

FUJITSU ETERNUS DX400 SERIES DISK STORAGE SYSTEMS FOR MID-RANGE ENTERPRISES

ETERNUS DX DISK STORAGE SYSTEMS ARE THE MOST RELIABLE AND SECURE DATA SAFES AVAILABLE, FROM ONLINE BACKUP TO MISSION-CRITICAL APPLICATIONS, FROM ENTRY-LEVEL TO HIGH-END USAGE SCENARIOS.



ETERNUS DX – THE DATA SAFE

ETERNUS DX disk storage systems – the most reliable and secure data safes: For small and medium-sized businesses, ETERNUS DX60, DX80, and DX90 provide fast and highly available data. For mid-range and enterprise customers who need secure and flexible integration into the data center, Fujitsu offers the ETERNUS DX400 series and ETERNUS DX8000 series. ETERNUS DX disk storage systems use the same software stack and hardware functions across the entire range to allow ease-of-use and greater efficiency for users.

ETERNUS SF – Fujitsu's Storage Management Software – reduces total cost of ownership by simplifying the monitoring and management of ETERNUS DX disk storage systems. Furthermore it helps to achieve business continuity by leveraging the Advanced Copy functions for data backup, using snapshots and clones. Altogether, with ETERNUS SF, storage resources in complex IT environments are optimized.

As one of the world's leading IT services companies, Fujitsu combines many years of experience in complex data centers to offer tailor-made solutions that perfectly fit customers' individual requirements. Moreover, Fujitsu is one of the few global players to provide flexible infrastructures with its Dynamic Infrastructures strategy: server, storage, networking and service solutions – all from one trusted partner.

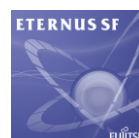
ETERNUS DX400 SERIES

ETERNUS DX410/DX440 disk storage systems continue the Fujitsu success story in the mid-range segment. This generation of RAID systems offers a high degree of data storage reliability. In combination with proven software delivering, ETERNUS DX410/DX440 disk storage systems offer the sturdiness you need in dynamic infrastructures. A rapid increase in storage capacity will be no problem for the world's fastest dual controller mid-range disk storage system (ETERNUS DX440; cf. SPC-1). ETERNUS DX410/DX440 disk storage systems are suitable for a large range of applications. With their Eco-mode which uses the MAID technology, ETERNUS DX410/DX440 disk storage systems are some of the most energy efficient storage systems in their class.

This datasheet will give you an overview of ETERNUS DX400 series disk storage systems



	<p>Green Policy Innovation</p>	<p>Green Product This product cleared our company's original evaluation standard which followed global environmental measures.</p>
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FEATURES AND BENEFITS

MAIN FEATURES	BENEFITS
<p>FAMILY CONCEPT</p> <ul style="list-style-type: none"> ■ Fujitsu ETERNUS DX family from entry-level to enterprise-level systems 	<ul style="list-style-type: none"> ■ Simplifies administration: you know one model – you know the whole family ■ High-end features are also available in mid-range and entry systems
<p>PERFORMANCE AND CAPACITY</p> <ul style="list-style-type: none"> ■ World's fastest mid-range disk storage system (cf. SPC-1) ■ Scalability 	<ul style="list-style-type: none"> ■ World's best price/performance ratio (cf. SPC-1) ■ Large storage capacity to grow (from 8 up to 420 drives)
<p>MULTI-PLATFORM SUPPORT</p> <ul style="list-style-type: none"> ■ Multi-platform support for server and operating systems 	<ul style="list-style-type: none"> ■ Perfect for a large range of applications in heterogeneous environments
<p>DATA INTEGRITY</p> <ul style="list-style-type: none"> ■ Data Block Guard 	<ul style="list-style-type: none"> ■ Ensures maximum data integrity on drives, in cache and during the transfer ■ Guarantees consistency of all stored data
<p>DATA SECURITY</p> <ul style="list-style-type: none"> ■ Data Encryption 	<ul style="list-style-type: none"> ■ Protection of sensitive data ■ Simple and cost effective
<p>DATA PROTECTION AND AVAILABILITY</p> <ul style="list-style-type: none"> ■ A variety of high-speed volume copy functions ■ Redundant Copy 	<ul style="list-style-type: none"> ■ High availability and business continuity ■ Disaster Recovery Scenarios ■ Ensures data redundancy by solving the problem of long recovery times within a RAID group due to increasing capacity of drives
<p>FLEXIBLE MANAGEMENT</p> <ul style="list-style-type: none"> ■ RAID Migration ■ Thin Provisioning 	<ul style="list-style-type: none"> ■ Move data to fast or low-priced drives for easy adaption to changing requirements ■ Use the most appropriate RAID level ■ Capacity virtualization which enables better utilization of resources with no disruption to operations
<p>GREEN IT</p> <ul style="list-style-type: none"> ■ Eco-mode with MAID technology (drive spin down) 	<ul style="list-style-type: none"> ■ Very easy to handle ■ Eco-mode conserves energy and costs
<p>ETERNUS SF</p> <ul style="list-style-type: none"> ■ AdvancedCopy Manager (ACM) ■ Storage Cruiser (SC) ■ Disk Space Monitor 	<ul style="list-style-type: none"> ■ ETERNUS SF reduces total cost of ownership by managing the operation of ETERNUS DX disk storage systems. ETERNUS SF achieves business continuity and optimizes storage resources in complex IT environments.
<p>DYNAMIC INFRASTRUCTURES</p> <ul style="list-style-type: none"> ■ Comprehensive IT portfolio (Server, Storage, Networking, Solutions, Services and flexible delivering models) 	<ul style="list-style-type: none"> ■ We optimize our customers' infrastructures by focusing on the customers' individual business requirements ■ Comprehensive look on the whole data center – not only to optimize customers Data Center – but to meet his business needs

