iSCSI Controllers for external storage solutions of iSCSI IP SAN

Qsan P300H Dual RAID Controller

iSCSI dual RAID controller, iSCSI GbE (x 4 per controller)-SAS, supports both SAS and SATA drives, backplane solution, the core of Qsan 8-port GbE high-availability iSCSI target for the disk arrays ranging from 16-bay to 24-bay.

Feature Highlights

1. Hardware iSCSI offload engine inside
2. Better performance, when comparing to other competitors' products in the same segment
3. Dual-active configuration support
4. Cache mirroring through high bandwidth channels
5. Flexible RAID group (RG) ownership management
   - Each RG can be assigned to one of the two P300H controllers
   - Each LUN can be exported from both P300H controller
6. Management port seamless take-over
   - The management port can be transferred smoothly to the other controller with the same IP address
7. Online FW upgrade, no system down time
8. Backward compatible to P210C volume configurations
9. Multiple target iSCSI nodes per controller support
   - Each LUN can be attached to one of 32 nodes from each controller
10. Front-end 4 GbE NIC ports with high availability/load balancing/fail-over support
    - Microsoft MPIO, MC/S, Trunking, LACP, & etc.
11. SBB Compliant
12. iSCSI jumbo frame support
13. RAID 6, 60
14. QSnap w/o relying on host software
15. Up to 128 sessions support
16. Host access control
17. Configurable N-way mirror for high data protection
18. On-line volume migration with no system down-time
19. HDD S.M.A.R.T. enabled for SATA drives
20. iSCSI header/data digest support
21. SATAII drive Backward-compatible (Optional)
22. SAS JBOD expansion support
23. Disk auto spindown support
24. Hot pluggable BBM support (Optional)

Performance

Read / Write: 850 MB/sec, 700 MB/sec
IOPS: 200,000 IO/sec (Dual), 120,000 IO/sec (Single)

Key Components

1. SBB-compliant controller form factor
2. CPU: Intel Xscale IOP 81342 1.2GHz (Chevelon dual core)
3. Memory: 2GB ~ 4GB DDRII 533 DIMM support
4. UARTs: support for serial console management and UPS
5. Fast Ethernet port: for Web-based management use
6. Backend: Up to 24 SAS 3.0Gb/s, or SATA 1.0, 1.5Gb/s or SATA 2.0, 3Gb/s disks support
7. Front-end: Four GbE ports per controller
8. LCM support for easy management use
9. SAS JBOD expansion port for capacity expansion
10. QMUX board support for SATA drives (Optional)
11. Hot pluggable battery backup module support (Optional)

RAID & Volume Operation

1. RAID level: 0,1,0+1,3,5,6,10,30,50, 60 and JBOD
2. Up to 1024 logical volumes in the system
3. Up to 32 PDs can be included in one RAID group
4. QSnap: built-in Qsan writable snapshot feature
   - Up to 32 QSnap for one logical volume
   - Up to 16 logical volumes can be setup with QSnap function
   - Rollback mechanism
   - Microsoft VSS compliant
5. Global and dedicated hot spare disks
6. Write-through/Write-back cache policy for different application usage
7. Multiple RAID volumes support
8. Configurable RAID stripe size
9. Online volume expansion
10. Instant RAID volume availability
11. Auto volume rebuilding
12. On-line volume migration
13. On-line disk roaming
14. Instant volume configuration restoration

Advanced Data Protection

1. Dual-active controller configuration
2. Cache mirroring
3. QSnap utility
4. Microsoft Windows Volume Shadow Copy Services (VSS) support
5. Local N-way mirror
6. On-line array roaming
7. Hot pluggable battery backup module support (Optional)

Enclosure Monitoring

1. S.E.S. support for standard enclosure management
2. UPS management via the specific serial port
3. Fan speed monitoring fan x 3~5
4. Redundant power supply monitor
5. 3.3V, 5V and 12V voltage monitor
6. Thermal sensors x 5 on the controller board
7. Thermal sensor x 3 (up to 24) in enclosure.
8. Status report of the managed SAS/SATA JBODs

Management Interface

1. Management UI via serial console, SSH telnet, HTTP WebUI and secured Web (HTTPS).
2. Online system firmware upgrade mechanism
3. Event notification via Email, SNMP trap, browser pop-up windows, Syslog, and Windows Messenger.
4. Run-time IO transactions recording
5. Built-in LCD module to control most enclosure components
6. iSNS & DHCP support
7. CHAP authentication mechanism support

Host & Drive Connection

1. 8 x GbE ports support independent access, fail-over or load-balancing (802.3ad port trunking, LACP) for one high-availability iSCSI subsystem empowered by P300H.
2. MC/S feature support over the four NIC ports
3. Microsoft Multipath IO (MPIO) support
4. iSCSI jumbo frame support
5. CHAP authentication enabled
6. iSCSI multiple target mode support: 32 multiple nodes support
7. SCSI-3 compliant
8. Multiple IO transaction processing
9. Tagged command queuing
10. Access control: Read-Write & Read-Only
11. S.M.A.R.T. enabled for SATA drives
12. Up to 128 sessions
13. Up to 16 hosts clustered for one volume
14. Compatible with Windows, Linux, Solaris, & MAC Operation Systems
15. iSCSI Data/Header digest support

Chassis Integration

Controller form factor
Dimension: 19.9 cm x 2.4 cm x 29.2 cm (W x H x D)
Through AirMax connector to connect the following signal to back plane: SAS, SATA 2.0, Ethernet, console/COM port, LCM, LED (HDD active/faulty, host busy, status), button (mute, system default, LCM, & etc.)

Qsan making data smart
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