

Overview

The exploding growth of unstructured content changes the storage landscape. HP StoreAll Storage enables customers to tame and mine their content explosion - reducing the cost, complexity, and time to store, protect, and extract business value from massive amounts of unstructured data. HP StoreAll Storage is hyperscale, harnessed, instant, economic storage for today's and tomorrow's datacenter.

Scale massively without complexity to 16 petabytes of billions of files and objects with centralized management. Bring structure to unstructured data with custom metadata attributes, data retention policies, and autonomic protection for data durability. Use StoreAll Express Query to extract value by finding files more quickly and cost effectively than traditional methods. Scale down costs of storing data over time with policy-based tiering and a modular architecture.

NOTE: HP StoreAll 9000 Storage has been superseded by HP StoreAll 8000 Storage. The new generation family includes:

- **HP StoreAll 8800 Storage** - a converged hyperscale, economic, ultra-dense appliance that can be flexibly configured for a broad range of archive workloads.
- **HP StoreAll 8200 Gateway Storage** - providing file archive and object storage services in combination with HP 3PAR StoreServ 7000 and 10000 Storage.

Existing HP StoreAll 9320 Storage, HP StoreAll 9730 Storage, and HP StoreAll 9300 Gateway Storage can be seamlessly clustered with new HP StoreAll 8800 Storage and HP StoreAll 8200 Gateway Storage when upgraded to StoreAll OS v6.5.

What's New

Innovative features to tame and mine enterprise information and industry-specific archives, unstructured Big Data, and cloud solutions:

- StoreAll Express Query enables meaning to be added to data via custom metadata attributes and value to be extracted from data with ultra-fast search
- SMB 2.1, Alternate Data Streams (ADS), and DFS Namespace target support provides tighter Windows IT integration
- Feature setup and configuration wizards simplify management
- Platform health monitoring and firmware version verification provide robust supportability
- Installation wizard for HP StoreAll 9730 Storage and storage provisioning tool for HP StoreAll 9320 Storage speed deployment
- Ultra-dense 5U 6Gb SAS 70 LFF HDD enclosure for HP StoreAll 9730 Storage delivers end-to-end 6Gb architecture for greater performance

HP StoreAll Storage Specifications

Common Specifications	Operating System	StoreAll OS v6.3 with rich, all inclusive data services for: <ul style="list-style-type: none">- Data protection including Snapshots and Constant Validation- Data retention including WORM file immutability and Data Retention Policies- Data mobility including Rebalancing, Tiering and Continuous Remote Replication- Data management including Express Query plus user and directory quotas
	Protocol Support	NFS, CIFS and SMB, NDMP, HTTP and HTTPS, WebDAV, REST API with File Compatibility Mode and Object Mode, FTP and FTPS
	Optical Drive	DVD-RW standard for QuickRestore
	Remote Access	HP ProLiant Integrated Lights-Out 3 with Advanced Pack license

Overview

Key Features and Benefits

Hyperscale: Massive scalability without complexity

Efficiently scale out capacity and performance to 16 petabytes in a single namespace with autonomic rebalancing of data between nodes.
Administer centrally without complexity using the web browser-based GUI and CLI.

Harnessed: Structure for unstructured data

Add meaning and value to data with integrated support for custom metadata attributes.
Drive corporate compliance with data retention policies to ensure files cannot be deleted and WORM to ensure that files cannot be modified.
Leverage data durability with local and remote autonomic protection including data integrity validation and replication.

Instant: Ultra-fast search and value extraction

Use StoreAll Express Query to find files and generate file system analytics up to 100,000 times faster than traditional methods and without the cost or complexity of an external database.

Economic: Scale down costs of storing data over time

Reduce ongoing storage costs while optimizing utilization with transparent and autonomic policy-based data tiering.
Flexibly expand storage capacity and performance with the modular "pay-as-you-grow" scale-out architecture and support for the mixing of models in a single cluster.
Leverage the rich set of all inclusive data services that provide data protection, retention, mobility, and management.

HP StoreAll 9320 Storage

HP StoreAll 9320 Storage

HP StoreAll 9320 Storage is a flexible, turnkey, highly available scale-out appliance that can be configured as needed to match the customer's performance and capacity needs.

HP StoreAll 9320 1GbE Storage Node Pair	QP330B
HP StoreAll 9320 10GbE Storage Node Pair	QP331B
HP StoreAll 9320 48TB LFF 2TB 7.2K Mdl SAS Storage Base Capacity Block	QP335B
HP StoreAll 9320 48TB LFF 2TB 7.2K Mdl SAS Storage Expansion Capacity Block	QP336B
HP StoreAll 9320 72TB LFF 3TB 7.2K Mdl SAS Storage Base Capacity Block	QZ722B
HP StoreAll 9320 72TB LFF 3TB 7.2K Mdl SAS Storage Expansion Capacity Block	QZ723B
HP StoreAll 9320 7.2TB SFF 300GB 10K Ent SAS Storage Base Capacity Block	QZ724B
HP StoreAll 9320 7.5TB SFF 300GB 10K Ent SAS Storage Expansion Capacity Block	QZ725B
HP StoreAll 9320 21.6TB SFF 900GB 10K Ent SAS Storage Base Capacity Block	QZ726B
HP StoreAll 9320 22.5TB SFF 900GB 10K Ent SAS Storage Expansion Capacity Block	QZ727B

HP StoreAll 9320 Storage



Storage Node Pair

Base Capacity Block

Expansion Capacity Block

Standard Features – HP StoreAll 9320 Storage

Node Pairs Each HP StoreAll 9320 Storage Node Pair model contains two nodes. The difference between the three Node Pair SKUs is the network interfaces included. Each node is 2U rack-mount and built on HP ProLiant DL380 G7 Server DNA with two quad core Intel® Xeon® Processor E5620 and 48GB memory.

