

# Data Sheet

## FUJITSU Storage ETERNUS DX500 S3 Disk System

Leading storage performance, automated quality of service



### 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 DX500 S3

The scalable, unified Fujitsu Storage ETERNUS DX500 S3 system delivers leading storage performance and automated quality of service management enabling a maximum of system utilization and contributing to a fast ROI. It is the perfect solution when consolidating data in large-scale databases, business-critical applications and business analytics / big data – all into one system. It provides ample headroom for demanding server / desktop virtualization environments and enterprise file services. Extensive high-availability and disaster recovery capabilities make ETERNUS DX500 S3 an ideal storage system for business-critical data.



# Features & Benefits

Main Features	Benefits
Market-leading performance combined with automated performance management	<ul style="list-style-type: none"><li>■ Top-class performance enables large-scale storage consolidation delivering a fast ROI</li><li>■ Automatically aligns storage performance with business priorities</li><li>■ Delivers reliable and predictable quality of service for business-critical data</li><li>■ Enables the operation of productive and analytical tasks in parallel on one storage system</li><li>■ High scalability within the system and upgrade options to higher system-class and bigger systems support high data increases at low costs of growth and ensure investment protection</li></ul>
Rock-solid operation	<ul style="list-style-type: none"><li>■ Comprehensive high-availability, quality of service and disaster resilience functions ensure predictable and reliable operation</li><li>■ System availability of 99.999%</li><li>■ Flexible disaster recovery, including transparent failover, with a multitude of snapshot concepts and remote replication between different models and generations</li><li>■ Extensive non-disruptive maintenance and upgrade capabilities reduce planned downtimes</li></ul>
Truly unified architecture	<ul style="list-style-type: none"><li>■ Unified SAN and NAS access drive system utilization improving ROI</li><li>■ Unified management functions across the entire product line result in operational efficiency</li><li>■ Unified connectivity supports a large range and many combinations of networking types</li><li>■ Unified architecture allows flexible combinations of 2.5" and 3.5" disk types</li></ul>
Selective use of deduplication / compression	<ul style="list-style-type: none"><li>■ Decide on volume label whether to use it or not</li><li>■ Capacity savings in hybrid and disk configurations</li></ul>

# Technical details

## General system information

ETERNUS DX500 S3	
No. of controllers	2 ( 2.6 GHz, 6 cores/controller)
No. of host interfaces	4/8 ports [iSCSI, FCoE, Ethernet(10Gbit/s)], 4-16 ports [FC], 8/16 ports [Ethernet(1Gbit/s)]
Maximum System Memory	128GB
Extreme Cache	5,600 GB
Extreme Cache Pool	3,200 GB
Maximum Disk Drives	528
Max. no. of drive enclosures	22
Note	22 with 2.5" or 3.5" DE, 8 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, 8 Gbit/s, 4 Gbit/s) FCoE (10 Gbit/s) iSCSI (10 Gbit/s, 1 Gbit/s) Ethernet (10 Gbit/s, 1 Gbit/s)
Mixed host interfaces	Yes
Max. no. of hosts	4,096
Supported NAS protocols	CIFS (SMB 2.0), CIFS (SMB 3.0), NFSv2, NFSv3, NFSv4
Maximum Storage Capacity	8,110 TB
Drive Type	2.5-inch, SAS, 15,000 rpm (600 GB / 300 GB) 2.5-inch, SAS, 10,000 rpm (1.8 TB / 1.2 TB / 900 GB / 600 GB / 300 GB) 2.5-inch, SAS (self-encrypting), 10,000 rpm (1.2 TB / 900 GB) 2.5-inch, Nearline SAS, 7,200 rpm (2 TB / 1 TB) 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) (1.92 TB / 1.6 TB / 800 GB) 3.5-inch, Nearline SAS, 7,200 rpm (10 TB / 8 TB / 6 TB / 4 TB / 2 TB) 3.5-inch, Nearline SAS (self-encrypting), 7,200 rpm (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) (1.92 TB / 1.6 TB / 800 GB) HDDE, SAS, 10,000 rpm (1.2 TB) HDDE, Nearline SAS, 7,200 rpm (10 TB / 8 TB / 6 TB / 4 TB / 2 TB) HDDE, SSD (3.84 TB / 1.92 TB / 1.6 TB)
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	2 pairs of four-lane x 12 Gbit/s Serial Attached SCSI buses (SAS 3.0 wide)
Max. no. of LUNs	16,384
Max. LUN capacity	128 TB
No. of snapshots - max.	8,192
Max. no. of copy generations	512
Eco-mode	Yes
Deduplication	for block
Compression	for block
Performance management	
Automated Storage Tiering	Yes
Quality of Service	Yes
Automated QoS	Yes
Wide striping	Yes

