

# Data Sheet

## Fujitsu Storage ETERNUS DX900 S5 Disk System

Enterprise-grade, midrange hybrid storage system



### ETERNUS DX - Business-centric Storage

FUJITSU Storage ETERNUS DX series are the ideal hybrid storage for on-premise storage of business-critical data in data centers, branch offices and self-operated IT of SMBs, something every business can afford, with integrated and powerful features for business growth, efficiency and continuity. Latest capacity and performance optimization capabilities contribute to overall business efficiency, outstanding data-safe technologies and all-inclusive encryption guarantee uncompromised business continuity.

### ETERNUS DX900 S5

Fujitsu Storage ETERNUS DX900 S5 is an Enterprise-grade, midrange hybrid storage system that offers modular scalability, leading performance headroom and relentless business continuity capabilities. Latest data reduction technologies and fully automated quality-of-service functions make ETERNUS DX900 S5 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.



# Features & Benefits

Main Features	Benefits
Flexible scalability in capacity and performance	<ul style="list-style-type: none"><li>■ 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.</li></ul>
Relentless Business continuity	<ul style="list-style-type: none"><li>■ Avoid planned or unplanned downtimes with replication and Storage Cluster. High redundancies enable business critical computing, data processing and real time data mirroring at the highest level and a system availability of up to 99.9999%. Intelligent snapshot functionality supports secure backups.</li></ul>
Automated Management of Data Service Levels	<ul style="list-style-type: none"><li>■ Control application priorities according to business needs, minimize admin efforts, automate monitoring and adjustment to guarantee service levels and compress data without performance impact.</li></ul>
Transition to a Full Flash Data Center	<ul style="list-style-type: none"><li>■ Flash-optimized data center storage system with complete management compatibility using ETERNUS SF software</li></ul>

# Technical details

## General system information

ETERNUS DX900 S5	
No. of controllers	2 / 4
No. of host interfaces	4-64 ports [FC(32Gbit/s,16Gbit/s)], 4-32 ports [iSCSI(10Gbit/s,1Gbit/s)]
Maximum System Memory	3,000 GB
Extreme Cache	51.2 TB
Maximum Disk Drives	2,304
Max. no. of drive enclosures	94
Note	94 with 2.5" or 3.5" DE, 32 with HD-DE or mixture of DEs up to Max. no. Drives
Supported RAID levels	0, 1, 1+0, 5, 5+0, 6
Host Interfaces	Fibre Channel (16 Gbit/s, 32Gbit/s) iSCSI (10Gbit/s [10GBASE-SR, 10GBASE-CR]) iSCSI (1 Gbit/s)
Mixed host interfaces	Yes
Max. no. of hosts	8,192
Maximum Storage Capacity HDD	40,723 TB
Maximum Storage Capacity SSD	70,778 TB
Drive Type	2.5-inch, SAS, 15,000 rpm (900 GB* / 600 GB* / 300 GB*) 2.5-inch, SAS, 10,000 rpm (2.4TB / 1.8TB / 1.2TB / 600GB) 2.5-inch, SAS (FIPS), 10,000rpm (1.2TB) 2.5-inch, SSD (30.72TB / 15.36TB / 7.68TB / 3.84TB / 1.92TB / 960GB) 2.5-inch, SSD (FIPS) (7.68TB / 3.84TB / 1.92TB) 3.5-inch, Nearline SAS, 7,200rpm (18TB / 16TB / 14TB / 12TB / 10TB / 8TB / 6TB / 4TB) 3.5-inch, Nearline SAS (FIPS), 7,200rpm (16TB / 12TB / 8TB / 4TB) HDDE, Nearline SAS, 7,200rpm (18TB / 16TB / 14TB / 12TB / 8TB / 4TB) HDDE, Nearline SAS (FIPS), 7,200rpm (16TB / 12TB / 8TB / 4TB)
Note	*For EMEIA only available on special request
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 RAID groups per system	528
Max. no. of LUNs per RAID group	128
Max. no. of LUNs	65,535
Max. LUN capacity	128 TB
No. of snapshots - max.	32,768
Max. no. of copy generations	512
Compression	Yes
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

Latency	140µsec (Read), 60µsec (Write)
Sequential access performance	44,000 MB/s (128KB Read) 22,000 MB/s (128KB Write)
Random access performance	1,800,000 IOPS (8KB Read) 870,000 IOPS (8KB Write)

**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.
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**Performance management**

