



Datasheet

# NetApp FAS Hybrid-Flash Arrays

Simple. Smart. Trusted.

## Key Benefits

**Simple: Free up your time, money and people**

- Provision storage in minutes
- Reduce costs with proven efficiency technologies
- Manage file and block data on a single system

**Smart: Flexibly adapt to your ever-changing business needs**

- Scale capacity and performance nondisruptively
- Effortlessly integrate with public clouds
- Optimize your storage infrastructure with predictive analytics and proactive care

**Trusted: Safeguard your data across the hybrid cloud**

- Secure your infrastructure from unauthorized access
- Protect your data with integrated data protection
- Deliver continuous availability

## The Challenge

**Simplifying data management across flash, disk, and cloud**

Organizations of all sizes are increasingly challenged with streamlining their storage operations. Their staff is overstretched from managing all their business applications, and they need to store and back up their ever-growing volume of data while budgets are shrinking. Plus, they need to integrate cloud and flash into their storage infrastructure.

## The Solution

**Hybrid-flash storage that simplifies your operations with best-in-class data management**

NetApp® FAS arrays, powered by NetApp ONTAP® data management software, help you build storage infrastructure that is simple, smart, and trusted. FAS systems are optimized for easy deployment and operations while also having the flexibility to handle future growth and cloud integration.

With their highly available hardware and powerful software, FAS systems cost-effectively deliver the data protection, security, and scalability to safeguard your data and help your staff be more efficient. Whether you're running a small business, a remote office, or a large enterprise, the FAS family's range of capabilities for SAN and NAS workloads make it an ideal solution for your general-purpose business applications as well as backup and retention.

## Simple

### Streamline your storage operations

When it comes to long-term investments in storage infrastructure, it's critical to focus on simplifying your storage environment and reducing total cost of ownership. The FAS family offers significant advantages:

- Go from initial power-on to serving data in less than 10 minutes with simple application provisioning.
- Reduce costs and minimize your storage footprint with proven efficiency technologies such as inline deduplication, compression, compaction, and thin provisioning.
- Simplify ongoing management by upgrading software or servicing storage with zero downtime during regular business hours.
- Eliminate silos by supporting both NAS and SAN workloads on one unified system.
- Accelerate business operations by leveraging NetApp Snapshot™ copies to instantly create writeable clones for use in Dev/Test, report generation, and analytics.
- Increase the efficiency of your staff by using the deep integration of ONTAP with key business applications.

## Smart

### Scale and adapt to meet changing needs

The FAS family has the flexibility to keep up with your growing business as your capacity and performance requirements change. Scale up by adding capacity or by upgrading controllers. Scale out by growing from 2 nodes with 10TB of storage up to a 24-node cluster with 176PB of capacity. Plus, you can cluster different combinations of FAS and AFF models to build out your environment by adding new generations of storage with the latest technologies.

The FAS family also supports massive NAS containers, which are easy to manage. With the NetApp FlexGroup feature of ONTAP 9, a single namespace can grow to 20PB and 400 billion files while maintaining consistent high performance and resiliency.

With nondisruptive addition and replacement of storage systems and components, scaling occurs without maintenance windows or the challenge of coordinating downtime across teams. And you can perform your updates during regular work hours.

### Integrate with the cloud

Organizations today are focusing on service-oriented IT architectures that take advantage of cloud IT models. FAS systems running ONTAP are optimized for private and hybrid cloud by providing secure multitenancy, quality of service (QoS), nondisruptive operations, and easily defined tiers of service. Plus, NetApp offers a number of options for extending your FAS system to the hybrid cloud with Amazon Web Services (AWS), Microsoft Azure, Google Cloud, and other leading cloud providers. Easily move your data between your on-premises FAS system and cloud environments by using NetApp SnapMirror® data replication software. FAS systems can also be deployed in a NetApp Private Storage for Cloud solution, to directly connect to multiple clouds using a high-bandwidth, low-latency connection, all while maintaining complete control of your data on your private FAS system.

## Optimize your storage with smart management

You don't need to be a storage expert to use the broad range of capabilities in the NetApp storage management portfolio.

- Simplify and speed up day-to-day management activities with ONTAP System Manager. The new GUI provides quick insights into capacity, system health, networking, and performance history.
- Streamline your management of multiple storage clusters with NetApp Active IQ® Unified Manager. Boost the efficiency of your staff by monitoring petabytes of data from a single dashboard, and receive notifications to quickly resolve issues before they affect data services. The latest version of Active IQ Unified Manager provides insights and advice on security risks and compliance.

Utilize insights and recommendations derived from predictive analytics and community wisdom to optimize and protect your storage investments with Active IQ. Expose risk factors and prevent problems before they affect your business. Benefit from insights and best-practice recommendations derived from the collective wisdom of NetApp's large user base. Implement its actionable intelligence to prevent problems, save time, and make smarter decisions when managing your infrastructure with ONTAP System Manager and Active IQ Unified Manager.

## Trusted

### Secure company and customer data across your hybrid cloud

- Easily and efficiently protect your at-rest data by encrypting any volume on FAS and AFF systems with the NetApp Volume Encryption feature of ONTAP. No special encrypting disks are required.
- Protect against weak administrative passwords, the leading cause of system compromises, by using multifactor authentication (MFA).
- Designate and validate authorized users with role-based access control (RBAC).
- Use storage-level file security to prevent unauthorized administrators from accessing or deleting critical intellectual property.
- Meet privacy standards, including GDPR, by cryptographically shredding and sanitizing individual files.

