Data Sheet
FUJITSU Storage ETERNUS DX8900 S3 Disk System

Enterprise Storage with leading scalability in capacity and performance



ETERNUS DX - Business-centric Storage

Combining leading performance architecture with automated quality of service management the Fujitsu Storage ETERNUS DX series aligns storage resources with business priorities, thus enabling higher system utilization and delivering increased system consolidation capabilities and a faster ROI. Unified scalable entry-level and midrange systems, a seamless family concept enabling system upgrades and ETERNUS SF, the unified management suite across the product line, reduce operational and migration costs. ETERNUS SF provides enterprise-class functionalities in the entry and midrange class and allows flexible disaster recovery and business continuity concepts for the different model sizes, thus decreasing investment costs

ETERNUS DX8900 S3



The ETERNUS DX8900 S3 disk storage system is purpose-built for biggest enterprises and ideal for the data management of business-critical core applications and the hyper-consolidation of large-scale data centers. ETERNUS DX8900 S3 provides non-disruptive capacity upgrades with up to 4608 disk drives, just by adding disks or complete drive enclosures. Performance of more than 4 million IOPS is provided by configurations based on 2 to 24 controllers and a maximum of 384 front-end ports for host connectivity. For simultaneous connection to different network types, FC, FCoE and iSCSI host interfaces can operate in mixed configurations.
Tiered storage optimization using a range of SAS, Nearline SAS and SSD drive options lowers the overall total cost of storage. The challenges of data exposure protection are addressed by self-encrypting drives (SED). Flexible and automated management across different quality of service profiles, using different drive types for each application scenario, ensures efficient assignment of system resources matched to the performance priorities of different applications. Highest availability and seamless business continuity is guaranteed by redundant interconnections to the storage array and internal redundant components and completed by transparent failover which ensures uninterrupted operation in case of an outage.

Green IT

Green Policy Innovation — Green Product: This product cleared our company's original evaluation standard which followed global environmental measures.

intel XEON inside

vmware READY STORAGE

Features & Benefits

Main Features	Benefits
Flexible scalability in capacity and performance	■ Future-oriented scale-out architecture and upgrade options meet today's and tomorrow's business requirements ■ Low cost of growth ensures investment protection ■ Superior system utilization ■ Large scale storage consolidation ■ Leading performance by design
Automation to manage unpredictable data growth	■ Automatically aligned storage performance with business priorities ■ Minimized manual tuning efforts ■ Optimized service level fulfillment
Zero downtime for business critical data	■ Predictable and reliable operation through end-to-end redundancy, comprehensive high-availability and disaster resilience functions ■ Multi-level disaster recovery with various snapshot concepts and remote replication between different models and generations ■ Highest business continuity by transparent failover and non-disruptive maintenance as well as upgrade capabilities

Models and architecture

ETERNUS DX8000 S3 Series

- The massively scalable Fujitsu Storage ETERNUS DX8000 S3 series, the flagship systems of the ETERNUS DX family are purpose-built for behemoth data centers which require outstanding storage performance and huge capacity paired with enterprise-class resiliency and 99.9999% availability. Its automated quality of service management features guarantee maximum system utilization and contribute to a fast ROI.
- It is the perfect solution when consolidating data in OLTP and large-scale databases, file services, business-critical applications and business analytics / big data – all into one system. It provides ample headroom for any demanding virtualization environments. Extensive high-availability and disaster recovery capabilities make ETERNUS DX8000 S3 the ideal storage systems for all business-critical data and fit perfectly in private and public cloud environments of large-scale enterprises and service providers.

