

# Data Sheet

## FUJITSU Server PRIMEQUEST 3800B

Superior performance and reliability for business-critical workloads with optimized economics

Combining the power of Intel® Xeon® Processor Scalable Family, the standard specifications of Microsoft Windows and Linux operating systems and the wealth of market solutions with innovative RAS features for highest availability and business continuity, FUJITSU Server PRIMEQUEST systems provide new levels of operational efficiency for business and mission critical computing with truly open standards and 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 preserving all the RAS qualities for maximum uptime.

### PRIMEQUEST 3800B

The FUJITSU Server PRIMEQUEST 3800B is the prime system for business-critical computing that offers superior performance and reliability with optimized economics. This 8-socket rack server combines the flexibility and economic benefits of x86 industry standard systems with business-critical uptime features. Featuring the latest Intel® Xeon® Processor Scalable Family with up to 28 cores per processor for a total of 224 cores, this server delivers superior compute performance leading to efficient business results. With high capacity 12TB DDR4 memory at 2,666 MHz, populated over 96 DIMM slots, the system can support large amounts of data for in-memory databases such as SAP HANA® and real-time data analytics. The large memory capacity also leaves enough headroom for high-density, high-capability virtualization. The superior compute and memory performance in combination with 16 PCIe 3.0 expansion options (Including PHP slots.) offers performance and scalability with no compromise for the most demanding workloads. With a newly designed compact 5U chassis versus

the 10U chassis of the previous generation, the PRIMEQUEST 3800B system is light weight and offers superior performance in an economic, space-saving footprint. All these features when combined with the PRIMEQUEST 3800B's advanced RAS features that prevent errors in advance, makes this 8-socket 5U rack server the right choice for demanding corporate databases, in-memory solutions and business-critical applications found in SAP environments or big data processing.



# Features & Benefits

Main Features	Benefits
<p><b>Scalable platform for transaction demanding workloads and consolidation</b></p> <ul style="list-style-type: none"> <li>■ 8x Intel® Xeon® Platinum processors(8200) with up to 224 cores</li> <li>■ Huge memory capacity of 12TB (DDR4, 2,993 MHz) over 96 DIMMs</li> <li>■ 16 PCIe 3.0 expansion options (Including PHP slots)</li> <li>■ Compact 5U chassis</li> <li>■ Economic scaling from 2 to 8 sockets</li> </ul> <p><b>Smart architecture with advanced RAS for Business Critical Workloads</b></p> <ul style="list-style-type: none"> <li>■ Glue-less' design, no external UPI cables</li> <li>■ Dual power feed option for two redundant phases</li> <li>■ CPU detects data errors and replay execution of instructions</li> <li>■ Advanced memory protection, intra-socket mirroring and address range mirroring</li> <li>■ System health check and failure prevention (MCA Gen.2)</li> <li>■ Online firmware update helps reduce downtime for system maintenance</li> </ul> <p><b>Cost efficiency for your data center</b></p> <ul style="list-style-type: none"> <li>■ Simplified server architecture with a newly designed compact chassis</li> <li>■ Simplified power management with different pre-defined power profiles</li> <li>■ 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 widely used enterprise management systems</li> </ul>	<ul style="list-style-type: none"> <li>■ Unprecedented performance and memory capacity for demanding corporate databases, in-memory solutions and business-critical applications</li> <li>■ Fast memory and I/O throughput ensured</li> <li>■ Cost-efficient 5U chassis packs superior performance in an economic, space-saving footprint</li> <li>■ This system is designed to enable simple scale-up as required components are "inside" the system thanks to the "glue-less" system design</li> <li>■ No external UltraPath Interconnect (UPI) cables ensure a high level of serviceability</li> <li>■ Improved system resilience, system can continue its operations even if two PSUs fail</li> <li>■ Advanced RAS features in CPUs and memories have been built in to enable advanced actions for error circumvention, assisted by the enterprise x86 operating systems to increase the system availability</li> <li>■ No need to stop the system even during a system update</li> <li>■ Reduced data center hardware costs and electricity bills</li> <li>■ Simplified and comprehensive power management that results with the high efficient power supplies in significant savings</li> <li>■ 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</li> </ul>