Network Ports	Description	Part Number	1 GbE Ports	10 GbE Ports
	HP StoreAll 9320 1GbE Storage Node Pair	QP330B	16	0
	HP StoreAll 9320 10GbE Storage Node Pair	QP331B	8	8

NOTE: Each node comes with 4 1GbE ports for optional connectivity to one or more secondary networks. All other ports are intended for client network connectivity. All nodes must be deployed in pairs. Single nodes are not supported

External Storage HBA (2) HP SC08e SAS HBA per node

Disk Drives (2) 300GB Enterprise SAS 10K SFF per node for StoreAll OS only

Power / Cooling Redundant hot plug replaceable power supply and fan modules in all nodes.
2 high voltage power cords (IEC C13 to C14) standard per node.

NOTE: HP StoreAll 9320 Storage is primarily connected to PDUs in racks. The SKUs ship standard with only PDU C-14 to C13 power cord(s). Alternative power cords and power connectivity options are available. See the ProLiant DL Server and HP MSA QuickSpecs on hp.com for additional information on available options.

Base Capacity Block The Base Capacity Block is the primary storage building block for the system. HP StoreAll 9320 Storage can be configured with 1 or 2 Base Capacity Blocks. Each Base Capacity Block includes a SAS Dual Controller LFF/SFF Array System and 24 HDDs. There are four Base Capacity Block models. The difference in the kits is the type and capacity of HDDs included:

Controller:	Based on HP MSA P2000 G3 SAS Dual Controller LFF/SFF Array System
Number of controllers:	2
RAID levels:	RAID 5 for SFF 10K Ent SAS Capacity Blocks RAID 6 for LFF 7.2K Mdl SAS Capacity Blocks
LUNs:	512
Host interconnect:	4 6Gb SAS host ports per controller

Standard Features – HP StoreAll 9320 Storage

Disk Drives

Base Capacity Block models include 24 HDDs.

HDD options:

300GB Enterprise SAS 10K SFF

900GB Enterprise SAS 10K SFF

2TB Midline SAS 7.2K LFF

3TB Midline SAS 7.2K LFF

Power / Cooling

Redundant hot plug replaceable power supply and fan modules in all Capacity Blocks.

2 high voltage power cords (IEC C13 to C14) standard per Capacity Block.

NOTE: HP StoreAll 9320 Storage is primarily connected to PDUs in racks. The SKUs ship standard with only PDU C-14 to C13 power cord(s). Alternative power cords and power connectivity options are available. See the ProLiant DL Server and MSA array QuickSpecs on hp.com for additional information on available options.

Storage Capacity

Base Capacity Block storage capacity

- 7.2TB raw capacity (5.7TB after RAID) with 24 300GB Enterprise SAS 10K SFF drives
- 21.6TB raw capacity (17.1TB after RAID) with 24 900GB Enterprise SAS 10K SFF drives
- 48TB raw capacity (32TB after RAID) with 24 2TB Midline SAS 7.2K LFF drives
- 72TB raw capacity (48TB after RAID) with 24 3TB Midline SAS 7.2K LFF drives

Expansion Capacity Block storage capacity

- 7.5TB raw capacity (6TB after RAID) with 25 300GB Enterprise SAS 10K SFF drives
- 22.5TB raw capacity (18TB after RAID) with 25 900GB Enterprise SAS 10K SFF drives
- 48TB raw capacity (32TB after RAID) with 24 2TB Midline SAS 7.2K LFF drives
- 72TB raw capacity (48TB after RAID) with 24 3TB Midline SAS 7.2K LFF drives

Configuration Instructions - HP StoreAll 9320 Storage

Introduction

Configuring and ordering HP StoreAll 9320 Storage is an easy process. The ordering tools are pre-populated with built-in rules to ensure your HP StoreAll 9320 Storage is properly configured. You will only need to specify the Node Pair model based on the customer network, the number and type of Capacity Blocks, and any system options required. The ordering system will then build the appropriate HP StoreAll 9320 Storage solution.

There are three major components used in an HP StoreAll 9320 Storage:

- HP StoreAll 9320 Storage Node Pair
- HP StoreAll 9320 Storage Base Capacity Block
- HP StoreAll 9320 Storage Expansion Capacity Block

Step 1 Choose a Node Pair model

The difference between the three Node Pair models is the network interface. The model ordered must have the network interface required to connect the HP StoreAll 9320 Storage to the customer's network.

HP StoreAll 9320 1GbE Storage Node Pair	QP330B
Includes 4 1GbE ports per node for connectivity to the customer's network	
HP StoreAll 9320 10GbE Storage Node Pair	QP331B
Includes 4 10GbE ports per node for connectivity to the customer's network	

NOTE: All HP StoreAll 9320 Storage Node Pair models include 2 nodes with 4 1GbE ports per node for optional connectivity to one or more secondary networks and 2 HP SC08e 6 Gb SAS HBAs.

