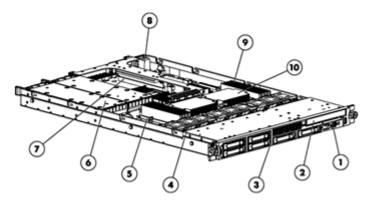
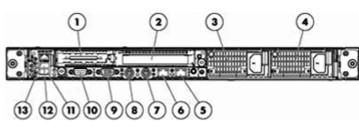
HP ProLiant DL365 Generation 5 (G5)

Overview





Front View:

- 1. Slide-out System Insight Display
- 2. Slimline removable media bay
- 3. Six SAS/SATA hot plug drive bays
- 4. Removable fans for easy serviceability
- 5. Choice of Smart Array P400i Controller or Smart Array E200i Controller
- 6. Redundant Hot Plug Power Supplies
- 7. Full length/height x8 PCI-Express Slot (optional PCI-X)
- 8. Low-profile x4 PCI-Express slot
- 9. Eight PC2-5300 667 MHz DDR2 DIMM slots
- 10. Up to two AMD Opteron[™] processors

Rear View:

- 1. PCI Express expansion slot 1, low-profile, half-length
- 2. PCI Express expansion slot 2
- 3. Power supply bay 2
- 4. Power supply bay 1
- 5. NIC 2 connector
- 6. NIC 1 connector
- 7. Keyboard connector
- 8. Mouse connector
- 9. Video connector
- 10. Serial connector
- 11. USB connector
- 12. USB connector
- 13. iLO 2 NIC connector

At A Glance

A concentrated 1U server that delivers the right match of processing power, memory performance, I/O throughput, scalability, HP Insight Control, and essential fault tolerance. The HP ProLiant DL365 G5 is optimized for space constrained scaling installations. Quad-Cord AMD Opteron™ processors, DDR2 memory, Serial Attached SCSI (SAS) and PCI Express technology provide a high performance system ideal for the full range scale out applications. What's more, the DL365 G5 provides all this in an ultra-dense platform with redundant power, fans, and embedded RAID capability.

• Processors:

- O Up to 2 AMD Opteron™ 2300 Series Quad-Core processors, with 512 KB L2 Cache per core, 2 MB L3 Cache
- O Supports DirectConnect Architecture and HyperTransport Technology
- O Supports AMD PowerNow!™ Technology

• Memory:

O Up to 32 GB of memory, supported by 8 slots of either PC2-5300 DDR2 (667 MHz) or PC2-6400 DDR2 (800 MHz) depending on the processor

• Storage Controller:

- O Entry Models: HP Smart Array E200i/64MB Controller (128 MB BBWC optional)
- O Base and High Efficiency Models: HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5) (512MB BBWC optional)
- O Performance Models: HP Smart Array P400i/256MB Controller with BBWC (RAID 0/1/1+0/5)



HP ProLiant DL365 Generation 5 (G5)

Overview

- Internal Drive Support:
 - O Up to 6 small form factor (SFF) hot-plug drive bays
 - O Slimline media bay supporting DVD or CD drive
- Network Controller:
 - Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit
- Expansion Slots:
 - O Two PCI-Express expansion slots: (1) full-length, full-height slot; (1) low-profile slot
- USB 2.0 Ports:
 - O 4 Total: (1) front, (1) internal and (2) rear accessible ports
- Redundancy:
 - O Multiple layers of fault tolerance through critical component redundancy (power supply and fan redundancy), embedded RAID capability, and full-featured ProLiant Onboard Administrator
- Infrastructure Management:
 - O Convenient slide-out Systems Insight Display for quick and easy front view server diagnostics, along with status LEDs, Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU)
 - O 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
 - O HP Insight Control (ICE) suites, as product options, deliver essential infrastructure management that can help save time and money by making it easy to deploy, monitor, control and optimize your IT infrastructure through a single, simple management console. ICE suites support both Windows and Linux-based servers and management consoles.
 - O HP Insight Dynamics VSE suite for ProLiant servers, a product option, is an integrated command center that enables you to continuously analyze and optimize your adaptive infrastructure. This advanced infrastructure management software lets you reduce the cost of common data center tasks by as much as 40 percent while keeping pace with your changing business
- Form Factor:
 - O 1U Rack form factor (1.75"), less than 28 in (70.5 cm) deep
- Operating Systems and Virtualization Software Support for ProLiant Servers:
 - O Supports Windows, RHEL, SLES, OEL, Solaris, VMware
- Deployment/Serviceability:
 - O Sliding rails for in rack servicing ship standard; optional 1U Cable Management Arm
 - O 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:
 - O This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

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

 http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html



HP ProLiant DL365 Generation 5 (G5)

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/4AA1-5214ENW.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 AMD Opteron[™] Processor 2384 (2.7 GHz, 75 Watts) AMD Opteron[™] Processor 2382 (2.6 GHz, 75 Watts AMD Opteron[™] Processor 2378 (2.4GHz, 75 Watts) AMD Opteron[™] Processor 2356 (2.3 GHz, 75 Watts) AMD Opteron[™] Processor 2354 (2.2 GHz, 75 Watts)

AMD Opteron[™] Processor 2352 (2.1 GHz, 75 Watts) AMD Opteron[™] Processor 2346 HE (1.8GHz, 55 Watts)

Chipset

Serverworks HT-2100 Northbridge and HT-1000 Southbridge Chipset

Memory

One of the following depending on Model Type

PC2-5300 DDR2 DIMMs (667 MHz)

One of the following

NOTE: Supported by 2352, 2354, 2356 processor models.

depending on Model

PC2-6400 DDR2 DIMMs (800MHz)

NOTE: Supported by 2384, 2382, 2378 processors models. 2 GB (2 x 1 GB) 667MHz or 800MHz

Entry, Base Models Performance Models High Efficiency Models

4 GB (4 x 1 GB) 667MHz or 800MHz 2 GB (2 x 1 GB), Low Power 667MHz

Maximum

32 GB (8 x 4 GB)

NOTE: DIMMs must be installed in decreasing capacity with the largest DIMM installed in the banks

furthest away from each processor.

