Overview

HPE Nimble Storage All Flash Arrays

Experience the Power of Predictive
HPE Nimble Storage All Flash Arrays combine a flash-efficient architecture with HPE InfoSight predictive analytics to achieve fast, reliable access to data and 99.9999% guaranteed availability. Radically simple to deploy and use, the arrays are cloud-ready - providing data mobility to the cloud through HPE Cloud Volumes. Your storage investment made today will support you well into the future, thanks to our technology and business-model innovations. HPE Nimble Storage All Flash Arrays include all-inclusive licensing, easy upgrades, and flexible payment options - while also being future-proofed for new technologies, such as NVMe and SCM.

What's new

Now HPE Nimble Storage All Flash Arrays are NEBS certified.
A new all-flash array platform that is up to 65% faster and twice the scalability of previous all-flash arrays. HPE Nimble Storage All Flash Arrays are guaranteed provide more effective capacity per terabyte of raw storage than competitive all-flash arrays[2].
The new platform is future-proofed with an architecture for NVMe and Storage Class Memory (SCM). The arrays are designed to be upgraded with SCM for greater performance in the future. These all-flash arrays reflect Hewlett Packard Enterprise commitment to deliver business value today and tomorrow as demonstrated by our **timeless storage**.
Notes: For more information about the entire HPE Nimble Storage product portfolio, go to: **https://www.hpe.com/us/en/storage/nimble.html**.

HPE Nimble Storage All Flash Array
(Base array, 4U; all 24 bays hold Dual Flash Carriers with Small Form Factor SSDs)

Notes:

– [1] For details on the HPE Nimble Storage 6-nines guarantee, refer to **https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00018503enw**.

– [2] For details on the HPE Store More Guarantee for HPE Nimble Storage, refer to **http://h20195.www2.hpe.com/V2/GetDocument.aspx?docname=a00039975enw**

Overview

Standard Features

HPE InfoSight predictive analytics

- Automatically predicts and resolves 86% of problems before you even know there is an issue[3].
- Transforms the support experience through cloud-based predictive analytics and Level 3-only support.
- Sees across the infrastructure stack and resolves problems beyond storage.
- Simplifies planning with prescriptive forecasts into capacity, performance, and bandwidth needs.
- Makes infrastructure smarter and more reliable by learning from the installed base.

Notes: [3] Based on actual customer data collected by the HPE Nimble Storage Support organization. See also **https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00018503ENW**.

Radical Simplicity

- Simple to deploy. Simple to use. Simple to manage.
- Cloud-ready. Deploy flash on-premises or in the cloud with common data services and mobility between all-flash, adaptive flash, and HPE Cloud Volumes.
- Timeless storage means no worries today or tomorrow. Flash arrays are future-proofed for NVMe and SCM and come with a satisfaction guarantee, all-inclusive software licensing, flat support pricing, no forklift upgrades, and an option to receive a free faster controller upgrade after three years.
- Radically easy to integrate with many ecosystems. Deep integration with VMware, MS applications, Oracle, Veeam, and others.

Fast and Reliable

- Scale-to-fit: Scale-up performance and capacity independently and non-disruptively. Scale-out to 4 arrays managed as one.
- Up to 5X or more, data reduction from variable block inline deduplication and compression.
- Backup and DR from all-flash to adaptive flash arrays at one-third the cost.
- Data reduction, snapshots, and Triple+ Parity RAID with no performance impact.
- Sub-millisecond response time for performance-sensitive enterprise workloads.

Absolute Resiliency

- 99.9999% (six-nines) guaranteed availability1.
- Triple+ Parity RAID tolerates 3 simultaneous drive failures plus additional protection through intra-drive parity.
- App-granular, FIPS-certified encryption provides data at rest and over-the-wire protection. Secure data shredding is built in.
- Native application-consistent snapshots and replication plus integration with leading backup software.
- Redundant, hot-swap components including controllers, power supplies, SSDs, and IO cards.

NEBS Level 3 Certified

- HPE Nimble Storage All Flash Arrays are NEBS (Network Equipment Building System) level 3 certified
- Ideal for network equipment providers and communication service providers requiring NEBS certified All Flash storage arrays for their telecom infrastructure
- NEBS Level 3 certified for the following Nimble Storage Adaptive Flash Arrays (AF20, AF20Q, AF40, and AF60)

Standard Features

HPE Nimble Storage All Flash Array models						
AF-Series Arrays	**AF20Q**	**AF20**	**AF40**	**AF60**	**AF80**	**Scale-out[1] 4X AF80**
Raw capacity (TB/TiB)[2, 5]	6-46/ 5-42	11-46/ 10-42	11-184/ 10-167	11-553/ 10-502	23-1106/ 21-1005	44232/ 4023
Usable capacity (TB/TiB)[2]	3-25/ 2-23	8-33/ 7-30	8-136/ 7-124	8-407/ 7-370	17-815/ 15-741	3260/ 2965
Effective capacity (TB/TiB)[2, 3]	14-128/ 13-116	40-168/ 36-153	40-682/ 36-620	40-2037/ 36-1853	82-4075/ 75-3706	16303/ 14827
Max. # of expansion shelves	1	1	1	2	2	8
RAID level Triple+ Parity						
Onboard iSCSI/Mgmt 1Gb /10Gb ports per array[4,6]	4	4	4	4	4	16
Optional iSCSI 1 Gb ports per array[6]	4, 8, 12, 16	4, 8, 12, 16	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	96
Optional iSCSI 10 Gb ports per array[6]	4, 8, 12, 16	4, 8, 12, 16	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	96
Optional iSCSI 25 Gb ports per array[6]	4, 8	4, 8	4, 8, 12	4, 8, 12	4, 8, 12	48
Optional FC 16 Gb (8 Gb) ports per array[6]	4, 8, 12, 16	4, 8, 12, 16	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	96
Optional FC 32 Gb (16 Gb) ports per array[6]	4, 8	4, 8	4, 8, 12	4, 8, 12	4, 8, 12	48
Max. power requirement (watts/kVA)	600/0.667	650/0.722	800/0.889	850/0.944	1200/1.333	4800/5.332
Thermal (BTU)	1968	2132	2624	2788	3936	15744