Step 2 Choose the Base Capacity Block(s) (minimum 1, maximum 2)

The Base Capacity Block is the primary storage building block for the system. HP StoreAll 9320 Storage can be configured with 1 or 2 Base Capacity Blocks. There are four Base Capacity Block models to choose from. The difference between the Base Capacity Block models is the type and capacity of HDDs included. The different Base Capacity Block models can be mixed in a system.

HP StoreAll 9320 7.2TB 300GB 10K SFF Ent Storage Base Capacity Block	QZ724B
Includes SAS Dual Controller Array System and 24 300GB Ent SAS 10K SFF drives	
HP StoreAll 9320 21.6TB 900GB 10K SFF Ent Storage Base Capacity Block	QZ726B
Includes SAS Dual Controller Array System and 24 900GB Ent SAS 10K SFF drives	
HP StoreAll 9320 48TB 2TB 7.2K LFF Storage Base Capacity Block	QP335B
Includes SAS Dual Controller Array System , drive enclosure and 24 2TB Mdl SAS 7.2K LFF drives	
HP StoreAll 9320 72TB 3TB 7.2K LFF Mdl Storage Base Capacity Block	QZ722B
Includes SAS Dual Controller Array System, drive enclosure and 24 3TB Mdl SAS 7.2K LFF drives	

Configuration Instructions - HP StoreAll 9320 Storage

Step 3 Choose the Expansion Capacity Block(s) (minimum 0, maximum 6 or 10)

The Expansion Capacity Blocks are optional blocks to increase storage capacity. With each Base Capacity Block, a maximum of 3 LFF Mdl SAS Expansion Capacity Blocks or 5 SFF Ent SAS Expansion Capacity Blocks can be added. The HDD type and capacity of the Expansion Capacity Block must match the HDD type and capacity of the Base Capacity Block. A fully configured HP StoreAll 9320 Storage with 2 Base Capacity Blocks can have maximum of 6 LFF Expansion Capacity Blocks or 10 SFF Expansion Capacity Blocks. There are four Expansion Capacity Block models. The difference between the Expansion Capacity Blocks is the type and capacity of HDDs included.

HP StoreAll 9320 7.5TB 300GB 10K SFF Ent Storage Expansion Capacity Block Includes 1 drive enclosure and 25 300GB Ent SAS 10K SFF drives	QZ725B
HP StoreAll 9320 22.5TB 900GB 10K SFF Ent Storage Expansion Capacity Block Includes 1 drive enclosure and 25 900GB Ent SAS 10K SFF drives	QZ727B
HP StoreAll 9320 48TB 2TB 7.2K LFF Storage Expansion Capacity Block Includes 2 drive enclosures and 24 2TB Mdl SAS 7.2K LFF drives	QP336B
HP StoreAll 9320 72TB 3TB 7.2K LFF Mdl Storage Expansion Capacity Block Includes 2 drive enclosures and 24 3TB Mdl SAS 7.2K LFF drives	QZ723B

Options - HP StoreAll 9320 Storage

Step 4 Choose the System Options

The following options are available for HP StoreAll 9320 Storage. For more information on compatibility with HP and non-HP hardware and software please visit the Single Point of Connectivity Knowledge (SPOCK) website: <http://h20272.www2.hp.com/>

Add a Rack

HP StoreAll 9320 Storage supports either a standard 42U cabinet based on the HP 10000 G2 Series Rack or a choice of 42U extended, 36U and 22U heights.

The default rack selection for HP StoreAll 9320 Storage is the HP Intelligent Series Rack. The following options are automatically added to the configuration by the HP configuration tools (Watson or SBW) when factory rack integration is selected:

- TFT (Keyboard with integrated mouse and 1U 17 inch flat panel display)
- KVM server console switch

NOTE: Factory rack integration should be selected unless a plan has been established for integrating the HP StoreAll 9320 Storage into the customer's existing environment. Factory racking for these with other HP products such as additional HP StoreAll Storage, HP ProLiant Servers and HP storage arrays is available based on the configuration. #0D1 will appear after the part number on the sales order if HP factory integration is supported.

Add 10 GbE Cables and Transceivers

HP StoreAll 9320 Storage with 10GbE NICs require Direct Attach Cables (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments to connect to the customer's network. There are multiple options and they must match that of the customer's network infrastructure. If the customer does not already have the needed DACs or fiber transceivers available at their site, then the correct ones should be selected. Up to eight 10GbE connections are supported per HP StoreAll 9320 Storage Node Pair. Without at least four DACs or fiber transceivers per HP StoreAll 9320 Storage, you will not be able to connect the system to the customer's network infrastructure. For more information, please see the HP NC550SFP Dual Port 10GbE Server Adapter QuickSpecs

