

Business-Centric IT Platform: Meeting your business goals of today and future



shaping tomorrow with you



The new role of information and communication technology

The cloud era as well as the new Internet of Things has created an unprecedented explosion of data and digital information which are essential to generate new business. The number of sent and received mails, the processed data, inquiries on search engines, the use of social media platforms, and last but not least the transported data through global networks, increase disproportionately. The impacts on data centers are tremendous. The demands on IT organizations have never been greater - the number, complexity, and required performance of applications continue to increase while budgets and data center space are always limited. For many date centers, IT infrastructure and operations have reached a breaking point; incremental improvements no longer work. It's time for platform infrastructure that works more efficient and agile, to enable a more resilient and reliable operation.

To be able to respond to these challenges, FUJITSU offers one of the broadest portfolios of servers and storage systems in the market ranging from industry standard x86 PRIMERGY servers, mission-critical x86 PRIMEQUEST systems, UNIX/SPARC servers to ETERNUS storage systems to offer the right combination of systems, solutions and know-how to our customers.

FUJITSU Server and Storage System

Innovate and modernize ICT in your organization



FUJITSU Server PRIMEQUEST

Enhance the economic benefits of x86 industry standards complemented with a fault immune system architecture.



FUJITSU Storage ETERNUS

Enable customers to build and operate Dynamic Infrastructures for data management and protection.



FUJITSU Server PRIMERGY

Industry's most complete x86-based portfolio for companies of all sizes, across all industries and for any type of workload.

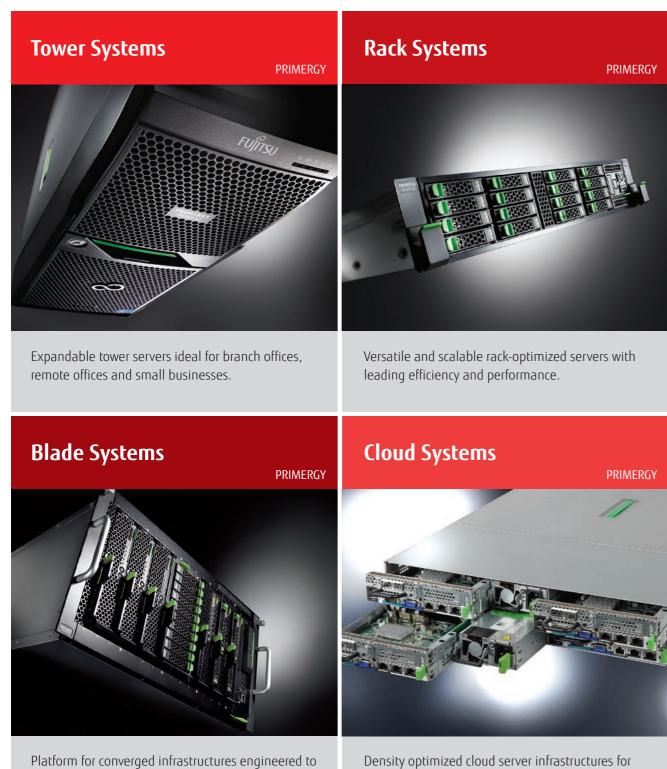


FUJITSU M10 Server

Unmatched scalability of up to 64 SPARC processors together with highest RAS features and a modular architecture.



Industry's most complete x86-based portfolio





High Availability with Japanese Quality

Stringent quality assurance measured at the state-of-the-art IT factory in Japan guarantees an extremely high rate of availability.



Excellent Price/Performance Ratio

PRIMERGY servers are world record breakers when it comes to performance, and rank highly for database and ERP benchmarks. Over several generations PRIMERGY servers have been optimized for virtualization and cloud environments.



With Cool-safe[®] ATD cooling technology and improved power management tools, PRIMERGY servers can support a wider range of temperatures, reducing the risk of heat-related downtimes and doubling the lifespan (MTBF) of electronic components. Enterprises can save up to 27% in energy costs for cooling.