Network Controller

Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including

support for Accelerated iSCSI through an optional Licensing Kit



HP ProLiant DL365 Generation 5 (G5)

Standard Features

Expansion Slots	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Device No.**	Form Factor	Notes
	1	PCI-e	x4	x8	72	0	Low profile slot	
	2	PCI-e	x8	x16	75	0	Full length, full height slot	
	2	PCI-X (133MHz, 3.3 Voltage)	64-bit	x16	2	1	Full length, full height slot	
	assignment i ** Slots are o by bus (starti	number enumerated c ing with the lo	lifferently base	ed on OS. MS	S OS's enume	rate from lo	alter the actual lowest to highest [
Manageability	out re vulner inforn • HP Pr proce	emote control rability scanni nation, go to: oLiant Onboo ssor) for simp	, optimization ing and patch www.hp.com ard Administro	of power use managemen /go/ice. utor (powered etup, health r	ige, rapid servers to and virtual results by the Integral	ver deploym nachine mo ated Light-C	ealth manageme nent, performand anagement. For r Dut 2 manageme power and them	e analysis, more
Storage Controllers One of the following depending on Model	Entry Model	S	Available u				/1) h battery-backed	d write
		IP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5) (512MB BBWC ptional)						
	Performance	e Models	HP Smart A	rray P400i/2	56MB Contro	ller with BB	SWC (RAID 0/1/	1+0/5)
Storage	Optical Driv (Slimline Dri		Optional D	VD-ROM, D\	/D/CD-RW C	ombo, or D	DVD-RW	
	Drive Bays		6 Small Form Factor bays total					
							y P400i controlle or activation of 5	
Maximum Internal	Hot Plug SA	S	1.8TB		6 x 300G	В		
Storage Type	Hot Plug SA	TA	3.0TB		6 x 500G	В		



HP ProLiant DL365 Generation 5 (G5)

Standard Features

Interfaces Keyboard 1

Mouse 1 Serial 1

Video 2 (1 front, 1 rear)

USB 2.0 Ports 2 rear, 1 front, 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.

Network RJ-45 2 iLO 2 remote 1 management port

Graphics

Integrated ATI ES1000, 32 MB video standard

16 bit color: maximum resolution of 1600 x 1200
32 bit color: maximum resolution of 1280 x 1024

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

Form Factor

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

HP Insight Software

HP Insight Foundation

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

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

The foundation pack includes:

- HP SmartStart
- HP Management
- HP ProLiant Firmware Maintenance

SmartStart version supported (minimum): SmartStart 7.60.

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

ProLiant Onboard Administrator HP ProLiant Onboard Administrator (powered by the HP 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 suites, and the 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. See www.hp.com/go/ProLiantOA



HP ProLiant DL365 Generation 5 (G5)

Standard Features

HP Insight Control suites

HP Insight Control suites, as product options, deliver essential infrastructure management that can help save time and money by making it easy to deploy, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. Insight Control suites install and license software modules that are integrated into HP System Insight Manager.

Two Insight Control suites are available, to serve environments requiring either Linux-based or Windows-based management consoles: HP Insight Control suite for Linux, and HP Insight Control suite. See www.hp.com/go/insightcontrol

HP Insight Control suites 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/insight.

suite

HP Insight Dynamics - VSE The HP Insight Dynamics - VSE suite for ProLiant, a product option, is an integrated command center that enables you to continuously analyze and optimize your adaptive infrastructure. This 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 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

Industry Standard Compliance

ACPI 1.0b Compliant PCI 2.3 Compliant **WOL Support** Microsoft® Logo certifications **PXE Support** USB 1.1 and 2.0 supported



HP ProLiant DL365 Generation 5 (G5)

Standard Features

Intelligent Manageability

HP Systems Insight Manager

SmartStart

ROM-Based Setup Utility (RBSU) Remote-Flash Redundant ROM Integrated Management Log (IML)

Server Health logging

Automatic Server Recovery-2 (ASR-2) System Interconnect Status Indicators

Dynamic sector repairing and drive parameter tracking (with Smart Array controllers)

Power Down Utility
Pre-Failure Warranty

Security

Power-on password Keyboard password Diskette drive control Diskette boot control

QuickLock, Network Server Mode

Removable CD and Diskette Drive Assembly

Serial interface control Administrator's password

Integrated Lights-Out has 12 customizable user accounts and SSL encryption

Integrated Lights-Out can be disabled via a Global Setting

iLO Advance Pack supports directory services integration and two-factor authentication

Server Power Cords

High line cord ships standard with all part numbers. Localized cables included with geographic specific models in other world regions.

NOTE: ProLiant DL servers no longer ship standard with NEMA power cords (187335-001) 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 power cord (416151-B21). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the NEMA power cord (187335-001) must be ordered separately.

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

www.hp.com/products/powercords.

Power Supply 700 W, Optional (1 + 1 redundant) power supply

NOTE: PN 399542-B21 contains the optional power supply and an IEC power cable only; purchase if connecting to PDU/UPS that supports IEC cables. PN 399542-291 includes IEC power cable and a Japan power cable. PN 399542-AA1 includes IEC power cable and a China power cable.

System Fans 9 fans ship standard; N+1 fan redundancy standard



HP ProLiant DL365 Generation 5 (G5)

Standard Features

Required Cabling

For required cabling information, refer to the Web site at: www.hp.com/servers/dl365.

Operating Systems and Virtualization Software Support for ProLiant Servers Microsoft Windows Server Microsoft Windows Server Hyper V Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Oracle Enterprise Linux (OEL) Solaris 10 for x86/x64 based Systems VMware

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/DL365G5.

Rack Airflow Requirements

Rack 10000 G2 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 G2 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the 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/dl365.

Rack Kit

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

Telco Rack Support

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



HP ProLiant DL365 Generation 5 (G5)

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

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

HP Enterprise Configurator

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

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 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



HP ProLiant DL365 Generation 5 (G5)

Models

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

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HP DL365 G5 Entry

Models

DL365G5 2352 447598-xx1 **Processor(s)** (1) AMD Opteron[™] Processor 2352 (2.1GHz, 75 Watts)

Memory2 GB (2 x 1 GB) Standard; PC2-5300 DDR2 DIMMs (667 MHz)Network ControllerTwo Embedded NC373i Multifunction Gigabit Server Adapters

Storage Controller Smart Array E200i/64 MB (RAID 0/1/1+0)
Hard Drive No drives included; (4) drive bays active

Internal Storage 1.8TB SAS; 1.50TB SATA

Optical Drive Optional upgrade

PCI-Express Slots 1 full-length x8 PCI-Express slot

1 low-profile x4 PCI-Express slot

Power Supply (1) 700W power supply, redundant optional

Fans (9) fans ship standard; N+1 fan redundancy standard

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

HP DL365 G5 Base

Models

DL365G5 2356 447597-xx1

DL365G5 2378 510146-xx1

Processor(s)

One of the following depending on model

Memory

One of the following depending on model

(1) AMD Opteron[™] Processor 2356 (2.3GHz, 75 Watts)

(1) AMD Opteron™ Processor 2378 (2.4GHz, 75 Watts)

2~GB (2 x 1 GB) Standard; PC2-5300 DDR2 DIMMs (667 MHz) (2352

processor)

2 GB (2 x 1 GB) Standard; PC2-6400 DDR2 DIMMs (800 MHz) (2378

processor)

Network Controller Two Embedded NC373i Multifunction Gigabit Server Adapters

Storage Controller HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5)

