DATA SHEET

Pure Storage FlashArray//C

Accelerate, consolidate, and protect your data with economical, all-flash storage.

Overview

- Up to 16.3PB effective capacity
- NVMe and NVMe-oF (Fibre Channel, RoCE, TCP)
- SMB and NFS

Highly Available

- Proven 99.9999% availability
- Data-in-place, Non-disruptive upgrades
- Built in business continuity and disaster recovery

Simplicity

- Intelligent control plane with Pure Fusion™ and Pure1®
- Unified REST API
- Self configuring and self healing

Pure Storage® FlashArray//C™ provides a capacity and performance balanced all-flash storage solution for file services and general purpose workloads. Ensure predictable performance, simplify operations, and establish a core foundation for cyber resiliency with FlashArray//C, ensuring applications are consistently secure and able to deliver superior business outcomes over other capacity-optimized, all-flash, and hybrid-storage systems.

The Increasing Requirements for Primary and Nearline Data

Data drives every part of business. All workloads across all tiers now demand fast access to data with enterprise-grade capability, reliability, and predictability. Tier 2 workloads that have typically been relegated to disk based storage are foundational to business. They require all the same consistent performance and reliability that Tier 1 applications get from all-flash storage systems. Companies that use both production and nearline data to their advantage move faster and are ready to leapfrog over competitors.

AI makes nearline data more valuable than ever. Infrastructure optimized for cost alone can't keep up with requirements from high capacities and checkpoints. Modern workloads require high reliability, high availability, and immediate accessibility. Extremely large historical datasets now fuel analytics, forecasting, and AI training by new teams. Hybrid HDD/SSD storage arrays are not designed for these requirements at scale. Complex tiering algorithms are optimized to balance costs and performance, but ultimately slow innovation. Even entry-level all-flash systems lack enterprise capabilities with limited upgrade paths. The result: overpaying for unnecessary performance or workarounds for feature-gaps.

Organizations need storage that is purchased once, always-improving, and always ready for what comes next.

FlashArray//C Delivers a Truly Balanced Solution

As part of the Pure Storage FlashArray™ family, FlashArray//C is value & capacity optimized without compromise. It provides the same Evergreen® architecture and enterprise-grade capabilities for your file services, general purpose workloads and business continuity / disaster recovery.

FIGURE 1 Key use cases

FlashArray//C is the balanced offering between capacity-optimized FlashArray//E™ and performance-optimized FlashArray//X™, FlashArray//XL™, and FlashArray//ST™. FlashArray//E is ideal for archival use cases that benefit from the resiliency, density, and power-space efficiencies offered by DirectFlash®. FlashArray//X is the performance-optimized solution, offering high performance and scalability for mission critical workloads. FlashArray//XL supports high performance at extremely large scales. FlashArray//ST is optimized solely for extreme performance. Regardless of the model, all FlashArray systems contribute to the same unified storage pool without requiring manual tuning or management.

Adaptability and Durability with All-flash

FlashArray//C with QLC DirectFlash delivers fast, efficient, and durable capacity in a single unified data plane. All data is globally accessible with consistent, predictable performance, eliminating silos, stranded capacity, and the guesswork of tiered storage. Scale seamlessly as needs evolve without cost penalties or disruption.

Key Advantages of Global Storage

- **Globally accessible data:** All workloads run on the same QLC DirectFlash storage without tiering, ensuring instant accessibility and consistent performance, even for unpredictable AI requests. Unlike competitive solutions, FlashArray natively supports file, block, and object protocols.
- **Higher storage density:** The Pure Storage platform uses DirectFlash Modules (DFM), which are optimized for enterprise storage, rather than commodity SSD. This ensures that Pure Storage solutions can achieve density, performance, and efficiencies unattainable in legacy drive architectures.
- **Scale without guesswork:** Traditional storage forces storage administrators to predict future data needs across their environment or endure extensive pre-planning. With a unified data plane and the seamless data mobility of Purity OS, storage administrators can flexibly provision storage as needed without concern about silos and stranded capacity
- **Upgrade without waste:** With Evergreen architecture, customers can upgrade controllers, DFMs, expansion shelves, and chassis independently and non-disruptively. Scale performance and capacity seamlessly without planned downtime or forklift upgrades.
- **Superior data reduction:** FlashArray consistently delivers a 5:1 average data reduction ratio (deduplication and compression) and up to 10:1 when including thin provisioning. These efficiencies continue to improve with software updates and apply globally across the entire storage pool, rather than within silos or tiers.

Enterprise-grade Performance for Every Tier

Every workload requires high availability, security, and consistent performance. File services, databases, virtualization, and business continuity all run best on the Evergreen architecture with DirectFlash, delivering enterprise capabilities across all tiers. Unlike entry-level flash or retrofitted hybrid systems, FlashArray//C ensures all workloads share the same enterprise foundation.

