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Data Sheet
Fujitsu PRIMERGY CX400 S1 Multi-Node Server Enclosure

Scale-out Smart for HPC and Cloud Computing at lower overall Investment

The PRIMERGY CX Cloud eXtension servers are Fujitsu´s platform for Cloud computing, HPC High Performance Computing, Service Provider and large scale-out computing server farms. They focus on providing large datacenters with massive scale-out x86 server power while at the same time delivering new datacenter economics for server density, energy consumption, heat optimization and lower overall operational costs. The PRIMERGY CX server family has everything customers need to achieve a new dimension of cost-effectiveness with a cloud data center.Due to their innovative scale-out design, the PRIMERGY CX servers require less space per rack and less energy & heat per server as compared to conventional rack servers. They pay dividends in significantly lowered operating expenses, easier installation and more aggregated computing power in the datacenter at lower all around investment.

PRIMERGY CX400 S1

Enterprise customers of all sizes are increasingly looking for improved energy efficiency, higher platform density, better management effectiveness and overall lower investment when realizing their scale-out Cloud Computing, High Performance Computing or Virtualization strategies.
The PRIMERGY CX400 S1 Multi-Node system provides a new condensed form factor, enabling to Scale-out Smart by packaging 4 independent dual socket server nodes and up to 24 local storage drives into a consolidated 2U rack enclosure.
Its new 4 in 2U granularity results in half of the rack space used, lower hardware investment and consolidated efficiency in management for the same performance as compared to standard rack servers. Using shared fans and redundant power

supplies energy consumption is significantly minimized while providing enhanced availability and higher effectiveness of management with hot-plug server nodes, power supplies and local storage drives.
Cost-effectiveness is granted by conventional front-to-back cooling, rear-side external connectivity, installation and operation in existing datacenter rack and air conditioning infrastructures. The server nodes can be individually configured and independently serviced.
A choice of PRIMERGY CX2y0 dual socket server nodes with latest Intel Xeon processor E5 family without (1U height) and with (2U height) GPGPU (General Purpose Graphics Processing Unit) option enable great flexibility to easily match for different solution stacks. All server nodes are condensed to a half-wide form factor, resulting in 4x 1U server nodes (4 in2U) or 2x 2U server nodes (2 in2U) per system. Thus density is doubled compared to standard rack servers.
Hot-plug local storage drives at the front side of the CX400 system operate as local server disks with up to 24=4 x 6 drives standard assignment or 12=4 x 3 drives standard assignment for 3.5" HDDs or SSDs, both with either SATA or SAS interfaces. GPGPU enabled server nodes (2U) are entitled for 24=2x 12 / 1x 24 or 12=2x 6 / 1x 12 standard drive assignments for maximum flexibility.
The PRIMERGY CX400 S1 Multi-Node system acts as a replicable Smart Scale-out building block with conformity to conventional 19 rack infrastructure, providing a new compact server node density to realize large scale-out solutions for HPC and Cloud Computing at lower overall costs.

Features and Benefits

Main Features	Benefits
New condensed 4in2U server density ■ CX400 features up to 4 half-wide dual socket server nodes plus up to 24 storage drives in a single 2U enclosure.	■ 50% less rack space used as compared to equivalent standard rack servers Enables to scale-out in fine tuned granularity more smartly. Higher server density results in more performance per rack unit (4 servers, 8 processors, 24 drives and 64 DIMMS in 2U chassis).
Shared power and cooling ■ CX400 features central cooling fans and up to 2 commonly shared highly efficient hot-plug power supplies.	■ Decreased energy consumption to even better meet power and cooling constraints and green IT mandates Lower energy budgets for a comparable performance as for standard rack servers.
Full compliance to conventional datacenter environment ■ CX400 complies to conventional datacenter front-to-back airflow and cooling and standard 19 industry rack infrastructure and applications.	■ Easy rack-wide team play with already existing datacenter infrastructure lowers overall investment.
Easy serviceability ■ Hot-plug for server nodes, power supplies and disk drives enable enhanced availability and easy serviceability.	■ Each single server can be serviced without affecting the other nodes in the chassis.
Variable local storage ■ Up to 24 hot-plug storage drives integrated into the CX400 system: from economy to business critical and enterprise class, with SAS or SATA interfaces, as HDD or SSD, 2.5 or 3.5, with opt. RAID functionality. Drives are variably connectable to server nodes.	■ Flexibility of drive choice, adaptable to any demand, with full 3-year warranty. ■ Up to 12 drives may be assigned to a single server node, for strong demands of applications.
Choice of server nodes ■ Different dual socket server nodes featuring latest Intel® Xeon® processor E5 family ■ Standard server node,16 DIMMs (1U) ■ Enhanced HPC node /w GPGPU option, 16 DIMMs (2U)	■ Different types of server nodes allow for best match to particular scale-out solution stacks. ■ Latest Intel® Xeon® processor E5 family CPUs for top performance and lower energy budgets.