Comprehensive Management

ServerView[®] Suite offers comprehensive administration that covers the entire lifecycle of individual servers as well as entire server parks. It dramatically reduces the time required for server deployment, maintenance and provisioning by up to 90%.



Global Lifecycle Excellence

applications and services.

Cloud, HPC and large scale-out computing.

maximize every hour, watt, and dollar.

Energy and Cost Saving Data Centers

The wide-ranging Fujitsu portfolio of services and tools helps you to reduce costs throughout the lifecycle, shorten project times and increase the availability of

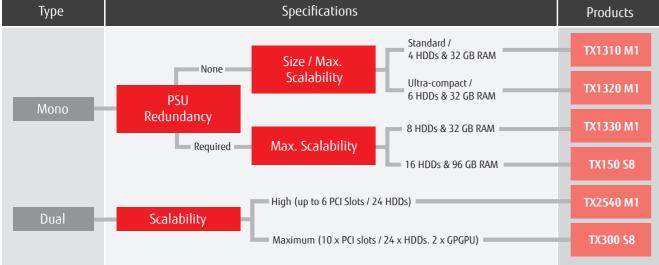




The efficient, flexible foundation for business growth

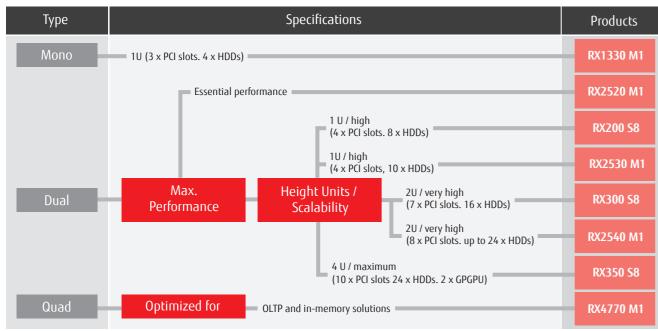
PRIMERGY Tower Systems

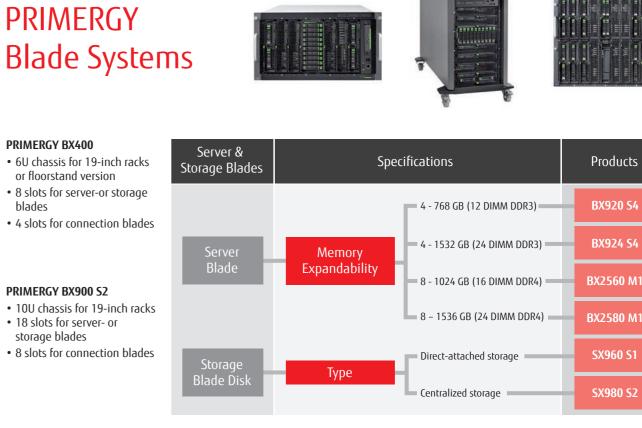




PRIMERGY Rack Systems







PRIMERGY Scale-out Systems for HPC and Cloud Computing

PRIMERGY CX400 M1



Usage Scenario Type	
HPC, Scale-out	Co-proces Support / D
Usage Scenario Type	
High Availability Cluster	Strong Per Cluster
	Type HPC, Scale-out Usage Scenario Type High Availability

	4 - 768 GB (12 DIMM DDR3)	BX920 S4
огу	4 - 1532 GB (24 DIMM DDR3)	BX924 S4
ability	= 8 - 1024 GB (16 DIMM DDR4)	BX2560 M1
	8 – 1536 GB (24 DIMM DDR4)	BX2580 M1
e	Direct-attached storage	SX960 S1
<u> </u>	Centralized storage	SX980 S2

Mission critical x86 open platform

PRIMEQUEST Servers



High-End Mission-Critical Server for Windows and Linux

The Mission Critical IA Server PRIMEQUEST provides high-end server functionality using Fujitsu's world-class technology, cultivated and refined over generations of computer system development. PRIMEQUEST embodies the best characteristics of mainframe and UNIX server reliability, supercomputer high-performance, and the cost and flexibility benefits of open systems.

