The mission critical open system Fujitsu PRIMEQUEST provides high-end server functionality using superior Fujitsu technology, long cultivated and refined over generations of computer system development.

The most cost-efficient enterprise server
The mission critical x86 server “Fujitsu PRIMEQUEST” is a high-end data center system focused on the needs of the growing enterprise. Based on technologies and innovations Fujitsu has refined over generations of highly reliable mainframe and UNIX servers, it provides mission critical class high-performance, excellent service availability and the openness of x86 servers.

Platform of standards and high availability
With outstanding redundancy, Fujitsu PRIMEQUEST 2400E3 provides the high uptime required from true enterprise platforms. The heart of the server, the system boards including CPUs and memory modules, can be instantly recovered on failure, enabling smooth operation of mission-critical workloads. In fact, almost every component can be redundantly configured.

Global standard Linux® and/or Microsoft® Windows® operating systems, with highly advanced Fujitsu reliability, stability and manageability technologies, make Fujitsu PRIMEQUEST a highly cost effective mission critical open platform.

Customer investment is fully secured by:
- Ability to operate a 24-hour, 365-day business.
- Outstanding performance and reliability.
- Excellent flexibility and scalability in an open server.
- A radically improved cost/performance profile.
- Use optimization and scalability for the future.

Platform of excellent performance per cost
PRIMEQUEST 2400E3 helps reduce running costs for mission critical systems including software support charges.

This new PRIMEQUEST is the world-first open server platform which enables online addition and replacement of system boards and I/O boards – Customers can be freed from system business disruption.

Under the strict quality standards in Fujitsu’s production processes – from server design to manufacturing and quality assurance – Fujitsu PRIMEQUEST can dramatically reduce failure rates.
<table>
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<th>Main features</th>
<th>Benefits</th>
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| **Complete redundancy and online recovery function**                        | - Systems on Fujitsu PRIMEQUEST 2400E3 can continue operation even if a component fails  
- Central component failure is usually fatal for continued system operation. Fujitsu PRIMEQUEST’s unique levels of redundancy eliminate such causes of major system failure making it suitable for enterprise operation  
- Dynamic Reconfiguration can help recover from failure without system interruption  
- Fujitsu PRIMEQUEST 2400E3 can satisfy customers demand to expand business platform without disruption |
With Fujitsu PRIMEQUEST 2400E3, your most important business operations can be strictly protected from errors as follows:

- Partitions using multiple system boards (SB) can continue operation even if one full system board fails. Service may degrade a little, but the failed system board can be immediately replaced by a reserved System Board. This means normal service levels can be very quickly resumed.
- Dynamic Reconfiguration help recover from failures on System Boards or I/O Units without system stoppage.
- Memory can be mirrored. This means that even if a memory failure occurs the application will continue using the correct data. With Double Data Device Correction (DDDC), even if two memory chips fail, the system can continue operation without interruption. With Address Range Mirror, you can eliminate system down caused by memory failures while saving investment to make memory redundant.
- Failed processor cores can be replaced by reserved cores using extended partitioning.
- System Interconnect, called Quick Path Interconnect (QPI), provides multiple access routes. This ensures continued operation even if one route fails.
- Fans, PCI Express switches, PCI Express cards, and Ethernet ports, are redundant as standard.
- HDD can be configured redundant using hardware or software RAID.
- Management Boards (MMB) and Power Supply Units (PSU) can be optionally configured as redundant.

With new memory technology called DDR4 inside the box, data protection of PRIMEQUEST 2400E2 has become more resilient.

- Bank SDDC/DDDC is expanded recovery from SDDC/DDDC recovery in units of DRAM to recovery in units of bank of DRAM. Memory recovery in more granular level strengthens data protection of PRIMEQUEST – even if Maximum five banks fail at all once, read/write operations from to memory can continue.
- Multi Memory Rank Sparing allows reserves Memory Ranks of DIMM to replace Memory Ranks in correctable errors with the reserved ones without intervention of operation.

With enhancement of problem prevention mechanism called eMCA Gen2, PRIMEQUEST 2800E2 helps eliminate problems in CPU, memory, or IO by detections of recoverable errors via system trace. Even if such recoverable errors happen, servers can continue their operations.

