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.

**Platform of standards and high availability**
With outstanding redundancy, Fujitsu PRIMEQUEST 2800B2 provides the high uptime required from true enterprise platforms. 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.

Using Intel® Xeon® E7-8800 v3 product family and Fujitsu's super fast I/O technologies, Fujitsu PRIMEQUEST 2800B2 has hit highest performance scores in the large systems server arena. This is further proof that Fujitsu can deliver best-matched products, conforming to open systems standards that handle enterprise workloads. For instance, PRIMEQUEST 2800B2 combined with variety of Solid State Drive products can leap data throughput from what existing mission critical servers could provide.

Based on state-of-the-art technologies such as smart cooling, Intel processors and other components Fujitsu PRIMEQUEST 2800B2 provides the best cost-efficiency in the enterprise server arena. It also reduces data center costs by lowering power consumption and minimizing the server footprint.

Fujitsu PRIMEQUEST 2800B2 with its high availability, performance scalability, cost-efficiency, and risk-free virtualization can lift the Return on Investment (ROI) of your IT system.
## Features and benefits

### Main features

**Complete redundancy and online recovery function**

- Almost all the components can be redundantly configured
- Systems on Fujitsu PRIMEQUEST 2800B2 can continue operation even if a component fails

**Highest data throughput in mission critical arena**

- Highest level of database performance in Mission Critical arena
- Fujitsu PRIMEQUEST 2800B2 can satisfy customers' demand to expand business platform without disruption
- High performance for computation, memory access, and I/O access
- High data throughput even for very large data

**Rich variety of I/O products**

- Solid State Drive products for disk drives and flash memory connected through PCIe are selectable according to customers' demands such as cost efficiency and high performance
- For demands for cost-efficiency and performance upgrade, SSD disk drives can be the best solution. For demands for high performance upgrade, PCIe SSD can be the best solution

**Secure confidential data**

- Even if confidential data is stolen, the stolen data cannot be used maliciously
- Intel Xeon's on-chip encryption greatly reduces encryption/decryption time making database encryption a practical solution for protecting intellectual property

**Much lower operational costs**

- Fujitsu PRIMEQUEST 2800B2 can halve reduce power consumption compared to predecessor model at similar performance
- With high performance Intel Xeon E7-8800 v3 product family and super fast I/O technology, PRIMEQUEST provides high performance with small number processor core
- As server resource utilization changes, PRIMEQUEST 2800B2 power consumption stays low. In particular it only consumes power according to its application workload
- PRIMEQUEST help reduce costs for datacenter space
- PRIMEQUEST can save costs more for Oracle DB license and support charge compared to other Mission Critical Servers at the similar performance.

**Simplified server lifecycle management**

- An integrated suite of tools takes care of servers and their component products in your datacenter over the entire life of the server
- Human resource costs for server management, including: installation, integration, monitoring, maintenance, and upgrading are reduced
Almost every component redundant
With Fujitsu PRIMEQUEST 2800B2, your most important business operations can be strictly protected from errors as follows:

- 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.
- 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.
- Power Supply Units (PSU) can be optionally configured as redundant.

With new memory technology called DDR4 inside the box, data protection of PRIMEQUEST 2800B2 has become more resilient.

- Bank SDDC/DDDC is recovery mechanism enhanced 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 all at 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 2800B2 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.

Much lower operational costs
Fujitsu PRIMEQUEST 2800B2 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.

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 v3 processor 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.

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.
Specifications

<table>
<thead>
<tr>
<th>Mainboard type</th>
<th>Up to 4 x System Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Note for System Board</td>
<td>System Board selectable from one with Trust Platform Module (TPM) and one without TPM</td>
</tr>
</tbody>
</table>

**System Boards**

<table>
<thead>
<tr>
<th>Processor quantity</th>
<th>2 Processor per System Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor type</td>
<td>Intel Xeon® processor E7-8860v3 (16C/32T, 2.2GHz, TLC:40MB, Turbo: Yes, Mem bus: 140W)</td>
</tr>
<tr>
<td></td>
<td>Intel Xeon® processor E7-8867v3 (16C/32T, 2.5GHz, TLC:45MB, Turbo: Yes, Mem bus: 165W)</td>
</tr>
<tr>
<td></td>
<td>Intel Xeon® processor E7-8870v3 (18C/36T, 2.1GHz, TLC:45MB, Turbo: Yes, Mem bus: 140W)</td>
</tr>
<tr>
<td></td>
<td>Intel Xeon® processor E7-8880v3 (18C/36T, 2.5GHz, TLC:45MB, Turbo: Yes, Mem bus: 150W)</td>
</tr>
<tr>
<td></td>
<td>Intel Xeon® processor E7-8890v3 (18C/36T, 2.5GHz, TLC:45MB, Turbo: Yes, Mem bus: 165W)</td>
</tr>
<tr>
<td></td>
<td>Intel Xeon® processor E7-8891v3 (10C/20T, 2.8GHz, TLC:45MB, Turbo: Yes, Mem bus: 165W)</td>
</tr>
<tr>
<td></td>
<td>Intel Xeon® processor E7-8893v3 (4C/8T, 3.2GHz, TLC:45MB, Turbo: Yes, Mem bus: 140W)</td>
</tr>
</tbody>
</table>

| Memory slots | 192 |
| 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 192 DIMM slots per server within 4 system boards, each equipped with 2 Memory Mezzanine cards. 12TB will be available with 64GB LRDIMM module. |

| 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 |
|                | 64 GB (2 x 32GB) DDR4, LRDIMM , ECC |
|                | 128 GB (2 x 64GB) DDR4, LRDIMM, ECC |

