



# Qsan P600Q 10GbE iSCSI-6G SAS High Availability Systems

Qsan's storage systems are designed for high availability, non-stop and mission critical services, applications demanding high IOPS / throughput, and flexible storage planning with cost effectiveness for small and medium enterprises solutions.



## Highlights

- Fully redundant & hot pluggable designs: RAID controllers, power supplies, fan modules, battery backup modules, & JBOD expansion
- Two (2) 10GbE iSCSI ports & Two (2) iSCSI ports per controller
- Hardware iSCSI offloaded engine
- Green storage designs: auto disk spin down, advanced cooling mechanism, & 80 PLUS energy-efficient power supplies
- Advanced data protection: RAID 6, 60, QSnap writeable snapshot, Windows VSS support, QReplica remote replication, Volume cloning
- Flexible volume management for multiple applications & environments: virtualization (VMWare, Hyper-V, Citrix), cloud storage, SQL, Exchange, surveillance, file backup, email, boot from SAN, & etc
- High connection availability: load balancing & failover
- Extendable capacity up to 192 hard drives

## High Availability

P600Q 10GbE iSCSI system is specially designed for high availability applications. The P600Q has fully redundant components including redundant RAID controllers, power supplies, fan modules, battery backup modules and SAS JBOD expansion ports. All of these components are hot-swappable to create a high availability platform and provide non-stop services. Special features in firmware are RAID 6, 60 support, QSnap writeable snapshot, Windows VSS support, volume cloning, QReplica remote replication, and volume configuration restoration. All these features are designed to add an extra layer of protection to your valuable data. To raise the bar higher, P600Q can upgrade firmware without system down time. Both firmware image and volume handling are well protected by the redundant RAID controllers. When one RAID controller is down or disconnected, the other RAID controller will take over all tasks immediately and seamlessly.

## Outstanding Performance

The P600Q's powerful RAID controllers provide much higher IOPS and throughput than other storage systems within the same segment in the current market. The P600Q can minimize your cost and optimize your investment, simplify storage planning, and integrate more applications.

## Applications

The optimized IOPS and throughput are capable of providing run-time critical online services, such as Cloud storage, SQL, Exchange, and high-end surveillance storages. Furthermore, with the 10GbE iSCSI interface, P600Q is ideal for virtualization environments - VMWare, Hyper-V, and Citrix. Users can install up to 128 OSes in the 10GbE iSCSI system through the Boot-from-SAN feature. With this feature, the multiple OSes/Servers can be managed easily and well protected by Qsan's advanced data protection features, and there will be no system downtime caused by single point of failure.

## Green

All P600Q system has Qsan's default power saving feature. In most cases, the hard drives consume most power. With the auto disk spin down feature and proper configuration, the power consumption of hard drives can be reduced to a minimum, and users will not even notice this feature. P600Q monitors the environment temperature for cooling mechanism and the fan modules respond accordingly. The power supply modules are all 80 PLUS power efficient for better power converting rate. In virtue of the reduction of hard drive power consumption, the advanced cooling mechanism, and the energy-efficient power supplies, we can use energy more efficiently and reduce unnecessary carbon footprint.

## Default Built-In Data Protection Features

The P600Q systems are built-in with Qsan's highly reliable data protection features, from writeable snapshot, volume cloning, to remote replication. Your valuable data can be easily safeguarded and synchronized locally and remotely. In case of accidents, data corruption, virus, and even disasters, the services and applications can be recovered in a very short time.