Notes: Specifications are subject to change without notice.

– 1 Scale-out configuration consists of 4x AF80 arrays, each with two all-flash shelves.

– 2 Raw, usable, and effective capacities are shown in TB (10^{12} bytes) and TiB (2^{40} bytes). Usable and effective capacities take into account space used for parity, spares, and system overhead.

– 3 Effective capacity is the capacity of the base array and maximum number of expansion shelves. Assumes data reduction of five to one (5:1) from deduplication and compression.

– 4 Each array controller has 2 x 10GbaseT ports built in. Optional ports are 1GbaseT, 10GbaseT, 10GbE SFP+, 25GbE SFP28, 16Gb (8Gb) FC, and 32Gb (16Gb) FC.

– 5 The Total Max Raw Capacity per system is limited by the architecture of the system and is not to be exceeded, even if it may be possible to configure a system that exceeds this limit.

– 6 Array port counts shown include both active and standby controllers; active ports are half value shown.

Standard Features

SSD Expansion Shelves for All Flash Arrays	
Raw capacity (TB/TiB)[1, 3]	6-368/5-334
Usable capacity (TB/TiB)[1]	4-272/3-248
Effective capacity (TB/TiB)[1, 2]	20-1,364/18-1,240

Notes: Specifications are subject to change without notice.

– 1 Raw, usable, and effective capacities are shown in TB (10^{12} bytes) and TiB (2^{40} bytes).

– 2 Effective capacity is the capacity of the base array and maximum number of expansion shelves. Assumes data reduction of five to one (5:1) from deduplication and compression.

– 3 The Total Max Raw Capacity per system is limited by the architecture of the system and is not to be exceeded, even if it may be possible to configure a system that exceeds this limit.

Host OS Support

Microsoft® Windows® Server, including Microsoft® Hyper-V™ | VMware vSphere™ | HP-UX® | Ubuntu
SUSE® Linux Enterprise | SUSE® Linux Virtualization | Red Hat® Enterprise Linux® | Red Hat® Enterprise Virtualization
CentOS | Oracle® Linux® (UEK and RHEL compatible kernels) | Oracle® Solaris | Citrix® XenServer | IBM® AIX®
Notes: For the latest information on supported operating systems refer to Single Point of Connectivity Knowledge (SPOCK) for HPE Storage products, including HPE Nimble Storage: **http://www.hpe.com/storage/spock**

Service and Support

Warranty

HPE Nimble Storage arrays come with the following warranties:

- 1 year; parts-only warranty for hardware components, including SSDs
- 90 day, software updates for defects

Additionally, HPE Nimble Storage will provide phone support for replacing a defective part. Additional support coverage is required for HPE Nimble Storage Arrays.

Notes:

– For hardware warranty claims, defective part must be received before replacement parts are shipped.

– Warranty is provided by HPE Nimble Storage.

– Link to **HPE Global Limited Warranty and Technical Support**.

Service and Support

Support is required for all HPE Nimble Storage arrays. Support SKUs provide up to five years of 24x7 telephone and email support for the arrays and hardware components (Including SSDs reaching the write wear limit) with a choice of Next Business Day (NBD) parts exchange, 4-hour parts delivery, or 4-hour onsite support, access to the HPE InfoSight predictive analytics platform and software updates.

HPE Services **Tech Care** is the new operational service experience for HPE products. Tech Care goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Services Tech Carehas been reimagined from the ground up to support a customer-centric, AI-driven, and digitally enabled customer experience to move your business forward.

Notes: Support contract is mandatory for all HPE Nimble Storage products.

Installation Services

Installation Services are intended to guide you from start to finish and to help make your installation a success. Our engagement includes:

- Inventory and verify HPE Nimble Storage equipment against the sales order
- Physically rack and cable all HPE Nimble Storge equipment, including connecting network cables provided by the customer
- Conduct power-on tests and verify operation
- Add the array to an existing HPE Nimble Storage Group, if applicable
- Configure array's basic management, monitoring, & reporting capabilities
- Configure array for additional data networks / SAN connectivity as needed
- Upgrade the array to the latest recommended HPE Nimble OS version as needed.

HPE Tier 1 Storage Array Start-up service - HA114A1#5MR

Provides full hardware and software installation of a new HPE Nimble Storage array in a data center with up to six (6) shelves.

HPE Tier 1 Storage Array Start-up service - HA113A1#5MR

Provides on-site hardware installation only of a new HPE Nimble Storage array in a data center with up to six (6) shelves.

