DATA SHEET

Pure Storage FlashArray//X

Mission-critical performance,
simple and resilient by design

Overview

- As low as 250µs latency
- Up to 4.4PB 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//X™ delivers mission-critical performance with the efficiency and resiliency that's missing from legacy arrays. Traditional arrays consume significant power, space, and administrative time to deliver the performance needed by today's workloads. Designed from the ground up for modern, highly transactional, and low latency solutions, FlashArray//X packs more IOPS, ultra consistent latency, and greater scale into a smaller footprint. Non-disruptive upgrades, always-on availability, and built-in data protection ensure workloads are always running while cutting risk. A single, intelligent control plane extends capacity seamlessly to the cloud, so admins can focus on data delivery rather than storage management.

Today, Performance Needs Simplicity, Resiliency, and Efficiency

Data volumes are growing faster, testing existing infrastructure strategies. More performance for mission-critical databases and workloads drives more transactions, but it also drives up complexity, power use, and cost when handled with legacy arrays. Traditional high-performance systems are single-purpose tools: fast but optimized for just one core business process and nothing else. It's rigid by design. As compliance demands tighten and cyber risks rise, the lack of built-in resiliency forces operators into planned downtime, disruptive upgrades, and endless workarounds. Performance on its own isn't enough anymore.

The right solution meets all these challenges without gutting efficiency or resiliency. FlashArray//X brings highly efficient, all-flash performance with built-in protection, non-disruptive upgrades, and unified management. Data stays 99.9999% available without hidden work. It scales with changing business needs instead of blocking them. And unlike legacy arrays, no more weekends are required to account for "planned maintenance."

FIGURE 1 Key use cases

FlashArray//X is the performance optimized member of the FlashArray™ family ideal for most mission critical workloads. FlashArray//XL supports high performance at extremely large scales. The FlashArray//ST™ is optimized solely for extreme performance. FlashArray//C balances both capacity and performance which is ideal for enterprise file and general purpose workloads. FlashArray//E™ is ideal for archival use cases that benefit from the resiliency, density, and power-space efficiencies offered by DirectFlash®. Regardless of the model, all FlashArrays contribute to the same unified storage pool without requiring manual tuning or management.

Manage Your Data, Not Your Storage

FlashArray//X puts all high-performance storage into a unified pool managed by an intelligent control plane. Insights, automation, and recommendations keep configuration, compliance, and administration consistent even as environments grow, so you spend less time buried in storage tasks and more time driving your data strategy.

Key Advantages: Native Simplicity

- **Accomplish more with simplicity that scales:** Simplicity isn't bolted on, it's built-in. At the array level, FlashArray//X is self-configuring and self-healing. Management with Pure Fusion is native to the array, ensuring efficiencies are distributed to every endpoint and simplicity that scales as more systems are added. Legacy systems with multiple management tools only serve to add management overhead over time.
- **Eliminate endless configuration headaches:** Forget RAID pools, node pairs, and provisioning zones. FlashArray//X runs on a unified data plane with no pools, no tiers, and no manual tuning. Provision instantly, scale cleanly, and automate workflows to ensure speed and consistency.
- **Unleash infinite data mobility:** Move data anywhere with the same experience, whether it's on one array, across arrays, or into the cloud. As part of the Pure Storage platform, FlashArray is powered by the same Purity OS, ensuring seamless replication.
- **Scale without the crystal ball:** Stop guessing where capacity belongs. Scale performance independent of capacity as needed and grow the pool without tiresome pre-planning and downtime. A modular architecture means upgrades are completely non-disruptive, offered through an SLA backed Evergreen//One™ storage-as-a-service.
- **Management that gets simpler:** As the environment expands, management doesn't. An intelligent control plane powered by Pure Fusion and Pure1 puts recommendations, insights, and automation at your fingertips. Over time, manual storage administration decreases.

Scale Performance without Compromise

Mission-critical databases and workloads demand more than just performance. They also need to be highly available, highly accessible, and highly efficient. A unified storage pool delivers better outcomes for mission-critical workloads while allowing for flexible scaling for capacity. The availability for mission-critical data requires data-in-place upgrades without planned downtime. The necessary accessibility can only be achieved through a single API and a unified data pool. The efficiency can only be delivered with DirectFlash, not commodity SSDs. Mission-critical workloads require all these, without compromise.