Hard Drive No drives included; (4) drive bays active

Internal Storage 1.8TB SAS; 1.50TB SATA

Optical Drive Optional upgrade

PCI-Express Slots

1 full-length x8 PCI-Express slot
1 low-profile x4 PCI-Express slot

Power Supply (1) 700W power supply, redundant optional

Fans (9) fans ship standard; N+1 fan redundancy standard

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



HP ProLiant DL365 Generation 5 (G5)

Models

HP DL365 G5 Performance Models

DL365G5 2356 447596-xx1

DL365G5 2384 510143-xx1

Processor(s)
One of the following depending on model

Memory
One of the following depending on model

(2) AMD Opteron™ Processors 2356 (2.3GHz, 75 Watts)
 (2) AMD Opteron™ Processors 2384 (2.7GHz, 75 Watts)

4 GB (4 x 1 GB) Standard; PC2-5300 DDR2 DIMMs (667 MHz)DIMMs (667 MHz) (2356 processor)
4 GB (4 x 1 GB) Standard; PC2-6400 DDR2 DIMMs (800 MHz) (2384

processor)

Network Controller Storage Controller Two Embedded NC373i Multifunction Gigabit Server Adapters
HP Smart Array P400i/256MB Controller with BBWC (RAID 0/1/1+0/5)

Hard Drive No drives included; (6) drive bays active

Internal Storage 1.8TB SAS; 1.50TB SATA

Optical Drive Slimline CD-RW/DVD-ROM Combo Option Kit

PCI-Express Slots 1 full-length x8 PCI-Express slot 1 low-profile x4 PCI-Express slot

Power Supply (2) 700W power supplies

Fans (9) fans ship standard; N+1 fan redundancy standard

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

HP DL365 G5 High Efficiency Models

DL365G5 2346HE 457647-xx1

Processor(s) Memory (1) AMD Opteron™ Processor 2346HE (1.8GHz, 55 Watts)

2 GB (2 x 1 GB) Standard; PC2-5300 DDR2 Low Power DIMMs (667 MHz)

Network Controller Two Embedded NC373i Multifunction Gigabit Server Adapters

Storage Controller HP Smart Array P400i/256MB Controller (RAID 0/1/1+0/5)

Hard Drive No drives included; (4) drive bays active

Internal Storage (9) fans ship standard; N+1 fan redundancy standard

Optical Drive Optional upgrade

PCI-Express Slots

1 full-length x8 PCI-Express slot
1 low-profile x4 PCI-Express slot

Power Supply (1) 700W power supply, redundant optional

Fans (9) fans ship standard; N+1 fan redundancy standard

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

Country Code Key

Rack Code Key

 XX=00
 US

 XX=20
 Brazil

 XX=29
 Japan

 XX=37
 APD

 XX=42
 EURO

 XX=AA
 PRC



HP ProLiant DL365 Generation 5 (G5)

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 ProLiant DL365 G5 Rack CTO Chassis 454269-B21

Factory Integrated Model ships with:

Two embedded NC373i Multifunction Gigabit Server Adapters

Integrated Lights-Out 2 (iLO 2) embedded

1 full-length and 1 low-profile x8 PCI-Express slots

9 fans; N+1 fan redundancy

(1) 700W power supply, redundant optional

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

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

Processors	AMD Opteron™ Processor 2356 (2.3 GHz, 75 Watts), FIO	447600-L21
	AMD Opteron™ Processor 2354 (2.2 GHz, 75 Watts), FIO	447602-L21
	AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts), FIO	447604-L21
	AMD Opteron™ Processor 2384 (2.7 GHz, 75 Watts), FIO	510145-L21
	AMD Opteron™ Processor 2382 (2.6 GHz, 75 Watts), FIO	510150-L21
	AMD Opteron™ Processor 2378 (2.4 GHz, 75 Watts), FIO	510148-L21
	AMD Opteron™ Processor 2346 HE (1.8 GHz, 55 Watts), FIO	457239-L21
Base Memory	1 GB REG PC2-5300 2 x 512 MB Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408850-B21
	2 GB REG PC2-5300 2 x 1 GB Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408851-B21
	2 GB REG PC2-5300 2 x 1 GB Low Power Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483399-B21
	4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408853-B21
	4 GB REG PC2-5300 2 x 2 GB Low Power Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483401-B21
	8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408854-B21
	8 GB REG PC2-5300 2 x 4 GB Low Power Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483403-B21
	2 GB REG PC2-6400 2 x 1 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497763-B21
	4 GB REG PC2-6400 2 x 2 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497765-B21



HP ProLiant DL365 Generation 5 (G5)

Configuration Inform	ation - Factory Integrated Models	
	8 GB REG PC2-6400 2 x 4 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497767-B21
	8 GB REG PC2-6400 2 x 4 GB Low Power Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	504351-B21
Storage Controllers	HP E200i Controller FIO NOTE: If selected, must choose one of the cache modules below.	399548-B21
	HP Smart Array E200 64 MB FIO Cache NOTE: Supports Smart Array E200 Controller only.	405102-B21
	128 MB Battery Backed Write Cache Enabler Option Kit NOTE: Supports Smart Array E200i Controller.	346914-B21
	HP P400i Controller FIO NOTE: If selected, must choose one of the two cache modules below.	413741-B21
	HP Smart Array P400 256 MB FIO Cache NOTE: Supports Smart Array P400 Controller and Smart Array P400i Controller only.	405139-B21
	512 MB Battery-backed cache upgrade NOTE: Supports Smart Array P400 Controller and Smart Array P400i Controller only.	405148-B21
	HP Smart Array P600/256 BBWC Controller NOTE: Requires PCI-X Riser option (PN 405154-B21). NOTE: Requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).	337972-B21
	HP Smart Array 6404/512 FIO CNTRLR	452240-B21

Step 3: Choose Additional Factory Integratable Options

Performance Packs

The HP ProLiant DL365 G5 performance packs are necessary to configure a HP ProLiant DL365 G5 Performance Model. HP ProLiant DL365 G5 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, redundant power supplies, Smart Array P400i Controller with 256MB of BBWC, and storage cable to enable the all 6 disk drive bays.

NOTE: 331903-B21 Slimline CD-RW/DVD-ROM Combo Drive Option Kit should also be selected along with the Performance Pack skus below to achieve parity to the HP ProLiant DL365 G5 Performance Models.