Only grow as you need, only buy for that growth

With up to 146 cores and maximum 12TB of memory, Fujitsu PRIMEQUEST 2400E3 has the resources to accommodate hundreds of workloads. Performance has doubled ensuring Fujitsu PRIMEQUEST 2400E3 capability as an enterprise workload platform continues to expand.

Outstanding performance from such a compact chassis means Fujitsu PRIMEQUEST 2400E3 is the "platform for success" when you really need to improve performance and cost-efficiency.

Secure confidential data

Fujitsu PRIMEQUEST embeds security measures into its hardware and OS. Due to swift encryption by Advanced Encryption Standard New Instructions (AES-NI) with the Intel Xeon E7-8800 v4 product family, a hacker could never maliciously use any stolen data. As an example, Oracle Database 12c and Xeon processors shrink the encryption time to one-tenth.

Much lower operational costs

Fujitsu PRIMEQUEST 2400E3 can reduce operational costs: power consumption, datacenter space, and Oracle license and support changes. And it triples OLTP performance per Oracle database license and support charge compared to previous generation of PRIMEQUEST.

Simplified server lifecycle management

During a server’s life cycle you must undertake a variety of actions including installation, integration, monitoring, maintenance, and upgrading of all servers in your datacenter. To do this you have to use different tools for different actions. It can be a nightmare. Fully integrated tools through the lifecycle are what our customers are demanding.

Fujitsu provides an integrated suite of tools that take care of server products at your datacenter for the entire life of the server. ServerView Suite, a bundled product with Fujitsu PRIMEQUEST and PRIMERGY, can help ease the pain in dealing with servers. This includes:

- Automated OS installation on multiple servers
- Automated RAID configuration
- Automated driver updates, hot fixes and security patch applications
- Integrated monitoring of multiple Fujitsu PRIMEQUEST and Fujitsu PRIMERGY servers
- Simplified setup and monitoring of disk array controllers, HDD, and logical drives

The suite also enables early problem detection and resolution via intuitive diagnostics, look-and-feel operation and pro-active error alerts.
Risk-free virtualization

Using Fujitsu PRIMEQUEST and industry standard virtualization, such as VMware vSphere™ 5, Hyper-V, and KVM lets you more easily create the right platform for your demands. It means, simple migration using Physical Partitioning with no performance overheads. High reliability is guaranteed by Physical Partitioning as failures in one partition can never spread to other partitions. With VMware vSphere™ 5, hundreds of virtual machines can be created on one server.

Fujitsu PRIMEQUEST Physical Partitioning delivers risk-free and reliable virtualization. Such partitioning without performance overheads also requires no elaborate performance testing on your application environments. Further your main mission critical applications, such as databases, can be fully isolated from failures in all other partitions.

If you are planning to accommodate greater numbers of workloads, you can mix standard virtualization products with Physical Partitioning. Such state-of-the-art virtualization means applications can share system resources more flexibly, while main systems remain fully protected.

If you plan to save server operational costs by consolidation of up to four servers, you can use Extended Partitioning.
Physical Partition
Max. two Physical Partitions form from max. two System Boards, max. two Memory Scaleup Boards, max. four IO Units, and max. two Disk Units

Extended Partition
Max. four Extended Partitions

Mainboard type
Up to 2 x System Board

System Boards
Processor quantity
2 Processor per System Board

Processor type
- Intel Xeon® processor E7-8860v4 (18C/36T, 2.2GHz, TLC:45MB, 140W)
- Intel Xeon® processor E7-8867v4 (18C/36T, 2.4GHz, TLC:45MB, 165W)
- Intel Xeon® processor E7-8870v4 (20C/40T, 2.1GHz, TLC:50MB, 140W)
- Intel Xeon® processor E7-8880v4 (22C/44T, 2.2GHz, TLC:55MB, 150W)
- Intel Xeon® processor E7-8890v4 (18C/36T, 2.2GHz, TLC:35MB, 140W)
- Intel Xeon® processor E7-8891v4 (10C/20T, 2.8GHz, TLC:60MB, 165W)

Memory slots
96

Memory slot type
DDR4

Memory capacity (min.- max.)
16GB-12TB

Memory protection
ECC
- Extended ECC
- Double Data Device Correction
- Memory Patrol
- Memory Mirroring; full and partial mirroring available
- Bank DDDC/SDDC
- Multi Memory Rank Sparing
- Address Based Memory Mirror

Memory notes
Up to 96 DIMM slots per server within 2 system boards, each equipped with 2 Memory Mezzanine cards. 12TB will be available with 256GB memory available as Special Release. 6TB is available with 128GB memory as General Release.