http://h18000.www1.hp.com/products/quickspecs/13555_na/13555_na.pdf

Spare Disk Drives

SFF SAS Drives, Hot Plug

HP 300GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive 507127-B21

SFF SAS Drives, Hot Plug

HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive 619291-B21

LFF SAS Drives, Hot Plug

HP P2000 3TB 6G SAS 7.2K LFF (3.5-inch) Dual Port MDL Hard Drive QK703A

LFF SAS Drives, Hot Plug

HP P2000 2TB 6G SAS 7.2K LFF (3.5-inch) Dual Port MDL Hard Drive AW555A

Options - HP StoreAll 9320 Storage

Storage field upgrades

Storage field upgrades can be ordered for HP IBRIX X9320 Storage and HP StoreAll 9320 Storage based on HP MSA P2000 G3 with 6Gb SAS capability. HP IBRIX X9320 Storage and HP StoreAll 9320 Storage based on QP330B, QP331B and QP332B Node Pair SKUs can be field upgraded with QZ722B, QZ723B, QZ724B, QZ725B, QZ726B, QZ727B, QP335B, and QP336B Base and Expansion Capacity Block SKUs. Previous HP IBRIX X9320 Storage based on QP330A, QP331A and QP332A Node Pair SKUs can be field upgraded with QZ722B, QZ723B, QZ724B, QZ725B, QZ726B, QZ727B, QP335B, QP336B Base and Expansion Capacity Block SKUs.

If only Base and Expansion Capacity Blocks (QZ722B, QZ723B, QZ724B, QZ725B, QZ726B, QZ727B, QP335B, QP336B) are being added to an existing HP IBRIX X9320 Storage and HP StoreAll 9320 Storage based on HP MSA P2000 G3 with 6Gb SAS capability then upgrading to IBRIX OS v6.1 or later is not required. If a new Node Pair is being added, then the existing HP IBRIX X9320 Storage or HP StoreAll 9320 Storage also needs to be upgraded so that the same IBRIX OS or StoreAll OS version is running across the cluster.

HP IBRIX X9320 Storage and HP StoreAll 9320 Storage with the older Base and Expansion Capacity Blocks (QP333A, QP334A, QP337A, QP338A) are NOT field upgradable.

Specifications - HP StoreAll 9320 Storage

Specification for Mdl SAS LFF Solution	Min System - 1 Node Pair, 1 Base Capacity Block:	Max System - 1 Node Pair, 2 Base and 6 Expansion Capacity Blocks:	Each Node Pair	Each Base Capacity Block	Each Expansion Capacity Block
Current - Amps (240VAC)	12	35.8	8.6	3.4	3.4
Max Power - Watts	2396	7632	1,648	748	748
Max Thermal - btu/hr	8177	26048	5625	2553	2553
Weight - lbs	226	496	110	116	107
Weight - kg	103	225	50	53	49
Form Factor - Units	8U	36U	4U	4U	4U

Specification for SFF Solution	Min System - 1 Node Pair, 1 Base Capacity Block:	Max System - 1 Node Pair, 2 Base and 6 Expansion Capacity Blocks:	Each Node Pair	Each Base Capacity Block	Each Expansion Capacity Block
Current - Amps (240VAC)	10.3	29	8.6	1.7	1.7
Max Power - Watts	1995	2696	1648	374	300
Max Thermal - btu/hr	6809	9201	5625	1276	1024
Weight - lbs	153	696	110	43	50
Weight - kg	70	316	50	20	23
Form Factor - Units	6U	28U	4U	2U	2U

HP StoreAll 9730 Storage

HP StoreAll 9730 Storage

HP StoreAll 9730 Storage is a modular, ultra-dense, scale-out storage solution designed for customers with extreme capacity needs.