 HP DL365G5 X2356 HPM FIO Perf Pack
 448448-B21

 HP DL365G5 X2384 HPM FIO Perf Pack
 510151-B21

Step 4: Choose Additional Options for Factory Integration

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



HP ProLiant DL365 Generation 5 (G5)

Core Options

NOTE: Some options ma	y not be factory integratable. Contact your local sales representative for additiona	l information.
HP ProLiant DL365 G5	AMD Opteron™ Processor 2384 (2.7GHz, 75 Watts) Option Kit	510145-B21
Unique Options	AMD Opteron™ Processor 2382 (2.6GHz, 75 Watts) Option Kit	510150-B21
	AMD Opteron™ Processor 2378 (2.4GHz, 75 Watts) Option Kit	510148-B21
	AMD Opteron™ Processor 2356 (2.3GHz, 75 Watts) Option Kit	447600-B21
	AMD Opteron™ Processor 2354 (2.2GHz, 75 Watts) Option Kit	447602-B21
	AMD Opteron™ Processor 2352 (2.1GHz, 75 Watts) Option Kit	447604-B21
	AMD Opteron™ Processor 2346 HE (1.8GHz, 55 Watts) Option Kit	457239-B21
	PCI-X Riser option NOTE: To convert full-length PCI-Express slot to PCI-X slot.	405154-B21
Processor	AMD Opteron™ Processor 2384 (2.7GHz, 75 Watts) Option Kit	510145-B21
	AMD Opteron™ Processor 2382 (2.6GHz, 75 Watts) Option Kit	510150-B21
	AMD Opteron™ Processor 2378 (2.4GHz, 75 Watts) Option Kit	510148-B21
	AMD Opteron™ Processor 2356 (2.3GHz, 75 Watts) Option Kit	447600-B21
	AMD Opteron™ Processor 2354 (2.2GHz, 75 Watts) Option Kit	447602-B21
	AMD Opteron™ Processor 2352 (2.1GHz, 75 Watts) Option Kit	447604-B21
	AMD Opteron™ Processor 2346 HE (1.8GHz, 55 Watts) Option Kit	457239-B21
Memory	1 GB REG PC2-5300 2 x 512 MB Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408850-B21
	2 GB REG PC2-5300 2 x 1 GB Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408851-B21
	2 GB REG PC2-5300 2 x 1 GB Low Power Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483399-B21
	4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408853-B21
	4 GB REG PC2-5300 2 x 2 GB Low Power Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483401-B21
	8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408854-B21
	8 GB REG PC2-5300 2 x 4 GB Low Power Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483403-B21
	2 GB REG PC2-6400 2 x 1 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497763-B21
	4 GB REG PC2-6400 2 x 2 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497765-B21
	8 GB REG PC2-6400 2 x 4 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497767-B21
	8 GB REG PC2-6400 2 x 4 GB Low Power Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	504351-B21



HP ProLiant DL365 Generation 5 (G5)

Core Options		
Optical Drives	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit	264007-B21
	HP DVD <u>+</u> R/RW 8X Slim	383975-B21
	Slimline CD-ROM Drive 24X	356963-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. NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.	
	SAS Hot Plug SFF 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 15K SFF DP ENT HDD	512547-B21
	HP 146GB 6G SAS 10K SFF DP ENT HDD	507125-B21
	HP 146GB 3G SAS 15K SFF DP ENT HDD	504062-B21
	HP 146GB 3G SAS 10K SFF DP ENT HDD	418367-B21
	HP 72GB 6G SAS 15K SFF DP ENT HDD	512545-B21
	HP 72GB 3G SAS 15K SFF DP ENT HDD	418371-B2
	HP 72GB 3G SAS 10K SFF DP ENT HDD	384842-B2
	SAS Hot Plug SFF Midline (MDL) Drives	
	HP 500GB 6G SAS 7.2K SFF DP MDL HDD	507610-B2
	NOTE: 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 Midline (MDL) Drives	
	HP 500GB 3G SATA 7.2K 2.5in MDL HDD	507750-B2
	HP 160GB 3G SATA 7.2K 2.5in MDL HDD	530888-B2
	SATA Hot Plug SFF Entry (ETY) Drives	
	HP 250GB 3G SATA 5.4K SFF ETY HDD	460355-B2
	HP 120GB 1.5G SATA 5.4K SFF ETY HDD	458924-B2
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html	
	(Worldwide)	
	SATA Hot Plug Midline (MDL) Solid State Drives	
	HP 60GB 3G SATA 2.5in MDL 1y Wty SSD	572071-B2
	HP 120GB 3G SATA 2.5in MDL 1y Wty SSD	572073-B2
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13415_div/13415_div.html (Worldwide)	



HP ProLiant DL365 Generation 5 (G5)

Core Options

Communications G	Gigabit Ethernet Adapters				
HI	HP NC110T PCI Express Gigabit Server Adapter				
HI	P NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21			
HI	P NC364T PCI Express Quad Port Gigabit Server Adapter	435508-B21			
HI	P NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21			
HI	P NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21			
HI	P NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter	458492-B21			
10	10 Gigabit Ethernet Adapters				
N(N(N(P NC522SFP Dual Port 10GbE Server Adapter OTE: A minimum of two gigabyte (2 GB) of server memory is required per each C522SFP adapter. OTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and ables for fiber-optic environments must be purchased separately.	468332-B21			
	OTE: Please see the QuickSpecs for Technical Specifications and additional formation: www.hp.com/go/ProLiantNICs				
Power Supplies 70	00W HP redundant power supply with IEC cord only	399542-B21			
70	00W HP redundant power supply with IEC cord and Japan cord (Japan)	399542-291			



HP ProLiant DL365 Generation 5 (G5)

Additional Options

HP Insight Control suites HP Insight Control suite

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

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

HP Insight Control Management Software Media Kit

436222-B21

NOTE: Insight Software DVD media without licenses. Contains HP System Insight Manager and Insight software products and components licensed by the 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 suite for Linux (ICE-LX)

HP Insight Control suite for Linux, Media pack (DVD) - No licenses included 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 Management software, 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 suite for Linux, No Media, 1-Server license, including one year of 24x7 Technical Support and Updates

464423-B22

464422-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

HP Integrated Lights-Out Advanced

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

512485-B21

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

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

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

HP Insight Rapid Deployment software

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

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



HP ProLiant DL365 Generation 5 (G5)

Additional Options

entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24×7 HP Software Technical Support Service

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

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

Storage Controllers	SAS Controllers	
	Smart Array E500 Controller	
	Smart Array E500/256 MB Controller	435129-B21
	HP Smart Array P400 Controller HP Smart Array P400i Controller	
	HP Smart Array P400/256 MB Controller	405132-B21
	HP Smart Array P400i/256MB Controller	399550-B21
	Smart Array P600 Controller	
	HP Smart Array P600/256 BBWC Controller NOTE: Requires Mixed PCI-E/X riser cage.	337972-B21
	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
	Smart Array P410 Controller	
	HP Smart Array P410/256 MB Controller	462862-B21
	HP Smart Array P410/512 MB with BBWC Controller	462864-B21
	Smart Array P411 Controller	
	HP Smart Array P411/256 MB Controller	462830-B21
	HP Smart Array P411/512 MB with BBWC Controller	462832-B21
	Optional Upgrades	
	128 MB Battery-Backed Write Cache with Battery Housing NOTE: Supports Smart Array E200 Controller.	346914-B21
	Battery-backed write cache upgrade NOTE: For Smart Array P400 Controller and Smart Array P400i Controller only.	383280-B21
	512 MB Battery-backed write cache upgrade NOTE: For Smart Array P400 Controller and Smart Array P400i Controller only.	405148-B21
	512 MB Battery-Backed Cache Upgrade NOTE: This 512 MB Battery-Backed Cache Module upgrade kit supports the Smart Array P600 Controller and the Smart Array 6400 series Controller.	372538-B21
	256 MB Cache Module NOTE: Supported on HP Smart Array P212 Controller only.	462968-B21
	512MB BBWC NOTE: When used with the embedded HP Smart Array P410i controller, this battery module also requires a 24 inch SFP Battery Cable (496029-B21).	462967-B21
	http://h18000.www1.hp.com/products/quickspecs/12460_div/12460_div.html (Smart Array E200 Controller)	

