QSAN

Power Up Your Digital Universe

The most advanced modern technology meets the most outstanding QSAN storage yet. The result of this combination is whole new era of security, performance, and capacity. QSAN XS5200 SAN series gives all the business customers the performance and reliability you need, now with the newest generation Intel Xeon processor, inside the carefully designed world's first ever 2U 26 bay SAN unit. QSAN thoughtfully created the XS5200 series for work intensive businesses and mission-critical applications.

New Architecture Platform

- 5 generation Intel Xeon processor D-1500 family 4 cores
- Latest 12Gb SAS 3.0 technology
- Dual host card slots per controller, fully redundant and modular design
- Two 10GbE iSCSI (RJ45) ports onboard for default base controller
- Memory protection using super capacitor with M.2 flash module

Performance & Scalability

- Up to 12,000MB/s (read) and 8,000MB/s (write) stable throughput
- Up to 1,500K+ IOPS
- Up to 16x 16Gb Fibre Channel ports
- Up to 20x 10GbE iSCSI ports
- Scale up to 10 expansion units with over 3PB capacity

Innovated SANOS 4.0 operating system with SSD-optimized features

- QSnap (Writeable Snapshot)
- QReplica (Remote Replication with traffic shaping)
- QThin (Thin Provisioning)
- QCache (SSD Caching)
- QTiering (Auto Tiering)

High Availability & Reliability

- Dual active controller design with NTB cache mirroring
- Redundant, hot-swappable components
- Firmware upgrade with zero downtime

High Security

- iSCSI Force Field protection against mutant DDoS network attack
- Support SED drive

XS5200 series targets enterprise entry and SMB high-end businesses with limited budget and wanting for enterprise-class storage features. XS5200 series integrates Intel® Xeon® processor D1500 family that is optimized for enterprise SAN and cloud storage along with native 12Gb SAS 3.0 technology to build up the next generation storage platform to the highest standard. Innovative design includes dual host cards, dual onboard 10GBase-T ports, M.2 flash and supercapacitor modules for memory protection, and Wake-on-SAS. Not only performance can be scaled by adding a second SAN controller or adding a second host card, but the storage capacity can be scaled with XCubeDAS expansion enclosures.

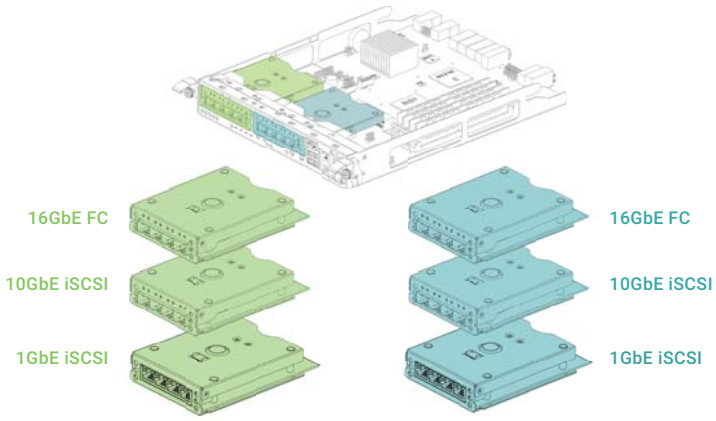
The heart and soul of XCubeSAN product family is SANOS 4.0 operating system, which is optimized to support QCache (SSD Caching) and QTiering (Auto Tiering) to fully leverage the advantages of SSD drives. XS5200 series also features real time wear level indicator to provide early warning and prevent data loss.

With the next generation storage platform, XS5200 series is positioned to provide excellent values for customers and can deliver ultra-high performance for both throughput and IOPS to enable all kinds of enterprise applications, such as

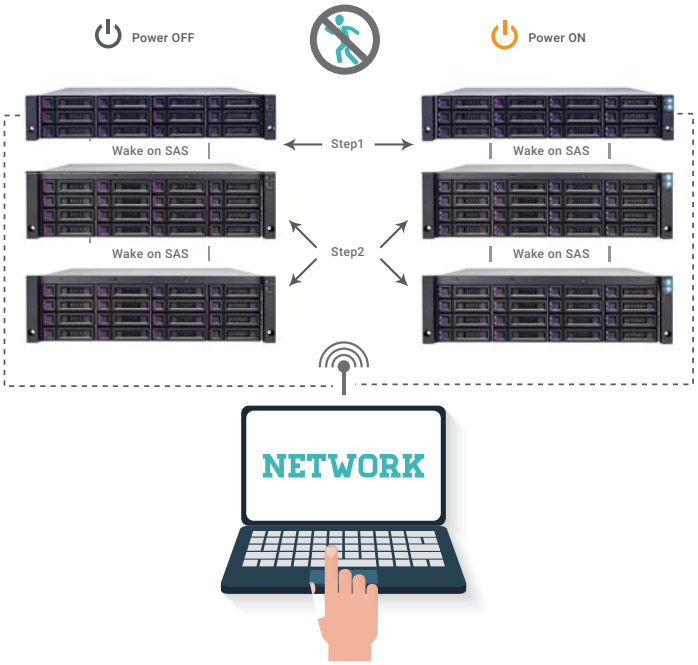
- Mission-critical database applications : real-time transactional database (Exchange server, SQL server, RDBMS, DB2), OLTP
- Consolidation & virtualization : virtualized data center, VMware, Hyper-V, Citrix
- Backup & disaster recovery : Symantec,
- Commvault, Veeam, Acronis
- Media & entertainment : 2K/4K/8K video editing, streaming and archiving.
- Large-scale surveillance : mega structure (shopping mall/skyscraper), public transportation (airport/train station/highway), secure & smart city infrastructure
- Private cloud computing and big data analytics
- Science and HPC (High Performance Computing)
- Corporate analytic or decision-making appliations : CRM, data warehousing, EAI

