



NS-RC 2510FS

1U Profile

Fibre-to-Fibre RAID Controller Head



MODELS

Eight models (see table) in the series stand for the various customizations using single or dual controllers. For the applications that aim at performance rather than redundancy, single or dual-single controllers may be sufficient. For the applications that require 24-7 availability, the "dual-redundant" models have all the necessary functionality to ensure the system will survive catastrophic events.

MODELS	CONTROLLERS	CHANNELS
NS-RC 2510FS-4S	Single controller	4 Fibre
NS-RC 2510FS-6S	Single controller	6 Fibre
NS-RC 2510FS-4D	Dual-Single controllers	8 Fibre
NS-RC 2510FS-6D	Dual-Single controllers	12 Fibre
NS-RC 2510FS-4R	Dual-Redundant	4 Fibre
NS-RC 2510FS-4RH	Dual-Redundant	4 Fibre
NS-RC 2510FS-6R	Dual-Redundant	6 Fibre
NS-RC 2510FS-6RH	Dual-Redundant	6 Fibre

OVERVIEW

The NS-RC 2510FS is what you need for the 2Gb/s Fibre-Fibre RAID storage applications. It is designed for achieving the highest level of data availability, performance, and storage sharing. Its modular design minimizes the time for maintenance and adds scalability in the SAN environments where the demands for more capacity and higher performance can never cease.

It is a durable subsystem that can be easily configured and operated with the cross-platform GUI. It comes with complete component redundancy and FC support, including that for dual-loops and multi-host configurations.

FEATURE HIGHLIGHTS

- 2Gbit Fibre-to-Fibre; FC-AL, point-to-point, and switched fabric
- 4 or 6 redundant channels in the dual-active redundant mode OR up to 12 FC channels in the dual-single mode
- Modular and hot-swappable design of all critical components. Designed for No Single Point of Failure Full-featured active-active redundancy with synchronized cache
- LUN Filtering - RAID-based and centralized access management in SAN
- Battery-protected cache memory; architecturally supports up to 1GB
- Chassis: 1U or 44mm (H), x 427mm (W), x 537.1mm (including front ears -D) and 19" rack mountable



High Performance

The controller incorporates Infortrend's proprietary dual-ASIC and separate-bus architecture with a state-of-the-art, 64-bit PowerPC processor. The controllers can achieve an exceptional performance transferring data at a maximum read bandwidth of 700MB/s (dual-single), RAID 0 write bandwidth of 640MB/s and RAID 5 write bandwidth up to 350MB/s.

Flexibility

Pre-set schemes are available in firmware for an optimum setup of host and drive channels and system resources.

Logical configurations of drives can be assigned to different controllers/multi-IDs with different LUN filtering entries. This can be done for both load sharing and access management in the shared-storage environments.

Fault-Tolerance

The controller head supports a complete range of RAID levels 0, 1 (0+1), 3, 5, 10, 30, and 50 storage. It is capable of advanced data protection and the complete system redundancy. All critical components are hot-swappable, including RAID controllers, power, fan, and even the I/O modules. In the active-active configuration, data cached on one controller has an exact replica on another controller through the communications over drive loops or a dedicated data path. Controller failover and failback are totally transparent to host computers.

Data availability is guaranteed by a long list of sophisticated firmware functions: dedicated/global hot-spares, battery protected disk cache, configurable reaction schemes against SMART detected errors, remote and real-time array monitoring, and more.

SAN Features

The controller supports LUN Filtering, a centralized access management capability. Up to 1024 filtering entries are supported and multiple entries can be mapped to each logical unit. Various functions; like host port auto-identification, filter type selection, entry naming, and access mode configuration; make shared storage an easier task.

Manageability

The Java-based RAIDWatch GUI manager provides easy-to-use interfaces, is rich in configuration options, and allows users to remotely manage their storage system over a network. Its sub-modules, Event Monitor and NPC, provide system managers the freedom of real-time monitoring via a variety of notification methods.

UPGRADE KITS

Upgrade kits are available for the migration from single to redundant controller mode.