- Built on Fujitsu's heritage in performance and reliability
- Best performance open platform combined with in-memory database
- Elimination of downtime by Dynamic Reconfiguration and Reserved System Board
- Cost-efficient platform for easy server consolidation by Physical Partitioning.





Open System with Mainframe-class RAS

Integrating the robust performance of Intel[®] Xeon[®] processors, together with Fujitsu's design prowess in high RAS technology, PRIMEQUEST delivers Linux® and Windows[®] reliability that is head and shoulders above the competition.



S

Save Cost

Scalability for Highest Data Throughput

Availability of choices according to business needs. PRIMEQUEST 2800E and 2800B with 2.5 times the performance scalability can accommodate higher enterprise workload.

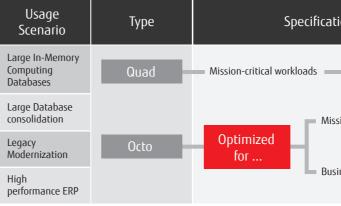
Lower Operational Costs

Thanks to the small chassis and lower power consumption, PRIMEQUEST helps save datacenter costs while providing highest level of performance.



Complete Redundancy for Business Continuity

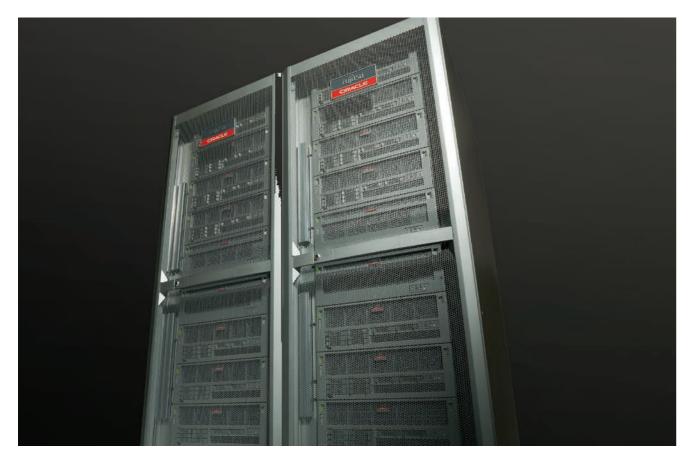
Unique levels of redundancy eliminates causes of major system failure. Dynamic Reconfiguration helps recover from failure without system interruption.



tions	Products	Mission-Critical Features
	2400E	Yes – Reserved System Board, Flexible I/O,
ssion-critical workloads	2800E	Dynamic Reconfiguration, red. MMB, hot-plug PCIe
siness-critical workloads	2800B	No

Mission critical SPARC / Oracle platform

FUJITSU M10 Servers







Fujitsu M10 servers are flexible and scalable UNIX systems that deliver high performance and mission-critical RAS for heavy workloads. These servers provide unmatched scalability from 1 to 64 CPUs, utilizing a modular architecture that allows enterprises to start with only what's needed today, and expand as their business grows. Featuring breakthrough technology including Software on Chip and Liquid Loop Cooling, Fujitsu M10 servers provide highly flexible system configurations with physical partitioning as well as built-in, low-cost virtualization technologies via Oracle VM Server for SPARC and Oracle Solaris Zones.





Extreme Cost Saving on OPEX and CAPEX

Two-pronged approach of core-based CPU activation and modular building-block architecture allows you to buy what you need now and pay as you grow, which greatly contributes to cost saving in CAPEX. Built-in virtualization features like physical partitions and Oracle VM server, coupled with Liquid Looping Cooling technology, significantly reduce running cost in operation.



Real-Time Business Decisions

Mainframe-class RAS allows Fujitsu M10 to run most demanding 24x7 database applications in high speed and low access time between memory and CPU, using parallel computing and Software on Chip technology.