# Technical details

## PRIMEQUEST 3800B

<b>Mainboard type</b>	up to 4 x Systemboards
<b>Chipset</b>	Intel® C621
<b>Processor quantity and type</b>	2, 4, 6, 8 x Intel® Xeon® Processor Scalable Family
<b>Intel® Xeon® Platinum Processor</b>	<p>Intel® Xeon® Platinum 8153 (16C, 2.00 GHz, TLC: 22 MB, Turbo: 2.30 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 125 W, AVX Base 1.60 GHz, AVX Turbo 2.00 GHz)</p> <p>Intel® Xeon® Platinum 8156 (4C, 3.60 GHz, TLC: 16.5 MB, Turbo: 3.70 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 105 W, AVX Base 3.30 GHz, AVX Turbo 3.60 GHz)</p> <p>Intel® Xeon® Platinum 8158 (12C, 3.00 GHz, TLC: 24.75 MB, Turbo: 3.60 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 150 W, AVX Base 2.60 GHz, AVX Turbo 3.30 GHz)</p> <p>Intel® Xeon® Platinum 8160 (24C, 2.10 GHz, TLC: 33 MB, Turbo: 2.80 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 150 W, AVX Base 1.80 GHz, AVX Turbo 2.50 GHz)</p> <p>Intel® Xeon® Platinum 8160M (24C, 2.10 GHz, TLC: 33 MB, Turbo: 2.80 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 150 W, AVX Base 1.80 GHz, AVX Turbo 2.50 GHz)</p> <p>Intel® Xeon® Platinum 8164 (26C, 2.00 GHz, TLC: 35.75 MB, Turbo: 2.70 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 150 W, AVX Base 1.60 GHz, AVX Turbo 2.30 GHz)</p> <p>Intel® Xeon® Platinum 8168 (24C, 2.70 GHz, TLC: 33 MB, Turbo: 3.40 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 205 W, AVX Base 2.30 GHz, AVX Turbo 3.00 GHz)</p> <p>Intel® Xeon® Platinum 8170 (26C, 2.10 GHz, TLC: 35.75 MB, Turbo: 2.80 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.40 GHz)</p> <p>Intel® Xeon® Platinum 8170M (26C, 2.10 GHz, TLC: 35.75 MB, Turbo: 2.80 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.40 GHz)</p> <p>Intel® Xeon® Platinum 8176 (28C, 2.10 GHz, TLC: 38.5 MB, Turbo: 2.80 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.40 GHz)</p> <p>Intel® Xeon® Platinum 8176M (28C, 2.10 GHz, TLC: 38.5 MB, Turbo: 2.80 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 165 W, AVX Base 1.70 GHz, AVX Turbo 2.40 GHz)</p> <p>Intel® Xeon® Platinum 8180 (28C, 2.50 GHz, TLC: 38.5 MB, Turbo: 3.20 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 205 W, AVX Base 1.70 GHz, AVX Turbo 2.30 GHz)</p> <p>Intel® Xeon® Platinum 8180M (28C, 2.50 GHz, TLC: 38.5 MB, Turbo: 3.20 GHz, 10.4 GT/s, Mem bus: 2,667 MHz, 205 W, AVX Base 1.70 GHz, AVX Turbo 2.30 GHz)</p>
<b>Memory slots</b>	96
<b>Memory slot type</b>	DIMM (DDR4)
<b>Memory capacity (min. - max.)</b>	32 GB - 12 TB
<b>Memory protection</b>	<p>ECC</p> <p>Advanced ECC</p> <p>Memory Mirroring support</p> <p>Address Range Memory Mirroring support</p> <p>Rank sparing memory support</p> <p>Memory Scrubbing</p> <p>SDDC+1</p> <p>ADDDC-MR</p>
<b>Memory notes</b>	Up to 96 DIMM slots per server within 4 system boards.
<b>Memory modules notes</b>	Memory modules will be delivered in sets of 2 DIMMs per order code
<b>Interfaces</b>	
<b>USB 3.0 ports</b>	4
<b>Graphics (15-pin)</b>	1 x VGA
<b>Management LAN (RJ45)</b>	Management LAN traffic can be switched to shared onboard LAN port
<b>Onboard or integrated Controller (Base unit specific)</b>	
<b>LAN controller</b>	Intel® i210 onboard#10/100/1000 Mbit/s Ethernet
<b>Remote management controller</b>	Integrated Remote Management Controller (iRMC S5, 512 MB attached memory incl. graphics controller)