HP StoreAll 9730 Storage Base Rack

QZ728A

HP StoreAll 9730 Storage Chassis

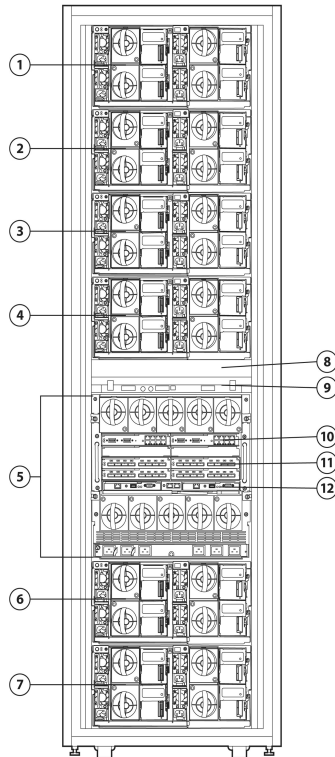
QZ729A

HP StoreAll 9730 140TB 2TB 7.2K LFF Mdl 6Gb Storage Couplet

QZ732A

HP StoreAll 9730 210TB 3TB 7.2K LFF Mdl 6Gb Storage Couplet

QZ733A



1. Capacity Block #6
2. Capacity Block #5
3. Capacity Block #4
4. Capacity Block #3
5. Chassis
6. Capacity Block #2

7. Capacity Block #1
8. 1U Support Shelf
9. TFT7600
10. 2 Flex10 VC Modules
11. 4 6G SAS Switches
12. 2 OA Modules

Standard Features – HP StoreAll 9730 Storage

HP StoreAll 9730 Storage Chassis	Chassis	Based on ProLiant C7000 c-Class Enclosure
	Capacity	16 Blade Server Bays, 8 Interconnect Bays
	Storage Ports	32 4x ports (128 SAS lanes)
	Network Ports - External	16 10 GbE ports
	Form Factor	10U
<hr/>		
HP StoreAll 9730 140TB 2TB 7.2K LFF Mdl 6Gb Storage Couplet	Node Pair	2 nodes built on HP ProLiant BL460c G7 Server DNA each with two quad core Intel® Xeon® Processor E5620 and 24GB memory
	Storage	70 HDD 6Gb SAS Enclosure
	Drives	70 HP 2TB 7.2k DP Mdl SAS 1y Wty HDD , Hot Swappable
	RAID Configuration	Multiple RAID 6 volumes, 4 universal spares
	Capacity	140TB raw, 100TB after RAID
	Form Factor	5U for 70 HDD 6Gb SAS enclosure plus Node Pair blades
<hr/>		
HP StoreAll 9730 210TB 3TB 7.2K LFF Mdl 6Gb Storage Couplet	Node Pair	2 nodes built on HP ProLiant BL460c G7 Server DNA each with two quad core Intel® Xeon® Processor E5620 and 24GB memory
	Storage	70 HDD 6Gb SAS Enclosure
	Drives	70 HP 3TB 7.2k DP Mdl SAS 1y Wty HDD, Hot Swappable
	RAID Configuration	Multiple RAID 6 volumes, 4 universal spares
	Capacity	210TB raw, 150TB after RAID
	Form Factor	5U for 70 HDD 6Gb SAS enclosure plus Node Pair blades
<hr/>		
HP StoreAll 9730 Storage Base Rack	Rack Model	Based on HP Intelligent Series Rack (42U) For more information including details on rack stabilization options: http://h18004.www1.hp.com/products/server
	PDUs	4, model varies by region and choice of single phase or three phase, HP 9.2kVA 40A High Voltage INTL Core Modular Power Distribution Unit (252664-B34) HP 17.3kVA 48A Three Phase NA/JP Modular Power Distribution Unit (AF511A) HP 8.6kVA 24A Three Phase NA/JP Modular Power Distribution Unit (AF512A) HP 11kVA 16A Three Phase INTL Modular Power Distribution Unit (AF513A) HP 22kVA 32A Three Phase INTL Core Modular Power Distribution Unit (AF518A) HP Single Input 3 Phase 40A Monitored Power Distribution Unit (AF536A) HP Single Input 3 Phase 48A Monitored Power Distribution Unit (AF916A) HP Single Input 3 Phase 32A Monitored Power Distribution Unit (AF917A) HP Intelligent Mod PDU 32A Intl Core (AF525A) HP Intelligent Mod PDU 3 Phase 16A Intl Core (AF526A) HP Intelligent Mod PDU 40A NA/JPN Core (AF521A)
	TFT	Automatically added to the rack by the ordering system based on the region: AZ870A HP TFT7600 KVM Console US Kit AZ871A HP TFT7600 KVM Console UK Kit AZ872A HP TFT7600 KVM Console GR Kit

Standard Features – HP StoreAll 9730 Storage

AZ873A HP TFT7600 KVM Console FR Kit
AZ874A HP TFT7600 KVM Console Itl Kit
AZ875A HP TFT7600 KVM Console SP Kit
AZ876A HP TFT7600 KVM Console Den Kit
AZ877A HP TFT7600 KVM Console Nw Kit
AZ878A HP TFT7600 KVM Console SE-FI Kit
AZ879A HP TFT7600 KVM Console Swi Kit
AZ880A HP TFT7600 KVM Console Port Kit
AZ881A HP TFT7600 KVM Console Bel Kit
AZ882A HP TFT7600 KVM Console JPN Kit
AZ883A HP TFT7600 KVM Console Rus Kit
AZ884A HP TFT7600 KVM Console Intl Kit

Form Factor

42U

Configuration Instructions - HP StoreAll 9730 Storage

Introduction

Configuring and ordering HP StoreAll 9730 Storage is a simple process. The ordering tools are pre-populated with built-in rules to ensure your HP StoreAll 9730 Storage is properly configured. You will only need to specify the number and type of Couplets and any system options required. The ordering system will then build the appropriate HP StoreAll 9730 Storage solution.

HP StoreAll 9730 Storage has two Couplet models:

- HP StoreAll 9730 140TB 2TB 7.2K LFF Mdl 6Gb Storage Couplet
- HP StoreAll 9730 210TB 3TB 7.2K LFF Mdl 6Gb Storage Couplet

In addition to the two Couplet models, all new systems automatically include a base rack and a chassis. All HP StoreAll 9730 Storage ships factory racked. Factory racking of these systems with other HP products including other HP StoreAll Storage, ProLiant Servers and HP storage arrays is not supported.

NOTE: 3rd party racks are not supported with HP StoreAll 9730 Storage

Step 1 Select the Power Configuration (Single Phase or Three Phase)

Two power configurations are available for the HP StoreAll 9730 Storage, single phase or three phase. The order default is single phase. The HP StoreAll 9730 Storage power configuration must match the facility power configuration. PDUs are included with the system and are based on the order region.

Step 2 Choose the Number of 140TB or 210 TB Couplet (min 2, max 8)

StoreAll 9730 Storage requires a minimum starting configuration of two couplets. The minimum configuration includes 2 140 TB Couplets (QZ732A) or 2 210TB Couplets (QZ733A) or 1 each of 140 TB Couplet (QZ732A) and 210 TB Couplet (QZ733A). Storage capacity can be increased by adding additional Couplets. The maximum number of Couplets is 8. Any combination of 140TB or 210TB Couplets can be used. Configurations with more than 6 Couplets automatically include an extra rack.