Technical details

General system information	
	Frontend Enclosure
No. of controllers	2 - 24
No. of host interfaces	384 (FC), 192 (iSCSI/FCoE)
Maximum System Memory	6,144 GB
Extreme Cache	67.2 TB
Extreme Cache Pool	38.4 TB
Maximum Disk Drives	4,608
Max. no. of drive enclosures	192
Supported RAID levels	0, 1, 1+0, 5, 5+0, 6
Host Interfaces	Fibre Channel (16 Gbit/s) iSCSI (10 Gbit/s, 1 Gbit/s) FCoE (10 Gbit/s)
Mixed host interfaces	Yes
Max. no. of hosts	8,192
Maximum Storage Capacity	70,779 TB
Drive Type	2.5-inch, SAS, 15,000 rpm (900 GB / 600 GB / 300 GB) 2.5-inch, SAS, 10,000 rpm (2.4 TB/ 1.8 TB / 1.2 TB / 900 GB / 600 GB / 300 GB) 2.5-inch, SAS (self-encrypting), 10,000 rpm (2.4 TB / 1.2 TB / 900 GB) 2.5-inch, SSD (15.36TB / 7.68TB / 3.84 TB / 1.92 TB / 960 GB / 1.6 TB / 800 GB / 400 GB) 2.5-inch, SSD (self-encrypting) (3.84 TB / 1.92 TB / 1.6 TB / 800 GB) 2.5-inch, Nearline SAS, 7,200 rpm (2 TB / 1 TB) 3.5-inch, Nearline SAS, 7,200 rpm (12 TB/ 10 TB / 8 TB / 6 TB / 4 TB / 2 TB) 3.5-inch, Nearline SAS (self-encrypting), 7,200 rpm (12 TB/ 8 TB/ 4 TB) 3.5-inch, SSD (3.84 TB / 1.92 TB / 960 GB / 1.6 TB / 800 GB / 400 GB) 3.5-inch, SSD (self-encrypting) (3.84 TB / 1.92 TB / 1.6 TB / 800 GB)
Note	2.5-inch drives are available only for 2.5-inch drive enclosures and 3.5-inch drives are available only for 3.5-inch drive enclosures. 6 TB/ 8 TB Nearline SAS and 1.8 TB SAS drives are Advanced Format drives.
Max. no. of SSDs	unlimited
Mixed 2.5 inch/ 3.5 inch drive enclosures	Yes
Drive interface	Serial Attached SCSI (12 Gbit/s)
Back-end disk connectivity	4 pair of four-lane x 12 Gbits Serial Attached SCSI buses (SAS3.0 wide) / Controller Enclosure
Max. no. of LUNs	65,535
Max. LUN capacity	128 TB
No. of snapshots - max.	32,768
Max. no. of copy generations	512
Eco-mode	Yes
Performance	
Random access performance	4M IOPS
Performance management	
Automated Storage Tiering	Yes
Quality of Service	Yes
Automated QoS	Yes
Wide striping	Yes
Note	Automation options can be activated via ETERNUS SF Software
Continuity management	
Storage Cluster	Yes

Continuity management				
Remote Copy functionality	Synchronous and asynchronous			
Note	Options can be activated via ETERNUS SF Software			
Information security management				
Data confidentiality	Self-Encrypting Disk, Controller based Encryption, HTTPS (SSL), One Time Password, RADIUS, SSH			
Data integrity	Cache Protection, Data Block Guard, Disk Drive Patrol			
Availability management				
Fast Recovery	Yes			
Non-disruptive maintenance	Dedicated Hot Spare, Global Hot Spare			
Non-disruptive firmware upgrade	Yes			
Redundancy	RAID Controller, Power supply, Fan			
Hot part replacement	Yes			
Capacity management				
Thin Provisioning	Yes			
RAID migration	Yes			
LUN online expansion w/o interruption	Yes			
Reporting function	Yes			
Hot part expansion	Yes			
Management				
Supported protocols	SNMP (version1, 2C, 3), SMI-S 1.6			
Administration	Web-based graphical user interface, CLI (Command Line Interface), ETERNUS SF			
Remote Support	Event notification (E-mail / SNMP / Syslog), Remote maintenance			
Supported OS for ETERNUS SF				
Operation Management Server	Microsoft® Windows Server® 2016 Microsoft Windows Server 2012, 2012 R2 Microsoft Windows Server 2008, 2008 R2 Solaris® 11 (11/11 or later) Solaris® 10 VMware® vSphere® 6.0, 6.5 VMware® vSphere® 5/ 5.1/ 5.5 Microsoft Windows Server 2016 Hyper-V Microsoft Windows Server 2012 Hyper-V, 2012 R2 Hyper-V Microsoft Windows Server 2008 Hyper-V, 2008 R2 Hyper-V			
Operation Management Client	Internet Explorer® 9, 10, 11 FireFox® ESR 17, 24, 31, 38, 45, 52 Microsoft Edge® 25 Chrome® 60 Chrome® 47, 50 (Android®) Safari 8, 9 (iOS)			
Supported configurations	**All major host operating systems, servers and business applications** Detailed support matrix: www.fujitsu.com/global/support/products/computing/storage/disk/supported-configrations			
Installation specification				
19" rackmount	Yes			
Service Area	Front: 850 mm (33.5 inch) or more Rear: 850 mm (33.5 inch) or more			
Power voltage	AC 200 - 240 V / AC 200 - 240 V			
Power frequency	50 / 60 Hz			
Power supply efficiency	92 % (80 PLUS gold)			
Maximum Power Consumption	AC 200 - 240 V: 97,520 W (99,710 VA)			
Power phase	Single			
	Frontend Enclosure	Controller Enclosure	2.5-inch Drive Enclosure	3.5-inch Drive Enclosure