Key Advantages over Entry-Level Flash and Hybrid Storage

- **Clear upgrade paths:** Upgrade paths are clear and simple across models and generations. Upgrades are always data-in-place and completely non-disruptive. Unlike competitors, upgrades require no caveats or planned downtime.
- **Optimized for Databases:** FlashArray is optimized for databases, with:
- Minimal disruptions**:** FlashArray delivers 99.9999% availability, ensuring production databases remain online without risk of downtime or disruption.
- **Superior database outcomes:** Other systems are constrained by the inefficiencies of packaged SSD drives. FlashArray leverages a global storage pool through DirectFlash modules, enabling higher efficiencies and better results for database workloads.
- **Faster copies for databases:** Operations like dev/test refreshes, backups, or analytics copies complete instantly. Data is always copied efficiently and without performance trade-offs.
- **First-class file services:** Enterprise file runs natively within Purity OS, alongside block and object. Unlike bolt-on solutions, file storage inherits all the same benefits as block storage, including efficiency, data services, and Evergreen architecture.
- **Simplicity that scales:** FlashArray is built on simplicity: self-configuring, self-healing, and self-adapting. That simplicity extends to data management across entire fleets, amplifying operational efficiency at scale. Legacy architectures with bolt-on features only serve to add complexity.
- **Unified management:** The Pure Storage platform is powered by Purity OS with storage delivered via a unified data plane, accessible through a single API, so there's no need for multiple management tools for managing silos of data across multiple tiers.

Simple and Complete Resiliency

FlashArray//C is designed for simplicity that reduces intervention and lowers risk. Data protection is built in, with no extra licenses required. Leading reliability makes lifecycle management easier, eliminating the hassles of media failures and freeing IT teams to focus on high-value strategy instead of low-value maintenance.

Key Advantages of Built-in Protection

- **Ransomware remediation with SafeMode™ snapshots:** SafeMode snapshots provide multiple layers of protection by protecting deletion of data and support processes to protect security policies in case admin credentials are compromised.
- **Resiliency in minutes:** Deploy a full suite of data protection across any RPO/RTO within minutes. Features are native to the platform, not bolt-on products that require separate licenses.
- **Cyber-secure by default:** Certified security features come enabled instead of requiring manual configuration. Features are easy to manage and ensure that storage has a baseline of security—no "hardening guide" required.
- **Encrypt without penalty:** Always-on encryption delivers zero performance impact and requires no user intervention, special hardware, licenses, or external key management.
- **Instant, immutable, indelible snapshots:** Protect your data against deletion or corruption by attackers. Data is protected if credentials are compromised or caused by human error.
- **Flexible recovery integrations:** Fast-read architecture accelerates restores, unlocking the full capabilities of partner solutions and reducing downtime during recovery.

Approachable, Affordable All-flash for General-purpose Workloads

FlashArray//C delivers a balanced, enterprise-grade foundation for data whether it's production, nearline, or everything in between. Built on Evergreen architecture with DirectFlash, it ensures consistent performance, enterprise-grade resiliency, and incredible efficiency across every tier without compromise. With built-in data protection, simple scalability, and non-disruptive upgrades, FlashArray//C eliminates the trade-offs of legacy architectures. Invest once for a storage solution that continually improves to meet the demands of today, tomorrow, and beyond.

Technical Specifications

	Capacity	Physical
//RC20	Up to 918TB/835TiB effective capacity* Up to 260TB/236TiB raw capacity	3U; 720–888 watts (typical–peak) 100–127 volts (input voltage range) 200–240 volts (input voltage range) 90.9 lbs (41.2 kg) fully loaded 5.12" x 18.94" x 29.72" chassis
//C50 R5	Up to 1.9PB/1.7PiB effective capacity Up to 525TB/467TiB raw capacity	3U; 1185–1405 watts (typical–peak) 200–240 volts (input voltage range) 98.3 lbs (44.6Kg) fully loaded 5.12" x 15.75" x 29.72" chassis
//C70 R5	Up to 5.3PB/4.8PiB effective capacity Up to 1.4PB/1.2PiB raw capacity	3U–6U; 1411–1665 watts (3U) (typical–peak) 200–240 volts (input voltage range) 98.3-189.2 lbs (44.6–85.8 kg) fully loaded 5.12"-15.75" x 18.94" x 29.72" chassis
//C90 R5	Up to 16.3PB/14.8PiB effective capacity Up to 4.2PB/3.7PiB raw capacity	3U–9U; 1631–1831 watts (3U) (typical–peak) 200–240 volts (input voltage range) 98.3–280.1 lbs (44.6-127 kg) fully loaded 5.12"-15.75" x 18.94" x 29.72" chassis

*Effective capacity assumes HA, RAID, and metadata overhead, GB-to-GiB conversion, and includes the benefit of data reduction with always-on inline deduplication, compression, and pattern removal. Average data reduction is calculated at 5-to-1 and does not include thin provisioning.

Additional Resources

- Visit the database solutions webpage.
- Read the enterprise file solution brief and watch the webinar.
- Watch the security demo videos.
- Learn about the Pure Storage platform.
- Learn more about how Pure Storage helps you build an Enterprise Data Cloud.

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