HP ProLiant DL365 Generation 5 (G5)

Additional Options

http://h18000.www1.hp.com/products/quickspecs/12700 div/12700 div.html (Smart Array E500 Controller) http://h18000.www1.hp.com/products/quickspecs/12400 div/12400 div.html (Smart Array P400 Controller) http://h18000.www1.hp.com/products/quickspecs/12247 div/12247 div.html (Smart Array P600 Controller) 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) SAS HBA HP SC08Ge Host Bus Adapter 488765-B21 HP SC44Ge Host Bus Adapter 416096-B21 NOTE: When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP 8 Internal Port SAS HBA with RAID 347786-B21 NOTE: Supports SAS and SATA disk drive. RAID 0,1 supported. Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the 8 Internal Port SAS HBA with SATA Hard Drives, 1.5G SATA Hard Drives are required. NOTE: Please see the following QuickSpecs for additional information: http://h18004.www1.hp.com/products/quickspecs/13082 div/13082 div.html (SC08Ge HBA) http://h18004.www1.hp.com/products/quickspecs/12617 div/12617 div.html (SC44Ge HBA) http://h18004.www1.hp.com/products/quickspecs/12332 div/12332 div.html (SAS HBA) **SAS Cables** HP Mini SAS 4i 13.4 inch/0.35 m cable 399546-B21 NOTE: Used to connect Smart Array P400i to DL365 5th and 6th drive bays. HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable 411100-B21 NOTE: Used to connect SA-P600, SA-P400, SA-E200 Controllers to the HP ProLignt DL365 G5 drive backplane. This kit supports all six drive bays. SCSI Controllers for External Drive/Storage Support Smart Array 6402/128 Controller 273915-B21 **NOTE:** For support of external drives only. Smart Array 6404/256 Controller 273914-B21 **NOTE:** For support of external drives only. 512 MB Battery-Backed Cache Upgrade 372538-B21 NOTE: This 512 MB Battery-Backed Cache Module upgrade kit supports the Smart Array P600 Controller and the Smart Array 6400 series Controller. **SCSI HBA** HP SC11Xe Host Bus Adapter 412911-B21 NOTE: Recommended HBA for SCSI tape drive connect.



HP ProLiant DL365 Generation 5 (G5)

Additional Options

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/10429 div/10429 div.html

(SCSI Adapter)

http://h18000.www1.hp.com/products/quickspecs/11555 div/11555 div.html

(U320 Adapter)

http://h18000.www1.hp.com/products/quickspecs/12566 div/12566 div.html

(SC11Xe HBA)

Power Cords	NOTE: The HP ProLiant DL365 G5 ships with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs).			
	Nema 5-15P to IEC320-C13	AF556A AF568A AF570A AF566A AF565A AF571A		
	Power Cord, Euro, 10A 250 V Straight (6 ft/1.83 m)			
	Power Cord, UK, 10A 250 V Straight (6 ft/1.83 m)			
	Power Cord, Danish, 10A 250 V Straight (6 ft/1.83 m) Power Cord, Swiss, 10A 250 V Straight (6 ft/1.83 m) Power Cord, Italian, 10A 250 V Straight (6 ft/1.83 m)			
			Power Cord, South Africa, 10A 250 V Straight (8.2 ft/2.5 m)	AF567A
	HPC Specific Options	HP IB 4X DDR Conn-X PCI-e Dual Port HCA	448397-B21	
	HP IB 4X DDR PCI-e DUAL PORT 0 mem HCA	483513-B21		
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html			

Tape Storage

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 SC44Ge HBA (416096-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

Ultrium tape drives, please visit: http://www.hp.com/go/connect

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 ProLiant DL365 Generation 5 (G5)

Additional Options

HP StorageWorks 1/8 G2 Tape Autoloader Rack Kit AH166A NOTE: Required to install the 1/8 G2 Tape Autoloaders in a standard 19-inch rack; includes rails and rackmount instructions. NOTE: Please reference the Tape Autoloader QuickSpecs at: http://www.hp.com/go/automation for additional information needed to create a complete solution. 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:

Disk-Based Backup

RDX Removable Disk Backup

http://www.hp.com/go/ebs.

HP StorageWorks RDX500 External Removable Disk Backup System

AJ935A

NOTE: 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

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 ProLiant DL365 Generation 5 (G5)

Additional Options

StorageWorks Options	StorageWorks Fibre Channel HBAs
Jioluge Works Opilolis	Siorage Works Tible Chairlet Tibles

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

2.000000.12.0 0.10.11.0.0	
HP StorageWorks 81B PCI-e FC HBA Single Port	AP769A
HP StorageWorks 82B PCI-e FC HBA Dual Port	AP770A
HP StorageWorks 41B 4Gb PCI-e FC HBA	AP767A
HP StorageWorks 42B 4Gb Dual-Port PCI-e FC HBA	AP768A
Emulex Fibre Channel HBAs	
HP StorageWorks 81E PCI-e FC HBA Single Port	AJ762A
HP StorageWorks 82E PCI-e FC HBA Dual Port	AJ763A
HP StorageWorks FC2142 4Gb PCI-e HBA	A8002A
HP StorageWorks FC2242 Dual Channel 4Gb PCI-e HBA	A8003A
QLogic Fibre Channel HBAs	
HP StorageWorks 81Q PCI-e FC HBA Single Port	AK344A
HP StorageWorks 82Q PCI-e FC HBA Dual Port	AJ764A
HP StorageWorks FC1142 4Gb PCI-e HBA	AE311A
HP StorageWorks FC1242 Dual Channel 4Gb PCI-e HBA	AE312A
StorageWorks SCSI HBA	
HP U320e SCSI Host Bus Adapter	AH627A
NOTE: Recommended HBA for MSL SCSI Tape Library connect.	

HP StorageWorks Modular Smart Array

MSA SAN Storage Arrays

HP StorageWorks Modular Smart Array 20

335921-B21

NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.

