Data Sheet
FUJITSU Server PRIMEQUEST 2800B3

Grow your business with vast performance and business-critical reliability on x86

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.



PRIMEQUEST 2800B3

FUJITSU Server PRIMEQUEST 2800B3 is an 8-socket rack server equipped with the latest Intel® Xeon® E7-8800 v4 processor family. Providing up to 192 cores and enormous as wells as super fast 24TB DDR4 main memory, populated over 192 DIMM slots, this system offers highest x86 performance. In combination with many PCIe 3.0 expansion options, the PRIMEQUEST 2800B3 offers performance and scalability with no compromise. Fortified with advanced RAS that enables actions in advance to avoid errors, this 10U rack server is the right choice for demanding databases, in-memory solutions and business-critical applications found in SAP environments or big data processing.

Features & Benefits

Main Features	Benefits
Scalable platform for transaction demanding workloads and consolidation	
■ 8x Intel Xeon processor E7-8800 v4 product family with up to 192 cores ■ Huge memory capacity of 24TB over 192 DIMMs ■ 16 PCIe 3.0 expansion options ■ Economic scaling from 2 to 8 sockets	■ Unprecedented performance and memory capacity for demanding corporate databases, in-memory solutions and business-critical applications ■ Fast I/O throughput ensured ■ This system is designed to enable simplify scale-up as required components are "inside" the system thanks to the "glueless" system design
Smart architecture with advanced RAS for Business Critical Workloads	
■ 'Glue-less' design, no external QPI cables ■ Dual power feed option for two redundant phases ■ Advanced memory protection and intra-socket mirroring ■ System health check and failure prevention (MCA)	■ Advanced RAS features have been built into to enable advanced actions for error circumvention, assisted by the enterprise x86 operating systems to increase the system availability ■ No external QPI cables ensure a high level of serviceability
Cost efficient operations	
■ Simplified power management with different pre-defined power profiles ■ Fujitsu ServerView Suite offers tools for installation and deployment, permanent status monitoring and control. A wide range of integration packs allow a seamless and easy integration in widelyused enterprise management systems	■ Simplified and comprehensive power management that results with the high efficient power supplies in significant savings ■ Fujitsu ServerView Suite provides all the functions for fail-safe, flexible and automated 24x7 server operations and improves end-user productivity via intelligent and innovative system management solutions.

Technical details

Mainboard type	up to 4 x Systemboard
Processor quantity and type	2, 4, 6, 8 x Intel® Xeon® processor E7-8800 v4 product family
Processor	Intel® Xeon® processor E7-8855v4 (14C/28T, 2.10 GHz, TLC: 35 MB, Turbo: 2.40 GHz, 8.0 GT/s, Mem bus: 1,866 MHz, 140 W, AVX Base 1.70 GHz, AVX Turbo 2.40 GHz)
	Intel® Xeon® processor E7-8860v4 (18C/36T, 2.20 GHz, TLC: 45 MB, Turbo: 2.70 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 140 W, AVX Base 1.70 GHz, AVX Turbo 2.70 GHz)
	Intel® Xeon® processor E7-8867v4 (18C/36T, 2.40 GHz, TLC: 45 MB, Turbo: 2.80 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 165 W, AVX Base 2.1 GHz, AVX Turbo 2.8 GHz)
	Intel® Xeon® processor E7-8870v4 (20C/40T, 2.10 GHz, TLC: 50 MB, Turbo: 2.60 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 140 W, AVX Base 1.70 GHz, AVX Turbo 2.60 GHz)
	Intel® Xeon® processor E7-8880v4 (22C/44T, 2.20 GHz, TLC: 55 MB, Turbo: 2.60 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 150 W, AVX Base 1.80 GHz, AVX Turbo 2.60 GHz)
	Intel® Xeon® processor E7-8890v4 (24C/48T, 2.20 GHz, TLC: 60 MB, Turbo: 2.60 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 165 W, AVX Base 1.80 GHz, AVX Turbo 2.60 GHz)
	Intel® Xeon® processor E7-8891v4 (10C/20T, 2.80 GHz, TLC: 60 MB, Turbo: 3.30 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 165 W, AVX Base 2.4 GHz, AVX Turbo 3.2 GHz)
	Intel® Xeon® processor E7-8893v4 (4C/8T, 3.20 GHz, TLC: 60 MB, Turbo: 3.40 GHz, 9.6 GT/s, Mem bus: 1,866 MHz, 140 W, AVX Base 2.60 GHz, AVX Turbo 3.20 GHz)
Memory slots	192 Max. 24 TB
Memory slot type	DIMM (DDR4)
Memory capacity (min. - max.)	16 GB - 24 TB
Memory protection	ECC Advanced ECC Memory Mirroring support Address Range Memory Mirroring support DDDC (Double Device Data Correction) SDDC
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	16 GB (2 module(s) 8 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 1Rx4
	32 GB (2 module(s) 16 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 1Rx4
	64 GB (2 module(s) 32 GB) DDR4, registered, ECC, 2,400 MHz, PC4-2400T-R, DIMM, 2Rx4
	128 GB (2 module(s) 64 GB) DDR4, registered, ECC, 2,133 MHz, PC4-2133P, LRDIMM, 4Rx4
Memory modules notes	Memory modules will be delivered in set´s of 2 DIMMs per order code
Interfaces	
Graphics (15-pin)	4 x VGA (1x per SB)
Management LAN (RJ45)	Dedicated Service LAN port for MMB (10/100 Mbit/s)
Onboard or integrated Controller	
RAID controller	RAID 0/1 or RAID 5/6 controller integrated in System board and/or Disk Unit (option) Options are described under Components RAID controller
LAN controller	LAN controller are integrated in optional I/O units, details are described under I/O options
Remote management controller	PQ2000 Management Board (MMB)
Service Processor	
General	Management Board (MMB), located on the rear side of the system.
Interfaces	For Maintenance: - Local: 10/100M RJ45 for local maintenance. - Remote: 10/100M RJ45 for REMCS, AIS-Connect, ACA and ServiceLink connection (Remote monitoring service). For Management - 0/1 10M/100M/1G RJ45