Automated Storage Tiering	Yes
Quality of Service	Yes
Operation Management Client	Google Chrome 99, Microsoft Edge® 99
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	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	HTTPS (SSL), SSH, CHAP, Bidirectional CHAP
Data integrity	Data Block Guard, Data Encryption, Cache Protection, Disk Drive Patrol, Global Hot Spare, Dedicated Hot Spare, Copy back less, Drive shield, Fast Recovery
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**

Non-disruptive firmware upgrade	Yes
Hot part replacement	Yes

**Capacity management**

Thin Provisioning	Yes
RAID migration	Yes
Reporting function	Yes
Hot part expansion	Yes
Non-disruptive firmware upgrade	Yes

**Management**

Administration	Web-based graphical user interface, CLI (Command Line Interface), ETERNUS SF
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**Supported OS for ETERNUS SF**

Operation Management Server	Microsoft® Windows Server® 2019 Microsoft® Windows Server® 2016 Microsoft Windows Server 2012, 2012 R2 Solaris® 11 (11/11 or later) Solaris® 10 (except ETERNUS SF Express) 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 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
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.

<b>Supported configurations</b>	All major host operating systems, servers and business applications Detailed support matrix: <a href="http://www.fujitsu.com/global/support/products/computing/storage/disk/supported-configurations">www.fujitsu.com/global/support/products/computing/storage/disk/supported-configurations</a>
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**Installation specification**

19" rackmount	Yes
Power voltage	AC 200 - 240 V
Power frequency	50 / 60 Hz
Power supply efficiency	92 % (80 PLUS gold)
Maximum Power Consumption	AC 200 - 240 V: 57,680W (58,910VA)
Power phase	Single
	ETERNUS DX900 S5    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    482 x 788 x 133 mm    482 x 540 x 88 mm    482 x 580 x 88 mm    482 x 980 x 176 mm 19 x 32.1 x 8.6 inch    19 x 31 x 5.2 inch    19 x 21.3 x 3.5 inch    19 x 22.8 x 3.5 inch    19 x 38.6 x 6.9 inch 5 U    3 U    2 U    2 U    4 U
Weight	64 kg (141 lb)    58 kg (128 lb)    35 kg (77 lb)    35 kg (77 lb)    100 kg (220 lb)

**Environment**

Maximum Heat Generation	AC 200 - 240 V: 213,310: kJ/h
Temperature (operating)	10 - 35 °C
Humidity (operating)	20 - 80 %
Operating environment	FTS 04230 – Guideline for Data Center (installation specification)
Operating environment link	<a href="http://docs.ts.fujitsu.com/dl.aspx?id=589915e9-1bf8-40f7-8ba4-7cac9371f2f0">http://docs.ts.fujitsu.com/dl.aspx?id=589915e9-1bf8-40f7-8ba4-7cac9371f2f0</a>

**Compliance**

Product	ETERNUS DX900 S5
Model	ET8954CE or ET8954FE
Product safety	UL 60950-1, CSA 60950-1, EN 60950-1, IEC 60950-1, TP TC 004/2011, CNS14336
Electromagnetic Compatibility	FCC Part-15 Class A, ICES-003 Class A, EN 55022 (2010), +AI, VCCI Class A, AS/NZS CISPR 22 Class A, CNS13438 (C6357) Class A, KN22
Electromagnetic Immunity	EN 55024
Environmental compliance	RoHS compliant, WEEE compliant
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	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>

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**Warranty**

Warranty period	3 years
Warranty type	Onsite warranty
Warranty Terms & Conditions	<a href="http://www.fujitsu.com/warranty">www.fujitsu.com/warranty</a>
<b>Product Support - the perfect extension</b>	
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 <a href="https://support.ts.fujitsu.com/">https://support.ts.fujitsu.com/</a>
Service Weblink	<a href="http://www.fujitsu.com/services/product-services">www.fujitsu.com/services/product-services</a>

### Fujitsu products, solutions & services

In addition to Fujitsu ETERNUS DX900 S5, 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/](http://www.fujitsu.com/global/products/computing/)

#### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

### More information

Learn more about Fujitsu ETERNUS DX900 S5, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.

[www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/dx900-s5/](http://www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/dx900-s5/)

### Fujitsu green policy innovation

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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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### Disclaimer

Please note that the data sheet reflects the technical specification with the maximum selection of components for the named system and not the detailed scope of delivery. The scope of delivery is defined by the selection of components at the time of ordering. The product was developed for normal business use.

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