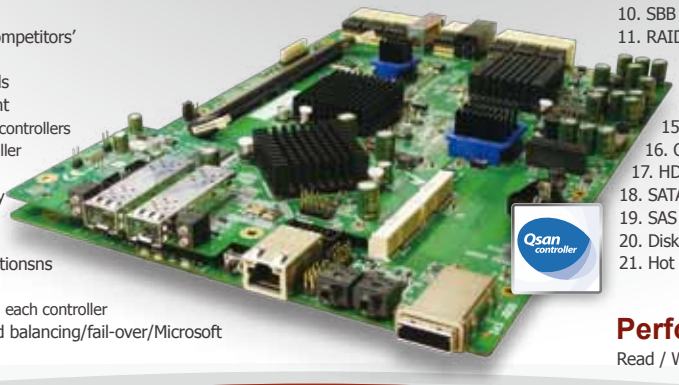
FC Controllers for external storage solutions of FC SAN

Qsan F300H Dual RAID Controller

FC dual RAID controller, 4Gb FC (x 2 per controller)-SAS, supports both SAS and SATA drives, backplane solution, the core of Qsan 4-port high-availability 4Gb FC target for the disk arrays ranging from 16-bay to 24-bay.

Feature Highlights

1. Dual-active configuration support
2. Better performance, when comparing to other competitors' products in the same segment
3. Cache mirroring through high bandwidth channels
4. Flexible RAID group (RG) ownership management
   - Each RG can be assigned to one of the two F300H controllers
   - Each LUN can be exported from both F300H controller
5. Management port seamless take-over
   - The management port can be transferred smoothly to the other controller with the same IP address
6. Online FW upgrade, no system down time
7. Backward compatible to F200C volume configurationsns
8. Multiple target nodes per controller support
   - Each LUN can be attached to one of 32 nodes from each controller
9. Front-end 4Gb FC ports with high availability/load balancing/fail-over/Microsoft MPIO support



10. SBB Compliant
11. RAID 6, 60
12. QSnap w/o relying on host software
13. Up to 128 sessions support
14. Host access control
15. Configurable N-way mirror for high data protection
16. On-line volume migration with no system down-time
17. HDD S.M.A.R.T. enabled for SATA drives
18. SATAII drive Backward-compatible (Optional)
19. SAS JBOD expansion support
20. Disk auto spindown support
21. Hot pluggable BBM support (Optional)

Performance Per System

Read / Write: 1200 MB/sec, 1200 MB/sec

Key Components

1. SBB-compliant controller form factor
2. CPU: Intel Xscale IOP 81341
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: Two 4Gb FC 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. DHCP support

Host & Drive Connection

1. 4 x 4Gb FC ports support independent access, fail-over or load-balancing for one high-availability FC subsystem empowered by F300H.
2. Microsoft Multipath IO (MPIO) support
3. Multiple target mode support: 32 multiple nodes support
4. SCSI-3 compliant
5. Multiple IO transaction processing
6. Tagged command queuing
7. Access control: Read-Write & Read-Only
8. S.M.A.R.T. enabled for SATA drives
9. Up to 128 sessions
10. Up to 16 hosts clustered for one volume
11. Compatible with Windows, Linux, Solaris, & MAC Operation Systems

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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