I/O options

Type	LAN ports	based on	number of PCIe slots	Max. number
I/O Unit 10GbE full-hight	2 x 100/1000 Mbit/s / 10 Gbit/s Ethernet (RJ45)	Intel® X540-AT2	2x PCIe Gen3 full hight / 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. 8 x 2.5-inch with max. 2 x Disk Units

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

Operating Systems and Virtualization Software

Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473
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 (Prefailure and Analysis; Automatic Server Recovery and Restart) 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 143 kg
Weight notes	Fully assembled Actual weight may vary depending on configuration

Environment

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)

Environment	
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	
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)	5,227 W
Heat emission (max. configuration)	18817.2 kJ/h (17835.3 BTU/h)

Compliance	
Global	CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronical equipment) - planned
Europe	CE Class A *
Japan	VCCI
Compliance link	http://globalsp.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
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, 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
HDD SAS, 6 Gb/s, 900 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 600 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise
HDD SAS, 6 Gb/s, 300 GB, 10,000 rpm, hot-plug, 2.5-inch, enterprise

Solid-State-Drive	SSD SAS, 12 Gb/s, 800 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
	SSD SAS, 12 Gb/s, 400 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
	SSD SAS, 12 Gb/s, 200 GB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
	SSD SAS, 12 Gb/s, 1.6 TB, Mainstream Endurance, hot-plug, 2.5-inch, enterprise
	PCIe-SSD AIC, 800 GB, MLC, HHHL, Flash drive, 10 DWPD (drive writes per day)
	PCIe-SSD AIC, 2 TB, MLC, HHHL, Flash drive, 10 DWPD (drive writes per day)
	PCIe-SSD AIC, 1.6 TB, MLC, HHHL, Flash drive, 10 DWPD (drive writes per day)
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
	Fujitsu PRAID EP420e FH, 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 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®)
	InfiniBand HCA 1 x 56 Gbit/s PCIe 3.0 x8 QSFP for the US market max. one IB HCA 56Gb controller can be installed (Mellanox)
	InfiniBand HCA 2 x 56 Gbit/s PCIe 3.0 x8 QSFP for the US market max. one IB HCA 56Gb controller can be installed (Mellanox)

Warranty	
Warranty period	3 years
Warranty type	Onsite Service (depending on country)
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty/Index.asp?LNG=COM
Product Support Services - the perfect extension	
Service Lifecycle	5 years after end of product life
Service Weblink	www.fujitsu.com/support

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu PRIMEQUEST 2800B3, 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 PRIMEQUEST 2800B3, 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



Copyrights

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.
For further information see www.fujitsu.com/terms
Copyright © Fujitsu Technology Solutions

Disclaimer

Technical data is subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

Contact
FUJITSU Technology Solutions GmbH

Website: www.fujitsu.com
2016-07-01 CE-EN

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.
For further information see www.fujitsu.com/terms
Copyright © Fujitsu Technology Solutions