SPARE PARTS

IFT-9560-IOLCD
LCD circuit board

IFT-9560-IO1

Type-1 IO module; dual-port SFP data gate w/o transceiver, w/mini-hub

FT-9560-IOLED

LED face plate module

IFT-9560-IOMT

Maintenance port module

IFT-9560-IOBT

Battery module

IFT-9560-CTMod-4

Replacement controller; 4 ch

IFT-9560-CTMod-6

Replacement controller; 6 ch

IFT-9560-LCDMod

LCD module

IFT-9560-PSU

Power supply-single unit

IFT-9560-FanMod

Fan module

IFT-9560-Fan

Single fan replacement



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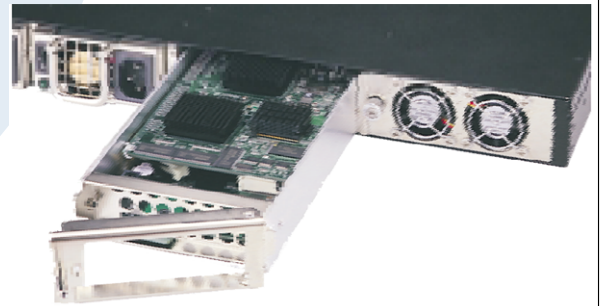
Hot-Swappable
Front Modules



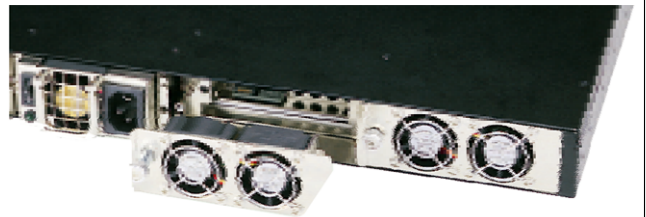
Redundant
Power Bank



Hot-Swappable
Controllers



Redundant Fans



SPECIFICATIONS

RAID Controller

- 400MHz PowerPC 750CXe with an internal L2 cache of 256Kb
- Separate 64-bit/66MHz PCI bus architecture Infortrend proprietary ASIC chipsets with hardware XOR
- One Gigabyte maximum cache size on one DIMM socket with ECC support
- Advanced caching algorithms: Intelligent read-ahead, multi-threaded, predictive read-ahead, optimized sorted and group writes
- Online firmware upgrade in redundant mode; automatic synchronization of firmware versions

Host/Drive Interfaces

- Up to 32 LUNs per host ID
- FC-AL, support for fabric login, FL_Port switch attachment, and F_Port support

Management

- Firmware-embedded Java-based GUI RAID manager over in-band or out-of-band connection featuring global manageability, real-time event notification and monitoring
- Firmware-embedded manager via RS-232 port (PS-2)

RAID Operation

- Supported RAID levels: 0, 1(0+1), 3, 5, 10, 30, 50, NRAID, and JBOD
- Online RAID expansion
- Rebuild Priority, host command queue number tunable
- Stripe size, caching mode per logical drive

Fault Detection, Monitoring, And Recovery

- S.E.S. enclosure device monitoring
- Controller self-diagnostics
- Battery backup support
- Bad Block Handling: recovering data from damaged sectors and skipping bad sectors during the degrade mode rebuild
- SMART support: clone failing drive with spare or replace it online, reaction schemes configurable
- Clustering support
- Parity background checks and corrections

Physical / Electrical

Interfaces 2Gbit Fibre SFP ports, LAN port, serial port

Input Voltage +90V ~ +240V AC (Auto-switching)

Power Consumption 150W

Operating Temperature 5 to 44°C

Relative Humidity 10-95%, non-condensing

Altitude Sea level to 10,000 ft

Warranty 3 years

ACCESSORIES

IFT-9560SCab serial cable (single mode)

IFT-9560YCab serial port Y-cable (redundant mode)

IFT-9253L18 slide rail

IFT-9011 null modem

NS-RC 2510FS

FCC certified  



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* Quality is our priority and we back it with a 3 year warranty for the RAID controller and 1 year warranty for enclosure components.

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