### Protect against data loss and accelerate recovery

FAS systems running ONTAP provide comprehensive, integrated data protection to safeguard your data. Meet your requirements for local backup with near-instant recovery by using space-efficient NetApp Snapshot copies. Achieve remote backup/recovery and disaster recovery with NetApp SnapMirror asynchronous replication. Plus, deep integration with leading backup applications makes management easier.

### Achieve unparalleled availability and nondisruptive operations

NetApp MetroCluster™ and SnapMirror Synchronous technologies expand data protection to eliminate risk of data loss by synchronously mirroring data between locations for continuous availability of information. Storage arrays can exist in a single data center or in two different data centers that

are located across a campus, across a metropolitan area, or in different cities. No matter what happens, your data can be protected from loss and, with MetroCluster, it is continuously available to meet business-critical needs.

FAS systems are engineered to meet demanding availability requirements. All models are designed to deliver 99.9999% availability or even higher through a comprehensive approach that combines highly reliable hardware, innovative software, and sophisticated service analytics.

The NetApp FAS9000 hybrid storage systems have an intelligent modular design that enhances reliability, availability, and serviceability (RAS). Service operations are greatly simplified, I/O cards are easily serviced, and controllers can be replaced without disturbing I/O cabling. This modular design simplifies and speeds up servicing and minimizes the risk of errors. The design also increases flexibility, streamlines maintenance, and extends the life of the platform, reducing the disruption and expense that come with tech refreshes.

Software and firmware updates, hardware repair and replacement, load balancing, and tech refresh happen without planned downtime.

#### NetApp FAS Hybrid Flash Arrays:

- **FAS9000:** Designed with a modular architecture that is optimized for serviceability and availability. Ideal for large consolidated environments.
- **FAS8700:** New high-end system that is optimized for high capacity and performance to consolidate multiple business workloads.
- **FAS8300:** Designed for a wide range of midrange deployments that need a balance of capacity, performance, and price.
- **FAS2750:** Optimized for small and midsize enterprises that require simple deployment and operations. Supports up to 24 SFF internal drives plus external storage shelves.
- **FAS2720:** Optimized for small and midsize enterprises that require simple deployment and operations. Optimized for high-capacity use cases.

#### Get it right from the start by using NetApp expertise and tools

Realize the most from your investment by engaging professional services experts from NetApp or our Services Certified partners. When moving data into your new environment, smooth the transition and mitigate risks by using proven NetApp methodologies, tools, and best practices. Learn more at [netapp.com/services](https://netapp.com/services).

## Harness the Power of ONTAP to Simplify and Accelerate Your Storage Environment:

### Storage Efficiency

Reduce costs with leading data reduction technologies and built-in configuration efficiencies.



### Business Continuity

Make sure that your critical applications stay online with continuous data availability.



### Nondisruptive Operations

Eliminate business disruptions during maintenance and upgrades.



### Performance and Scalability

Ensure performance for consolidated workloads, and scale up or scale out capacity and performance.



### Cloud Integration

Easily move your data between your on-premises FAS system and cloud environments.



### Security

Avoid unauthorized data access and secure your data at rest and in transit across your hybrid cloud.



### Compliance

Meet strict governance and data retention policies.



### About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation, and optimize their operations. For more information, visit [www.netapp.com](https://www.netapp.com). #DataDriven

Table 1) NetApp FAS technical specifications

	<b>FAS9000</b>	<b>FAS8700</b>	<b>FAS8300</b>	<b>FAS2750</b>	<b>FAS2720</b>
Maximum raw capacity per HA pair	14.7PB	14.7PB	7.3PB	1243TB	1440TB
Maximum drives per HA pair	1440	1440	720	144	144
NAS scale-out	1-24 nodes (12 HA pairs)	1-24 nodes (12 HA pairs)	1-24 nodes (12 HA pairs)	1-24 nodes (12 HA pairs)	1-24 nodes (12 HA pairs)
SAN scale-out	1-12 nodes (6 HA pairs)	1-12 nodes (6 HA pairs)	1-12 nodes (6 HA pairs)	1-12 nodes (6 HA pairs)	1-12 nodes (6 HA pairs)
Maximum raw capacity for cluster	176PB	176PB	88PB	15PB	17PB
Controller chassis form factor	8U	4U	4U	2U / 24 internal drives	2U / 12 internal drives
OS version	ONTAP 9.1 RC1 and later	ONTAP 9.7 RC1 and later	ONTAP 9.7 RC1 and later	ONTAP 9.4 RC1 and later	ONTAP 9.4 RC1 and later
Storage protocols supported	FC, FCoE, iSCSI, NFS, pNFS, CIFS/SMB	FC, iSCSI, NFS, pNFS, CIFS/SMB	FC, iSCSI, NFS, pNFS, CIFS/SMB	FC, FCoE, iSCSI, NFS, pNFS, CIFS/SMB	FC, FCoE, iSCSI, NFS, pNFS, CIFS/SMB
Shelves and media	See the Shelves and Media page <sup>1</sup> on NetApp.com for current information.				

Note: All HA pair specifications are for dual-controller, active-active configurations.

<sup>1</sup> Maximum raw capacity depends on the drive offerings.

See the [Shelves and Media page](#) on NetApp.com for current information.