Datasheet

NetApp FAS8200 Hybrid Flash System

Quickly respond to changing storage needs across flash, disk, and cloud with industry-leading data management

Key Benefits

Optimize for the Hybrid Cloud
Easily implement an IT architecture that spans on-premises and cloud resources.

Accelerate Enterprise Applications
Reduce latency and speed operations with up to 50% higher performance than the previous generation.

Simplify Your Storage Environment
Run SAN and NAS workloads with unified scale-out storage.

Maximize Uptime
Eliminate planned downtime to add, upgrade, or retire storage with no disruptions.

Consolidate Infrastructure
Scale up to 57PB, cluster with AFF all-flash systems, and integrate existing third-party storage arrays.

The Challenge
Enabling the data-driven business

As the role of technology has expanded to cover key business operations as well as back-office functions, IT leaders have had to rethink the way they architect storage. Traditional requirements such as storage uptime, scalability, and cost efficiency are still critical, but so are factors such as flash acceleration, cloud integration, unified support for SAN and NAS, and simplified data mining for competitive advantage.

Many enterprises struggle, held back by structural limitations in legacy storage and data architectures. Traditional storage arrays might deliver on basic needs but are divided into separate silos or are incapable of meeting advanced service requirements and leveraging the cloud.

The Solution
Accelerate business operations with unified scale-out storage

The demands of a data-driven business require a new approach to storage with an integrated combination of high-performance hardware and adaptive, scalable storage software. The approach needs to support existing workloads as well as adapt and scale quickly to address new applications and evolving IT models.

FAS8200 hybrid storage systems are engineered specifically to address these needs. Powered by NetApp® ONTAP® data management software, the FAS8200 unifies your SAN and NAS storage infrastructure. When FAS8200 systems are clustered with NetApp AFF all-flash arrays and integrated with the cloud, you have the control to easily move your data to where it's needed for your business and place it in the storage environment that delivers the best combination of flash performance, storage capacity, and cost efficiency. With proven agility and data management capabilities, the FAS8200 has the flexibility to keep up with changing business needs while delivering on core IT requirements.

Unlock the power of flash

Flash-accelerated FAS8200 hybrid storage systems deliver up to 50% more performance than our previous-generation FAS storage, boosting throughput, lowering latency, and meeting stringent service levels. The base configuration of each HA pair includes 2TB of onboard NetApp Flash Cache™ based on NVMe technology, which can be expanded up to 4TB of integrated Flash Cache and up to 48TB of total flash per HA pair when leveraging NetApp Flash Pool™ intelligent data caching. Hot data is automatically promoted to flash in real time, so you get the full benefit of flash performance.
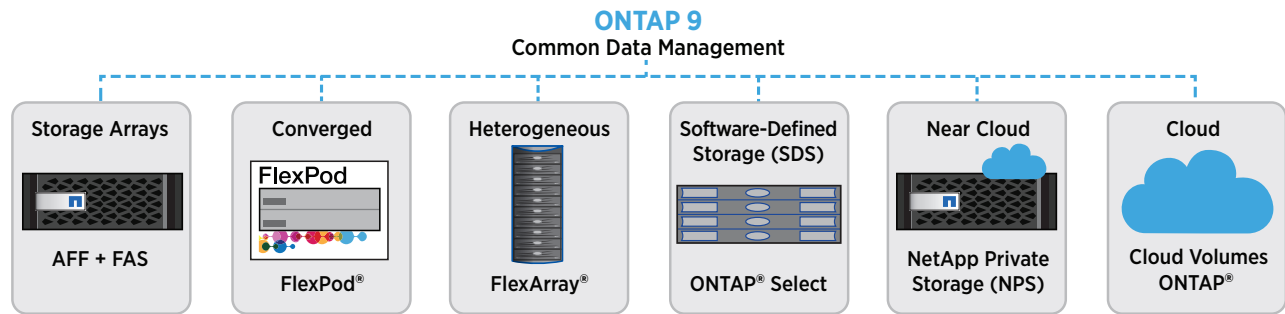
NetApp®

ONTAP 9
Common Data Management

Storage Arrays	Converged	Heterogeneous	Software-Defined Storage (SDS)	Near Cloud	Cloud
AFF + FAS	FlexPod®	FlexArray®	ONTAP® Select	NetApp Private Storage (NPS)	Cloud Volumes ONTAP®

Figure 1) Standardize data management across architectures with a rich set of enterprise data services.