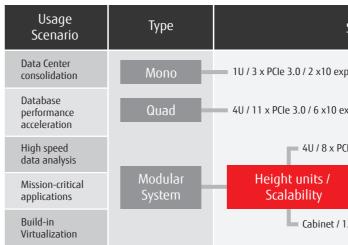
Accelerating Server Evolution

Traditional techniques of vertical up-scale and horizontal out-scale to expand systems have problems in processing large and unprecedented volume of data. Using a modular architecture, Fujitsu M10 can avoid these problems.



World's Leading Performance Benchmark

Leading performance in major benchmark tests demonstrate that Fujitsu M10 is designed to provide extreme performance for a wide range of enterprise applications.



Specifications	Products
xpansion units	M10-1
expansion units	M10-4
PCIe 3.0 / 5 x10 expansion units	M10-4S
Cabinet / 64 x PCIe 3.0 / 40 x IO expansion units	M10-4S (8BB)
/ 128 x PCle 3.0 / 80 x IO expansion units	M10-4S (16BB)

Business-centric storage system

FUJITSU Storage

When it comes to business-centric storage, you can rely on a single provider with more than 50 years experience in managing and storing enterprise data. Fujitsu's ETERNUS DX disk systems and ETERNUS CS data protection appliances allow customers to flexibly manage their increasing data volumes at lower cost, benefitting from a reliable architecture and simplified operations.

Disk Storage Systems



Tape Storage Systems



Data Protection Appliances



ETERNUS DX Family

Leading performance increases system utilization and consolidation resulting in a faster ROI

The ETERNUS DX Series combines storage capabilities with business priorities, enabling high system utilization and consolidation within a leading performance architecture and quality service management.

ETERNUS LT Family

Highly automated, simple and remote operation without any demand for local expert skills

The cost-effective ETERNUS LT tape systems offer impressive scalability and reliability. They are well suited for SMBs and certified to work with market-leading backup and archiving software.

ETERNUS CS Family

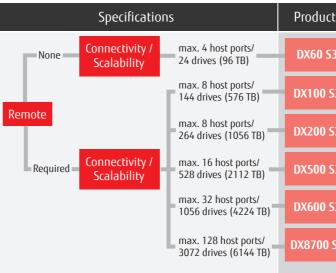
ETERNUS CS data protection appliances radically simplify backup and archive infrastructures by aligning storage resources with business priorities

ETERNUS CS800 is a turn-key data protection appliance providing simple and affordable solutions for customers, following a disk backup strategy with deduplication.



ETERNUS DX Disk Storage Systems





ETERNUS CD10000 Hyper-scale Storage Appliance

 The Fujitsu ETERNUS CD10000 is a turnkey end-to-end solution based on Ceph and industry standard technology. A robust storage architecture for the cloud era. Nearly unlimited and flexible scalability of capacity and performance Fault tolerance and self-healing by design Based on Ceph Open Source storage software Supports object, file and block storage Appliance with end-to-end maintenance 	Description	At a Glance
unlimited scalability at consistently high levels of performance. High performance through high parallelism of read and write operations	is a turnkey end-to-end solution based on Ceph and industry standard technology. A robust storage architecture for the cloud era. This hyperscale, software- defined system is designed for all environments, able to cope with massive online data volumes and offers almost unlimited scalability at consistently high levels of	 scalability of capacity and performance Fault tolerance and self-healing by design Based on Ceph Open Source storage software Supports object, file and block storage Appliance with end-to-end maintenance High performance through high parallelism of read and