HP StoreAll 9730 140TB 2TB 7.2K LFF Mdl 6Gb Storage Couplet

QZ732A

HP StoreAll 9730 210TB 3TB 7.2K LFF Mdl 6Gb Storage Couplet

QZ733A

Options - HP StoreAll 9730 Storage

Step 3 Choose the System Options

The following options are available for HP StoreAll 9730 Storage. For more information on HP StoreAll Storage compatibility with HP and non-HP hardware and software please visit the Single Point of Connectivity Knowledge (SPOCK) website:

<http://h20272.www2.hp.com/>

Add 10 GbE Cables and Transceivers

Transceivers are required to connect HP StoreAll 9730 Storage to the customer's network. The type of transceiver depends on the customer's network infrastructure. The customer should verify the compatibility of all transceivers with their network before they are used. Two 1Gb transceivers are included with each StoreAll 9730 to provide minimal connectivity to the customer's network. The redundant 1Gb configuration will support the system installation, configuration and minimal customer data access. For improved performance 10Gb transceivers should be used. If the customer does not already have the needed transceivers available at their site, then the correct ones should be ordered.

For more information on HP Virtual Connect Flex-10 10Gb Ethernet Module networking and related connectivity options see the QuickSpecs: http://h18004.www1.hp.com/products/quickspecs/13127_na/13127_na.html

Add Spare Disk Drives

Large Form Factor (LFF) HP StoreAll 9730 Storage Hard Drives

HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive

625031-B21

HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive

507616-B21

Specifications - HP StoreAll 9730 Storage

Base Rack	Minimum Base Rack Configuration (with 2 140TB Couplets):	Maximum Base Rack Configuration (with 6 210TB Couplets):	Each Node	Capacity Block (1 5U Chassis and 70 SAS drives)
Current - Amps (240VAC)	22	64	0.9	7.8
Max Power - Watts	4887	14127	200	1,710
Typical Power - Watts	-	-	-	1280
Max Thermal - btu/hr	16678	48215	682	5836
Weight - lbs	1379	2,847	14	320
Weight - kg	626	1,292	6.34	145
Expansion Rack			Maximum Expansion Rack (2 Capacity Blocks):	
Current - Amps (240VAC)			15.6	
Max Power - Watts			3420	
Typical Power - Watts			2560	
Max Thermal - btu/hr			11672	
Weight - lbs			907	
Weight - kg			412	

HP StoreAll 9300 Gateway Storage

HP StoreAll 9300 Gateway Storage

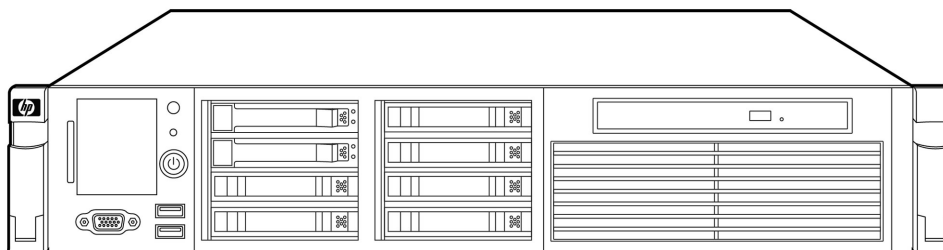
HP StoreAll 9300 Gateway Storage enables customers to leverage investments in HP 3PAR StoreServ Storage plus HP EVA and HP XP arrays for file archiving, while integrating seamlessly with HP StoreAll 9320 and 9730 Storage.

HP StoreAll 9300 1GbE Gateway Storage

AW539D

HP StoreAll 9300 10GbE Gateway Storage

AW540D



HP StoreAll 9300 Gateway Storage

Standard Features - HP StoreAll 9300 Storage

Gateway File Serving Node 2U rack-mount built on HP ProLiant DL380 G7 Server DNA with two quad core Intel® Xeon® Processor E5620 and 48GB memory.

Expansion Slots	Slot number	Bus Type	Connector width	Bus number	Form factor	Notes
	1	X8 PCI-e	X16	7	FL/FH	
	2	X4 PCI-e	X8	10	HL/FH	
	3	X4 PCI-e	X8	13	HL/FH	
	4	X8 PCI-e	X16	16	FL/HH	Reserved for 10GbE
	5	X4 PCI-e	X8	20	HL/HH	
	6	X4 PCI-e	X8	23	HL/HH	

Network Ports	Model	1 GbE Ports	10 GbE Ports
	HP StoreAll 9300 1GbE Gateway Storage (AW539D)	8	0
	HP StoreAll 9300 10GbE Gateway Storage (AW540D)	4	2 or

NOTE: Each Gateway node comes with 4 1GbE ports for optional connectivity to one or more secondary networks. All other ports are intended for client network connectivity.

Power / Cooling Redundant hot plug replaceable power supply and fan modules in all servers and disk enclosures. 2 high voltage power cords (IEC C13 to C14) standard per server and disk enclosure.

NOTE: HP StoreAll 9300 Storage is primarily connected to PDUs in racks. The SKUs ship standard with only PDU C-14 to C13 power cord(s). Alternative power cords and power connectivity options exist. See the ProLiant DL Server and HP MSA QuickSpecs on hp.com for additional information on available options.

HP StoreAll 9300 Gateway Storage is designed to be connected to a SAN by adding a recommended Fibre Channel or SAS HBA.

