

Data Sheet

FUJITSU Server PRIMEQUEST 2800E3

Critical workload processing revolutionized

Combining the power of Intel® Xeon® Processor E7 product family, the standard specifications of Microsoft Windows and Linux operating systems and the wealth of market solutions with innovative fault immune system architecture for highest availability and business continuity, FUJITSU Server PRIMEQUEST systems provide a new operational efficiency for business and mission-critical computing with truly open standards and to deliver highest performance. FUJITSU Server PRIMEQUEST systems combine the efficiency of an x86-architecture with the reliability levels rivaling that of a UNIX/mainframe architecture. This makes it ideal for processing big data, in-memory solutions such as SAP HANA® and business intelligence applications.

while simplifying resource management without any need for a reboot of the system.



PRIMEQUEST 2800E3

FUJITSU Server PRIMEQUEST 2800E3 is the prime system for economic mission-critical computing. It unifies the economic and flexibility benefits of x86 industry standard systems with mission-critical uptime features. Customers running SAP, financial institutions or big data applications will thus continuously benefit from a radically optimized cost effectiveness compared to UNIX/Mainfram-based enterprise platforms, while preserving all the RAS qualities so that the system always remains active. Featuring eight of the Intel® Xeon® processor E7-8800 v4 product family provided with for up to 192 cores and 24TB DDR4 memory, the PRIMEQUEST 2800E3 provides unprecedented performance and memory capacity for demanding corporate databases, mission-critical applications and in-memory solutions. Mission critical features also enable outstanding platform reliability with innovative error prevention and self-healing capabilities, such as a Reserved System Board, flexible I/O as well as physical hardware partitioning (PPAR). Moreover, unique features, such as Dynamic Reconfiguration enable the efficient use of available resources



Features & Benefits

| Main Features | Benefits |
|--|---|
| <p>Operational efficiency</p> <ul style="list-style-type: none"> ■ Combines x86 industry standard with mission-critical features ■ Eliminate costs related to the UNIX world ■ New levels of energy efficiency <p>Mission critical uptime leads to highest availability values in the x86 industry standard</p> <ul style="list-style-type: none"> ■ Different partitioning available: From software partitioning to completely isolated physical partitioning (PPAR) ■ Up to four physical partitions (PPAR): Failures of one partition do not influence other partitions ■ Active reserved system board for fast automatic recovery of services, in many cases without downtime ■ Flexible I/O ensures availability of PCIe devices ■ Almost everything is redundant ■ Online maintenance <p>Dynamic platform for demanding applications</p> <ul style="list-style-type: none"> ■ 8x Intel® Xeon® processor E7-8800 v4 product family with up to 192 cores ■ 192 DIMM slots enable a configuration of up to super fast 24TB memory ■ 'Glue-less' design, no external QPI cables ■ Many I/O expansion options for up to 56 PCIe slots ■ Dynamic Reconfiguration enables changes in the configuration of resources and system boards without stopping the application | <ul style="list-style-type: none"> ■ Unity of x86 efficiency and flexibility with mission-critical availability ■ Lower license fees and software maintenance costs for Oracle databases <ul style="list-style-type: none"> ■ Flexible platform to best meet individual requirements ■ Business continuity ensured even if there is a failure in one of the partitions ■ Its built-in error prevention/correction and self-healing capabilities result in outstanding platform reliability ■ All serviceable system modules can be accessed from the front or rear of the system without any cabling hassle. Moreover, Dynamic Reconfiguration enables online maintenance without the need for restarts or planned downtimes <ul style="list-style-type: none"> ■ Unprecedented performance and memory capacity for demanding corporate databases, in-memory solutions and mission-critical applications ■ Fast I/O throughput ensured ■ Efficient usage of available resources and simplified resource management without any need for restarts |