Memory modules
- 16 GB (2 x 8GB) DDR4, RDIMM, ECC
- 32 GB (2 x 16GB) DDR4, RDIMM, ECC
- 64 GB (2 x 32GB) DDR4, RDIMM, ECC
- 128 GB (2 x 64GB) DDR4, RDIMM, ECC
- 256 GB (2 x 128GB) DDR4, RDIMM, ECC

Memory modules notes
Memory modules are delivered in units of 2 DIMMS per order code

Memory Scaleup Board
Max. two Memory Scaleup Board

Memory slot
48 slots per Memory Scaleup Board

Memory slot type
DDR4

Memory capacity (min.- max.)
16GB-3TB per Memory Scaleup Board

Memory protection
Same memory protection as System Board

Memory Module
All memory modules available for System Boards are available for Memory Scaleup Board

256GB Memory is NOT mountable to Memory Scaleup Board

Drive bays
### Disks
Disks can be mounted in max. two System Boards and in max. two Disk Units

#### Hard disk bay configuration
- Internal storage: Max. 16 x 2.5-inch for SAS
- External storage: Max. 576 x 2.5-inch for SAS

#### Hard disk drive
- HDD SAS, 12Gb/s, 300 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise
- HDD SAS, 12Gb/s, 600 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise
- HDD SAS, 12Gb/s, 900 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
- HDD SAS, 12Gb/s, 1.2 TB, 10,000 rpm, hot-plug, 2.5-inch, enterprise

#### RAID Controller
- PRAID EP420i (2GB cache)
- Optional FBU, License Activation Key for CacheCade 2.0 and FastPath for PRAID EP420i

### Interfaces
- LAN ports in max. four IO Units are available.
- Max. four sets of LAN ports below selectable
  - 1 x dual 1Gbps Ethernet (RJ45) ports for IOU 1GbE
  - 1 x dual 10Gbps Ethernet (RJ45) ports for IOU 10GbE

#### Graphics (15-pin)
1 per System Board

#### Serial 1 (9-pin)
1 per Management Board

#### Management LAN (RJ45)
1 per Management Board

### Slots
- PCIe slots in max. four IO units and max. four PCI Boxes are available.
- Max. four sets of PCIe 3 slots below selectable
  - 4 low profile PCIe 3 slots for IOU 1GbE
  - 1 low profile PCIe 3 slots and 2 PCIe 3 full height slots for IOU 10GbE

#### Note
- Expandable to 56 slots when using PCI Boxes

### Drive bays
- Storage drive bays: 2.5-inch hot-plug SAS
- Storage drive bay configuration: Max. 16 x 2.5-inch

### General system information
- Number of fans: 6 fan modules contained in PSU and FANU
- Fan configuration: Hot plug

### Operating panel
#### Status LED
- System status (orange / yellow)
- Power (amber / green)
- Identification (blue)

### Connectable components
#### Fibre channel controllers
- Single Channel 8Gbps Fiber Channel Card
- Dual Channel 8Gbps Fiber Channel Card
- Single Channel 16Gbps Fiber Channel Card
- Dual Channel 16Gbps Fiber Channel Card

#### LAN controllers
- Dual Channel 1000BASE-T Card
- Quad Channel 1000BASE-T Card
- Dual Channel 10G BASE-T LAN Card
- Dual Channel 10G BASE LAN Card
- 10GBASE-SR SFP+ Optical Module
- Dual Channel FCoE Card (10Gbps)
**InfiniBand controllers**
- Single Channel 56Gbps Infiniband card
- Dual Channel 56Gbps Infiniband card
- Single Channel 100Gbps Infiniband card
- Dual Channel 100Gbps Infiniband card