HPE Tier 1 Storage Upgrade service - HA124A1#5MS

On-site installation of upgrades kits or for an existing HPE Nimble Storage array.

HPE Tier 1 Storage Cross Family Offline Upgrade service - HA124A1#V0R

Provides the on-site hardware upgrade and disk migration from your exiting array to the new family array chassis

Notes: All Installation and upgrade services are optional for all HPE Nimble Storage products.

Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.
https://www.hpe.com/services

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.
https://www.hpe.com/services/consulting

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.
HPE Managed Services | HPE

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.
https://www.hpe.com/services/operational

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

Service and Support

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:

https://www.hpe.com/services/lifecycle

For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

https://www.hpe.com/services/training

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Service and Support

Parts and Materials
HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.
Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services
Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

AI Powered and Digitally Enabled Support Experience
Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience
Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.
https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are-the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE" **https://www.hpe.com/us/en/contact-hpe.html**
For more information
http://www.hpe.com/services

Configuration Information

Step 1 - Choose Base configuration

All HPE Nimble Storage All Flash Arrays come in a 4U form-factor chassis with

- (2) controllers with fans and NVDIMM, and
- (4) 1GbE/10GbE network ports, i.e. (2) per controller for iSCSI or management traffic, and
- (2) power supplies and
- All-inclusive software including HPE InfoSight predictive analytics

Additional host connectivity per controller is indicated in the product descriptions below.
Flash capacity upgrades, network upgrades and expansion shelves will be available for integration in the field.

HPE Nimble Storage AF-Series Adaptive Flash Arrays - Base Configuration Base Array

Description	
HPE Nimble Storage AF20Q All Flash Dual Controller 10GBASE-T 2-port Configure-to-order Base Array	Q
HPE Nimble Storage AF20 All Flash Dual Controller 10GBASE-T 2-port Configure-to-order Base Array	Q
HPE Nimble Storage AF40 All Flash Dual Controller 10GBASE-T 2-port Configure-to-order Base Array	Q
HPE Nimble Storage AF60 All Flash Dual Controller 10GBASE-T 2-port Configure-to-order Base Array	Q
HPE Nimble Storage AF80 All Flash Dual Controller 10GBASE-T 2-port Configure-to-order Base Array	Q

Step 2 - Choose Head SSD Capacity

All HPE Nimble Storage All Flash Arrays come with one or two of the following SSD capacity options. Additional capacity can be added by connecting up to (2) flash expansion shelves to the base array - depending on the model.
Notes: R2 and non-R2 SKUs are functionally equivalent. The OCA quote tool will guide to the appropriate SKU option when configuring a model.
Table below shows All Flash Array compatibilities with SSD Options.

Head SSD Capacity Options						
AF20Q	**AF20**	**AF40**	**AF60**	**AF80**	**Any two different capacities of the following options can be selected:**	
					SKU Description	**SKU**
Yes	No	No	No	No	HPE Nimble Storage AF20Q All Flash Array R2 5.76TB (12x480GB) FIO Flash Bundle	Q8H
Yes	No	No	No	No	HPE Nimble Storage AF20Q All Flash Array R2 11.52TB (12x960GB) FIO Flash Bundle	Q8H
No	Yes	No	No	No	HPE Nimble Storage AF20 All Flash Array 5.76TB (24x240GB) FIO Flash Bundle	Q8B
No	Yes	No	No	No	HPE Nimble Storage AF20 All Flash Array R2 11.52TB (24x480GB) FIO Flash Bundle	Q8B
No	Yes	No	No	No	HPE Nimble Storage AF20 All Flash Array R2 23TB (24x960GB) FIO Flash Bundle	Q8B
No	Yes	No	No	No	HPE Nimble Storage AF20 All Flash Array 46TB (24x1.92TB) FIO Flash Bundle	Q8B
No	No	No	Yes	Yes	HPE Nimble Storage AF60/80 All Flash Array 11.52TB (24x480GB) FIO Flash Bundle	Q8H
No	No	Yes	No	No	HPE Nimble Storage AF40 All Flash Array R2 11.52TB (24x480GB) FIO Flash Bundle	Q8H
No	No	No	Yes	Yes	HPE Nimble Storage AF60/80 All Flash Array 23TB (24x960GB) FIO Flash Bundle	Q8G
No	No	Yes	No	No	HPE Nimble Storage AF40 All Flash Array R2 23TB (24x960GB) FIO Flash Bundle	Q8G

Configuration Information

AF20Q	AF20	AF40	AF60	AF80	SKU Description	SKU
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 46TB (24x1.92TB) FIO Flash Bundle	Q8G6
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 92TB (24x3.84TB) FIO Flash Bundle	Q8G6
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 184TB (24x7.68TB) FIO Flash Bundle	R4H6

Head SSD Capacity Options

	AF20Q	AF20	AF40	AF60	AF80
Platform RAM installed (GB) per controller	32GB	32GB	64GB	160GB	320GB
Platform Min SSD capacity (RAW)= (Head SSD+ expansion) capacity (TB)	6TB	11TB	11TB	11TB	23TB
Platform Max SSD capacity (RAW)= (Head SSD+ expansion) capacity (TB)	46TB	46TB	184TB	553TB	1106 TB

Step 3 - Choose Head Networking Option

Up to three (3) of the following options can be selected. Please refer to configuration guidelines for specific support of networking options on AF-Series arrays. The AF20 and AF20Q arrays support up to two (2) head networking options.

