

## D1-QIG iSCSI-SAS High Availability Systems

OPSLAG storage systems are designed for high availability, non-stop services, applications demanding high throughput, and flexible storage planning with cost effectiveness for small and medium businesses.



### Highlights

1. Four iSCSI ports per controller.
2. Up to 200K IOPS & 900MB/Sec. throughput.
3. Fully redundant & hot pluggable designs: RAID controllers, power supplies, fan modules, battery backup modules, & JBOD expansion..
4. Hardware iSCSI offloaded engine.
5. Green storage designs: auto disk spin down, advanced cooling mechanism, & 80 PLUS energy-efficient power supplies.
6. Advanced data protection: RAID6, 60, writeable snapshot, Windows VSS support.
7. Flexible volume management for multiple application & environments: (VMWare, Hyper-V, Citrix support), cloud, storage, SQL, Exchange, Surveillance, file backup, email, boot from SAN, & etc.
8. High connection availability: load balancing & failover.

### High Availability

D1-QIG iSCSI system is specially designed for high availability applications. The D1-QIG is well equipped with fully redundant components for all major functions, including redundant RAID controllers, power supplies, fan modules, battery backup modules, and SAS JBOD expansion ports. Being hot pluggable, all of them provide non-stop services. In addition, the firmware is high available as well, including RAID 6, 60 support, Opslag writable snapshot, Windows VSS support, and volume configuration restoration; all of these are provided to reduce the chance of rebooting or shutdown. Distinct from others, D1-QIG is able to 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 has lost the connection, the other RAID controller takes over its tasks immediately. The volumes and the services are transferred seamlessly simultaneously

### Outstanding Performance

D1-QIG IOPS is 200,000 at maximum, much higher than other storage systems within the same segment in the current market; besides, its throughput is 900MB/Sec. at maximum.

### 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 iSCSI interface, D1-QIG is ideal for virtualization environments - VMWare, Hyper-V, and Citrix. Users can install up to 32 OSec in the iSCSI system through the Boot-from-SAN feature. With this feature, the multiple OSec/Servers can be managed easily and well protected by OPSLAG's advanced data protection features, and there will be no system downtime caused by single point of failure.

### Green

All D1-QIG systems are equipped with Opslag's default green features for power saving. In most cases, the hard drives consume most power. With the autodisk 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. D1-QIG 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, the unnecessary power cost is decreased greatly

### Ordering Information

#### Controller Configuration

D1-QIG-212D, D1-QIG-316D, D1-QIG-424D	Dual controllers*
D1-QIG-212C, D1-QIG-316C, D1-QIG-424C	Single controller*

### Optional Components

TSATA board                      SATAII drives support on dual controller models

\* The specific functions of dual controller are not available in

D1-QIG-212C, D1-QIG-316C, D1-QIG-424C

## Hardware Components

	<b>D1-QIG-212D, D1-QIG-212C,</b>	<b>D1-QIG-316D, D1-QIG-316C,</b>	<b>D1-QIG-424D D1-QIG-424C</b>
RAID Controller	Dual Controllers Single controller	Dual Controllers Single controller	Dual Controllers Single controller
No. of Host Channels Per Controller	4 x iSCSI	4 x iSCSI	4 x iSCSI
Expansion Enclosure	D1-QJ6 series	D1-QJ6 series	D1-QJ6 series
Cache Memory Per Controller	2GB, up to 4GB, with battery backup	2GB, up to 4GB, with battery backup	2GB, up to 4GB, with battery back
No. of Hard Drives (SAS & SATA II)	12	16	24
Max. no. of hard drives (SAS & SATA II)	72	72	72
Power Supply	2 x 500W	2 x 500W	3 x 500W
Fan	2	2	2
Dimensions	2U 19" Rackmount 422.8mm x 500.6mm x 88.0mm (W x D x H)	3U 19" Rackmount 422.8mm x 500.6mm x 130.0mm (W x D x H)	4U 19" Rackmount 422.8mm x 500.6mm x 176.0mm (W x D x H)

## Feature Highlights

Green	Auto disk spin down Advanced cooling mechanism 80 PLUS energy-efficient power supplies
iSCSI	Up to 32 multiple nodes support Up to 128 sessions per controller
Raid & Volume	RAID level 0,1,0+1,3,5,6,10,30,50, JBOD, N-way mirror Up to 1024 logical volumes Up to 32 hard drives per volume group Once logical 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 On-line 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)
Advanced Data Protection	OP SLAG's writable snapshot Microsoft Windows Volume Shadow Copy Services (VSS) Configurable N-way mirror Instant volume configuration restoration Hot pluggable battery backup module (BBM)
Management	LCM; Serial console; SSH telnet; HTTP Web UI; Secured Web (HTTPS); S.E.S.
Notification	Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger
OS Support	Windows; Linux; Solaris; Mac
Virtualization	VMWare; Hyper-V; Citrix
Warranty	1-year warranty for system 1-year warranty for battery backup module

## Requirements

AC Output	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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Press Inquiries  
Email: info@tyronesystems.com

Support Inquiries  
Email: tyronecare@tyronesystems.com

Partner Inquiries  
Email: info@tyronesystems.com