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

| Drive bays | Disks can be mounted in max. two Disk Units |
| Hard disk bay configuration | Internal storage : Max. 8 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, 300 GB, 10,000 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, 600 GB, 10,000 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
- SSD, 12 Gb/s, 200 GB, MLC, hot-plug, 2.5-inch, enterprise
- SSD, 12 Gb/s, 400 GB, MLC, hot-plug, 2.5-inch, enterprise
- SSD, 12 Gb/s, 800 GB, MLC, hot-plug, 2.5-inch, enterprise
- SSD, 12 Gb/s, 1.6 TB, MLC, hot-plug, 2.5-inch, enterprise

RAID Controller

- PRAID EP420i (2GB cache) RAID 0/1/5/6/10 and hot spare supported
- Optional FBU, License Activation Key for CacheCade 2.0 and FastPath for PRAID EP420i

Interfaces

LAN

- 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 ports for IOU 10GbE

Graphics (15-pin)

- 1 (System Board #0 is only Available)

Serial 1 (9-pin)

- 1 per Management Board

Management LAN (RJ45)

- 1 per Management Board

Slots

PCI Express

- Max. four sets of PCIe 3 slots below selectable
  - 4 low profile PCIe 3 slot for IOU 1GbEs
  - 1 low profile PCIe 3 slots and 2 PCIe 3.0 full height slots for IOU 10GbE

Note

- Max. 16 PCIe slots

Drive bays

Storage drive bays

- 2.5-inch hot-plug SAS

Storage drive bay configuration

- Max. 8 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-T BASE LAN Card
- Dual Channel 10G BASE LAN Card
**Fujitsu Server PRIMEQUEST 2800B**

<table>
<thead>
<tr>
<th><strong>10GBase-SR SFP+ Optical Module</strong></th>
<th>Dual Channel 10G BASE-T LAN Card</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FCoE Cards</strong></td>
<td>Dual Channel FCoE Card (10Gbps)</td>
</tr>
<tr>
<td></td>
<td>Dual Channel FCoE Card (40Gbps)</td>
</tr>
<tr>
<td><strong>InfiniBand controllers</strong></td>
<td>Single Channel 56Gbps Infiniband card</td>
</tr>
<tr>
<td></td>
<td>Dual Channel 56Gbps Infiniband card</td>
</tr>
<tr>
<td></td>
<td>Single Channel 100Gbps Infiniband card</td>
</tr>
<tr>
<td></td>
<td>Dual Channel 100Gbps Infiniband card</td>
</tr>
<tr>
<td><strong>SAS Controllers</strong></td>
<td>Dual Channel SAS RAID control card</td>
</tr>
<tr>
<td></td>
<td>Dual Channel SAS control card</td>
</tr>
<tr>
<td><strong>PCle SSD</strong></td>
<td>PCIe SSD card (800 GB)</td>
</tr>
<tr>
<td></td>
<td>PCIe SSD card (1.2 TB)</td>
</tr>
<tr>
<td></td>
<td>PCIe SSD card (2.0 TB)</td>
</tr>
</tbody>
</table>

### Optional Software

**Server Management**

ServerView Suite

### Operating System

**Microsoft Windows Server® 2012**

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

**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 5.5
- 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

**Redundant components**

- Memory (memory mirroring), HDD (RAID0/1/1E/5/6/10), Power Supply Unit (option), PCI card (option), FAN, Dual Power Supply to server (option),

**Online maintenance**

- Online Firmware Update

**Problem prevention**

- eMCA Gen2

**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
### Cable-less Design in chassis

### Dimensions / Weight

<table>
<thead>
<tr>
<th>Weight</th>
<th>143 Kg (315 lb.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rack-mount (W x D x H)</td>
<td>445 x 778 x 438 mm, 10U</td>
</tr>
</tbody>
</table>

### Environment

<table>
<thead>
<tr>
<th>Noise emission</th>
<th>60 dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating ambient temperature</td>
<td>5 – 35 degree C</td>
</tr>
<tr>
<td>Operating relative humidity</td>
<td>20 – 80 %</td>
</tr>
<tr>
<td>Operating relative altitude</td>
<td>3000 m</td>
</tr>
<tr>
<td>Operating environment</td>
<td>Gaseous and Particulate Contamination Guidelines for Datacenters</td>
</tr>
</tbody>
</table>

### Electrical values

<table>
<thead>
<tr>
<th>Rated operating range</th>
<th>200 - 240 VAC ±10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated frequency range</td>
<td>50/60 Hz +2%, -4%</td>
</tr>
<tr>
<td>Active power max.</td>
<td>5,520 Watts</td>
</tr>
<tr>
<td>Heat emission</td>
<td>18,835 BTU</td>
</tr>
<tr>
<td>Rush currency</td>
<td>Max. 20A</td>
</tr>
</tbody>
</table>

### Compliance

<table>
<thead>
<tr>
<th>Europe</th>
<th>EMC Directive 2004/108/EC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Voltage Directive 2006/95/EC</td>
</tr>
<tr>
<td></td>
<td>RoHS Directive (2002/95/EC)</td>
</tr>
<tr>
<td>USA/Canada</td>
<td>FCC</td>
</tr>
<tr>
<td></td>
<td>ICES-003</td>
</tr>
<tr>
<td>Japan</td>
<td>VCCI</td>
</tr>
</tbody>
</table>

### Service link

| Service link | www.fujitsu.com/support |

More information
More Information

**Fujitsu platform solutions**
In addition to Fujitsu PRIMEQUEST 2800B, 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 2800B, 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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