Scale and adapt to meet changing needs

Optimize and accelerate your storage environment as performance and capacity requirements change. Scale up by adding capacity, adding more flash acceleration, and upgrading controllers. Scale out by growing from 2 nodes up to a 24-node cluster with 57PB of capacity, including combinations of different FAS and AFF models.

FAS8200 systems also support 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. Perform your updates during regular work hours.

Achieve unparalleled availability and nondisruptive operations

FAS8200 enterprise storage is engineered to meet demanding availability requirements. All models are designed to deliver 99.9999% availability or greater through a comprehensive approach that combines highly reliable hardware, innovative software, and sophisticated service analytics.

Software and firmware updates, hardware repair and replacement, load balancing, and tech refresh happen without planned downtime. Plus, NetApp Integrated Data Protection technologies protect your data, accelerate recovery, and integrate with leading backup applications for easier management.

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's continuously available to meet the most business-critical needs.

Optimize your NetApp systems with the predictive analytics and proactive support of NetApp Active IQ®. Fueled by NetApp's massive user base, Active IQ artificial intelligence and machine learning create actionable insights that help you prevent problems, optimize your configuration, save time, and make smarter decisions.

Get more from existing storage array investments

Simplify your IT operations and deliver more value from existing third-party arrays by using them as additional storage capacity behind FAS8200 systems. FlexArray® virtualization software running on FAS8200 extends ONTAP to include storage capacity from EMC, Hitachi, HPE, IBM, and NetApp E-Series arrays. Consolidate management of your existing storage to increase efficiency, add support for SAN and NAS workloads, and provide superior data management functionality.

Optimize hybrid cloud deployment

Organizations today are focusing on service-oriented IT architectures where cloud IT models are leveraged to enhance return on investment and assets. FAS8200 running ONTAP is optimized for private and hybrid cloud with secure multitenancy, quality of service (QoS), nondisruptive operations, and easily defined tiers of service. NetApp offers a number of options for extending your FAS8200 to the hybrid cloud with Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP) and other leading cloud providers.

You can easily burst capacity to public clouds without typical capex constraints with NetApp Cloud Volumes Service, the first enterprise-class cloud-native file service for AWS and GCP, or Azure NetApp Files for Microsoft Azure. Ideal for data-intensive workloads such as analytics and DevOps, these cloud data services combine elastic, on-demand storage as a service from NetApp with ONTAP data management in a fully managed offering.

For those seeking advanced data services for cloud block or object storage services such as AWS EBS or S3, or Azure storage, Cloud Volumes ONTAP provides data management between your on-premises environment and the public cloud with a single, common view. Running in AWS or Azure as an on-demand instance, Cloud Volumes ONTAP provides the

storage efficiency, availability, and scalability of ONTAP software to allow easy movement of data between your on-premises FAS9000 and AWS or Azure storage environment with NetApp SnapMirror® data replication software.

For organizations that need an enterprise-class hybrid cloud with predictable performance and availability, the FAS8200 can be used in a NetApp Private Storage (NPS) for Cloud solution. With NPS for Cloud, you can directly connect to multiple clouds using a private, high-bandwidth, low-latency connection. Connect to industry-leading clouds such as AWS, GCP, Microsoft Azure, or IBM Cloud and switch between them at any time, all while maintaining complete control of your data on your dedicated, private FAS8200.

Build the right long-term platform
When it comes to long-term storage infrastructure investments, it's critical to focus on flexibility for adapting to future requirements, simplification of your storage environment, and total cost of ownership. FAS8200 provides a significant price/performance benefit. Plus, it delivers industry-leading storage efficiency technologies such as inline deduplication, inline compression, inline compaction, thin provisioning, and space-efficient NetApp Snapshot™ copies to reduce your cost per effective gigabyte of storage.