XS5200 series is built for mission-critical applications that require high availability, high reliability, data security & protection, perfromane and scalability.

All critical components are fully redundant and hot swappable modules to achieve the highest availability and reliability. Components include power supply unit, cooling fan, host card, SAN controller, and HDD tray. Modular design can significantly reduce maintenance efforts because they are field-replaceable units (FRU) and require no tools to perform the task. Thanks to this modular design of host card, the complete SAN system can be assembled by independent modules. This can greatly reduce inventory stocks in distribution and increase a lot of flexibility and business opportunities.



XCubeSAN product family has fully integrated 12Gb SAS technology to support the latest and fastest disk drives on the market. 12Gb SAS 3.0 doubles data transfer rate than 6Gb SAS 2.0. Your original investment in 6Gb SAS HDDs can still benefit from moving to XS5200 series without any negative impact. XS5200 series provides Wake on SAS wake on SAS function that can power on/off all cascaded XD5300 expansion enclosures by using QSAN proprietary SAS cable. You can power on XS5200 series using Wake on LAN function. And XS5200 series will automatically power on all XD5300 expansion enclosures attached to it using Wake on SAS function. Wake on SAS empowers IT managers to control the storage system from a remote site. This can greatly reduces maintenance efforts and power consumption.

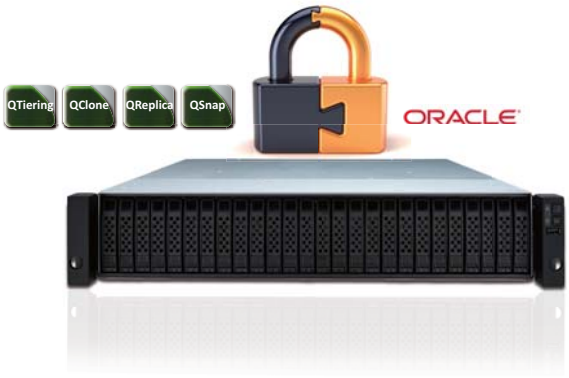


Enterprise applications are more demanding than ever, and the growing use of private clouds and virtualization puts additional strain on storage systems. However, not all applications require the performance of flash storage all the time. QCache (SSD Caching) leverages the strengths of both SSD and SAS/SATA drives to cost-effectively meet both high performance and high capacity requirements. It accelerates application performance by utilizing SSD drives as extended RAID controller cache for frequently-accessed hot data, while most of the cold data are stored in the hard drives . It can improve random read performance by up to 18 times.

With QTiering (Auto Tiering) technology, XS5200 series can help you put the right data at the right place in the right time for optimal use of all storage tiers and allow you to reduce storage costs and management overhead while increasing performance and capacity. Intelligent algorithm behind QTiering manages the data relocation and monitors the data hotness ratio using half-life coefficient and advanced ranking mathematics. 5 tiering policies provide more flexibility and options to satisfy actual deployment scenarios. Big data analytics, data mining, business intelligence, and trend analysis are the target applications because they have different data retention and usage characteristics.

The business community at large has embraced HD video. The digital video is rapidly evolving to 4K and beyond, but their adoption and consumption creates immense stress and challenges for the storage domains. 16Gb Fibre Channel and 10GbE iSCSI are ideal tools to solve 2K/4K video entertainment requirements such as editing, rendering, streaming and broadcasting. XS5200 series offers super wide bandwidth up to 16x 16Gb FC ports and 20x 10GbE iSCSI ports through innovative dual host card design. Stable 12,000MB/s throughput supports multiple concurrent streams of 2K, 4K, HD and 3D content without dropping frames.

XS5200 series is built for mission-critical database applications. Five 9's high availability, dual active controllers, Cache-to-Flash memory protection, and efficient array-based backup solutions are all tailor-made for database applications. Run your SQL Server environment or Orcale 12c database environment on XS5200 series to:

Accelerate database performance with stunning throughput and random IOPS
Reduce or eliminate planned/unplanned downtime through high availability and non-disruptive operations
Reduce storage and data management costs and increase ROI.
Accelerate application test/dev process and deployment

By using QCache and all flash solution, database latency can decrease by up to 80% and increase throughput by up to 4x times. Because of this performance benefit, you can consolidate more databases into XS5200 series and save database license fees by up to 50%. Using free QSnap/QClone/QReplica enterprise storage functions reduces database backup time from hours to minutes. Furthermore XS5200 series can help reduce or eliminate planned and unplanned downtime through five 9's high availability and non-disruptive operations especially for clustered database server environment.