DATA SHEET

ETERNUS DX80 disk storage systems
The Data Safe

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With three different base models, ETERNUS DX80 entry level disk storage systems can either connect to hosts via Fibre Channel (with 8 Gbit/s performance option), iSCSI or SAS. They are easy to install, configure, operate and maintain, integrating well with host operating systems, servers, network infrastructures and backup solutions.
Different drive types can be mixed and matched, secured by the relevant monitored RAID levels (0, 1, 1+0, 5, 5+0 and 6) and features to ensure data integrity. Administrators can dynamically move data, spin disks down to save energy or encrypt data to prevent unauthorized access.
In the event of power outages, the content of the cache is secured to flash memory. A backup copy is always at hand via snapshots and clones.

Main features	Benefits
Redundant RAID controllers, fans and power supplies that are hot swappable	For highest 99.99% availability
Cache Protector uses capacitor technology to better protect RAID controller cache during power outages	Returns the array to high performance mode within minutes following restore
Redundant Copy rebuilds a disk automatically as soon as the first signs of failure appear	Dramatically reduces recovery times and minimizes the risk of permanent data loss during recovery
Data Block Guard appends check codes to every data block and verifies them at multiple checkpoints.	Helps to ensure maximum data integrity on disk in cache and in between
RAID Migration enables LUNs to be moved dynamically between different RAID groups and hard disks without interrupting operations	Allows different service levels to be provided matched to access frequency and data importance
Mixed SAS, Nearline SAS disk drives and SSD	Fulfills all main performance and capacity requirements
Eco-mode spins down disk drives	Reduces energy consumption and heat dissipation
Latest technologies and improved RAID Controller Fibre Channel or iSCSI or SAS technology 15,000 rpm SAS, 7,200 rpm Nearline SAS disk drives and SSD 8 snapshots (standard) upgradeable to 1,024 overall	For highest flexibility For improved data protection
Intuitive web interface	Easy to install and use
A wide range of Operating Systems, servers as well as applications is supported	Versatility in use for databases, storage consolidation, clustering, tiered storage, backup-to-disk and many other high value storage functions

TECHNICAL DETAILS

ETERNUS DX80

General specification		Single controller version	Dual controller version
Host interface		Fibre Channel (8/4/2 Gbit/s) **or** Fibre Channel (4/2/1 Gbit/s) **or** iSCSI (1 Gbit/s) **or** SAS (3 Gbit/s)	
Number of controllers		1 (field upgradeable to 2)	2 (for redundancy)
Number of host interfaces		2	4
Number of connectable hosts	Fibre Channel	Max. 64	Max. 128
	iSCSI	Max. 64	Max. 128
	SAS	Max. 2	Max. 4
Cache memory capacity		2 GB	4 GB
CPU frequency		1.2 GHz	
RAID levels		0, 1, 1+0, 5, 5+0, 6	
Storage capacity	Physical capacity	Max. 120 TB	
	Logical capacity	Max. 88.5 TB	
Number of disk drives		2 - 120	
Drives 3.5-inch	SAS disk drives	450 GB / 300 GB (15,000 rpm)	
	Nearline SAS disk drives	1 TB / 750 GB (7,200 rpm)	
	SSD (Solid State Drives)	200 GB / 100 GB	
Drive interface		Serial Attached SCSI (3 Gbit/s)	

Installation specification		
Dimensions (W × D × H)	Standard	483 mm × 650 mm × 88 mm (2U)
	Maximum	20 U
Service Area		Front: 800 mm or more, Rear: 800 mm or more
Maximum Weight		350 kg (w. 35 kg per single enclosure)
Power	Voltage	AC 100 V – 120 V / AC 200 – 240 V
	Phase	Single
	Frequency	50 Hz / 60 Hz
Maximum Power Consumption	AC100 – 120V	3,774 W (3,929 VA)
	AC200 – 240V	3,805 W (4,129 VA)
Maximum Heat Generation	AC100 – 120V	13,587 KJ/H
	AC200 – 240V	13,698 KJ/H
Environmental Conditions	Temperature	5 – 40°C (Operating)
	Humidity	20 – 80% RH (Operating)

Supported RAID levels	
RAID 0	Data striping on several disk drives
RAID 1	Mirrored disk drives
RAID 1+0	Data mirroring, then striping of the data over several disk drives
RAID 5	Striping with distributed parity
RAID 5+0	RAID 5 arrays, striped again over several drives
RAID 6	Striping with distributed double parity

Management	
Interfaces:	Ethernet (1000 Base-T / 100 Base-TX / 10 Base-T)
Supported protocols:	SNMP (version1), SMI-S
Administration	Web-Environment, CLI (Command Line Interface)

Options

Hot-plug drives (SAS, Nearline SAS and SSD mixing is possible)

Up to 9 expansion shelves cascaded with the base shelf

Upgrade to 1024 snapshots

Supported configurations

A wide range of host operating systems, servers as well as applications is supported.
For a detailed support matrix check http://ts.fujitsu.com/products/storage/matrixEP.html

Noise Emission (single enclosure)

measured according to ISO7779 and declared according to ISO9296

Sound Power Level (LWAd)	5.9 B
Sound Pressure Level (LpAm)	42.0 dB(A)

Compliance with standards

Product safety	UL60950-1, CSA60950-1, EN60950-1, IEC60950-1, GOST
Electromagnetic Compatibility	FCC Part-15 Class A, ICES-003 Class A,EN55022 Class A, VCCI Class A, AS/NZS CISPR22 Class A, CNS13438(C6357) Class A, C-Tick, BSMI
Electromagnetic Immunity	EN 55024
CE certification	Electromagnetic Compatibility Directive 2004/108/EC Low Voltage Directive 2006/95/EC
Environmental compliance	RoHS-compliant (Restriction of hazardous substances) WEEE-compliant (Waste electrical and electronical equipment)

Compliance note: 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/default.aspx

For more product information please go to http://www.fujitsu.com/eternus

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Fujitsu ETERNUS DX80 surpass the highest environmental regulations within Fujitsu and are labeled as Green Product. Please find further information at http://www.fujitsu.com/global/about/environment/

Green Policy Innovation SUPER Green Product
This product has the top-level environmental factor in the comparison with our previous product or product in market.

Green IT

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