

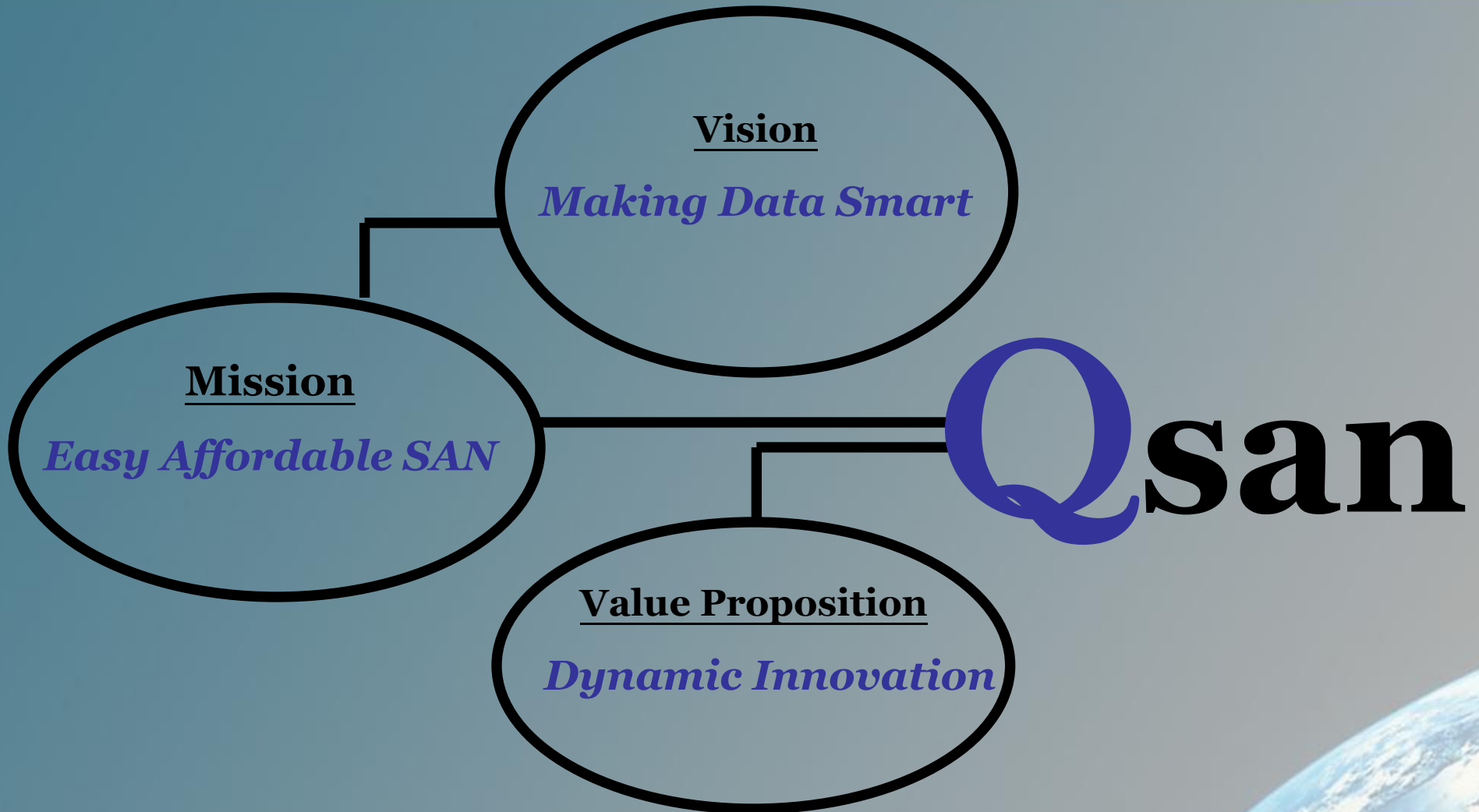
**Qsan Technology**  
making data smart

# **Qsan Technology, Inc.**

~ making data smart ~



# Company Positioning



# Product Matrix

## QSAN All Product Line

	iSCSI					FCoE	FC		SAS		SCSI	JBOD		
Host Interface	10Gb iSCSI		1Gb iSCSI			10Gb FCoE	8Gb FC	4Gb FC	6Gb SAS	3Gb SAS	U320	6G SAS	3G SAS	
			6 ports/Ctrl	4 ports/Ctrl	2 ports/Ctrl									
Disk Interface	6Gb SAS	3Gb SAS	6Gb SAS	3Gb SAS	SATA II	6Gb SAS	6Gb SAS	3Gb SAS	6Gb SAS	3Gb SAS	SATA II	6G SAS	3G SAS	
4U24	P600Q	P500Q-D424 P500Q-S424 P500Q-C424	P400Q	P300Q-D424 P300Q-S424 P300Q-C424		FE600Q	F600Q	F300Q-D424 F300Q-S424 F300Q-C424	6Gb SAS	S300Q-D424 S300Q-S424 S300Q-C424	SATA II	J300Q-D424 J300Q-C424	J220Q-D424 J220Q-C424	
3U16		P500Q-D316 P500Q-S316 P500Q-C316		P300Q-D316 P300Q-S316 P300Q-C316				F300Q-D316 F300Q-S316 F300Q-C316		S300Q-D316 S300Q-S316 S300Q-C316		S120V60	J300Q-D316 J300Q-C316	J220Q-D316 J220Q-C316
2U12		P500Q-D212 P500Q-S212 P500Q-C212		P300Q-D212 P300Q-S212 P300Q-C212				F300Q-D212 F300Q-S212 F300Q-C212		S300Q-D212 S300Q-S212 S300Q-C212		S120V50	J300Q-D212 J300Q-C212	J220Q-D212 J220Q-C212
2U24(2.5")		P500Q-D224 P500Q-S224 P500Q-C224		P300Q-D224 P300Q-S224 P300Q-C224				F300Q-D224 F300Q-S224 F300Q-C224		S300Q-D224 S300Q-S224 S300Q-C224			J300Q-D224 J300Q-C224	J220Q-D224 J220Q-C224
2U8		<del> </del>		P210V40	P160V40			F200V40		S510V40		S120V40		

- RED refers to Dual Redundant RAID system
- BLUE refers to Single RAID system upgradeable to Dual Redundant by adding another controller with canister
- BLACK refers to single RAID system
- All 3.5" Qsan Q series arrays are able to fit with both 3.5" and 2.5" hard disks with the same disk carrier

# Single & Dual Redundant Arrays



# 10GbE iSCSI Array

## P500Q Series Feature Highlight

- Symmetric Active-Active configuration
