Qsan F200C RAID Controller

FC RAID controller, 4Gb FC (x2)-SAS, supports both SAS and SATA drives, backplane solution, the core for the arrays ranging from 8-bay to 24-bay.

Feature Highlights

1. Front-end 2-ported 4Gb FC ports with load-balancing & failover for high availability
2. RAID 6, 60
3. QSnap
4. SATAII drive backward-compatible
5. One logic volume can be shared by as many as 16 hosts
6. Host access control
7. Configurable N-way mirror for high data protection
8. On-line volume migration with no system down-time
9. HDD S.M.A.R.T. enabled for SATA drives
10. SAS JBOD expansion support
11. Microsoft VSS, VDS and MPIO enabled
12. Disk auto spindown support

Performance

Single port : 400MB/sec
Dual port : 800MB/sec
IOPS : 70,000 (Read), 55,000 (Write)

Key Components

1. CPU: Intel Xscale IOP 81341
2. Memory: 1GB ~ 2 GB DDRII 533 DIMM supported
3. 32MB flash
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 supported on the controller board
7. Front-end: One 4Gb FC controller to have 2 SFP ports
8. LCM supported for easy management use
9. Battery backup 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 16 PDs can be included in one volume group
4. Global and dedicated hot spare disks
5. Write-through or write-back cache policy for different application usage
6. Multiple RAID volumes support
7. Configurable RAID stripe size
8. Online volume expansion
9. Instant RAID volume availability
10. Auto volume rebuilding
11. Online volume migration

Advanced Data Protection

1. Qsnap
   (a) Built-in snapshot with rollback enabled
   (b) Writable Qsnap volumes
   (c) Snapshot enabled up to 16 volumes, each logical volume supports up to 32 snapshot volumes, total 512 snapshot volumes per controller
   (d) VSS support
2. Local N-way mirror
3. Offline array roaming
4. Smart faulty sector relocation
5. Battery backup support (optional)

Chassis Integration

Dimension: 14.5 cm x 3.2 cm x 28 cm (W x H x D)
VHDM-HSD connector to customized backplane, designed with all interfaces mounted on-board exposed to external via customized IO bracket

Enclosure Monitoring

1. S.E.S. support for standard enclosure management
2. UPS management via the specific serial port
3. Fan speed monitoring fan x3
4. Redundant power supply monitor
5. 3.3V, 5V and 12V voltage monitor
6. Thermal sensors x 3 on the controller BOARD (for CPU, bridge and host channel chip)
7. Thermal sensor x 3 (up to 24) in enclosure.
8. Status report of the managed J200C SAS/SATA JBODs

Management Interface

1. Management UI via serial console, SSH telnet, HTTP Web UI, 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. Microsoft VDS support

Host Connection

1. 2 x SFP optical FC host ports support independent access, fail-over or load-balancing
2. Multiple target nodes support (multiple aliases)
3. Microsoft MPIO enabled
4. LUN access control: Read-Write and Read-Only
5. Up to 32 host connections
6. Up to 16 hosts clustered for one volume
7. Support Windows, Linux and MAC OS

Drive Support

1. SCSI-3 compliant
2. Multiple IO transaction processing
3. Tagged command queuing
4. Hard drive S.M.A.R.T. enabled for SATA drives
5. Up to 4 Qsan J200C SAS JBODs can be connected to one F200C by using the SAS JBOD port
6. The overall SAS/SATA drives supported for one controller is up to 16+4*16 = 80 SAS/SATA drives
7. The maximum capacity supported for this controller will be 128 TB