Technical details

Housing types	24= 4x 6 2.5-inch	12= 4x 3 or 2x 6 3.5-inch	24= 1x 24 or 2x 12 2.5-inch	12= 1x 12 3.5-inch
Storage drive architecture	24x 2.5" SAS/SATA/SSD	12x 3.5" SATA	24x 2.5" SAS/SATA/SSD	12x 3.5" SATA

Enclosure

System unit type	2 U chassis for 19-inch rack
Front bays	Storage drives: 12x 3.5-inch or 24x 2.5-inch (HDD, SSD)
Rear bays	4 bays for half wide server trays CX2y0 2 x for PSU
Fan configuration	4 non hot plug fans
Fan notes	System operation also in degraded mode
Power supply configuration	2x hot-plug power supply modules

Operating panel

Operating buttons	On/off switch ID button
Status LEDs	Identification (blue) Power (green)

Dimensions / Weight

Rack (W x D x H)	447 x 774.7 x 87.3 mm
Height Unit Rack	2 U
19" rackmount	Yes
Weight	up to 38 kg plus 2.5 kg for rack rails
Weight notes	Fully assembled Actual weight may vary depending on configuration
Rack integration kit	Included in Rack System

Electrical values

Max. input of single power supply	1400 W
Power supply configuration note	max. 2 PSU in n or n+1 redundancy configuration.
Power supply efficiency	92% (at 50% PSU load, CSCI "gold")
Rated voltage range	200 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Rated current max.	8 A
Active power (min. configuration)	800 W
Active power (max. configuration)	1400 W
Apparent power (max. configuration)	1445 VA
Heat emission	5040.0 kJ/h (4777.0 BTU/h)
Electrical value notes	Active power max. value depends on system configuration. For details see System Architect.

Environmental

Operating ambient temperature	5 - 35°C
Operating temperature note	DIN IEC 721-3-3 class 3K2
Operating relative humidity	10 - 85 % (non condensing)
Maximum altitude	3000 m
Operating environment	FTS 04230 – Guideline for Data Center (installation locations)
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound power (LWAd; 1B = 10dB)	6,9B (idle) / 7,4B (operating)

Compliance

Germany	GS
Europe	CE Class A *

Compliance

USA/Canada	ULc/us FCC Class A
Global	CB RoHS WEEE
Japan	VCCI Class A + JIS 61000-3-2
Australia/New Zealand	C-Tick
Taiwan	BSMI
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.
Compliance link	http://sp.ts.fujitsu.com/sites/certificates/

Cloud Server Nodes

Product Model name	Product Type	Processor quantity support	Number of nodes	Memory slots total	Supported capacity RAM (max.)	Number of Storage Drives (max.)
PRIMERGY CX250 S1	Dual Socket Cloud Server Node (Intel)	2	4	16	512 GB	6x 2.5-inch or 3x 3.5-inch
PRIMERGY CX270 S1	Dual Socket Cloud Server Node (Intel)	2	2	16	512 GB	24x 2.5-inch or 12x 3.5-inch

Warranty

Standard Warranty	3 years
Service level	On-site Service (depending on country)

Maintenance and Support Services - the perfect extension

Recommended Service	7x24, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Spare Parts availability	5 years
Service Weblink	http://www.fujitsu.com/fts/services

More information

Fujitsu platform solutions

In addition to Fujitsu PRIMERGY CX400 S1, 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/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY CX400 S1, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
http://www.fujitsu.com/

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 http://www.fujitsu.com/global/about/environment/

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