Notes:

- The following minimum ports are recommended for best performance:
  - AF20: at least 2-ports
  - AF40: at least 4-ports
  - AF60: at least 8-ports
  - AF80: at least 8-ports
- Max One (1) Storage Class Memory kit (R0P46A or R0P48A) per AF60/AF80 array
- All 10GbE, 25GbE, 16Gb FC, and 32Gb FC cards include SFP optical transceivers
- The 25GbE NICs include SFP28 transceivers for 25G environments
- Each Head networking option includes two (2x) cards which are evenly populated in the two controllers.

Head Networking Options

AF20Q	AF20	AF40	AF60	AF80	SKU Description	SKU
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x1GbE 2-port FIO Adapter Kit	Q8B84
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GbE 2-port FIO Adapter Kit	Q8B88
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x25GbE 2-port SFP28 FIO Adapter Kit	R3Q00
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x32Gb 2-port Fibre Channel FIO Adapter Kit	R4G78

Configuration Information

Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x16Gb Fibre Channel 4-port FIO Adapter Kit	Q8C0
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GbE 4-port FIO Adapter Kit	Q8C1
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GBASE-T 4-port FIO Adapter Kit	Q8C2
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x1GbE 4-port FIO Adapter Kit	Q8C0
No	No	No	Yes	Yes	HPE Nimble Storage 1.5TB Storage Class Memory FIO Adapter Kit	R0P46

Notes:

– The 25GbE 2-port Adapter (R3Q00A/R3P98A) supports the following transceivers and DAC cables

- HPE 25G SFP28 Transceiver (included)
- HPE 10G SFP+ Transceiver (R7D09A, 455883-B21)
- HPE 10G SFP+ SFP+ 3m DAC Cable (R7D16A, 487655-B21)
- HPE 25Gb SFP28 to SFP28 3m DAC (R7D17A, 844477-B21)

Step 4 - Optional All-Flash Shelves

Best practices when adding All-Flash expansion shelves

1. **SAS Port load balancing**
   a. When adding expansion shelves to an array, evenly distribute the expansion shelves across the two (2) SAS expansion ports on each controller. For example, first expansion shelf to SAS port 1, second expansion shelf SAS port 2.
   b. No more than one (1) expansion shelf per SAS expansion port
   c. Keep disk capacity balanced across both SAS expansion ports
2. **Shelf capacity**
   a. For best performance, it is recommended the head shelf and all expansion shelves are the same capacity (or least no more than 1 disk size delta). This guideline is more important in the higher performing systems.
   b. If different capacities are required, the highest capacity should be in the head shelf.
   c. Keep disk capacity balanced across both SAS expansion ports
3. **Scale-out configurations**
   a. For multi-array configurations, the highest performing array should be assigned as the group leader
4. **Workload specific recommendations**
   a. Sequential workloads will perform better with more disks versus fewer disks (to meet a specific capacity)

The All-Flash shelves are optional; Min 0, Max 2.

AF20Q	AF20	AF40	AF60	AF80	SKU Description	SKU
Yes*	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash AFS3 Configure-to-order Expansion Shelf	Q8B5
N/A	N/A	N/A	N/A	N/A	HPE NS 2x3m SAS AFS3 Shelf FIO Cable Kit	R0N8
1*	1	1	2	2	Maximum number of AFS3 shelves (per platform basis.)	

Notes:

– *AF20Q must be fully populated in the head before an AFS3 shelf can be added as an upgrade.

– *Quantity one (1) R0N80A cable kit required per AFS3 Expansion Shelf (Q8B53B).

Configuration Information

Step 5 - Add All-Flash Packs to AFS3 Expansion Shelves

Min 1, Max 2 when AFS3 Expansion Shelf (Q8B53B) is selected.

AF20Q	AF20	AF40	AF60	AF80	SKU Description	SKU
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash AFS3 Expansion Shelf 5.76TB (24x240GB) FIO Flash Bundle	Q8C2
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash AFS3 Expansion Shelf 11.52TB (24x480GB) FIO Flash Bundle	Q8C3
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash AFS3 Expansion Shelf 23TB (24x960GB) FIO Flash Bundle	Q8C3
No	No	Yes	Yes	Yes	HPE Nimble Storage AF All Flash AFS3 Expansion Shelf 46TB (24x1.92TB) FIO Flash Bundle	Q8G4
No	No	Yes	Yes	Yes	HPE Nimble Storage AF All Flash AFS3 Expansion Shelf 92TB (24x3.84TB) FIO Flash Bundle	Q8G5
No	No	Yes	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Expansion Shelf 184TB (24x7.68TB) FIO Flash Bundle	R4H6

Notes: Maximum capacity of "SSD Capacity Bundles" and "All Flash Expansion Shelf Chassis:"

– AF20Q = 46TB

– AF20 = 46TB

– AF40 = 184TB

– AF60 = 553TB

– AF80 = 1106TB

Step 6 - Add Support (Mandatory)

Support recommendations are designed to help you enhance technology operations, lower risk and make it easier for yo
seek the right balance between affordability and service-level commitments. Depending on your individual support needs
choose from four levels of care that cover the entire lifecycle to better address your needs from 3, 4 and 5 year duration
service levels ranging from Basic Exchange (Next Business Day parts exchange) to Essential (4 hour onsite response).