NOTE: Please see the Modular Smart Array 20 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11942_div/11942_div.html (Worldwide)

HP StorageWorks Modular Smart Array 30 SB

302969-B21

NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies.

NOTE: Please see the Modular Smart Array 30 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11738_div/11738_div.html (Worldwide)

HP StorageWorks 50 Modular Smart Array

364430-B21

NOTE: Please see the Modular Smart Array 50 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html (Worldwide)

HP 2012sa Single Controller Modular Smart Array

AJ752A

HP 2012sa Dual Controller Modular Smart Array

AJ753A



HP ProLiant DL365 Generation 5 (G5)

Additional Options

NOTE: Please see the Modular Smart Array 2000sa QuickSpecs for additional options and configuration information at:

 $http://h18000.www1.hp.com/products/quickspecs/13045_div/13045_div.html$

(Worldwide)

Uninterruptible Power Systems

HP Rack-mountable UPS

HP R1500 G2 UPS

HP, R1.5kVA UPS, 1U, NA	AF419A
HP, R1.5kVA UPS, 1U, INTL	AF418A
HP R1 5kVA LIPS 111 IPN/TW	AF421A

NOTE: Please see UPS QuickSpecs for additional information:

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

HP R3000 UPS

HP R3000 VA UPS, 2U, DTC, INTL	AF414A
HP R3000 VA UPS, 2U, Low voltage L5-30, NA	AF422A
HP R3000 VA UPS, 2U, High voltage L6-20, NA	AF423A
HP R3000 VA UPS, 2U, High voltage L6-20, JPN	AF424A
HP R3000 VA UPS, 2U, Low voltage L5-30, JPN	AF425A

NOTE: Please see UPS QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/10671_div/10671_div.html (Worldwide)

HP R3000v Uninterruptible Power System

HP R3000v UPS	AF444A
111 K3000V 013	\triangle 1 444 \triangle

NOTE: The R3000v is available in China and India only.

NOTE: Please see UPS QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13129_div/13129_div.html (Worldwide)

HP R/T3000 Uninterruptible Power System (UPS)

HP R/T3000 UPS, Low voltage NA/JPN	AF452A
HP R/T3000 UPS, High voltage, NA/JPN	AF453A
HP R/T3000 UPS, High voltage, detachable inlet cord INTL	AF454A

NOTE: Please see the QuickSpecs for additional information:

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

HP Rack-Mountable R5500 UPS

HP R5500 VA UPS, INTL	AF416A
HP R5500 VA UPS, NA/JPN	AF426A

NOTE: Please see UPS QuickSpecs for additional information:

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

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



Monitored PDUs

HP ProLiant DL365 Generation 5 (G5)

Additional Options

Power Distribution Units

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 \$1324 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 \$1140 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 \$1316 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 \$1132 Monitored PDU- single input, 1Ø, 32A (INTL)	AF510A
HP 4.9 kVA \$124 Monitored PDU- single input, 1Ø, 24A (NA/JPN)	AF914A
HP 7.3 kVA \$132 Monitored PDU- single input, 1Ø, 32A (INTL)	AF915A
Modular PDUs 1U/0U (Up to 32 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 G2 9000 series racks).	and

9000 series racks).	
3.6kVA Model - mPDU, 16A, High (WW)	252663-B24
2.8 kVA Model - mPDU, 24A, Low (NA/JPN)	252663-D71
4.9kVA Model - mPDU, 24A, High (NA/JPN)	252663-D72
7.3kVA Model - mPDU, 32A, High (INT'L)	252663-B31
8.3kVA Model - mPDU, 40A, High (WW)	252663-B21
8.3kVA Model - mPDU, 40A, High (power cord attached) (NA/JPN)	252663-D73
9.2kVA Model - mPDU, 40A, High (power cord attached) (INTL)	252663-B32
8.3kVA Model - mPDU 40A, High (core only) (NA/JPN)	252663-D75
9.2kVA Model - mPDU 40 A, High (core only) (Int'l)	252663-B34
8.3kVA Model - mPDU 32A, High (core only) (Int'l)	252663-B33
4.9kVA Model - mPDU 24A, High (core only) (NA/JPN)	252663-D74

NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and country specific power cords:

http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html (Worldwide)



HP ProLiant DL365 Generation 5 (G5)

Additional Options

HP Rack Series	Rack 5000 series	(Graphite Metallic)
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HP 5642 Rack Unassembled 358254-B21

NOTE: Please see the HP Rack 5642 QuickSpecs for additional part numbers and

Technical Specifications such as height, width, depth, weight, and color:

http://h18000.www1.hp.com/products/quickspecs/12074 div/12074 div.html (Worldwide)

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)

\ ' \ '	
S10614 (14U) Rack Cabinet- Shock Pallet	292302-B22
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
10647 G2 (47U) Rack Cabinet 1200mm Deep - Shock Pallet 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	AF044A

required before an order is approved. CTO orders may require additional lead time.

10647 G2 (47U) Rack Cabinet 1200mm Deep - Pallet NOTE: It is mandatory to use a shock pallet when shipping racks with equipment

installed.

DA - 12799

NOTE: xxxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels).

NOTE: Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color:

http://h18000.www1.hp.com/products/quickspecs/12402 div/12402 div.html (Worldwide)

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

HP Rack Options 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



AF045A

HP ProLiant DL365 Generation 5 (G5)

Additional Options

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
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 Cabinets, 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 NOTE: Requires PS/2 and one USB port on server.	AF604A
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 (ALL)	AF611A
PS2 Server Console Cable, 6 ft, 2 pack	AF612A



HP ProLiant DL365 Generation 5 (G5)

Additional Options

USB Server Console Cable, 6 ft, 2 pack AF613A

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.

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.

Rack Kits

1U Cable Management Arm 365403-B21

NOTE: Package contains two cable management arms.

USB Options

HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver) DC172B USB 1.44-MB External Diskette Drive (Carbonite) DC141B HP USB 04 Standard Keyboard DT528A#ABA HP 1GB USB 2.0 Floppy Drive Key 442085-B21 HP 4GB USB Flash Media Key Kit 580385-B21

NOTE: Blank USB media device is supported for use with ProLiant iVirtualization. USB media must be installed in the internal slot of the ProLiant server. Learn more at http://www.hp.com/go/proliantvirtualization.

Service and Support Offerings

(HP Care Pack Services)

Hardware Services 4-Hour On-site Service

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic U4496E 4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic U4497E

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, U4498E Electronic

Hardware Services Next Business Day On-Site Service

Hardware Installation, Electronic U4506E Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the U4507E

Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic

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

Support Plus 24



U4508E

HP ProLiant DL365 Generation 5 (G5)

Additional Options

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

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

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

NOTE: For more information, customer/resellers can contact:

http://www.hp.com/services/carepack.