**Performance management**

**Note** Automation options can be activated via ETERNUS SF Software

**Continuity management**

**Storage Cluster** Yes

**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, Fan, Power supply

**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**

**Interfaces** Ethernet (1000 Base-T / 100 Base-TX / 10 Base-T)

**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 configurations**

**All major host operating systems, servers and business applications**

Detailed support matrix:

[www.fujitsu.com/global/support/products/computing/storage/disk/supported-configurations](http://www.fujitsu.com/global/support/products/computing/storage/disk/supported-configurations)

**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 100 - 120 V / AC 200 - 240 V

**Power frequency** 50 / 60 Hz

**Power supply efficiency** 92 % (80 PLUS gold)

**Maximum Power Consumption** AC 100 - 120 V: 13,210 W (13,480 VA)

**Maximum Power Consumption** AC 200 - 240 V: 13,320 W (13,590 VA)

**Power phase** Single

	High-Density Drive Enclosure	ETERNUS DX500 S3	2.5-inch Drive Enclosure	3.5-inch Drive Enclosure
<b>Dimensions (W x D x H)</b>	482 x 980 x 176 mm 19 x 38.6 x 6.9 inch 4 U	482 x 805 x 133 mm 19 x 31.7 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
<b>Weight</b>	95 kg (209 lb)	54 kg (119 lb)	35 kg (77 lb)	35 kg (77 lb)
<b>Maximum Power Consumption (AC 100 - 120 V)</b>	1,300 W (1,320 VA)	650 W (660 VA)	430 W (440 VA)	340 W (350 VA)
<b>Maximum Power Consumption (AC 200 - 240 V)</b>	1,300 W (1,320 VA)	760 W (770 VA)	430 W (440 VA)	340 W (350 VA)

**Environment**

**Maximum Heat Generation** AC 100 - 120 V: 48,800: kJ/h  
AC 200 - 240 V: 49,200: kJ/h

**Environment**

Temperature (operating)	10 - 40 °C		
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)	54dB(A)		
Sound power (LWAd; 1B = 10dB)	7.0B		
Noise notes	Measured with single enclosure according to ISO 7779 and declared according to ISO 9296		
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>		
Type	ETERNUS DX500 S3	2.5-inch Drive Enclosure	3.5-inch Drive Enclosure

**Compliance**

Product safety	UL 60950-1, CSA-C22.2 No. 60950-1, EN 60950-1, IEC 60950-1, GOST-R		
Electromagnetic Compatibility	CNS 13438, FCC CFR 47 class A, ICES 003 Class A, EN 55022 Class A, VCCI Class A, AS/NZS CISPR 22 Class A		
Electromagnetic Immunity	EN 55024		
CE certification	2004/108/EC, 2006/95/EC, 2011/65/EC		
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	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>		

**Warranty**

Warranty period	3 years		
Warranty type	Onsite warranty		
Warranty Terms & Conditions	<a href="http://www.fujitsu.com/support">www.fujitsu.com/support</a>		

**Product Support Services - the perfect extension**

Support Pack Options	Available in major business areas: 9x5, Next Business Day Onsite Response Time 9x5, 4h Onsite Response Time 24x7, 4h Onsite Response Time		
Recommended Service	24x7, Onsite Response Time: 4h		
Service Lifecycle	5 years after end of product life		
Service Weblink	<a href="http://www.fujitsu.com/services/product-services">www.fujitsu.com/services/product-services</a>		

#### Fujitsu OPTIMIZATION Services

In addition to Fujitsu ETERNUS DX500 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/](http://www.fujitsu.com/global/products/computing/)

#### Software

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

#### More information

Learn more about Fujitsu ETERNUS DX500 S3, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. [www.fujitsu.com/eternus](http://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>



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