Dimensions (W x D x H)	482 x 795 x 222 mm 19 x 31.3 x 8.7 inch 5 U	482 x 809 x 133 mm 19 x 31.9 x 5.2 inch 3 U	482 x 540 x 88 mm 19 x 21.3 x 3.5 inch 2 U	482 x 560 x 88 mm 19 x 22 x 3.5 inch 2 U
Weight	64 kg (141 lb)	54 kg (119 lb)	35 kg (77 lb)	35 kg (77 lb)
Maximum Power Consumption (AC 200 - 240 V)	560 W (590 VA)	1,200 W (1,220 VA)	430 W (440 VA)	340 W (350 VA)

Environment

Maximum Heat Generation	AC 200 - 240 V: 361,180: kJ/h
Temperature (not operating)	0 - 50 °C
Humidity (operating)	20 - 80 % (relative humidity, non-condensing)
Humidity (not operating)	8 - 80 % (relative humidity, non-condensing)
Altitude	3,000 m (10,000 ft.)
Sound pressure (LpAm)	59.5dB(A)
Noise notes	Measured with single enclosure according to ISO 7779 and declared according to ISO 9296
Operating environment	Site Planning Guide
Operating environment link	http://docs.ts.fujitsu.com/dl.aspx?id=d4cf793f-c549-494f-85a7-e381f1be138e

Type	Frontend Enclosure	Controller Enclosure	2.5-inch Drive Enclosure	3.5-inch Drive Enclosure
Maximum Heat Generation (AC 200 - 240 V)	2,020 kJ/h	4,330 kJ/h	1,600 kJ/h	1,300 kJ/h

Compliance

Product safety	UL 60950-1, CSA 60950-1, EN 60950-1, IEC 60950-1
Electromagnetic Compatibility	CNS 13438, FCC Part-15 Subpart B Class A, ICES 003 Class A, EN55032, VCCI Class A, AS/NZS CISPR 32 class A
Electromagnetic Immunity	EN 55024
CE certification	2014/30/EU, 2014/35/EU, 2011/65/EU
Approvals	CB, CE, C-Tick, FCC, EAC, GS, VCCI
Environmental compliance	RoHS compliant, WEEE compliant
Compliance notes	There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates

Warranty

Warranty period	3 years
Warranty type	Onsite warranty
Warranty Terms & Conditions	www.fujitsu.com/support

Product Related Services - the perfect extension

Support Pack Options	- Available in major business areas: 9x5, Next Business Day Onsite Response Time 9x5, 4h Onsite Response Time (depending on country) 24x7, 4h Onsite Response Time (depending on country)
Recommended Service	- 24x7, Onsite Response Time: 4h
Service Lifecycle	5 years after end of product life
Service Weblink	www.fujitsu.com/services/product-services

Fujitsu products, solutions & services

In addition to FUJITSU ETERNUS DX8900 S3, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products
www.fujitsu.com/global/products/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu ETERNUS DX8900 S3, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/eternus

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment



Copyrights

All rights reserved, including intellectual property rights. Designations may be trademarks and/or copyrights of the respective owner, the use of which by third parties for their own purposes may infringe the rights of such owner. For further information see http://www.fujitsu.com/fts/resources/navigation/terms-of-use.html
Copyright 2018 FUJITSU LIMITED

Disclaimer

Technical data is subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective owner, the use of which by third parties for their own purposes may infringe the rights of such owner.

Contact
FUJITSU LIMITED
Website: www.fujitsu.com/eternus
2018-09-03 WW-EN