<b>Slots</b>	
PCI-Express 3.0 x8	8 x Low profile
PCI-Express 3.0 x16	8 x Low profile (PCI hot-plug is available in 4 out of 8 slots)
<b>Drive bays</b>	
Storage drive bays	8 x 2.5-inch hot-plug
Storage drive bay configuration	8x 2.5" SAS HDD/SSD's
<b>General system information</b>	
Number of fans	6
Fan configuration	hot-plug
<b>Operating panel</b>	
Status LEDs	Power (green) System status (orange) Identification (blue)
<b>RAS Features</b>	
Standard	SDDC+1, ECC, redundant fans and power supply
Advanced	Intra-socket memory mirroring, MCA, ADDDC-MR
<b>Operating Systems and Virtualization Software</b>	
Certified or supported operating systems and virtualization software	Windows Server 2019 Datacenter
	Windows Server 2019 Standard
	Hyper-V Server 2016
	Windows Server 2016 Datacenter
	Windows Server 2016 Standard
	Hyper-V Server 2012 R2
	Windows Server 2012 R2 Datacenter
	Windows Server 2012 R2 Standard
	VMware vSphere™ 6.5
	VMware vSphere™ 6.7
	SUSE® Linux Enterprise Server 12
	Red Hat® Enterprise Linux 7
Oracle® Linux 7	
Oracle® VM 3	
Operating system release link	<a href="http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfb3230473">http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfb3230473</a>
Operating system notes	Not all OSes, OS versions and server functions will be released at server release. For details, please refer to the link.
<b>Server Management and Infrastructure Management</b>	
Standard	ServerView Suite - Maintain Remote Management (iRMC S5) Update Management (BIOS, Firmware, Windows Drives and SV Agents) 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

## Server Management and Infrastructure Management

<b>Option</b>	ServerView embedded Lifecycle Management (eLCM) Lifecycle management Infrastructure Manager (ISM) Automate device configuration Mass OS installation Node Management Health status Monitoring and Control Capacity/Threshold Management Power Management Converged Management Auto Discovery Virtual-I/O Management Network topology Management Remote Management Update Management Logging and Auditing Integrate in to Enterprise Management Vendor specific Management Monitor 3rd party platforms
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## Dimensions / Weight

<b>Rack (W x D x H)</b>	482 x 820 x 219 mm
<b>Height Unit Rack</b>	5 U
<b>19" rackmount</b>	Yes
<b>Weight</b>	Up to 80 kg
<b>Weight notes</b>	Fully assembled Actual weight may vary depending on configuration

## Floor-stand (W x D x H)

<b>Height Unit Rack</b>	5 U
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## Environment

<b>Operating ambient temperature</b>	5 - 35 °C (5 - 40 °C with Advanced Thermal Design option)
<b>Operating relative humidity</b>	10 - 80 %
<b>Temperature and humidity notes</b>	Non condensing
<b>Maximum altitude</b>	3.000 m
<b>Operating environment</b>	FTS 04230 - Guideline for Data Center (installation specification)
<b>Operating environment link</b>	<a href="http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe">http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe</a>
<b>Noise emission</b>	Measured according to ISO 7779 and declared according to ISO 9296
<b>Sound pressure (LpAm)</b>	61 dB
<b>Sound power (LWAd; 1B = 10dB)</b>	7.0B

## Electrical values

<b>Power supply configuration</b>	Up to 4 hot-plug power supplies. Base unit equipped with 2 power supplies, redundancy as option.
<b>Power supply efficiency</b>	94 % (80 PLUS platinum)
<b>Hot-plug power supply redundancy</b>	Yes
<b>Rated voltage range</b>	200 V - 240 V
<b>Rated frequency range</b>	50 Hz - 60 Hz
<b>Rated current max.</b>	12.6A (200V)
<b>Rated current in basic configuration</b>	10A
<b>Active power (max. configuration)</b>	4,167 W
<b>Heat emission (max. configuration)</b>	15001.2 kJ/h (14218.4 BTU/h)

## Compliance

<b>Global</b>	CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronic equipment) - planned
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<b>Compliance</b>	
Europe	CE Class A *
Japan	VCCI
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>
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