Description	
HPE Tech Care Basic Exchange SVC	HU4B5
HPE Tech Care Basic Exchange w/DMR SVC	HU4B6
HPE Tech Care Basic Exchange w/CDMR SVC	HU4B7
HPE Tech Care Basic SVC	HU4B2
HPE Tech Care Basic w/DMR SVC	HU4B3
HPE Tech Care Basic w/CDMR SVC	HU4B4
HPE Tech Care Essential Exchange SVC	HU4A9
HPE Tech Care Essential Exchange w/DMR SVC	HU4B0
HPE Tech Care Essential Exchange w/CDMR SVC	HU4B1
HPE Tech Care Essential SVC	HU4A6
HPE Tech Care Essential w/DMR SVC	HU4A7
HPE Tech Care Essential w/CDMR SVC	HU4A8

Notes: Minimum support required 3-year HPE Tech Care Basic Exchange

---

Configuration Information

Controller Refresh

The Controller Refresh program provides customers with a new controller after three years provided they meet the term the Controller Refresh program. To add Controller Refresh it needs to be configured with the initial Nimble array order. F more details on the Controller Refresh program, please see the **timeless storage** brochure.

HPE NS 5Y FC NBD PExch L2 CtrlRfr Supp	HT
HPE NS 5Y FC NBD PExchDMR L2CtrlRfr Supp	HT
HPE NS 5Y NBD Ons L2 CtrlRfr Supp	HT
HPE NS 5Y NBD OnsDMRL2CtrlRfr Supp	HT
HPE NS 5Y FC 4H PExch L2 CtrlRfr Supp	HT
HPE NS 5Y FC 4H PExch DMR L2CtrlRfr Supp	HT
HPE NS 5Y FC 4H Onsite L2 CtrlRfr Supp	HT
HPE NS 5Y FC 4H OnsiteDMR L2CtrlRfr Supp	HT
HPE NS 3Y NBD PExch L2 CtrlRfr PP Supp	HU
HPE NS 3Y NBD PExchDMR L2CtrlRfr PP Supp	HU
HPE NS 3Y 4H PExch L2 CtrlRfr PP Supp	HU
HPE NS 3Y 4H PExchDMR L2CtrlRfr PP Supp	HU
HPE NS 3Y 4H Onsite L2 CtrlRfr PP Supp	HU
HPE NS 3Y 4H OnsiteDMR L2CtrlRfr PP Supp	HU
HPE NS 3Y NBD Onsite Controller Refresh Level 2 PP SVC	HU
HPE NS 3Y NBD Onsite with DMR Controller Refresh Level 2 PP SVC	HU

Notes: Controller Refresh is available as 3-year or 5-year support offerings

Installation Services

Installation Services are intended to guide you from start to finish and to help make your installation a success.

Notes: Installation services are optional.

Description

HPE Tier 1 Storage Array Start-up service	HA114A1
HPE Tier 1 Storage Array Hardware Installation service	HA113A1
HPE Tier 1 Storage Array Upgrade service	HA124A1
HPE Tier 1 Storage Cross Family Offline Upgrade service	HA124A

Racks

HPE Nimble Storage arrays and expansion shelves are compatible with industry standard 4-post EIA 19-inch racks with square mounting holes, including HPE 36U, 42U and 48U Enterprise Shock Racks. HPE recommends HPE racks with a depth of 1200mm to best accommodate the length of the Nimble Storage chassis; the HPE 1200mm rack provides amp room for cabling and ease of serviceability. HPE racks with a depth of 1075mm can be used but may have limited space cabling and component access. If a 3rd party rack with a depth less than 1075mm is used, the rear doors cannot be fully closed.

Recommended Racks:

HPE G2 Enterprise Series Racks

- HPE 48U 600mmx1200mm G2 Enterprise Rack
- HPE 48U 800mmx1200mm G2 Enterprise Rack
- HPE 42U 600mmx1200mm G2 Enterprise Rack

Configuration Information

- HPE 42U 800mmx1200mm G2 Enterprise Rack

HPE G2 Advanced Series Racks

- HPE 48U 600mmx1200mm G2 Advanced Rack
- HPE 48U 800mmx1200mm G2 Advanced Rack
- HPE 42U 600mmx1200mm G2 Advanced Rack
- HPE 42U 800mmx1200mm G2 Advanced Rack
- HPE 36U 600mmx1200mm G2 Advanced Rack
- HPE 36U 800mmx1200mm G2 Advanced Rack

Notes:

– For more information on the HPE rack offerings, please see the following URL:
https://www.hpe.com/info/rackandpower

– For more information on PDUs, see: **http://www.hpe.com/servers/pdu**

Step 7: Required and additional power cords

HPE Nimble Storage Arrays and expansion shelves do not ship with any power cords by default and require a minimum
power cords per system. Please ensure these are selected at time of quoting. A pair of power cords are required when
connecting base arrays (C19/C14 or C19/C20) or expansion shelves (C13/C14) to Rack-Mounted Power Distribution Un
(PDU). A pair of country/region specific power cords are required when connecting base arrays or expansion shelves to
standard office wall power outlets.

