FUJITSU

Data Sheet
FUJITSU Storage ETERNUS DX500 S4 Disk System

Leading storage performance, automated quality of service

ETERNUS DX - Business-centric Storage

FUJITSU Storage ETERNUS DX S4 is the perfect hybrid storage for all businesses, with integrated and powerful features for digital 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 DX500 S4

The scalable and unified Fujitsu Storage ETERNUS DX500 S4 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. The ETERNUS DX family architecture lets customers benefit from software options, such as thin provisioning, automatic storage tiering, transparent failover, quality of service management and ensures smart operation and business continuity. The selective use of deduplication and compression completes the set of features with efficiency options. This all makes ETERNUS DX500 S4 an ideal storage system for business-critical data.

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
Maximum utilization and consolidation	■ Comprehensive scalability ready for future needs ■ Outstanding benchmark results with ultra-low latency ■ Unified SAN and NAS access drive system utilization improving ROI ■ Flexible combination of flash and disk media for a broader scope of deployments ■ ETERNUS SF management suite
Business Continuity around the clock	■ Replication and Storage Cluster to avoid planned or unplanned downtimes ■ Transparent failover for 100% data insurance and non-stop operations ■ Intelligent snapshot functionality for backup ■ System availability of 99.9999%
Automated Quality-of-Service	■ Control of applications priorities according to business needs. ■ Automation of monitoring and adjustment ■ Minimization of admin efforts ■ Guaranteed service levels
Selective use of deduplication / compression	■ Decide on application label which option fits best ■ Don't compromise applications with performance SLA's ■ Capacity savings in hybrid configurations

Technical details

General system information

	ETERNUS DX500 S4
No. of controllers	2
No. of host interfaces	4/8 ports [FC(32Gbit/s), iSCSI, Ethernet(10Gbit/s)], 4-16 ports [FC(16Gbit/s), Ethernet(1Gbit/s)]
Maximum System Memory	256GB
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 (32Gbit/s, 16Gbit/s, 8Gbit/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 HDD	5,280 TB
Maximum Storage Capacity SSD	8,110 TB
Drive Type	2.5-inch, SAS, 15,000 rpm (900 GB / 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), 10,000rpm (1.2TB) 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 / 960GB / 400 GB) 2.5-inch, SSD (self-encrypting) (1.92 TB) 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 (3.84TB / 1.92TB / 960GB / 400GB) 3.5-inch, SSD (self-encrypting) (1.92TB) 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 (3.84TB / 1.92TB)
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. 2.5-inch 2TB, 3.5-inch 6TB/8TB/10TB Nearline SAS and 1.8TB 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

Performance management

Automated QoS	Yes
Wide striping	Yes
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 OS for ETERNUS SF

Operation Management Server	Microsoft Windows Server 2016 Microsoft Windows Server 2012, 2012 R2 Microsoft Windows Server 2008, 2008 R2 Solaris11 (11/11 or later) Solaris 10 Red Hat Enterprise Linux 7 Red Hat Enterprise Linux 6 Red Hat Enterprise Linux 5 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 Hyper-V 2.0
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 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

	ETERNUS DX500 S4	2.5-inch Drive Enclosure	3.5-inch Drive Enclosure	High-Density Drive Enclosure
Dimensions (W x D x H)	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	482 x 980 x 176 mm 19 x 38.6 x 6.9 inch 4 U
Weight	54 kg (119 lb)	35 kg (77 lb)	35 kg (77 lb)	95 kg (209 lb)
Maximum Power Consumption (AC 100 - 120 V)	650W (660VA)	430W (440VA)	340W (350VA)	1,300W (1320VA)
Maximum Power Consumption (AC 200 - 240 V)	760W (770VA)	430W (440VA)	340W (350VA)	1,300W (1320VA)

Environment

Maximum Heat Generation	AC 100 - 120 V: 48,800: kJ/h
	AC 200 - 240 V: 49,200: kJ/h
Temperature (operating)	10 - 40 ℃
Temperature (not operating)	0 - 50 ℃
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	http://docs.ts.fujitsu.com/dl.aspx?id=589915e9-1bf8-40f7-8ba4-7cac9371f2f0

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	X - 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)

Warranty

Recommended Service	X - 24x7, Onsite Response Time: 4h
Service Lifecycle	5 years after end of product life
Service Weblink	www.fujitsu.com/services/product-services

Warranty

Recommended Service	X - 24x7, Onsite Response Time: 4h

Fujitsu OPTIMIZATION Services

In addition to Fujitsu ETERNUS DX500 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
Build 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 offering. This allows customers to leverage 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 DX500 S4, 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/

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