<b>Hard disk drives</b>	HDD SAS, 12 Gb/s, 900 GB, 15,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 900 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 600 GB, 15,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 600 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 300 GB, 15,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 300 GB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 1.8 TB, 10,000 rpm, 512e, hot-plug, 2.5-inch, enterprise
	HDD SAS, 12 Gb/s, 1.2 TB, 10,000 rpm, 512n, hot-plug, 2.5-inch, enterprise
<b>Solid-State-Drive</b>	SSD SAS, 12 Gb/s, 800 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years)
	SSD SAS, 12 Gb/s, 800 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (Drive Writes Per Day for 5 years)
	SSD SAS, 12 Gb/s, 400 GB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years)
	SSD SAS, 12 Gb/s, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 2.3 DWPD (Drive Writes Per Day for 5 years)
	SSD SAS, 12 Gb/s, 1.6 TB, Write-Intensive, hot-plug, 2.5-inch, enterprise, 10 DWPD (Drive Writes Per Day for 5 years)
	SSD SAS, 12 Gb/s, 1.6 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD (Drive Writes Per Day for 5 years)
<b>PCIe SSD</b>	PCIe-SSD AIC, 4 TB, Mixed-use, HHHL, Flash drive, 3 DWPD (Drive Writes Per Day for 5 years)
	PCIe-SSD AIC, 2 TB, Mixed-use, HHHL, Flash drive, 3 DWPD (Drive Writes Per Day for 5 years)
<b>SCSI / SAS Controller</b>	LSI PSAS CP400e LP SAS Ctrl. 12 Gbit/s 8 ports ext. PCIe 3.0 x8
<b>RAID Controller</b>	RAID Ctrl FBU option with 25cm cable, RAID level: , RAID Ctrl FBU option
	Fujitsu PRAID EP580i LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 8 Gbit/s 16 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 8 GB, Optional FBU based on LSI SAS3516
	Fujitsu PRAID EP540i LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 8 Gbit/s 16 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 4 GB, Optional FBU based on LSI SAS3516
	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
<b>Fibre Channel controller</b>	Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Emulex LPe31000-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Emulex LPe31002-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 32 Gbit/s Cavium QLE2740 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 32 Gbit/s Cavium QLE2742 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 32 Gbit/s Emulex LPe32000-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 32 Gbit/s Emulex LPe32002-M6-F MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Qlogic QLE2690 LC-style
	Fibre Channel Host Bus Adapter 2 x 16 Gbit/s Qlogic QLE2692 LC-style

<b>Communication, Network</b>	Converged Network Adapter 2 x 10 Gbit/s PCIe 3.0 x8 SFP+ ( Emulex )
	Ethernet Ctrl. 2 x 10 Gbit/s / 25 Gbit/s PCIe 3.0 x8 SFP28 ( Mellanox )
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 3.0 x8 10Gbit/s Eth (RJ45) ( Emulex )
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 3.0 x8 RJ45 ( Intel® )
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 3.0 x8 SFP+ ( Emulex )
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe 3.0 x8 SFP+ ( Intel® )
	Ethernet Ctrl. 2 x 1 Gbit/s PCIe 2.1 x4 RJ45 ( Intel® )
	Ethernet Ctrl. 2 x 40 Gbit/s PCIe 3.0 x16 QSFP ( Mellanox )
	Ethernet Ctrl. 4 x 1 Gbit/s PCIe 2.1 x4 RJ45 ( Intel® )
	InfiniBand HCA 1 x 100 Gbit/s PCIe 3.0 x16 QSFP ( Mellanox )
	InfiniBand HCA 1 x 56 Gbit/s PCIe 3.0 x8 QSFP ( Mellanox )
	InfiniBand HCA 2 x 100 Gbit/s PCIe 3.0 x16 QSFP ( Mellanox )
	InfiniBand HCA 2 x 56 Gbit/s PCIe 3.0 x8 QSFP ( Mellanox )
Omni Path 1 x 100 Gbit/s PCIe 3.0 x16 QSFP ( Intel® )	

**Warranty**

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

# More information

## Fujitsu products, solutions & services

In addition to FUJITSU Server PRIMEQUEST 3800B, 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/](http://www.fujitsu.com/global/products/computing/)

### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

## More information

Learn more about FUJITSU Server PRIMEQUEST 3800B, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.

<http://www.fujitsu.com/fts/products/computing/servers/mission-critical/primequest-3800b/>

## 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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