- 4 x 10GbE for dual redundant controllers
- Hardware iSCSI off-load engine
- RAID 6, 60
- Built-in Qsan snapshot with Windows VSS support
- Optional Qreplca (Qsan asynchronous remote replication)
- Volume cloning (Qsan asynchronous local replication)
- Uninterrupted firmware upgrade, no system downtime
- Multiple iSCSI target nodes per controller
- Host ports with high availability/load-balancing/fail-over
- Hot pluggable BBM (Battery backup module) support

## Performance

- 1200 MB/Sec (dual controllers)
- 210,000 IOPS (dual controllers)

## Raid system solution

- 4U24: P500Q-D424 (2 x redundant controllers)  
P500Q-S424 (1 x redundant controller, upgradeable)  
P500Q-C424 (1 x single controller, **non-upgradeable**)
- 3U16: P500Q-D316 (2 x redundant controllers)  
P500Q-S316 (1 x redundant controller, upgradeable)  
P500Q-C316 (1 x single controller, **non-upgradeable**)
- 2U12: P500Q-D212 (2 x redundant controllers)  
P500Q-S212(1 x redundant controller, upgradeable)  
P500Q-C212 (1 x single controller, **non-upgradeable**)
- 2U24: P500Q-D224, P500Q-S224, P500Q-C224

## P500Q series

2U12



3U16



4U24



2U24



# 1GbE iSCSI Array

## P300Q Series Feature Highlight

- Symmetric Active-Active configuration
- Hardware iSCSI off-load engine
- RAID 6, 60
- Built-in Qsan Snapshot with Windows VSS support
- Volume cloning (Qsan asynchronous local replication)
- Optional Qreplica (Qsan asynchronous remote replication)
- Uninterrupted firmware upgrade, no system downtime
- Multiple iSCSI target nodes per controller
- Host ports with high availability/load-balancing/fail-over
- Hot swappable Battery Backup Module

## Performance

- IOPS: 100,000 IO/sec (single), 200,000 IO/sec (dual)
- Throughput: Read (750+ MB/sec), Write (600+MB/sec)

