



NS-FC 8 Disk Controller Module



Superior Performance

Bursting with power to handle the most demanding storage applications, the NS-FC 8 Disk Controller Module features industry-leading capabilities:

- **8 independent 2-Gb/s (200 MB/s) Fibre Channels** providing 1600 MB/s bandwidth
 - 2 high-speed microprocessors
 - 5 high-speed internal buses
 - RAID 0, 1, 0+1, 3, 5, JBOD
 - Read-ahead, write-through, and write-back caching configurable for each LUN
 - Cache parameters (cache size, cluster size, look ahead, write back allocation) configurable by LUN
 - Pipelined read and write operations
- With its ability to define individual LUN characteristics and their caching parameters, the NS-FC 8 Disk Controller Module provides superior performance over a wide range of applications: from intensive high-churn small random I/O operations like data base systems to demanding high-throughput large sequential file operations like video streaming. The NS-FC 8 Disk Controller Module can configure LUNs independently, so that NS-FC 8 Disk Storage Systems can serve as information appliances in small dedicated configurations and as information utilities in large network configurations.

Superior Availability

To provide continuous storage system operation, the NS-FC 8 Disk Controller Module continuously monitors its subsystems and the modules connected to it, displays that information on the front panel and a remote GUI, and takes corrective action to mitigate the effect of problems.

Continuous Monitoring Designed in a self-contained 1U rack mount enclosure with its own redundant hot-swappable load-sharing power supplies, power cords, and fans, the NS-FC 8 Disk Controller Module continuously monitors its status and the status of attached Disk Enclosure Modules.

Information Display and Notification Whenever the NS-FC 8 Disk Controller Module detects a problem, it notifies users in several ways: the VFD display, the audible alarm, the RECON remote GUI, and sending email to administrators.

Corrective Action In the event of a problem, the NS-FC 8 Disk Controller Module takes corrective actions to keep the system operating while the problem is being addressed. NS-FC 8 uses global spare disks and 3 types of zoned spares (for LUNs, disk channels, or disk enclosure modules), redundant power supplies and fans, and redundant Fibre Channels for continuous operation.

Superior Configurability

The eight 2-Gb/s Fibre Channels of the NS-FC 8 Disk Controller Module can be configured as either host or disk channels, providing multiple configurations to optimize performance and availability based on application requirements.

- Each disk Fibre Channel can support 120 disks, enabling systems with up to **840 disks** providing over **120TB** storage!
 - Each host Fibre Channel can support switched fabric, arbitrated-loop, or point to-point configurations to support SAN, DAS, and NAS configurations.
- After installation of a NS-FC 8 Disk Storage System, you can easily augment the size of your storage with additional Disk Enclosure Modules. The additional storage can be used for new LUNs or for augmenting existing LUNs. The NS-FC 8 Disk Controller Module also provides LUN virtualization by restricting access to LUNs based on the hosts' WWN.





RECON GUI

The RECON (REmote Control, Observation, and Notification System) GUI is a platform-independent Java program that runs on the NS-FC 8 Disk Controller Module like a web page. Connecting to your network through a standard Ethernet port, each NS-FC 8 Disk Controller Module has a unique Internet address so that any computer with a Java-enabled browser can monitor status and performance and initiate system actions.

Applications

With their advanced capabilities, Digi-Data NS-FC 8 Storage Systems support a wide variety of demanding applications:

- High-churn transaction processing
- Continuous 24 x 7 operation even when subsystems fail
- Large file applications requiring high throughput
- Large storage large applications, requiring multiple terabytes

NS-FC 8 Storage Architecture

The NS-FC 8 Storage System Architecture extends the fundamental precepts of RAID to provide superior performance, availability, and configurability for demanding storage applications. NS-FC 8 Storage Systems comprise a number of independent redundant storage modules, including:

- Disk controller modules
- Disk enclosure modules
- Uninterruptible power supply modules
- Fibre channel switches and HBAs

NS-FC 8 Disk Storage Systems can survive the failure of a disk, power supply, fan, Fibre Channel connection to host or disk, disk channel, and disk enclosure.