Technical details

| | |
|---|--|
| Mainboard type | up to 4 x Systemboard |
| Processor quantity and type | 1 - 8 x Intel® Xeon® processor E7-8800 v4 product family |
| Processor | <p>Intel® Xeon® processor E7-8894v4 (24C/48T, 2.40 GHz, up to 2.8 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8893v4 (4C/8T, 3.20 GHz, up to 3.4 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8891v4 (10C/20T, 2.80 GHz, up to 3.3 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8890v4 (24C/48T, 2.20 GHz, up to 2.6 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8880v4 (22C/44T, 2.20 GHz, up to 2.6 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8870v4 (20C/40T, 2.10 GHz, up to 2.6 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8867v4 (18C/36T, 2.40 GHz, up to 2.8 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8860v4 (18C/36T, 2.20 GHz, up to 2.7 GHz, 9.6 GT/s)</p> <p>Intel® Xeon® processor E7-8855v4 (14C/28T, 2.10 GHz, up to 2.4 GHz, 8.0 GT/s)</p> |
| Memory slots | 192 Max. 24 TB |
| Memory slot type | DIMM (DDR4) |
| Memory capacity (min. - max.) | 16 GB - 24 TB |
| Memory protection | <p>ECC</p> <p>Advanced ECC</p> <p>Memory Mirroring support</p> <p>Address Range Memory Mirroring support</p> <p>DDDC (Double Device Data Correction)</p> |
| Memory notes | Up to 192 DIMM slots per server within 4 system boards, each equipped with 2 Memory Mezzanine cards. 24TB on special release. |
| Memory options | <p>256 GB (2 module(s) 128 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-L, LRDIMM, 8Rx4</p> <p>16 GB (2 module(s) 8 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 1Rx4</p> <p>32 GB (2 module(s) 16 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 1Rx4</p> <p>32 GB (2 module(s) 16 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 2Rx4</p> <p>64 GB (2 module(s) 32 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 2Rx4</p> <p>128 GB (2 module(s) 64 GB) DDR4, registered, ECC, 2,133 MHz, PC4-2133P, LRDIMM, 4Rx4</p> |
| Memory modules notes | Memory modules will be delivered in set's of 2 DIMMs per order code |
| Interfaces | |
| USB 2.0 ports | 4 |
| Graphics (15-pin) | 1 x VGA per partition |
| Management LAN (RJ45) | Dedicated Service LAN port for MMB (10/100 Mbit/s) |
| Onboard or integrated Controller | |
| RAID controller | <p>RAID 0/1 or RAID 5/6 controller integrated in System board and/or Disk Unit (option)</p> <p>Options are described under Components RAID controller</p> |
| LAN controller | LAN controllers are integrated in optional I/O units, details are described under I/O options |
| Remote management controller | PQ2000 Management Board (MMB) |
| Service Processor | |
| General | <p>Management Board (MMB), located on the rear side of the system.</p> <p>2nd MMB as option</p> |
| Interfaces | <p>For Maintenance:</p> <ul style="list-style-type: none"> - Local: 10/100M RJ45 for local maintenance. - Remote: 10/100M RJ45 for REMCS, AIS-Connect, ACA and ServiceLink connection (Remote monitoring service). <p>For Management</p> <ul style="list-style-type: none"> - 0/1 10M/100M/1G RJ45 |
| Redundancy | Up to two MMB unit can be installed in one chassis. 2nd MMB for redundancy is optional. 2nd MMB is not supported at Business model (2800B). |

| I/O options | | | | |
|---|--|-----------------|---|--------------------|
| Type | LAN ports | based on | number of PCIe slots | Max. number |
| I/O Unit 10GbE full-height | 2 x 100/1000 Mbit/s / 10 Gbit/s Ethernet (RJ45) | Intel® X540-AT2 | 2x PCIe Gen3 full height / 1x PCIe Gen3 low profile | 4 |
| I/O Unit 1GbE low-profile | 2 x 10/100/1000 Mbit/s Ethernet | Intel® I350-AM2 | 4x PCIe Gen3 low profile | 4 |
| Drive bays | | | | |
| Storage drive bays | 2.5-inch hot-plug SAS | | | |
| Storage drive bay configuration | Max. 24 x 2.5-inch | | | |
| General system information | | | | |
| Number of fans | 6 | | | |
| Fan configuration | hot plug | | | |
| Fan notes | PSU cooling fan will be used as chassis cooling facility | | | |
| Operating panel | | | | |
| Status LEDs | System status (orange / yellow) Power (amber / green) Identification (blue) | | | |
| RAS Features | | | | |
| Standard | SDDC, ECC, redundant fans and power supply | | | |
| Advanced | Intra-socket memory mirroring, MCA, DDDC | | | |
| Mission-Critical | Reserved SB, flex IO, Dynamic Reconfiguration, red. MMB, hot-plug PCIe | | | |
| Operating Systems and Virtualization Software | | | | |
| Certified or supported operating systems and virtualization software | Hyper-V Server 2016 Windows Server 2016 Datacenter Windows Server 2016 Standard VMware vSphere™ 6.5 VMware vSphere™ 6.7 Oracle® Linux 6 | | | |
| Operating system release link | http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfb3230473 | | | |
| Operating system notes | Not all OSes, OS versions and server functions will be released at server release. For details refer to link below. | | | |
| Server Management | | | | |
| Standard | ServerView Suite - Maintain Remote Management (iRMC in combination with Intel® Node Manager) Update Management (BIOS, Firmware, Windows Drivers, Agents and CIM Providers) Performance Measurement Asset Management Online Diagnostics ServerView Suite - Integrate Integration packs for Microsoft System Center, VMware vCenter, VMware vRealize, Nagios, and HP SIM Deployment tools and others ServerView Suite - Deploy SV Installation Manager ServerView Suite - Control Operations Manager incl. PDA and ASR & R Agents and CIM Providers / Agentless Service System Monitor RAID Manager Capacity Management Power Management Storage Support | | | |
| Dimensions / Weight | | | | |
| Rack (W x D x H) | 445 x 782 x 438 mm | | | |
| Height Unit Rack | 10 U | | | |
| 19" rackmount | Yes | | | |
| Weight | Up to 150 kg | | | |

Dimensions / Weight

| | |
|---------------------|--|
| Weight notes | Fully assembled Actual weight may vary depending on configuration |
|---------------------|--|