TECHNICAL DETAILS

ETERNUS DX400 SERIES

GENERAL SPECIFICATION	ETERNUS DX410	ETERNUS DX440
Host-interface	Fibre Channel (Max 8 Gbit/s) and/or iSCSI (1 Gbit/s)	
Number of Controller Modules (CM)	2	2
Number of Channel Adapters (CA)	each CM with 1 FC CA and/or 1 iSCSI CA	each CM with 1 or 2 FC CA or iSCSI CA
Number of Connectable Hosts	max 64 Initiator per CA Port, 256 per System	
- Notes: Channel Adapters	FC CA and iSCSI CA mixable within CM	
Each FC CA with	1 or 2 or 4 host-interfaces 8 Gbit/s FC	2 or 4 host-interfaces 8 Gbit/s FC
Each iSCSI CA with	1 or 2 host-interfaces 1 Gbit/s iSCSI	2 host-interfaces 1 Gbit/s iSCSI
Number of FC host-interfaces	2 - 8	4 - 16
Number of iSCSI host-interfaces	2 or 4	4 or 8
- Notes: Host-interfaces	max. 8 FC and 4 iSCSI	mixed configurations possible
Cache memory capacity	4 - 8GB	8 - 32GB
RAID levels		0, 1, 1+0, 5, 6
Number of drives	8 - 210	8 - 420
- Notes: max. number of Enterprise SSD	8 (plus hot spares)	16 (plus hot spares)
Max. Physical storage capacity	414.4 TB	834.4 TB
Max. Logical capacity with RAID5	292 TB	591.2TB
FC disk drives (15,000rpm)		600GB / 450GB / 300GB
SATA disk drives (7,200rpm)		2TB / 1TB / 500GB
Enterprise SSD (Enterprise-class Solid State Drives)		400GB / 200GB
Drive interface		Fibre Channel (4Gbit/s)

INSTALLATION SPECIFICATION	ETERNUS DX410	ETERNUS DX440
Dimensions (W x D x H): Floor stand		590 x 990 x 1,800 mm
with max expansion cabinets	1,180 x 990 x 1,800 mm	1,770 x 990 x 1,800 mm
Dimensions (W x D x H): Rack mount (minimum configuration)		483 x 770 x 533 mm [12U]
Service Area Floor stand		Front: 850mm or more, Rear: 850mm or more, Left: 50mm or more, Right: 0mm
Service Area Rack mount		Front: 850mm or more, Rear: 850mm or more, Side: 0mm
Maximum Weight Floor stand	1,050 kg	1,820 kg
Maximum Weight Rack mount	760 kg	1,395 kg
Power Voltage		AC 200 – 240 V
Power Phase		Single
Power Frequency		50 Hz / 60 Hz
Maximum Power Consumption	7,700W (8,200VA)	14,700W (15,700VA)
Maximum Heat Generation	27,800KJ/H	53,000KJ/H
Environmental Conditions: Temperature (Operating)		5 – 35°C
Environmental Conditions: Humidity (Operating)		20 – 80% RH

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 6	Striping with distributed double parity

MANAGEMENT

Interfaces:	100BASE-TX/10BASE-T
Supported protocols:	SNMP, SMI-S
Administration	Web-Environment

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>

COMPLIANCE WITH STANDARDS

Safety, Quality and Environmental Standards	CSA60950-1, UL60950-1, EN60950-1, IEC 60950-1, ISO9001, ISO14001, GOST-R,
Electromagnetic Compatibility	FCC Class A, CE Mark, EN55022 Class A, VCCI Class A(for Japan), AS/NZS CISPR 22 Class A (for Australia/New Zealand), BSMI Class A(for Taiwan)
Electromagnetic Immunity	EN55024

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 PLATFORM SOLUTIONS

In addition to Fujitsu ETERNUS DX, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/
- PRIMERGY: Industrial standard server
- SPARC Enterprise: UNIX server
- PRIMEQUEST: Mission-critical IA server
- ETERNUS: Storage system

Software

www.fujitsu.com/software/
- Interstage: Application infrastructure software
- Systemwalker: System management software

MORE INFORMATION

Learn more about Fujitsu ETERNUS DX, please contact your Fujitsu sales representative, 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 resolve issues of environmental energy efficiency through IT. Please find further information at:
www.fujitsu.com/global/about/environment/



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CONTACT

FUJITSU Limited
Website: www.fujitsu.com/eternus/
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