FUJITSU

Data Sheet
Fujitsu Storage ETERNUS DX8900 S4 Disk System

Flash-optimized data center storage

ETERNUS DX - Business-centric Storage

FUJITSU Storage ETERNUS DX S4 is the perfect hybrid storage for SMB, something every business can afford, with integrated and powerful features for business growth, efficiency and continuity. Latest capacity and performance optimization capabilities contribute to comprehensive business efficiency. Outstanding data-safe technologies and all-inclusive encryption guarantee uncompromised business continuity

ETERNUS DX8900 S4

Fujitsu Storage ETERNUS DX8900 S4 is the purpose built platform to consolidate storage in data centers. Based on a multiple redundant, scale-out architecture it provides modular scalability, leading performance headroom and relentless business continuity capabilities. Latest data reduction technologies and fully automated quality-of-service functions make ETERNUS DX8900 S4 ideal for the data management of business critical core applications as well as of large and fast growing amounts of unstructured data. Various types of disk and flash drives can be combined flexibly to balance capacity, data access speed and cost for specific business needs. Designed to host up to 140 PB of flash capacity the system paves the way to the full flash data center.

Features & Benefits

Main Features	Benefits
Flexible scalability in capacity and performance	■ Future-proof scale-out architecture and upgrade options meet current and future business requirements. Flexible combination of flash and disk media allow for different workloads of deployments and NVMe cache provides highest performance. The perfect system for data center storage consolidation.
Relentless Business continuity	■ Avoid planned or unplanned downtimes with replication and Storage Cluster. Transparent failover allows 100% data insurance and non-stop operations, as well as a system availability of up to 99.9999%. Intelligent snapshot functionality supports secure backups.
Automated Management of Data Service Levels	■ Control application priorities according to business needs, minimize admin efforts, automate monitoring and adjustment to guarantee service levels and compress data without performance impact.
Transition to a Full Flash Data Center	■ Flash-optimized data center storage system with complete management compatibility using ETERNUS SF Management software

Technical details

General system information

	Frontend Enclosure
No. of controllers	2 - 24
No. of host interfaces	4-384 ports [FC(32Gbit/s, 16Gbit/s)], 4-192 ports [iSCSI(10Gbit/s, 1Gbit/s)]
Maximum System Memory	9,216 GB
Extreme Cache	307.2 TB
Maximum Disk Drives	6,912
Max. no. of drive enclosures	180
Supported RAID levels	0, 1, 1+0, 5, 5+0, 6
Host Interfaces	Fibre Channel (16 Gbit/s, 32Gbit/s) iSCSI (10 Gbit/s, 1 Gbit/s)
Mixed host interfaces	Yes
Max. no. of hosts	8,192
Maximum Storage Capacity HDD	119.92 PB
Maximum Storage Capacity SSD	141.56 PB
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 / 600 GB / 300 GB*) 2.5-inch, SAS (self-encrypting), 10,000rpm (2.4 TB/ 1.2TB) 2.5-inch, Nearline SAS, 7,200 rpm (2 TB*) 2.5-inch, SSD (30.72TB / 15.36TB / 7.68TB / 3.84 TB / 1.92 TB / 960GB / 400 GB*) 2.5-inch, SSD (self-encrypting) (7.68TB / 3.84 TB/1.92 TB) 3.5-inch, Nearline SAS, 7,200rpm (18TB / 16TB / 14TB / 12TB / 8TB / 6TB / 4TB) 3.5-inch, Nearline SAS (FIPS), 7,200rpm (16TB / 12TB / 8TB / 4TB) HDDE, Nearline SAS, 7,200rpm (18TB / 16TB / 14TB / 12 TB / 8TB / 6TB / 4TB) HDDE, Nearline SAS (FIPS), 7,200rpm (16TB / 12 TB / 8TB / 4TB)
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. 2 TB (2.5-inch)/ 6 TB/ 8 TB/10 TB/12 TB/14TB Nearline SAS and 1.8 TB/ 2.4 TB SAS drives are Advanced Format drives HDDE not available in EMEIA region * Not Available in EMEIA region
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.	32768
Max. no. of copy generations	512
Eco-mode	Yes
Compression	for block
Compatibility note	If and to the extent a list of components or certain compatibilities are specified in the product data sheet, these component lists and compatibility specifications are exhaustive. Using deviating or other system components and applications together with the product may but does not necessarily have to lead to compatibility problems. A final statement and/or commitment on the compatibility of such deviating or other system components and applications can only be provided after a corresponding verification through a dedicated compatibility testing.

Performance

Random access performance	10M IOPS (8KB Random Read Miss)

Performance

Note	To the extent that specific performance specifications for the product are indicated in the product data sheet, these are usually also dependent on the specific use and workload of the product and may therefore not be reached equally in all application situations. Such performance specifications thus do not represent a specifically agreed characteristic or feature of the product, but only serves as an orientation. The responsibility for a sufficient sizing of the overall system functionality lies solely with the user.

Performance management

Automated Storage Tiering	Yes
Quality of Service	Yes
Automated QoS	Yes
Wide striping	Yes
Operation Management Client	Google Chrome 99, Microsoft Edge® 99, Chrome® 47, 50 (Android®), Safari 8, 9 (iOS)
Note	Automation options can be activated via ETERNUS SF Software. Use of browser software is subject to proactive acceptance of the respective License Agreements/ EULAs of the Software manufacturer as applicable for the relevant Software whether preinstalled or optional.