Environment

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|--------------------------------------|---|
| Operating ambient temperature | 5 - 35 °C |
| Operating relative humidity | 20 - 80 % |
| Maximum altitude | 3.000 m |
| Operating environment | FTS 04230 – Guideline for Data Center (installation specification) |
| Operating environment link | http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe |
| Noise emission | Measured according to ISO 7779 and declared according to ISO 9296 |
| Sound pressure (LpAm) | 60dB, 74dB(80 Plus Platinum) |
| Sound power (LWAd; 1B = 10dB) | 7.8B, 9.2B(80 Plus Platinum) |

Electrical values

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|---|---|
| Power supply configuration | Up to 6 hot plug power supplies. Base unit equipped with 0 power supplies, redundancy as option. |
| Max. input of single power supply | 3200 W (240 V) |
| Power supply efficiency | 94 % (80 PLUS platinum) 89 % |
| Hot-plug power supply redundancy | Yes |
| Rated voltage range | 200 V - 240 V |
| Rated frequency range | 47 Hz - 63 Hz |
| Rated current max. | 65A / 29A (100 V / 240 V) |
| Rated current in basic configuration | 7,2A |
| Active power (max. configuration) | 5,354 W |
| Heat emission (max. configuration) | 19274.4 kJ/h (18268.6 BTU/h) |

Compliance

| | |
|-------------------------|---|
| Global | CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronic equipment) - planned |
| Europe | CE Class A * |
| Japan | VCCI |
| Compliance link | https://sp.ts.fujitsu.com/sites/certificates |
| Compliance notes | 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. * Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. |

Components

Hard disk drives

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| HDD SAS, 12 Gb/s, 900 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 600 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 600 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 300 GB, 15,000 rpm, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 300 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 2.4 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 1.8 TB, 10,000 rpm, hot-plug, 2.5-inch, enterprise |
| HDD SAS, 12 Gb/s, 1.2 TB, 10,000 rpm, hot-plug, 2.5-inch, enterprise |

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|---|--|
| Solid-State-Drive | SSD SAS, 12 Gb/s, 800 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (5y) |
| | SSD SAS, 12 Gb/s, 400 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (5y) |
| | SSD SAS, 12 Gb/s, 1.6 TB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (5y) |
| PCIe SSD & SATA DOM SSD | PCIe-SSD AIC, 4 TB, Mixed-use, HHHL, Flash drive, 3.1 DWPD (Drive Writes Per Day for 5 years) |
| | PCIe-SSD AIC, 2 TB, Mixed-use, HHHL, Flash drive, 3.0 DWPD (Drive Writes Per Day for 5 years) |
| SCSI / SAS Controller | LSI PSAS CP400e SAS Ctrl. 12 Gbit/s 8 ports ext. PCIe 3.0 x8 |
| | SAS Ctrl., SAS/SATA 12 Gbit/s, RAID level: , |
| RAID Controller | RAID Ctrl FBU option with 25cm cable, RAID level: , |
| | Fujitsu PRAID EP420i, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 2 GB, Optional FBU based on LSI SAS3108 |
| | Fujitsu PRAID EP420e LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 2 GB, Optional FBU based on LSI SAS3108 |
| Fibre Channel controller | Fibre Channel Host Bus Adapter 1 x 8 Gbit/s Emulex LPe1250 MMF LC-style |
| | Fibre Channel Host Bus Adapter 2 x 8 Gbit/s Emulex LPe12002 MMF LC-style |
| | Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Emulex LPe16000B LC-style |
| Fibre Channel controller | Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Emulex LPe16002B LC-style |
| | Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Qlogic QLE2670 LC-style |
| | Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Qlogic QLE2672 LC-style |
| Communication, Network | Converged Network Adapter 2 x 10 Gbit/s PCIe 3.0 x8 SFP+ (Emulex) |
| | Ethernet Ctrl. 2 x 10 Gbit/s PCIe 2.0 x8 SFP+ (Fujitsu) |
| | Ethernet Ctrl. 2 x 10 Gbit/s PCIe 2.1 x8 RJ45 (Intel®) |
| | Ethernet Ctrl. 2 x 1 Gbit/s PCIe 2.1 x4 RJ45 (Intel®) |
| | Ethernet Ctrl. 4 x 1 Gbit/s PCIe 2.1 x4 RJ45 (Intel®) |
| Warranty | |
| Warranty period | 3 years (depending on country) |
| Warranty type | Onsite Service |
| Warranty Terms & Conditions | http://support.ts.fujitsu.com/warranty/Index.asp?LNG=COM |
| Product Related Services - the perfect extension | |
| Service Lifecycle | 5 years after end of product life |
| Service Weblink | www.fujitsu.com/support |

More information

Fujitsu products, solutions & services

In addition to FUJITSU Server PRIMEQUEST 2800E3, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products

www.fujitsu.com/global/products/computing/

Software

www.fujitsu.com/software/

More information

Learn more about FUJITSU Server PRIMEQUEST 2800E3, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts/products/computing/servers/mission-critical/

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 contribute to the creation of a sustainable environment for future generations through IT. Please find further information at <http://www.fujitsu.com/global/about/environment>



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