**SAS Controllers**
- Dual Channel SAS RAID control card
- Dual Channel SAS control card

**PCIe SSD**
- PCIe SSD card (800 GB)
- PCIe SSD card (1.2 TB)
- PCIe SSD card (2.0 TB)

**Optional Software**

**Server Management**
- ServerView Suite

**Operating System**

**Microsoft Windows Server® 2012 R2**
- Microsoft Windows Server® 2012 R2 Standard Edition (64-bit)
- Microsoft Windows Server® 2012 R2 Datacenter Edition (64-bit)

**Red Hat Enterprise Linux**
- Red Hat Enterprise Linux 6 (for Intel64)
- Red Hat Enterprise Linux 7 (for Intel64)

**SUSE Linux Enterprise Server**
- Novell SUSE Linux Enterprise Server 11
- Novell SUSE Linux Enterprise Server 12

**VMware**
- VMware vSphere 6

**Optional Software**

**Server Management**
- ServerView Suite – Control
  - SV Operations Manager including PDA and ASR & R
    (Pre-failure and analysis; Automatic Server Recovery and Restart)
  - SV Performance Manager
  - SV Power Management
  - SV RAID Manager
  - ServerView Suite – Maintain
    - SV Remote Management
    - SV Update Management
    - SV Asset Management
    - SV Online Diagnostics
  - ServerView Suite – Integrate

**RAS features**

**Problem prevention**
- eMCA Gen2

**Redundant components**
- Memory (memory mirroring), HDD (RAID0/1/1E/5/6/10), Power Supply Unit (option), PCI card (option), FAN, System Board (Reserved System Board), Management Board (option), Dual Power Supply to server (option), Processor core degradation

**Online maintenance**
- Online replacement of IO Units is available using Dynamic Reconfiguration and Red Hat Enterprise Linux 6.
- Online replacement of System Boards is supported as hardware level.
- Online replacement of PCIe slots in PCI Box is available.

**Online upgrade**
- Online addition of System Boards and IO Units is available using Dynamic Reconfiguration and Red Hat Enterprise Linux 6

**Quick Path Interconnect**
- Data transferred between system boards protected by system interface error detection, re-transmission, and degradation.
- Removes cabling errors, cabling work and cable problems when changing
**Datasheet** Fujitsu Server PRIMEQUEST 2400E

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<thead>
<tr>
<th>Cable-less Design in chassis</th>
<th>partition configurations.</th>
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<tr>
<td><strong>Dimensions / Weight</strong></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>128 Kg (282 lb.)</td>
</tr>
<tr>
<td>Rack-mount (W x D x H)</td>
<td>445 x 778 x 438 mm, 10U</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Noise emission</td>
<td>60 dB</td>
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<tr>
<td>Operating ambient temperature</td>
<td>5 – 35 degree C</td>
</tr>
<tr>
<td>Operating relative humidity</td>
<td>20 – 80 %</td>
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<tr>
<td>Operating relative altitude</td>
<td>3000 m</td>
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<tr>
<td>Operating environment</td>
<td>Gaseous and Particulate Contamination Guidelines for Datacenters</td>
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<tr>
<td><strong>Electrical values</strong></td>
<td></td>
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<tr>
<td>Rated operating range</td>
<td>100 - 240 VAC ±10%</td>
</tr>
<tr>
<td>Rated frequency range</td>
<td>50/60 Hz ±2%, -4%</td>
</tr>
<tr>
<td>Active power max.</td>
<td>4,100 Watts</td>
</tr>
<tr>
<td>Heat emission</td>
<td>13,989.8 BTU</td>
</tr>
<tr>
<td>Rush currency</td>
<td>Max. 20A</td>
</tr>
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</table>

**Compliance**

Europe:
- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC
- RoHS Directive(2002/95/EC)

USA/Canada:
- FCC
- ICES-003

Japan:
- VCCI

**Service link**

Service link: [www.fujitsu.com/support](http://www.fujitsu.com/support)
More information

Fujitsu platform solutions
In addition to Fujitsu PRIMEQUEST 2400E3, 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
- Fujitsu M10: 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 PRIMEQUEST 2400E3, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website. www.fujitsu.com/primequest/

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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