Description	
HPE Nimble Storage NEMA 5-15P to C19 125V 15Amp 2.5m US FIO Power Cord	R
HPE Nimble Storage IEC 60320 C14 to C19 250V 15Amp 1.8m FIO Power Cord	R
HPE Nimble Storage AS3112 to C19 250V 16Amp 1.8m AU FIO Power Cord	C
HPE Nimble Storage Schuko to C19 250V 16Amp 1.8m EU FIO Power Cord	C
HPE Nimble Storage BS 1363 UK10 to C19 250V 16Amp 1.8m UK FIO Power Cord	C

Description	
HPE Nimble Storage NEMA L5-20P to C19 125V 20Amp 2.5m US FIO Power Cord	C
HPE Nimble Storage GB2099 to C19 250V 16Amp 1.8m CN FIO Power Cord	C
HPE Nimble Storage KSC8305 to C19 250V 16Amp 1.8m KR FIO Power Cord	C
HPE Nimble Storage JIS8303 to C19 125V 15Amp 1.8m TW/JP FIO Power Cord	C
HPE Nimble Storage JIS8303 6-30 to C19 250V 15Amp 1.8m JP FIO Power Cord	C
HPE Nimble Storage IS1293 to LS-60 250V 16Amp 1.8m IN FIO Power Cord	C
HPE Nimble Storage SAN164-1 to C19 250V 16Amp 1.8m ZA FIO Power Cord	C
HPE Nimble Storage SI32 to C19 250V 16Amp 1.8m IL FIO Power Cord	C
HPE Nimble Storage CEI 23-16 to C19 250V 16Amp 1.8m IT FIO Power Cord	C
HPE Nimble Storage C19 to C20 250V 16Amp 1.8m PDU Base Array FIO Power Cord	C
HPE Nimble Storage AS 3112 to C13 250V 10Amp 1.8m AU FIO Power Cord	C
HPE Nimble Storage Schuko to C13 250V 10Amp 1.8m EU FIO Power Cord	C
HPE Nimble Storage BS1363 UK10 to C13 250V 10Amp 1.8m UK FIO Power Cord	C
HPE Nimble Storage NEMA 5-15P to C13 125V 10Amp 1.8m US FIO Power Cord	C
HPE Nimble Storage GB2099 to C13 250V 10Amp 1.8m CN FIO Power Cord	C
HPE Nimble Storage KSC8305 to C13 250V 10Amp 1.8m KR FIO Power Cord	C

Configuration Information

HPE Nimble Storage JIS8303 to C13 125V 12Amp 1.8m TW/JP FIO Power Cord	C
HPE Nimble Storage JIS8303 to C13 250V 15Amp 2.5m JP FIO Power Cord	C
HPE Nimble Storage IS1293 to C13 250V 10Amp 1.8m IN FIO Power Cord	C
HPE Nimble Storage SANS164-1 to C13 250V 10Amp 1.8m ZA FIO Power Cord	C
HPE Nimble Storage SI32 to C13 250V 10Amp 1.8m IL FIO Power Cord	C
HPE Nimble Storage CEI23-16 to C13 250V 10Amp 1.8m IT FIO Power Cord	C
HPE Nimble Storage C13 to C14 250V 10Amp 1.8m Universal FIO Power Cord	C

Field Upgrade Options

The following product options are to upgrade currently installed All Flash Arrays.

SSD Capacity Upgrade on Head Max three of the following:

AF20Q	AF20	AF40	AF60	AF80	SKU Description	
Yes	No	No	No	No	HPE Nimble Storage AF20Q All Flash Array R2 5.76TB (12x480GB) Flash Field Upgrade	Q
Yes	No	No	No	No	HPE Nimble Storage AF20Q All Flash Array R2 11.52TB (12x960GB) Flash Field Upgrade	Q
Any one of the following:						
No	Yes	No	No	No	HPE Nimble Storage AF All Flash Array 5.76TB (24x240GB) Flash Field Upgrade	Q
No	Yes	No	No	No	HPE Nimble Storage AF20 All Flash Array 11.52TB (24x480GB) Flash Field Upgrade	Q
No	Yes	No	No	No	HPE Nimble Storage AF20 All Flash Array 23TB (24x960GB) Flash Field Upgrade	Q
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 11.52TB (24x480GB) Flash Field Upgrade	Q
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 23TB (24x960GB) Flash Field Upgrade	Q

AF20Q	AF20	AF40	AF60	AF80	SKU Description	
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 46TB (24x1.92TB) Flash Field Upgrade	Q
No	No	Yes	Yes	Yes	HPE Nimble Storage AF40/60/80 All Flash Array 92TB (24x3.84TB) Flash Field Upgrade	Q
No	No	No	Yes	Yes	HPE Nimble Storage AF60/80 All Flash Array 184TB (24x7.68TB) Flash Field Upgrade	R

Head Network Add / Upgrade Options

AF20Q	AF20	AF40	AF60	AF80	SKU Description	
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GBASE-T 2-port Adapter Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GbE 2-port Adapter Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x25GbE 2-port SFP28 Adapter Field Upgrade	R
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x1GbE 2-port Adapter Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x32Gb 2-port Fibre Channel Adapter Field Upgrade	R
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x16Gb Fibre Channel 4-port Adapter Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x1GbE 4-port Adapter Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GbE 4-port Adapter Field Upgrade	Q

Configuration Information

Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage 2x10GBASE-T 4-port Adapter Field Upgrade	Q
No	No	No	Yes	Yes	HPE Nimble Storage 1.5TB Storage Class Memory Adapter Field Upgrade	F