- **Leading performance density:** Adding more high performance capacity can't simply be about adding more rack units, more cables, and more management points. FlashArray can scale seamlessly and grow a unified storage pool that's always accessed through a single API and managed through an intelligent control plane, ensuring more storage doesn't bloat operating costs and overhead.
- **Always max performance:** Capacity that's split across pools of storage limits efficiency. FlashArray delivers better results by balancing I/O across all media, ensuring performance is balanced at all times to deliver the best possible outcomes for critical workloads.
- **Snapshots without compromise:** High performance for production is just one part of the equation. Limits on snapshots, snapshots that create performance overhead are serious limitations for mission-critical workloads. Support dev/test refreshes, backups, and analytics copies with unlimited snapshots. Snapshots are instant, metadata only, and create zero performance overhead.
- **No planned downtime:** High availability shouldn't come with exceptions to achieve 99.9999%. This means no planned downtime for upgrades, across generational product upgrades. Mission-critical workloads require performance without outages.
- **Industry-leading data reduction:** Data reduction works across the entire pipeline and continues to improve with hardware and software updates. Because deduplication, compression, and thin-provisioning is applied globally, FlashArray can achieve far greater data reduction ratios over disk and SSD based systems.

Raise the Bar for Enterprise Resilience

An Evergreen® architecture powered by DirectFlash ensures mission-critical workloads are supported by the most resilient flash storage media. FlashArray provides a critical backstop for cyber resiliency by ensuring that critical security features come enabled by default, rather than requiring manual configuration.

Key Advantages: Resilience

- **No planned downtime:** High availability shouldn't come with exceptions to achieve 99.9999%. This means no planned downtime for upgrades, across generational product upgrades.
- **Denser, more reliable media:** DirectFlash Modules (DFM) are designed for enterprise environments with an architecture that is optimized for flash. Commodity SSD and HDD inherit a legacy disk-centric architecture. The result? DFM's are six times more reliable than HDD and three times more reliable than SSDs, with storage density we've doubled year over year that responds to the needs of only enterprise storage.
- **Built-in ransomware remediation:** SafeMode™ snapshots are enabled by default and protects against data deletion and enforces security policies, even if admin credentials are compromised.
- **Data protection in minutes:** Choose from a full set of RPO/RTO options and configure them in minutes. Unlike other vendors, these features are built-in, not add-ons that require separate licenses.
- **Cyber-secure by default:** Certified security features ship enabled, not left for customers to configure later. With FlashArray, you disable security if you want to, not build it from scratch, with no "hardening guide" needed.

Performance with Simplicity, Efficiency, and Resiliency

Performance alone doesn't cut it for today's mission-critical databases and workloads. FlashArray//X delivers mission-critical performance with simplicity, efficiency, built-in security, and next-level enterprise resilience in one platform. Every system contributes capacity to a unified storage pool managed through a single, intelligent control plane. Security is on by default. Automation and workload placement simplify management as environments grow. The result is a production platform that stays efficient, resilient, and easy to run, even as demands scale.

Technical Specifications

	Capacity	Physical
//X20 R5	Up to 435TB/395TiB effective capacity* Up to 127TB/111TiB raw capacity	3U–6U; 1012–1241 watts (3U) (typical–peak) 200–240 volts (input voltage range) Low line: 867–1064 watts (typical-peak) 100–127 volts (input voltage range) 98.3lbs (41.2kg) fully loaded 5.12" x 18.94" x 29.72" chassis
//X50 R5	Up to 900TB/810TiB effective capacity* Up to 256TB/224TiB raw capacity	3U–6U; 1101–1350 watts (3U) (typical–peak) 200–240 volts (input voltage range) 98.3–189lbs (44.6–85.8kg) fully loaded 5.12" x 15.75" x 29.72" chassis
//X70 R5	Up to 2.5PB/2.2PiB effective capacity* Up to 695TB/608TiB raw capacity	3U–9U; 1370–1616 watts (3U) (typical–peak) 200–240 volts (input voltage range) 98.3-280.1lbs (44.6–127kg) fully loaded 5.12" x 18.94" x 29.72" chassis
//X90 R5	Up to 4.4PB/4.0PiB effective capacity* Up to 1207TB/1056PiB raw capacity	3U–9U; 1500–1736 watts (3U) (typical–peak) 200–240 volts (input voltage range) 98.3–280.1lbs (44.6–127kg) fully loaded 5.12" 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.
- Learn about Simple Management.
- 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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