Continuity management

Storage Cluster	Yes
Remote Copy functionality	Synchronous and asynchronous
Note	Options can be activated via ETERNUS SF Software
Note	The product may in connection with and depending on the specific configuration include elements to support time- and performance-critical applications, however high availability (e.g., 99.9999%) and failsafe performance is not a standalone product feature. If and to the extent the product is to be used in such business-critical environments, it is within the sole responsibility of the user to set up the specific additional technical features (e.g., Storage Cluster), redundancies, and operational conditions as required to ensure such high availability or failsafe performance.

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
Note	The properties of the product provide a baseline for product security and therefore end-customer IT security. However, these properties are not sufficient on their own to protect the product from all existing threats, such as intrusion attempts, data exfiltration and other forms of cyberattacks. To customize security settings, please use the configuration options as available for the respective product. During operation, the IT security of this product is within the responsibility of the respective administrator/end-user of the product. Please note, that Fujitsu as a manufacturer does not make any policy prescriptions or advocacy statements regarding IT security best practices and/or general product operation.

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
Non-disruptive firmware upgrade	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® 2022
	Microsoft® Windows Server® 2019
	Microsoft® Windows Server® 2016
	Microsoft Windows Server 2012, 2012 R2
	Solaris® 11 (11/11 or later)
	Solaris® 10
	Red Hat® Enterprise Linux® 9
	Red Hat® Enterprise Linux® 8
	Red Hat® Enterprise Linux® 7
	Red Hat® Enterprise Linux® 6
	Oracle Linux 6
	VMware® vSphere® 6.0, 6.5, 6.7, 7.0, 8.0
	Microsoft® Windows Server® 2022 Hyper-V
	Microsoft Windows Server 2019 Hyper-V
	Microsoft Windows Server 2016 Hyper-V
	Microsoft Windows Server 2012 Hyper-V, 2012 R2 Hyper-V
Operation Management Client	Google Chrome 99
	Microsoft Edge® 99
	Chrome® 47, 50 (Android®)
	Safari 8, 9 (iOS)
Note	See the ETERNUS SF datasheet for further options.
	Use of certified or supported operating systems and virtualization software is subject to proactive acceptance of the respective License Agreements/ EULAs/ Subscription and support terms of the Software manufacturer as applicable for the relevant Software whether preinstalled or optional. The software may only be available bundled with a software support subscription which – depending on the Software - may be subject to separate remuneration.

Supported configurations

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
Power frequency	50 / 60 Hz
Power supply efficiency	92 % (80 PLUS Gold)
Maximum Power Consumption	168,560 W (171,470 VA)
Power phase	Single

	Frontend Enclosure	Controller Enclosure	2.5-inch Drive Enclosure	3.5-inch Drive Enclosure	High-Density Drive Enclosure
Dimensions (W x D x H)	482 x 816 x 218 mm 19 x 32.1 x 8.6 inch 5 U	482 x 788 x 133 mm 19 x 31 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	482 x 980 x 176 mm 19 x 38.6 x 6.9 inch 4 U
Weight	64 kg (141 lb)	58 kg (128 lb)	35 kg (77 lb)	35 kg (77 lb)	100 kg (220 lb)
Maximum Power Consumption	560W (590VA)	1,560W (1,580VA)	430W (440VA)	340W (350VA)	1,300W (1,320VA)

Environment

Maximum Heat Generation	AC 200 - 240 V: 614,240: kJ/h
Temperature (not operating)	0 - 50 °C
Temperature (operating)	10 - 35 °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)	60dB(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	High-Density Drive Enclosure
Maximum Heat Generation	2,020 kJ/h	5,620 kJ/h	1,600 kJ/h	1,300 kJ/h	4,700 kJ/h

Compliance

Product	ETERNUS DX8900 S4, ETERNUS DX8900 S4 2.5DE, ETERNUS DX8900 S4 3.5DE, ET DX HD-DE
Model	ET89S4CE, ET89S4FE, DE-25,DE-35, HD-DE
Product safety	EN 62368-1, IEC 62368-1, ANSI/UL 62368-1, 2nd Ed, CAN/CSA C22.2 No. 62368-1-14, CNS 14336-1, TP TC 004
Electromagnetic Compatibility	EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, FCC Part-15 Subpart B Class A, ICES-003 Class A, VCCI Class A, JIS C 61000-3-2, CNS 13438, AS/NZS CISPR 32 class A, TP TC 020, KN32 Class A, KN35
Electromagnetic Immunity	EN 55035
CE certification	2014/35/EU , Low Voltage Directive, 2014/30/EU , Electromagnetic Compatibility Directive, 2011/65/EU,(EU)2015/863 as amended, Restriction of Hazardous Substances (RoHS) Directive
Approvals	CB, CE, C-Tick, FCC, EAC, GS, VCCI
Environmental compliance	REACH (substance regulations in articles), WEEE (Waste electrical and electronical equipment)
Compliance notes	There is general compliance with the safety/EMC 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/warranty

Product Support - the perfect extension

Support Pack Options	Available in major metropolitan 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	at least 5 years after shipment, for details see https://support.ts.fujitsu.com/
Service Weblink	www.fujitsu.com/services/product-services

Fujitsu products, solutions & services

In addition to Fujitsu ETERNUS DX8900 S4, 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 S4, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/dx8900/

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

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www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/dx8900/