



Xyratex integrates the power, flexibility and reliability of Fibre Channel switching into its industry-leading 4Gb Fibre Channel enclosures, supercharging back-end performance to achieve leading edge system operation and design.

Following on from the very successful RS-1600-FC and RS-1602-FC family of storage systems, Xyratex presents its latest product range, the RS-1600-F4 and RS-1602-F4 family. This equally innovative and cost effective range of high performance, modular, storage systems provides a highly stable and reliable enclosure for sixteen Low Profile (1in) disk drives in only 5.25" of rack space. 16 drives in a 3U rack enclosure represents industry leading capacity in this form factor, with absolutely no compromise in cooling capability up to 40°C ambient conditions. Highly effective cooling ensures your drives will provide the best possible Mean Time Between Failure, maintaining the drive manufacturer's warranty in full effect.

The standard enclosure is designed for 24x7 operation, with fully redundant and hot-swappable data path logic, power supplies, cooling and enclosure management functions. Disk drive carriers are lockable and hot-swappable.

A range of optional modules provides customer flexibility and investment protection. Operating to the latest industry Fibre Channel standards at 1, 2 or 4Gb, enclosures can perform a number of SBOD and JBOD loop architectures. The use of interchangeable IO modules allows customers to use 1Gb/2Gb JBOD or SBOD solutions today and upgrade to a fully featured 4Gb dual SBOD system at a later date supporting both SBOD & JBOD functionality.

Customers can now realize both high performance and ultra high capacity in a single enclosure with the introduction of SATA II (3Gb) drive support. This seamless mixing of 4Gb Fibre Channel and SATA II (3Gb) in the same enclosure is the first in the industry and allows customers to standardize on this single enclosure, protecting capital investment and maximizing system flexibility.

The following modules are available for the product; full redundancy is provided if two modules are installed.

- FC-AL Single loop 1Gb/2Gb, with DB9 or SC Optical connections.
- FC-AL Single or Dual Loop 1, 2 or 4Gb, with SFP interfaces

Features

- Supports FC-AL 4 at 1Gb, 2Gb or 4Gb/s
- FC & SATA II (3Gb) tiered storage in a single enclosure
- High drive packing density (16 drives in 3U/5.25")
- Dual PSUs with Power Factor Correction & auto-ranging and a -48VDC PSU option for Telco applications
- Drive cooling provided by 4 centrifugal blowers
- Suitable for standard 19" rack or Telco style centre of gravity mounting and also available with deskside tower options
- Operator panel with enclosure ID selection, status indicators and configuration switches
- Fault indicators and audible alarm for power, cooling, system faults, loop speed and hub configuration
- Components hot swap for maximum availability and dual redundant feature select module
- FCC class A, UL, cUL & CE mark

Technical Specification

General Information

Product Code	RS-1600-F4 and RS-1602-F4
External Interface via IO Modules	1, 2 & 4Gb/s FC-AL external ports (4 x SFP Optical)
Supported Hosts	Single/dual active/dual independent bridge
Total Capacity per Unit*	2.336TB (@146GB/drive)
Expansion Chassis	7 enclosures (112 drives maximum)
Total Expansion Capacity*	16.352TB (@146GB/drive)

Disk Drives

Disk Drives Supported (2Gb)	36GB, 73GB, 146GB & 300GB up to 15K RPM
Disk Drives Supported (3Gb)*	250GB, 400GB & 500GB SATA II (3Gb)
RS-1602 only	7K2 RPM
Disk Drives Supported (4Gb)*	36GB, 73GB, & 146GB up to 15K RPM
Interface Types	Fibre Channel
Max Drives per Enclosure	16 hot-swappable FC drives with point-to-point connections (per enclosure)

System Availability

Hot Swappable Components	PSU/Cooling modules, disk drives, I/O modules and controllers
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Dimensions *(Both enclosures unless stated otherwise)*

Height	130mm (5.12") (3 EIA Units)
Width	482.6mm (19.0") (1EC Rack Compliant)
Depth	RS-1600: 500mm (19.7") RS-1602: 551mm (21.7")
Weight	35Kg (77.6 lbs)

Altitude, Power and Temperatures

Operational Altitude	0 to 2133m
Non-operational Altitude	-305 to 12,192m
Voltage	110 to 240V AC or -48V DC
Frequency	48 - 62 HZ
Power Consumption	450W
Temperature Range	+5 to +40°C
Humidity	20% - 80%

Shock and Vibration

Operational Shock	5g 10ms 1/2 Sine
Operational Vibration	Random 0.21grms 5-500Hz
Non-operational Shock	30g 10ms 1/2 Sine
Non-operational Vibration	Random 1.04 grms 2-200 Hz
Relocation Vibration	Swept Sine 0.3g 2-200Hz
Acoustics	Sound Power Operating: < 6.0 LwA @20°C

Approvals

UL and cUL listed. Tested to UL/IE/EN 60950. Certified Body Certificate & Report to IEC60950.

CE marked to the requirements of the Low Voltage Directive 73/23/EEC and the Electromagnetic Compatibility Directive 89/336/EEC. FCC Class A. EMC: EN55022/EN61000-3-2; EN61000-3-3.

Warranty Information

Enclosures with drives Up to 3 years

Please contact Xyratex for detailed warranty information.

** Additional drive types and capacities will be qualified as new releases are made. For a full list of supported drives, please contact your account or sales manager.*

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