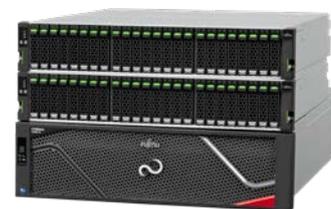# FUJITSU

Data Sheet
ETERNUS DX600 S6
Disk System

Leading storage performance, automated quality of service

ETERNUS DX - Business-centric 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 DX600 S6

The scalable ETERNUS DX600 S6 system delivers leading storage performance and automated quality of service management, enabling maximum 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 architecture lets customers benefit from software options, such as thin provisioning, automated storage tiering including for all-flash configuration (multi-flash tiering), active-active 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 data efficiency options. All this makes ETERNUS DX600 S6 an ideal storage system for business-critical data.

Features & Benefits

Main Features	Benefits
Maximum utilization and consolidation	■ Massive scalability makes it perfect for all future requirements. Flexible combination of high-performance and high-capacity flash media in an intelligent auto-tiering concept improves ROI. Outstanding benchmark results with ultra-low latency and the ETERNUS SF Management Suite make it the ideal RAID system.
Round-the-clock Business Continuity	■ Zero RPO & RTO - Avoid planned or unplanned downtimes by using a real Active-Active 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.
Automated Quality-of-Service	■ Control application priorities according to business needs, minimize admin efforts, automate monitoring and adjustment to guarantee service levels.
Selective use of deduplication / compression	■ Use data reduction technologies at the volume level to improve storage efficiency and meet performance SLA's, and also save storage capacity in hybrid configurations.

Technical details

General system information

	Controller Enclosure
No. of host interfaces	4-32 ports [FC(64Gbit/s, 32Gbit/s,16Gbit/s), 4-16 ports [iSCSI(10Gbit/s)]
Maximum System Memory	2,048 GB
Extreme Cache Pool	25.6 TB
Maximum Disk Drives	960
Max. no. of drive enclosures	39
Supported RAID levels	0, 1, 1+0, 5, 5+0, 6
Host Interfaces	Fibre Channel (64 Gbit/s, 32 Gbit/s, 16 Gbit/s)
	iSCSI (10Gbit/s [10GBASE-SR, 10GBASE-CR])
Mixed host interfaces	Yes
Max. no. of hosts	4,096
Maximum Storage Capacity HDD	8,424 TB
Maximum Storage Capacity SSD	29,123 TB
Drive Type	2.5-inch, NVMe SSD (15.36TB / 7.68TB / 3.84TB / 3.2TB / 1.92TB)
	2.5-inch, NVMe SSD (self-encrypting) (15.36TB / 7.68TB / 3.84TB / 3.2TB / 1.92TB)
	2.5-inch, SAS SSD (30.72TB / 15.36TB / 7.68TB / 3.84TB / 1.92TB)
	2.5-inch, SAS SSD (self-encrypting) (7.68TB / 3.84 TB/1.92 TB)
	2.5-inch, SAS, 10,000 rpm (2.4TB / 1.2TB)
	2.5-inch, SAS (self-encrypting), 10,000rpm (1.2TB)
	3.5-inch, Nearline SAS, 7.2krpm (18TB / 12TB / 8TB / 4TB)
	3.5-inch, Nearline SAS (self-encrypting), 7,200rpm (16TB / 8TB)
Note	NVMe SSDs (3.2 TB) can be used as drives for configuring Extreme Cache Pools.
Max. no. of SSDs	unlimited
Mixed 2.5 inch/ 3.5 inch drive enclosures	Yes
Drive interface	NVMe (16 Gbit/s); SAS (12 Gbit/s)
Back-end disk connectivity	Max. 4 pairs of four-lane x12 Gbit/s Serial Attached SCSI buses (SAS 3.0 wide)
	Max. 4 pairs of four-lane x16 Gbit/s PCI-express buses (PCIe 4.0 wide)
Max. no. of RAID groups per system	480
Max. no. of LUNs per RAID group	16,384
Max. no. of LUNs	16,384
Max. LUN capacity	128 TB
No. of snapshots - max.	8,192
Max. no. of copy generations	512
Deduplication	for block
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	Less than 1ms
Sequential access performance	44,000 MB/s (128KB Read)
	22,000 MB/s (128KB Write)
Random access performance	950,000 IOPS (8KB Read)
	410,000 IOPS (8KB Write)
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 124, Microsoft Edge® 124
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	HTTPS (SSL), SSH, CHAP, Bidirectional CHAP, RADIUS, Self-Encrypting Disk, Controller based Encryption
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 Fsas Technologies Inc. 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
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 Solaris® 11 (11/11 or later) Solaris® 10 Red Hat® Enterprise Linux® 9 Red Hat® Enterprise Linux® 8 Red Hat® Enterprise Linux® 7 Oracle Linux 9 Oracle Linux 8 Oracle Linux 6 VMware® vSphere® 7.0, 8.0 Microsoft® Windows Server® 2022 Hyper-V Microsoft Windows Server 2019 Hyper-V Microsoft Windows Server 2016 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	94 % (80 PLUS platinum)
Maximum Power Consumption	AC 200 - 240 V: 18,273W (18,665VA)
Power phase	Single

	Controller Enclosure	2.5-inch SAS Drive Enclosure	3.5-inch SAS Drive Enclosure	2.5-inch NVMe Drive Enclosure
Dimensions (W x D x H)	482 x 785 x 132 mm 19 x 30.9 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	482 x 546 x 88 mm 19 x 21.5 x 3.5 inch 2 U
Weight	55 kg (121 lb)	35 kg (77 lb)	35 kg (77 lb)	33 kg (73 lb)
Maximum Power Consumption	1,503W (1,505VA)	430W (440VA)	340W (350VA)	570W (580VA)

Environment

Maximum Heat Generation	AC 200 - 240 V: 67,820: kJ/h
Temperature (operating)	10 - 40 ℃
Humidity (operating)	20 - 80 % (relative humidity)
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 62368-1, CSA 62368-1, EN 62368-1, IEC 62368-1, CNS15598-1
Electromagnetic Compatibility	FCC Part-15 Class A, ICES 003 Class A, EN 55032, VCCI Class A, AS/NZS CISPR 32 class A, CNS 15936, Class A, KN32
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

Compliance

Environmental compliance	RoHS-compliant (Restriction of hazardous substances), 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
Manufacturer	Fsas Technologies Inc. 13-2, Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa, 211-0012, Japan

Warranty

Manufacturer 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 ETERNUS DX600 S6, 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/

Software
www.fujitsu.com/software/

More information

Learn more about ETERNUS DX600 S6, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/dx600-s6/

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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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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