Host Bus Adapter (HBA) Support HBA selection is based on existing infrastructure and/or desired array support. Please see compatible HBAs listed in the 'Options' section below.

NOTE: See the following URL for additional information about Fibre Channel HBAs:
<http://h18006.www1.hp.com/storage/saninfrastructure/hba.html>

HP SAN / Array Support Review the SPOCK website (<http://h20272.www2.hp.com/>) for details and to ensure compatibility with a given SAN/Array model and firmware version.

HP 3PAR StoreServ Storage <http://www.hp.com/go/3PAR>

NOTE: Array compatibility, does not include feature integration

HP EVA Storage <http://www.hp.com/go/EVA>

NOTE: Array compatibility, does not include feature integration

HP XP Storage <http://www.hp.com/go/XP>

NOTE: Array compatibility, does not include feature integration

Configuration Instructions – HP StoreAll 9300 Gateway Storage

Introduction

Configuring and ordering an HP StoreAll 9300 Gateway Storage is an easy process. The ordering tools are pre-populated with built-in rules to ensure your order is properly configured. You will only need to specify the HP StoreAll 9300 Gateway Storage model based on the customer network connectivity, the storage interface cards, and any system options required. The ordering system will then build the appropriate HP StoreAll 9300 Gateway Storage solution.

Step 1 Choose a Gateway Model

The difference between the two Gateway models is the network interface. The model ordered must have the network interface required to connect the HP StoreAll 9300 Gateway Storage to the customer's network.

HP StoreAll 9300 1GbE Gateway Storage	AW539D
Includes 4 1GbE ports (HP NC364T) for connectivity to the customer's network	
HP StoreAll 9300 10GbE Gateway Storage	AW540D

NOTE: All gateway models include 4 1 GbE ports per node for optional connectivity to one or more secondary networks.

NOTE: HP StoreAll 9300 Gateway Storage is only supported with HP 3PAR StoreServ Storage, HP EVA, and HP XP arrays. Review the SPOCK website (<http://h20272.www2.hp.com/>) for more details.

NOTE: Gateways must be implemented in pairs with storage shared between the Gateways.

Step 2 Select the Storage Interface

NOTE: The HP StoreAll 9300 Gateway Storage supports up to two storage interfaces. A minimum of one and maximum of two Host Bus Adapter (FC or SAS) or Network Adapter (iSCSI) MUST be selected when configuring the system. Network ports provided with the Gateway for connectivity to the customer's network and optional connectivity to secondary networks cannot be used for interfacing with iSCSI storage

HP StoreAll 9300 Gateway	HP SC08Ge 2-ports Ext PCIe x8 SAS Host Bus Adapter	488765-B21
Storage Interfaces	HP Modular Smart Array SC08e 2-ports Ext PCIe x8 SAS Host Bus Adapter	614988-B21
	HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
	HP NC364T PCIe 4Pt Gigabit Server Adptr	435508-B21
	HP NC550SFP Dual Port 10GbE Server Adptr	581201-B21

Step 3 Model AW540D Only - Add Network Interface

NOTE: AW540D supports one expansion slot for interfacing the Gateway with the customer's network. One 10GigE interface adapter MUST be selected when ordering.

HP StoreAll 9300 Gateway	HP NC364T PCIe 4Pt Gigabit Server Adptr	435508-B21
Storage Model AW540D		
Network Interface	HP NC550SFP Dual Port 10GbE Server Adptr	581201-B21

Options– HP StoreAll 9300 Gateway Storage

Step 4 - Choose the System Options

The following options are available for HP StoreAll 9300 Gateway Storage. For more information on HP StoreAll Gateway Storage compatibility with HP and non-HP hardware and software please visit the Single Point of Connectivity Knowledge (SPOCK) website <http://h20272.www2.hp.com/>

Add More Memory

NOTE: All models come with 48GB standard and are expandable up to 72GB with the following option kit.

24GB Memory Upgrade (requires 6 of the following DIMMs)

HP 4GB 1Rx4 PC3-10600R-9 Kit

593339-B21

NOTE: All DDR3 memory option kits consist of one DIMM per kit. The 24GB upgrade requires that a quantity of 6 of this memory kit be ordered (3 DIMMS for each processor)

Add a Rack

The HP StoreAll 9300 Gateway Storage supports either a standard 42U cabinet based on the HP 10000 G2 Series Rack or a choice of 42U extended, 36U and 22U heights.

The default rack selection for HP StoreAll 9300 Gateway Storage is the HP Intelligent Series Rack. The following options are automatically added to the configuration by the HP configuration tools (Watson or SBW) when factory rack integration is selected:

- TFT (Keyboard with integrated mouse and 1U 17 inch flat panel display)
- KVM server console switch

NOTE: Factory rack integration should be selected unless a plan has been established for integrating the HP StoreAll 9300 Gateway Storage into the customer's existing environment. Factory racking of these with other HP products such as additional HP StoreAll Storage, HP ProLiant Servers and HP storage arrays is available based on the configuration. #OD1 will appear after the part number on the sales order if HP factory integration is supported.