ts	Max. Drives	Host Interface
3	24 x SAS / Nearline SAS	Up to 8 Gbit/s FC / 1 Gbit/s iSCSI / 6 Gbit/s SAS
53	120(3.5") / 120(2.5") × SAS / Nearline SAS / Enterprise SSDs	10 Gbit/s FCoE / 10/1 Gbit/s iSCSI,16/8/4 Gbit/s FC, File: 10/1 Gbit/s Ethernet
53	120(3.5") / 240(2.5") x SAS / Nearline SAS / Enterprise SSDs	10 Gbit/s FCoE / 10/1 Gbit/s iSCSI,16/8/4 Gbit/s FC, File: 10/1 Gbit/s Ethernet
53	240(3.5") / 480(2.5") x SAS / Nearline SAS / Enterprise SSDs	10 Gbit/s FCoE / 10/1 Gbit/s iSCSI,16/8/4 Gbit/s FC, File: 10/1 Gbit/s Ethernet
53	480(3.5") / 960(2.5") x SAS / Nearline SAS / Enterprise SSDs	10 Gbit/s FCoE / 10/1 Gbit/s iSCSI,16/8/4 Gbit/s FC, File: 10/1 Gbit/s Ethernet
S2	Up to 3,072 xSSD, SAS and Nearline SAS in mixed configuration (3.5" / 2.5")	Up to 16 Gbit/s FC /10 Gbit/s FCoE, 10/1 Gbit/s iSCSI



Host Connectivity Options

Software Version

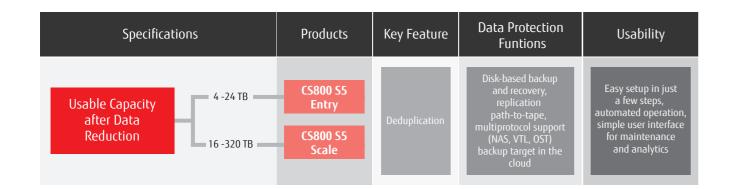
Unified : Block, File and Object

Based on Open Source Ceph storage software

Business-centric storage system

ETERNUS CS800 Data Protection Appliance

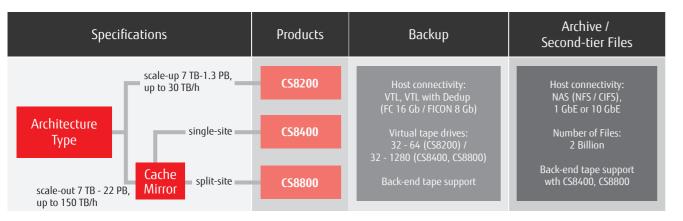




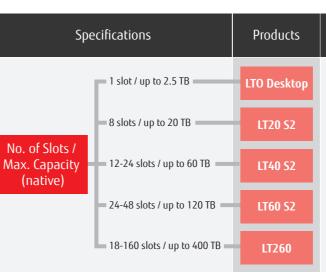
ETERNUS CS8000 V6

Unified Data Protection Appliance





ETERNUS LT Tape Storage System



ETERNUS SF Flexible Data Management

Description

ETERNUS SF storage management software is the uniform management solution for the entire ETERNUS DX series. All essential operations for storage resource management, monitoring, reporting, tiered storage, performance management, disaster resilience and business continuity are integrated. The uniform management for the entire storage infrastructure covers all ETERNUS DX disk storage systems from entry-level through the high-end as well as virtualized server infrastructures.

through automated storage tiering

Reduced storage system power consumption

Automated Quality-of-Service management

ETERNUS Snapshot Manager Efficient Snapshot Management

Description

The ETERNUS Snapshot Manager (ESM) is a feature rich software to manage and catalog application-consistent hardware snapshots of ETERNUS DX arrays without scripting. The software offers granular recovery of data across physical and virtual environments to minimize downtime and enhance business productivity.

- without scripting
- Application-consistency increases protection for mission-critical data with low production impact Snapshot support for industry's broadest application and file systems eliminates multiple management and operational costs



