-to-Fibre Channel HBA	AB429A
	HP StorageWorks 4 Gb PCI-X 2.0 DC-to-Fibre Channel HBA	AE369A
	HP StorageWorks FC2142SR 4 Gb PCI-e HBA	A8002A
	HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA	A8003A
	HP StorageWorks FC1142SR 4 Gb PCI-e HBA	AE311A
	HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA	AE312A
	HP StorageWorks FC2143 4Gb PCI-X 2.0 HBA	AD167A
	HP StorageWorks 81Q PCI-e FC HBA	AK344A
	StorageWorks SCSI HBA	
	HP U320e SCSI Host Bus Adapter	AH627A
	NOTE: Recommended Dual Channel Ultra320 SCSI Controller for connecting multi-drive MSL tape libraries to ProLiant servers	
	HP StorageWorks FC2243 4Gb PCI-X 2.0 DC HBA	AD168A
	StorageWorks Connection Kit	
HP StorageWorks 8Gb Simple SAN Connection Kit	AK241A	
StorageWorks Fibre Channel Switch		
HP StorageWorks 8/20q Fibre Channel Switch	AK242A	
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USB Options	HP 1GB USB 2.0 Floppy Drive Key	442085-B21
	HP 256MB USB 2.0 Floppy Drive Key	442084-B21
	USB 1.44-MB External Diskette Drive	DC141B
	USB Floppy Drive	DC361B
	HP USB-P/S2 Mouse	DC369A
	HP Keyboard (USB) standard 2004	DT528A#xxx
	USB 2.0 4-port HUB	DG954A
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Options

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.	
	HP Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	HP Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface Adapter - 1 pack with power supply	373035-B21
	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: 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 Serial Console Server Options	HP 16 Port Serial Console Server (worldwide)	AF101A
	HP 48 Port Serial Console Server (worldwide)	AF102A
	Serial Adapter, RJ45-D89 DCE Female, 1-pack	AF103A
	Serial Adapter, RJ45-D89 DCE Female, 8-pack	AF110A
	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 4-Hour On-site Service	
	13-Hour x 5-Day Coverage, 3 Years, Electronic	U9509E
	Hardware Services Next Business Day On-Site Service	
	9-Hour x 5-Day Coverage, 3 Years, Electronic	U9508E
	Hardware Services 6-Hour Call to Repair On-Site Service	
Hardware Installation, Electronic	U9520E	
NOTE: For more information, customer/resellers can contact http://www.hp.com/services/carepack		

Memory

HP ProLiant DL140 G3 (all models)

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

Standard Memory

1 GB (2 x 512 MB) PC2-5300 Fully Buffered DIMM memory, with Advanced ECC Capabilities Memory installed.

Maximum Memory

Up to 32GB memory is available with the optional installation of PC2-5300 Fully Buffered DIMM memory kits.

NOTE: Memory should be installed in pairs and matched for optimum performance.

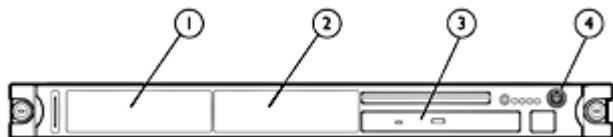
NOTE: Chart does not represent all possible memory configurations.

Memory	Slot							
	1	2	3	4	5	6	7	8
Standard (1 GB)	512 MB	Empty	512 MB	Empty	Empty	Empty	Empty	Empty
Maximum (32 GB)	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB

Following are memory options available from HP:

1 GB FBD PC2-5300 2 X 512 Kit	397409-B21
2 GB FBD PC2-5300 2 x 1 GB LP Kit	461826-B21
2 GB FBD PC2-5300 2 X 1 GB Kit	397411-B21
4 GB FBD PC2-5300 2 X 2 GB Kit	397413-B21
8 GB FBD PC2-5300 2 X 4 GB Kit	397415-B21

Storage



- 1,2 Two Non-hot plug SATA or Two 3.5" Hot Plug SAS/SATA Hard Drive Bays
- 3 Optional CD-ROM, DVD-ROM, DVD RW, DVD/CD RW
- 4 Power On/Off

Drive Support

Removable Media

	Quantity Supported	Position Supported	Controller
IDE (ATAPI) CD-ROM Drive	Up to 1	3	Integrated IDE (ATAPI) (optional)
DVD-ROM	Up to 1	3	Integrated IDE (ATAPI) (optional)
DVD RW	Up to 1	3	Integrated IDE (ATAPI) (optional)
DVD/CD RW	Up to 1	3	Integrated IDE (ATAPI) (optional)

Hard Drives

SATA - Non-Hot Plug

	Quantity Supported	Position Supported	Controller
3.5-inch			
80 GB 7,200 rpm	Up to 2	1;2	HP Embedded SATA RAID Controller
160 GB 7,200 rpm	Up to 2	1;2	HP Embedded SATA RAID Controller
250 GB 7,200 rpm	Up to 2	1;2	HP Embedded SATA RAID Controller
500 GB 7,200 rpm	Up to 2	1;2	HP Embedded SATA RAID Controller

SAS/SATA Hot Plug

	Quantity Supported	Position Supported	Controller
3.5-inch			
80 GB SATA 7,200 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
160 GB SATA 7,200 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
250 GB SATA 7,200 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
500 GB SATA 7,200 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
750 GB SATA 7,200 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
72 GB SAS 15,000 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
146 GB SAS 15,000 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID
300 GB SAS 15,000 rpm	Up to 2	1;2	HP Internal SAS HBA with RAID