## Ordering Information

### Controller Configuration

P600Q-D424	Dual controllers	P600Q-S424	Single & upgradable controller
P600Q-D316		P600Q-S316	
P600Q-D224		P600Q-S224	
P600Q-D212		P600Q-S212	

### Connector

P600Q-DXXXX	SFP+ connector	P600Q-DXXXXT	BASE-T connector
P600Q-DXXXC	CX4 connector		

### Optional Components

6G MUX Board	SATA drives support	8GB RAM	8GB RAM support
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**P600Q-D424**  
**P600Q-S424**

**P600Q-D316**  
**P600Q-S316**

**P600Q-D224**  
**P600Q-S224**

**P600Q-D212**  
**P600Q-S212**

## Hardware Components

RAID Controller	Dual controllers Single upgradable controller	Dual controllers Single upgradable controller	Dual controllers Single upgradable controller	Dual controllers Single upgradable controller
No. of Host Channels Per Controller	2 x 10Gb/s iSCSI 2 x 1Gb/s iSCSI	2 x 10Gb/s iSCSI 2 x 1Gb/s iSCSI	2 x 10Gb/s iSCSI 2 x 1Gb/s iSCSI	2 x 10Gb/s iSCSI 2 x 1Gb/s iSCSI
Expansion Enclosure	J300Q series	J300Q series	J300Q series	J300Q series
Cache Memory Per Controller	4GB with battery backup for 72 hours protection. Up to 8GB	4GB with battery backup for 72 hours protection. Up to 8GB	4GB with battery backup for 72 hours protection. Up to 8GB	4GB with battery backup for 72 hours protection. Up to 8GB
No. of Hard Drives (6Gb/s SAS/SATA)	24 x 3.5"	16 x 3.5"	24 x 2.5"	12 x 3.5"
Max. No. of Hard Drives	192	192	192	192
Power Supply	3 x 500W	2 x 500W	2 x 500W	2 x 500W
Fan	2	2	2	2
Dimensions	4U 19" Rackmount 442.8 x 500.6 x 176.0 mm (W x D x H)	3U 19" Rackmount 442.8 x 500.6 x 130.0 mm (W x D x H)	2U 19" Rackmount 446.0 x 542.0 x 88.0 mm (W x D x H)	2U 19" Rackmount 442.8 x 500.6 x 88.0 mm (W x D x H)

## Feature Highlights

Green	Auto disk spin down Advanced cooling mechanism 80 PLUS energy-efficient power supplies
Host Interfaces: 10GbE iSCSI iSCSI	Hardware iSCSI offload engine Jumbo frame Header/Data digest CHAP authentication Virtual LAN Role-based access control / Active directory Up to 128 multiple nodes support Up to 128 hosts support Up to 1024 sessions per controller
RAID & Volume	RAID level 0,1,0+1,3,5,6,10,30,50, 60, JBOD, N-way mirror Up to 4096 logical volumes Up to 64 hard drives per volume group One logic volume can be shared by as many as 16 hosts Global and dedicated hot spare Write-through or write-back cache policy Online volume expansion Instant RAID volume availability Auto volume rebuilding Online volume migration without system down time
High Availability	Dual-active RAID controller Cache mirroring through high bandwidth channels Flexible RAID group ownership management Management port seamless take-over Online firmware upgrade, no system down time Multi-path & load-balancing support (Microsoft MPIO, MC/S, Trunking, LACP)
Advanced Data Protection	QReplica remote replication QSnap writable snapshot Volume cloning Microsoft Windows Volume Shadow Copy Services (VSS) Configurable N-way mirror Online disk roaming Instant volume restoration Hot pluggable battery backup module (BBM)
Management	QCentral Java-based centralized management software LCM; Serial console; UPS console; SSH telnet; HTTP Web UI; Secured Web (HTTPS); LED indicators; iSNS; S.E.S.
Notification	Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger
OS Support	Windows Server 2003; Windows Server 2003R2; Windows Server 2008; Windows Server 2008 R2; Red Hat Enterprise Linux 5; Solaris 10; Mac OS X
Virtualization	VMware Ready; Hyper-V; Citrix Ready
Safety / EMI	RoHS, CE, FCC, BSMI, UL, cUL
Warranty	System: Three years Battery backup module: One year

## Requirements

AC Input	100-240V ~ 7A-4A 500W with PFC (Auto Switching)
DC Output	3.3V-25A; 5V-32A; 12V-40A
Operating Temperature	0 to 40°C
Relative Humidity	5% to 95% non-condensing

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**Qsan Technology, Inc.**  
+886-2-7720-2118 • sales@Qsan.com.tw  
www.QsanTechnology.com