It is also critical to look at the security of your data environment, With the NetApp Volume Encryption feature of ONTAP, you can easily and efficiently protect your at-rest data by encrypting any volume on FAS (and AFF) systems. No special encrypting disks required. In addition, multifactor authentication increases security, and cryptographic shredding enables GDPR compliance.

In a data-driven business, you also need the ability to leverage data for competitive advantage and to assign resources dynamically for more effective operations. The NetApp storage management software portfolio is composed of a range of products for use with the FAS8200, including automation, integration, device-level management, and enterprise storage resource management.

Get it right from the start by using NetApp expertise and tools
Realize the most out of 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.

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. #DataDriven

Table 1) FAS8200 technical specifications

Scale-out

	FAS8200
NAS scale-out: 1–24 nodes (12 HA pairs)	
Maximum drives (HDD/SSD)	5,760/5,760
Maximum raw capacity	57PB
SAN scale-out: 1–12 nodes (6 HA pairs)	
Maximum drives (HDD/SSD)	2,880/2,880
Maximum raw capacity	28PB

Per HA Pair Specifications (Active-Active Dual Controller)

	FAS8200
Maximum drives (HDD/SSD)	480/480
Maximum raw capacity	4800TB
Controller form factor	3U
OS version: ONTAP 9.1 RC1 and later	
Shelves and media	See the Shelves and Media page[1] on NetApp.com for current information.
Storage protocols supported	FC, FCoE, iSCSI, NFS, pNFS, CIFS/SMB

1. netapp.com/us/products/storage-systems/disk-shelves-and-storage-media/index.aspx.

Table 2) NetApp FAS8200 series software

	The ONTAP 9 Base Bundle includes a set of software products that deliver leading data management, storage efficiency, data protection, and high performance. The optional Premium Bundle and extended-value software products provide advanced capabilities, including instant cloning, data replication, application-aware backup and recovery, NetApp Volume Encryption, and data retention.
Software included in ONTAP 9 Base Bundle	The Base Bundle includes the following NetApp technologies: • Storage protocols: All supported data protocol licenses (FC, FCoE, iSCSI, NFS, pNFS, CIFS/SMB) • Efficiency: NetApp FlexVol®, deduplication, compression, compaction, and thin provisioning • Availability: Multipath I/O • Data protection: RAID-TEC™, RAID DP®, and Snapshot technologies • Performance: Storage QoS (maximum and minimum resource limits) • Scalable NAS container: FlexGroup • Management: ONTAP System Manager and Active IQ Unified Manager
Software included in ONTAP 9 Premium Bundle (optional)	To add capabilities to the Base Bundle, the optional Premium Bundle includes the following NetApp technologies: • FlexClone®: Instant virtual copies of databases or virtual machines • SnapMirror: Simple, efficient, flexible disaster recovery • SnapRestore®: Restore entire Snapshot copies in seconds • SnapCenter®: Unified, scalable platform and plug-in suite for application-consistent data protection and clone management • SnapManager® suite: Application- and virtual machine–aware backup, recovery, and cloning See NetApp.com for information about additional software available from NetApp.
Extended-value software (optional)	Separate optional software, beyond the Base Bundle and Premium Bundle, is also available: • OnCommand suite of management software: Provides the visibility and control to help maximize system utilization, meet storage SLAs, minimize risks, and boost performance • SnapMirror Synchronous: Synchronous replication for zero data loss protection (RPO=0) • FlexCache: Accelerate read performance with cached datasets within a cluster and at remote sites. • SnapLock®: Compliance software for write once, read many (WORM) protected data • NetApp Volume Encryption: Granular, volume-level data-at-rest encryption • FlexArray: Virtualization of existing third-party storage arrays into an ONTAP environment to leverage the array storage capacity behind a NetApp FAS