Storage

Tape Drives

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/north_america/10233.html

NOTE: For complete listing of tape drive offerings see
<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>
For recommended tape drive offerings for this ProLiant server see the following:

	Position Supported	Controller	Controller/HBA Option Kit Part Number
HP StorageWorks USB Tape DAT 72 USB DAT 160 USB 1U USB Rack-Mount Kit	External	USB 2.0 Port	N/A
HP StorageWorks SCSI Tape Ultrium 232 DAT 72 DAT 160 1U USB Rack-Mount Kit	External	HP SC11Xe Host Bus Adapter	412911-B21
HP StorageWorks D2D Backup Systems D2D110 D2D120 D2D130	External	Embedded Network Controller	N/A

Power Specifications

650W Power Supply Spare Kit	416349-001					
Operational Input Voltage Range (Vrms)	90Vac to 264Vac full range					
Frequency Range (Nominal) (Hz)	47 Hz to 63 Hz					
Nominal Input Voltage (Vrms)	100	115	200	220	230	240
Max Rated Output Wattage Rating	653.10	653.19	653.08	652.96	653.08	652.96
Nominal Input Current (Arms)	8.55	7.31	4.12	3.77	3.6	3.46
Max Rated Input Wattage Rating (Watts)	855	840.72	824.12	827.5	806.3	805.71
Max. Rated VA (Volt-Amp)	990	990	990	990	990	990
Efficiency (%)	76.39	77.69	79.25	78.91	81	81.04
Power Factor	0.998	0.997	0.983	0.976	0.973	0.969
Leakage Current (mA)	<3.5mA	<3.5mA	<3.5mA	<3.5mA	<3.5mA	<3.5mA
Maximum Inrush Current (A peak)	60A	60A	60A	60A	60A	60A
Maximum Inrush Current Duration (mS)	1mS	1mS	1mS	1mS	1mS	1mS

System Specifications

Power		
ProLiant DL140 G3 Fully Configured	115V/60Hz	220V/50Hz
Fully Loaded System Input Wattage (W)	651	638
Fully Loaded System Input Current (A rms)	5.7	3.0
Fully Loaded System Thermal (BTU- Hr)	2218	2174
Fully Loaded System VA (Volt-Amp)	657	657
System Leakage with all power supplies loaded (mA)	1.58	3.03
System Inrush Current with all power supplies loaded (A)	19	37
Power cord requirements	Nema 5-15P to IEC320-C13 IEC320-C13 to IEC320-C14	
NOTE: Power shown is for a fully configured system consisting of (2) CPU, (8) double-sided DIMMs, (2) HDDs, (1) CD-ROM, and (2) PCI cards.		
Power Cord		AF556A

Technical Specifications

System Unit	Dimensions (HxWxD) (with feet)	1.70 x 16.78 x 27.75 in (4.32 x 42.62 x 70.49 cm)	
	Weight (approximate)	35 lb (15.87 kg)	Fully configured (less rail kit)
	Input Requirements (per power supply)	Range Input Voltage	90 to 140 VAC/180 to 264 VAC
		Normal Line Voltage	115 or 230 VAC
	Line Frequency	47 to 63 Hz	
	Rated Input Current load	7.31A at 115VAC, 3.6A at 230VAC	
	BTU Rating	BTU-Hr	2228
	Power Supply Output	Rated Steady-State Power	653W
	Power (per power supply)	Maximum Peak Power	
	Temperature Range	Operating	50° to 95° F (10° to 35° C)
		Shipping	-40° to 140° F (-40° to 60° C)
	NOTE: All temperature ratings shown are for sea level. An altitude derating of 1° C per 304.8 m (1.8°F per 1,000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Upper operating limit is 3,048m (10,000 ft) or 70 Kpa/10.1 psia. Upper non-operating limit is 9,144 m (30,000 ft) or 30.3KPa/4.4 psia. System performance may be reduced if operating above 30° C.		
	Relative Humidity (non-condensing)	Operating	10% to 85%
		Non-operating	10% to 95%
	Acoustic Noise	Idle (Fixed Disk Drives Spinning)	
		L WAd (BELS)	6.96
		Operating (Random Seeks to Fixed Disks)	
		L WAd (BELS)	7.0

Non-Hot Plug SATA Hard Drives	80 GB 7.2K 383410-B21	Capacity	80027 MB		
		Height	1.028 in (2.61 cm)		
		Width	4.0 in (10.16 cm)		
		Interface	SATA 150		
		Transfer Rate Synchronous (Maximum)	150 MB/s		
		Seek Time (typical reads, including settling)	Single Track	0.8 ms	
			Average	9.0 ms	
			Full-Stroke	17.0 ms	
		Physical Configuration	Rotational Speed	7,200 rpm	
			Bytes/Sector	512	
		Logical Blocks	160,086,528		
	Operating Temperature	41° to 131° F (5° to 55° C)			

Technical Specifications

Two embedded NC320i PCIe Gigabit Server Adapters	Network Interface Compatibility	10Base-T/100Base-TX/1000Base-TX IEEE 802.3 10Base-T IEEE 802.3 1000Base-T IEEE 802.3 100Base-TX	
	Data Transfer Method	64-bit, 133MHz PCI(X)1.0	
	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)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000Base-TX	Category 5 UTP (2 Pair); up to 328 ft (100 m)

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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.