## Available Raid systems

- 4U24: P300Q-D424 (2 x redundant controllers)  
P300Q-S424 (1 x redundant controller, upgradeable)  
P300Q-C424 (1 x single controller, **non-upgradeable**)
- 3U16: P300Q-D316 (2 x redundant controllers)  
P300Q-S316 (1 x redundant controller, upgradeable)  
P300Q-C316 (1 x single controller, **non-upgradeable**)
- 2U12: P300Q-D212 (2 x redundant controllers)  
P300Q-S212 (1 x redundant controller, upgradeable)  
P300Q-C212 (1 x single controller, **non-upgradeable**)
- 2U24: P300Q-D224, P300Q-S224, P300Q-C224 (2.5" HDD)

## P300Q series

2U12



3U16



4U24



2U24



# 4Gb FC Array

## F300Q Series Feature Highlight

- Symmetric Active-Active configuration
- The core for 4-ported 4Gb high-availability FC target
- RAID 6, 60
- Built-in Qsan with Windows VSS support
- Flexible RAID Group (RG) ownership management
- Uninterrupted firmware upgrade, no system downtime
- Hot pluggable BBM (Battery backup module) support
- Microsoft MPIO support

## Performance

- Read 1500~1600 MB/Sec (dual controllers)
- Write 1200~1300 MB/Sec (dual controllers)

## Raid system solution

- 4U24: F300Q-D424 (2 x redundant controllers)  
F300Q-S424 (1 x redundant controller, upgradeable)  
F300Q-C424 (1 x single controller, **non-upgradeable**)
- 3U16: F300Q-D316 (2 x redundant controllers)  
F300Q-S316 (1 x redundant controller, upgradeable)  
F300Q-C316 (1 x single controller, **non-upgradeable**)
- 2U12: F300Q-D212 (2 x redundant controllers)  
F300Q-S212 (1 x redundant controller, upgradeable)  
F300Q-C212 (1 x single controller, **non-upgradeable**)
- 2U24: F300Q-D224, F300Q-S224, F300Q-C224 (2.5" HDD)

## F300Q series

2U12



3U16



4U24



2U24



# 6Gb SAS Array

## P500Q Series Feature Highlight

- Symmetric Active-Active configuration
- 2 x 6Gb SAS for dual redundant controllers
- RAID 6, 60
- Built-in Qsan snapshot with Windows VSS support
- Optional Qreplca (Qsan asynchronous remote replication)
- Volume cloning (Qsan asynchronous local replication)
- Uninterrupted firmware upgrade, no system downtime
- Host ports with high availability/load-balancing/fail-over
- Hot pluggable BBM (Battery backup module) support

## Performance

- MB/Sec (dual controllers)
- IOPS (dual controllers)

## Raid system solution

- 4U24: S300Q-D424 (2 x redundant controllers)  
S300Q-S424 (1 x redundant controller, upgradeable)  
S300Q-C424 (1 x single controller, **non-upgradeable**)
- 3U16: S300Q-D316 (2 x redundant controllers)  
S300Q-S316 (1 x redundant controller, upgradeable)  
S300Q-C316 (1 x single controller, **non-upgradeable**)
- 2U12: S300Q-D212 (2 x redundant controllers)  
S300Q-S212(1 x redundant controller, upgradeable)  
S300Q-C212 (1 x single controller, **non-upgradeable**)
- 2U24: S300Q-D224, S300Q-S224, S300Q-C224 (2.5" HDD)

## S300Q series

2U12



3U16



4U24



2U24



# JBOD Expansion for Redundant RAID

## J300Q series

	Dual Redundant RAID					
	24bay		16bay		12bay	
	P500Q-D424(S424) P500Q-D224(S224) P300Q-D424(S424) P300Q-D224(S224) F300Q-D424(S424) F300Q-D224(S224) S300Q-D424(S424) S300Q-D224(S224)		P500Q-D316(S316) P300Q-D316(S316) F300Q-D316(S316) S300Q-D316(S316)		P500Q-D212(S212) P300Q-D212(S212) F300Q-D212(S212) S300Q-D212(S212)	
Maximum supported Number of disks including JBOD expansion	72		72		72	
Actual Installable Number of JBOD & Disks	JBOD	Disks	JBOD	Disks	JBOD	Disks
J300Q-D424/D224	2 Units	72 disks	2 Units	64 disks	2 Units	60 disks
J300Q-D316	3 Units	72 disks	3 Units	64 disks	3 Units	60 disks
J300Q-D212	4 Units	72 disks	4 Units	64 disks	4 Units	60 disks



16bay



24bay