Add 10 GbE Cables and Transceivers

HP IBRIX X9300 Storage 10 GbE Cables and Transceivers

HP StoreAll 9300 Gateway Storage with 10 GbE NICs require Direct Attach Cables (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments to connect to the customer's network. There are multiple options and they must match that of the customer's network infrastructure. If the customer does not already have the needed DACs or fiber transceivers available at their site, then the correct ones should be selected. Up to two 10GbE connections are supported per Gateway. Without at least one DAC or fiber transceiver per Gateway you will not be able to connect the system(s) to the customer's network infrastructure. If additional 10 GbE interfaces have been selected for iSCSI storage connectivity then additional DACs or fiber transceivers (up to two per interface) will need to be included.

For more information please see the HP NC550SFP Dual Port 10GbE Server Adapter QuickSpecs

http://h18000.www1.hp.com/products/quickspecs/13555_na/13555_na.pdf

Specifications – HP StoreAll 9300 Gateway Storage

HP StoreAll 9300 Gateway Storage Environmental Specifications

Specification	Each 9300 Gateway
Max Current - Amps (240VAC)	4.3
Max Power - Watts	824
Max Thermal - btu/hr	2,813
Weight - lbs	55
Weight - kg	25
Form Factor - Units	2U

HP StoreAll 9300 Gateway Storage

HP 750W Common Slot Gold Hot Plug Power Supply Kit

512327-B21

Service and Support, HP Care Pack, and Warranty Information

Warranty

HP StoreAll Storage comes with a standard 3-3-3 warranty (3 years parts exchange, 3 years labor and 3 years onsite, next business day response). Software media is warranted to be free of physical defect for a period of 90 days from delivery.

Services Included with the Product One year of HP Software Support, standard 9x5 business hours (software advisory and remedial software telephone support, new version license rights, and media and documentation distribution service).

Service and Support

Technology Services for increased uptime, productivity and ROI

TRUST HP storage technology experts for every level of service and support. Our integrated portfolio of Services for storage help customers reduce costs, optimize data, streamline storage management, and improve backup and recovery. Capitalizing on HP Storage Systems' capabilities requires a service partner who understands your increasingly complex environment. Team with the people who know HP infrastructure hardware and software best—the experienced professionals at HP Services.

Protect your business beyond warranty

Warranty protects against manufacturer defects, however warranty uplifts, such as HP Care Pack Services protect the business—by reducing downtime risks and providing operational consistency for mission-critical and standard business computing.

What HP Storage Technology Services can do for you

HP Storage Technology Services can help you design, deploy, test, integrate, support, and manage IT and infrastructure solutions. HP storage lifecycle support services offer a full spectrum of customer care—from technology support to complex migrations to complete managed services.

Choose the right level of support, deployment and integration services

HP support recommendations are designed to help you enhance technology operations and lower risk—and make it easier for you to seek the right balance between affordability and service-level commitments. Depending on your individual support needs, choose from three levels of care that cover the entire lifecycle to better address your needs—Optimized Care, Standard Care, and Basic Care. If none of our support recommendations meet your needs, we can tailor a service solution for your unique support requirements. Only HP brings together deep expertise, proactive and business critical support and a strong partner network—plus, a full set of infrastructure services designed to power a Converged Infrastructure.

Optimized Care- delivers best performance and stability through deployment and proactive management practices

HP Critical Advantage -An end-to-end infrastructure support solution (server, OS/hypervisor, storage, and network) for business critical applications running on virtualized/x86 infrastructures

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-1772ENW.pdf>

Plus, 20 credits per year, select from an extensive menu of consultancy and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

Standard Care- maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support

HP Proactive 24 Service- This is the right choice for environments where some downtime is acceptable. HP helps manage your IT environment for improved performance, stability, and availability. Your incidents are addressed 24x7, with a maximum 4-hour onsite response 365 days a year.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9842EN.pdf>

Plus, 10 credits per year, select from an extensive menu of consultancy and technical services, such as

Service and Support, HP Care Pack, and Warranty Information

onsite firmware upgrades, health checks, assessments, and education.

Basic Care-Minimum recommended support

Support Plus 24- For a higher return on your server and storage investment, HP Support Plus 24 provides integrated hardware and software support services designed specifically for your technology. Available 24x7, this 3-year combined reactive support option delivers onsite hardware support and over-the-phone software support around-the-clock. Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure. Plus, 10 credits per year, select from an extensive menu of consultancy and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

Plus, 10 credits per year, select from an extensive menu of consultancy and technical services, such as onsite firmware upgrades, health checks, assessments, and education

Implementation

HP StoreAll Storage Implementation Service - Provides customized product and technology deployment consistent with HP product specifications for the HP StoreAll Storage.

HP Proactive Select: Accelerate the ROI of your technology investment

HP Proactive Select is a flexible way to purchase services to fit your particular environment or situation. Working with an HP Account Support Manager, you select a 'package' of services, from a wide range of proactive services offered by HP spanning many technologies and processes-- such as onsite firmware upgrades, health checks, assessments, and education. You tailor the service delivery to improve time-to-production, optimize performance, or build in continuous improvements

The link to the datasheet is as follows:

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENW.pdf>

Remote Support Tools

HP Insight Remote Support-Available at no additional cost to all warranty, HP Care Pack Service and service agreement customers, uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnosis and problem resolution.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-4676ENW.pdf>

For more information

www.hp.com/services/storage

To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
 - Customers purchasing from a commercial reseller can find HP Care Pack Services at www.hp.com/go/lookuptool
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Service and Support, HP Care Pack, and Warranty Information

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