HP ProLiant DL365 Generation 5 (G5)

Memory

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

HP ProLiant DL365 G5 Models

Standard Memory

NOTE: One of the following depending on model:

Performance Models: 4 GB PC2-5300 DDR2 DIMMs (667 MHz) installed (4 x 1 GB) Base and Entry Models: 2 GB PC2-5300 DDR2 DIMMs (667 MHz) installed (2 x 1 GB)

High Efficiency Models: 2 GB PC2-5300 DDR2 Low Power DIMMs (667MHz) installed (2 x 1 GB)

Upgrading Memory and Memory Interleaving

DIMMs must be installed in identical pairs. Bank interleaving is automatically enabled on a processor node under the following conditions:

- 1) Four single ranked DIMMs populated per node (4 x 512 MB or 4 x 1 GB for example) yields 2-way bank interleaving.
- 2) Two dual ranked DIMMs populated per node (2 x 2 GB or 2 x 4 GB for example) yields 2-way bank interleaving.
- 3) Four dual ranked DIMMs populated per node (4 x 2 GB or 4 x 4 GB for example) yields 4-way bank interleaving.

If single and dual ranked DIMMs are mixed on the same node, bank interleaving will not be enabled.

Node interleaving can be configured via RBSU if both processors have the same memory footprint and is independent of bank interleaving.

Standard Memory Plus Optional Memory

Up to 26 GB memory is available with the standard memory of 1 GB and the optional installation of PC2-5300 DDR2 DIMMs (667 MHz) memory kits. - 6 slots would be available, and potentially could be filled with 4GB DIMM's.

Standard Memory Replaced with Optional Memory

Up to 32 GB of memory is available with the removal of the standard 512 MB of memory and the optional installation of PC2-5300 DDR2 DIMMs (667 MHz) memory kits.

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

NOTE: Chart does not represent all possible configurations.

Mer	mory	Slot							
		1	2	3	4	5	6	7	8
Standard (Base, Entry, and Performance Models)		1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	26 GB	1 GB	1 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Maximum	32 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB

HP ProLiant DL365 Generation 5 (G5)

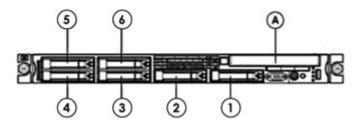
Memory

Following are memory options available from HP:	
1 GB REG PC2-5300 2 x 512 MB Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408850-B21
2 GB REG PC2-5300 2 x 1 GB Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408851-B21
2 GB REG PC2-5300 2 x 1 GB Low Power Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483399-B21
4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408853-B21
4 GB REG PC2-5300 2 x 2 GB Low Power Single Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483401-B21
8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	408854-B21
8 GB REG PC2-5300 2 x 4 GB Low Power Dual Rank Kit NOTE: Supported on 2352, 2354, and 2356 processor models.	483403-B21
2 GB REG PC2-6400 2 x 1 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497763-B21
4 GB REG PC2-6400 2 x 2 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497765-B21
8 GB REG PC2-6400 2 x 4 GB Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	497767-B21
8 GB REG PC2-6400 2 x 4 GB Low Power Kit NOTE: Supported on 2384, 2382, and 2378 processor models.	504351-B21



HP ProLiant DL365 Generation 5 (G5)

Storage



- 1-6 6 x SFF Hot Pluggable Hard Drive Bays
- A Slimline Bay: Optional optical drive

Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
Slimline DVD-Rom Drive (8x/24x) Option Kit (Servers)	Up to 1	А	
Slimline DVD/CD-RW Combo Option Kit	Up to 1	Α	Integrated IDE
Slimline DVD-RW Drive (8X) Option Kit	Up to 1	А	

Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components. NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
300GB 6G SAS 10K DP 300GB 3G SAS 10K DP 146GB 6G SAS 15K DP 146GB 3G SAS 10K DP 146GB 3G SAS 15K DP 146GB 3G SAS 10K DP 72GB 6G SAS 15K DP 72GB 3G SAS 15K DP 72GB 3G SAS 10K DP	6	1-6	HP Smart Array E200i/64 MB Controller HP Smart Array P400/256 MB Controller HP Smart Array P400/512 MB BBWC Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/ZM 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 HP Smart Array P411/512 MB BBWC Controller Please see NOTES below regarding hard drive quantity supported by Smart Array Controller.

NOTE: The Smart Array E200i Controller can support a maximum of 4 hard drives.

NOTE: The Smart Array P400 Controller can support a maximum of 6 hard drives. To support drives 5 and 6, the optional HP Mini SAS 4i 13.4 inch/0.35 m cable is required (PN 399546-B21).

NOTE: The Smart Array P600 Controller requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).



HP ProLiant DL365 Generation 5 (G5)

Storage

SAS Hot Plug SFF Midline (MDL) Drives					
	Quantity Supported	Position Supported	Controller		
500GB 6G SAS 7.2K DP	6	1-6	HP Smart Array E200i/64 MB Controller HP Smart Array P400/256 MB Controller HP Smart Array P400/512 MB BBWC Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/ZM 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 HP Smart Array P411/512 MB BBWC Controller Please see NOTES below regarding hard drive quantity supported by Smart Array Controller.		

NOTE: The Smart Array E200i Controller can support a maximum of 4 hard drives.

NOTE: The Smart Array P400 Controller can support a maximum of 6 hard drives. To support drives 5 and 6, the optional HP Mini

SAS 4i 13.4 inch/0.35 m cable is required (PN 399546-B21).

NOTE: The Smart Array P600 Controller requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).

SATA Hot Plug SFF Midline (MDL) Drives				
	Quantity Supported	Position Supported	Controller	
500GB 3G SATA 7.2K 160GB 3G SATA 7.2K	6	1-6	HP 8 Internal Port SAS HBA with RAID NOTE: Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the 8 Internal Port SAS HBA with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP SC44Ge Host Bus Adapter NOTE: Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP Smart Array E200i/64 MB Controller HP Smart Array P400/256 MB Controller HP Smart Array P400/512 MB Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/ZM Controller HP Smart Array P212/ZM Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P411/512 MB BBWC Controller	

NOTE: The Smart Array E200i Controller can support a maximum of 4 hard drives.

NOTE: The Smart Array P400 Controller can support a maximum of 6 hard drives. To support drives 5 and 6, the optional HP Mini

SAS 4i 13.4 inch/0.35 m cable is required (PN 399546-B21).

NOTE: The Smart Array P600 Controller requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).



HP ProLiant DL365 Generation 5 (G5)

Storage

SATA Hot Plug SFF Entry (ET	Y) Drives		
	Quantity Supported	Position Supported	Controller
250GB 3G SATA 5.4K 120GB 1.5G SATA 5.4K	6	1-6	HP 8 Internal Port SAS HBA with RAID NOTE: Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the 8 Internal Port SAS HBA with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP SC44Ge Host Bus Adapter NOTE: Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP Smart Array E200i/64 MB Controller HP Smart Array P400/256 MB Controller HP Smart Array P400/512 MB Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/ZM Controller HP Smart Array P212/ZM Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P411/256 MB Controller

NOTE: The Smart Array E200i Controller can support a maximum of 4 hard drives.