Notes:

– Max One (1) Storage Class Memory kit (R0P46A or R0P48A) per AF60/AF80 array

– All 10GbE, 25GbE, 16Gb FC, and 32Gb FC cards include SFP optical transceivers

– The 25GbE NICs include SFP28 transceivers for 25G environments-not backward compatible with 10GbE

– Each networking upgrade option includes two (2x) cards which are evenly populated in the two controllers

– The 25GbE 2-port Adapter (R3Q00A/R3P98A) supports the following transceivers and DAC cables

- HPE 25G SFP28 Transceiver (included)
- HPE 10G SFP+ Transceiver (R7D09A, 455883-B21)
- HPE 10G SFP+ SFP+ 3m DAC Cable (R7D16A, 487655-B21)
- HPE 25Gb SFP28 to SFP28 3m DAC (R7D17A, 844477-B21)

Upgrades for All-Flash Shelves (3rd Gen, for AFA only)						
AF20Q	**AF20**	**AF40**	**AF60**	**AF80**	Only one of the following options can be selected	
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Shelf 5.76TB (24x240GB) Flash Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Shelf 11.52TB (24x480GB) Flash Field Upgrade	Q
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Shelf 23TB (24x960GB) Flash Field Upgrade	Q
No	No	Yes	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Shelf 46TB (24x1.92TB) Flash Field Upgrade	Q
No	No	Yes	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Shelf 92TB (24x3.84TB) Flash Field Upgrade	Q
No	No	No	Yes	Yes	HPE Nimble Storage AF All Flash Array AFS3 Expansion Shelf 184TB (24x7.68TB) Flash Field Upgrade	R

Notes: Maximum capacity of "SSD Capacity Bundles" and "All Flash Expansion Shelf Chassis:"

– AF20Q = 46TB

– AF20 = 46TB

– AF40 = 184TB

– AF60 = 553TB

– AF80 = 1106TB

Configuration Information

DC Power Supply unit (PSU)						
AF20Q	**AF20**	**AF40**	**AF60**	**AF80**		
Yes	Yes	Yes	Yes	Yes	HPE Nimble Storage AF/HF 3000W Dual DC Power Supply Kit	R

Notes:

- The DC PSU kit includes two (2) DC PSUs; one (1) DC PSU kit per array or shelf should be ordered for systems to be installed in environments utilizing DC power infrastructure
- If NEBS compliance is required, the DC PSU kit should only be ordered with new arrays (which include DC grounding posts)

Cross-Family Upgrades

The cross-family upgrades provide an upgrade path for legacy X10 Nimble Storage Arrays (CSx000, AFx000) to the curre generation (Gen5) Nimble Storage Arrays (HFx0, AFx0). The X10 media is retained and used with the Gen5 upgrade bas array so new SSD/HDD capacity does not need to be repurchased.

Description	
HPE Nimble Storage xF40 All/Adaptive Flash Array Dual Controller Upgrade Base Array	R
HPE Nimble Storage xF60 All/Adaptive Flash Array Dual Controller Upgrade Base Array	R
HPE Nimble Storage AF80 All Flash Array Dual Controller Upgrade Base Array	R

Notes:

- For hybrid arrays (e.g. HFx0) a minimum of six (6) cache drives are required
- For hybrid arrays, minimum cache capacity of target array (Gen5) must be met
- NimOS 5.2.1.x or greater must be installed on X10 array before upgrade
- Order Gen5 networking cards on upgrade base array to match networking cards in existing X10 array
- Refer to the Gen5 array Configuration Matrices on the InfoSight Portal to ensure minimum system requirements are m

Technical Specifications

Physical Dimensions						
	Width in/mm		Depth in/mm	Height in/mm/U		Weight lb/kg
HPE Nimble Storage AF20Q/20/40/60/80	17.3/439		35/890	6.92/175.8/4		115/52

Power Requirements						
	AF20Q	AF20	AF40	AF60	AF80	AFS3
Input Voltage, frequency (1200W AC PSU w/C14 connector)	100-120V, 50-60Hz, 11A 200-240V, 50-60Hz, 7A			N/A		100-120V 200-240V
Input Voltage, frequency (3000W AC PSU w/C20 connector)	100-120V, 50-60Hz, 12A 200-240V, 50-60Hz, 7A				200-240V, 50-60Hz, 13A	N/A
Input Voltage, frequency (3000W DC PSU)	-48/-72 VDC, 40A					
Max power requirements (Watts/kVA)	600 W / 0.667 kVA	650 W 0.772 kVA	800 W 0.889 kVA	850 W 0.994 kVA	1200 W 1.333 kVA	350W 0.389 kVA
Thermal (BTU)	1968 BTU	2132 BTU	2624 BTU	2788 BTU	3936 BTU	1147 BTU

Notes:

– AF80 is not support with 100-120V

– AF20/40 currently only ship with 1200W PSU

– The 1200W AC and 3000W AC power supplies are 80 PLUS Platinum

Environmental Specifications[1]	
Operating Temperature	10 - 35° C (50 - 95° F) Reduce rating by 1° F for each 1000 ft altitude (1.8° C/1,000 m)
Shipping Temperature	0° C - 40° C (32° F - 104° F) Maximum rate of change is 20°C/hr (36°F/hr)
Operating Altitude (ft/m) max.	10,000 ft / 3,048 m
Shipping Altitude (ft/m) max.	40,000ft/ 12,192 m
Humidity	8 - 90%, non-condensing
Shipping Humidity	5 - 95%, non-condensing
Operating Vibration	0.25 G, Sine 5 - 200 Hz (approx. 15 min/axis);0.4 GRMS, Random 5 - 200 Hz (approx. 60 min/axis)
Non-operating Vibration	0.5 G, Sine 5 - 200 Hz (approx. 15 min/axis); 0.98 GRMS, Random 5 - 500Hz (approximate 30 min/axis)
Operating Shock	20 G, 2.5ms, half-sine, one shock on each side
Non-operating Shock	20 G, 10ms, square wave, one shock on each side

Technical Specifications

Notes: [1] Specifications are subject to change without notice.

Electromagnetic Compatibility

- Subpart B of Part 15 of FCC Rules for Class A digital devices
- ICES-003, Issue 6, dated January 2016 (Class A)
- VCCI V-3: April 2014 (Class A)
- EN 55022:2010
- CISPR 22:2008
- AS/NZS CISPR 22:2009 +A1:2010
- EN55032:2012
- CISPR 32:2012
- EN 55024:2010
- CISPR 24:2010 +A1:2015

- TCVN 7189:2009
- NBTC TS 3001-2555
- TP TC 020/2011

Safety

- EN60950-1:2005 (Second Edition); Am1:2009 + Am2:2013
- IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013
- EN60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
- UL/IEC 60960-1 2nd Ed. Am1 + Am2
- CNS14336-1 ('99)
- CNS13438 ('95)
- NOM-019-SCFI-1998
- NBTC TS 4001-2550
- TP TC 004/2011
- IS 13252 (PART 1):2010 +A1:2013 + A2:2-15
- SANS IEC 60950-1

Certifications / Markings

- UL
- cUL
- CE
- FCC Class A
- IC Class A
- VCCI Class A
- RCM
- BSMI Class A
- KC
- CCC Exemption
- NOM
- MoEc
- NBTC SDoC
- CITC/CoC*
- EAC

Technical Specifications

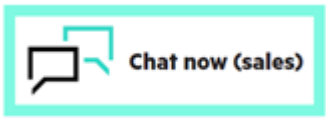
- BIS
- LOA (S. Africa)
- RoHS 2011/65/EU, EN50581:2012
- WEEE

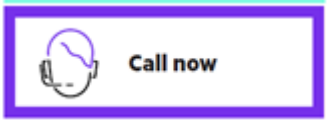
Summary of Changes

Date	Version History	Action	Description of Change
13-Nov-2023	Version 31	Changed	HPE Services Rebranding
06-Jun-2022	Version 30	Changed	Configuration Information section was updated.
07-Feb-2022	Version 29	Changed	Configuration Information, and Technical Specifications were updated.
06-Dec-2021	Version 28	Changed	Service and Support and Configuration Information sections were updated
17-May-2021	Version 27	Changed	Standard Features, Service and Support and Configuration Information sections were updated
01-Feb-2021	Version 26	Changed	Service and Support section was updated.
04-Jan-2021	Version 25	Changed	Configuration Information section was updated.
07-Dec-2020	Version 24	Changed	Overview, Standard Features and Configuration Information sections were revised
04-May-2020	Version 23	Changed	Standard Features and Configuration Information sections were revised
02-Mar-2020	Version 22	Changed	Configuration Information section was updated.
04-Nov-2019	Version 21	Changed	Technical Specifications section was updated.
07-Oct-2019	Version 20	Changed	Configuration Information section was updated.
03-Sep-2019	Version 19	Changed	Configuration Information section was updated.
05-Aug-2019	Version 18	Added	Overview and Configuration Information were updated.
01-Jul-2019	Version 17	Changed	Configuration Information and Technical Specifications were updated.
03-Jun-2019	Version 16	Changed	Technical Specifications section was updated.
02-Apr-2019	Version 15	Changed	Configuration Information section was updated.
04-Mar-2019	Version 14	Changed	Configuration Information section was updated.
04-Feb-2019	Version 13	Changed	Overview and Configuration Information sections were updated.
07-Jan-2019	Version 12	Changed	Overview and Configuration Information sections were updated
5-Nov-2018	Version 11	Changed	Overview, Service and Support and Warranty Information and Configuration Information sections were revised
01-Oct-2018	Version 10	Changed	Overview and Configuration Information sections were revised.
13-Aug-2018	Version 9	Changed	Configuration Information section was revised.
06-Aug-2018	Version 8	Changed	Configuration Information section was updated.
04-Jun-2018	Version 7	Changed	Raw capacity for the AF20 array was revised.
14-May-2018	Version 6	Changed	Overview section was revised.
07-May-2018	Version 5	Changed	Overview, Configuration Information, and Technical Specifications were revised.
13-Nov-2017	Version 4	Changed	Overview and Configuration Information were revised.
06-Nov-2017	Version 3	Changed	Changes made to the entire document including the new Branding changes.
12-Jun-2017	Version 2	Changed	Detail on included power cords and SAS cables.
05-Jun-2017	Version 1	New	New QuickSpecs.

Copyright

Make the right purchase decision. Contact our presales specialists.





a00008273enw - 15932 - Worldwide - V31 - 13-November-2023