Interface	Drives	Description
SAS	1	LTO-4 / LTO-5 / LTO-6 drive with 0.8 TB (LTO-4), 1.5 TB (LTO-5) or 2.5 TB (LTO-6) capacity native
SAS or FC	1	LTO-4 / LTO-5 / LTO-6 drive with 6.4 TB (LTO-4), 12 TB (LTO-5) or 20 TB (LTO-6) capacity native
SAS or FC	2	LTO-4 / LTO-5 / LTO-6 drive with 9.6 - 19.2 TB (LTO-4), 18 -36 TB (LTO-5) or 30 -60 TB (LTO-6) capacity native
SAS or FC	4	LTO-4 / LTO-5 / LTO-6 drive with 19.2 - 38.4 TB (LTO-4), 36 -72 TB (LTO-5) or 60 -120 TB (LTO-6) capacity native
SAS or FC	12	LTO-5 / LTO-6 drive with 120 - 240 TB (LTO-5) or 200 -400 TB (LTO-6) capacity native

ETERNUS SF at a Glance

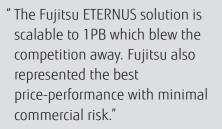
- Management of all infrastructure devices based on a unified view
- Visualization of the relations between storage, network and physical servers or virtual servers
- Early detection and elimination of performance issues through performance monitoring
- Reduced initial system infrastructure through thin provisioning
- Fault management with support for fault resolution vHardware investment optimization
- Central management for local and remote replication
- Enhanced business continuity with transparent failover

ETERNUS SF at a glance

Manages and catalogs application-consistent hardware snapshots of ETERNUS DX arrays

Granular and consistent recovery of applications and files speeds up and simplifies recovery process

In the Words of Our Customers



John Higgins, IT Manager, Tendring District Council

" The decision to partner with Fujitsu was influenced by its innovation in sustainability ... and its long term commitment to sustainable data centre environments"

University Alliance

" Swedish public utility upgrades to Fujitsu M10-4 Servers to modernize billing and statistics of the state's high-voltage electrical distribution networks."

Saeid Firuzabadi-Bonab, System Administrator, Svenska Kraftnät "We were most impressed by Fujitsu's track record in data center and their customer-centric approach. They score high in reliability and are patient to understand our needs. Few in the market gave us as much confidence in providing such sophisticated end-to-end solutions. We look forward to enjoying the long term benefits from our new ICT systems and data center services."

Richard Chen, CEO, Core Pacific – Yamaichi (PRIMERGY servers and ETERNUS storage systems are used to build Core Pacific – Yamaichi's data center infrastructure)

" The highly professional and fast support we have received from Fujitsu during our collaboration has always helped us a great deal, and is a key reason why we chose to work with this long-term partner." (The ETERNUS DX500 S3 storage system makes life easy for EOS Group and its continual growth)

Dr. Thorsten Kleinwort, Data Center Manager, EOS IT Services

'The raw performance is extraordinary and we now supply Cloud services to five different media companies who each have their own virtual data centre. This enables them to broadcast valuable content in a totally secure and seamless fashion."

Martin Bradburn, CEO, Pea Soup (Pea Soup uses PRIMERGY Servers for building its Cloud business) " Fujitsu's IT equipment initiatives offered savings of 43%... building on the business' environmental strategies."
 TOYOTA

"We wanted to reorganize our data center to cut costs and energy consumption, but also to improve our services. By selecting Fujitsu blade servers, we were able to achieve these goals."

Marcello Missagia, Director of GIS Information Technology and Statistics, Vicenza Municipal Authority

> " Fujitsu's servers and storage systems cut CO2 emissions by 40%. We were determined to streamline operations ... and to help the environment"

Hokiruku Bank



"Our systems were unable to effectively catch up with the expansion of our business in APAC. So we were keen to find a reliable partner to help us with this situation. We were impressed by the comprehensive services offered by Fujitsu. Throughout the whole process we are confident that we are in capable hands."

Fergus Tooher, VP, Information Technology ThyssenKrupp Elevator AG, Asia Pacific (ThyssenKrupp uses PRIMERGY servers and ETERNUS storage systems to build its IaaS for SAP hosting)

> "We can now produce detailed reports that help inform our decision making and control our inventory more effectively. Smart decisions need smart information and that is what this new server environment provides." (DIS Migrates Private Cloud to Fujitsu PRIMERGY Blade Servers)

Goran Rakić, IT Director, DIS

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