NOTE: The Smart Array P400 Controller can support a maximum of 6 hard drives. To support drives 5 and 6, the optional HP Mini

SAS 4i 13.4 inch/0.35 m cable is required (PN 399546-B21).

NOTE: The Smart Array P600 Controller requires HP SAS 4i to Mini SAS 4i 31 inch/.79 meter cable (PN 411100-B21).

SATA Hot Plug Midline (MDL) Solid State Drives

	Quantity Supported	Position Supported	Controller
60GB 3.0G SATA SSD 120GB 3.0G SATA SSD	6 1-6	HP 8 Internal Port SAS HBA with RAID NOTE: Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the 8 Internal Port SAS HBA with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP SC44Ge Host Bus Adapter NOTE: Transfer rate: 1.5 Gb/s SATA, 3 Gb/s SAS. NOTE: When using the SC44Ge with SATA Hard Drives, 1.5G SATA Hard Drives are required. HP Smart Array E200i/64 MB Controller HP Smart Array P400/256 MB Controller	
			HP Smart Array P400/512 MB Controller HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/ZM 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 ProLiant DL365 Generation 5 (G5)

Storage

HP Smart Array P411/512 MB BBWC Controller

	Quantity Supported	Position Supported	Host Controller or Adapter
20 Modular Smart Array	Please see the QuickSpecs to determine configuration requirements	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller
30 Modular Smart Array	Please see the QuickSpecs to determine configuration requirements.	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller
50 Modular Smart Array	2	External	HP Smart Array P600/256 BBWC Controller
HP 2000sa Modular Smart Array Controller	Up to 4	External	HP SC08Ge Host Bus Adapter

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

	0 1	1 371 1 737	
	Position Supported	Controller	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	External	HP SC44Ge Host Bus Adapter	416096-B21



HP ProLiant DL365 Generation 5 (G5)

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

HP StorageWorks SCSI Tape Automation, External

DAT 72x10 Autoloader 1/8 G2 Autoloader

MSL2024 MSL4048 MSL8096 MSL6000 External

HP SC11Xe Host Bus Adapter

412911-B21

HP U320e SCSI Host Bus Adapter

NOTE: Recommended for MSL tape libraries.

AH627A

HP StorageWorks SAS

Tape Automation, External

1/8 G2 Autoloader

MSL2024 MSL4048 External

HP SC44Ge Host Bus Adapter

416096-B21

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.

HP StorageWorks RDX Removable Disk Backup

System, External

RDX160 **RDX320** RDX500 External

USB 2.0 Port

N/A

N/A

HP StorageWorks D2D

Backup Systems D2D120

D2D2500i

D2D130 D2D4000i External

Embedded Network Controller

N/A



HP ProLiant DL365 Generation 5 (G5)

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 To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL365 G5
- Click on: "Power Calculator" link. (You may need to scroll down to see it)



HP ProLiant DL365 Generation 5 (G5)

Technical Specifications

System Unit Dimensions (H x W x D) 1.70 x 16.78 x 27.75 in (4.32 x 42.62 x 70.49 cm)

> Maximum (six hard drives 37 lb (16.78 kg) Weight

> > installed, two power supply, two processor)

No hard drives installed, 27.5 lb (12.47 kg)

one power supply, one

processor

Input Requirements Rated Input Voltage 100 to 240 VAC

> Rated Input Current 7.1 Amps (at 120VAC) to 3.5 Amps (240 at

> > VAC)

50 to 60 Hz Rated Input Frequency

852 W Rated Input Power

BTU Rating 2910 BTU/HR (at 120 VAC); 2870 (at 240 VAC)

NOTE: The BTU rating listed is for the Rated Input Power of 585 W.

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

To drill down to calculators: - Click on: "ProLiant Servers"

- Click on the Server of interest. Example: DL365 G5

- Click on: "Power Calculator" link. (You may need to scroll down to see it)

Power Supply Output (per power supply)

Rated Steady-State Power 700 W

 10° to 35° C (50° to 95° F) at sea level with an **System Inlet Temperature** Operating

> 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).

Storage -30° to 60°C - Maximum rate of change is

20°C/Hr.

10 to 90% relative humidity (Rh), 28°C maximum Humidity Operating (non-condensing)

wet bulb temperature

5 to 95% relative humidity (Rh), 38.7°C Storage

maximum wet bulb temperature.

Acoustic Noise Listed are the declared A-Weighted sound power levels (LWAd) and declared

> average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in

accordance with ISO 9296 (ECMA 109).

Idle:

L WAd (BELS) 6.4 L pAm (dBA) 49



HP ProLiant DL365 Generation 5 (G5)

Technical Specifications

Operating:

L WAd (BELS) 6.4

49 L pAm (dBA)

Emissions Classification

(EMC)

FCC Rating Class A

Normative Standards CISPR 22; EN55022; EN55024; FCC CFR 47,

> Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN

60950-1; IEC 60950-1

NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

Smart Array E200i Controller

Disk Drive and Enclosure 3 G SAS (Serial Attached SCSI)

Interface

1.5 G SATA (Serial Advanced Technology Attachment)

SAS Connectors

2 internal (SFF8484) x4 wide port connectors

Cache Memory Speed

DDR-1/266 MHz provides up to 4.2 GB/s maximum bandwidth.

Server Interface

x4 2.5 G PCle provides 2 GB/s maximum bandwidth.

SAS Speed Cache Memory x8 3 G SAS provides 2.4 GB/s maximum bandwidth. 40-bit 64 MB or 128 MB cache: ECC protection, battery-backed, and

transportable

Logical Volumes

Supported

Up to 32 logical volumes

Maximum Volume

3TB (6 x 500 GB)

Capacity

Host Memory Addressing

64-bit, supporting greater than 4 GB server memory space

RAID Support

RAID 5 (Distributed Data Guarding) requires 128 MB BBWC option

RAID 1+0 (Striping & Mirroring)

RAID 0 (Striping)

Upgradeable Firmware

Upgradeable Firmware



HP ProLiant DL365 Generation 5 (G5)

Technical Specifications

Two embedded NC373i Multifunction Gigabit Server Adapters Network Interface 10/100/1000-T Compatibility EEE 802.3 10Base-T

IEEE 802.3ab 1000Base-T IEEE 802.3u 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 2000 Mb/s

Full-Duplex)

Connector RJ-45

Cable Support 10Base-T Categories 3, 4 or 5 UTP up to 328 ft (100 m)

10/100/1000 Base-TX Category 5 UTP up to 328 ft (100 m)

Environment-friendly Products and Approach End-of-life Management and Recycling

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.

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.

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

