

Data Sheet

FUJITSU Server PRIMERGY CX272 S1 Dual socket server node for PRIMERGY CX420 cluster server

Strong Performance and Cluster Readiness combined

FUJITSU Server PRIMERGY will give you the servers you need to power any workload and changing business requirements. As business processes expand so does the need for applications. Each has its own resource footprint, so you need a way to optimize your computing to better serve your users. PRIMERGY systems will help you match your computing capabilities to your business priorities with our complete portfolio of expandable PRIMERGY tower servers for remote and branch offices, versatile rack-mount servers, compact and scalable blade systems, as well as hyper-converged scale-out servers. They convince by business proven quality with a wide range of innovations, highest efficiency cutting operational cost and complexity, provide more agility in daily operations, and integrate seamlessly to let help you concentrate on core business functions.

FUJITSU Server PRIMERGY CX scale-out systems are built for cloud computing scenarios, high performance computing, service providers and large server farms. They focus on providing large datacenters with massive scale-out x86 server power while at the same time delivering best economics for server density, energy consumption, heat optimization and lower overall operational costs.

PRIMERGY CX272 S1

Two PRIMERGY CX272 S1 server nodes, each in a half-wide 2U form-factor are installed in the PRIMERGY CX420 Dual Node Cluster server, representing a dense 2U rack enclosure. As continuous operation of applications and secure access to data are the main objectives for these server nodes, they are tightly coupled via midplane. In addition, a SAS expander in each node allows to access all storage drives in the PRIMERGY CX420 chassis, and an additional SAS connector enables for easy expansion of data capacity with further, external JBOD devices. High

availability ideally may be granted through use of Microsoft® Windows Server® 2012, which includes failover clustering and the Storage Spaces feature, is it in real mode or virtualized via Microsoft Hyper-V.

A dual socket server node PRIMERGY CX272 S1 features two CPUs out of the Intel® Xeon® processor E5-2600 product family, 16 high bandwidth memory modules for up to 256 GB RAM capacity, two free PCIe Gen3 slots, plus a SAS Host Bus Adapter accessing storage. Local system boot is executed via up to two internal storage drives. Up to twelve additional hot-plug storage drives, located in the shared PRIMERGY CX420 enclosure, can be assigned to both server nodes. Thus investment costs for external storage infrastructure may be economized. A range of powerful communication and networking PCIe cards supports future proof high speed node connectivity.



Features & Benefits

Main Features	Benefits
High Availability <ul style="list-style-type: none">■ Cost efficient cluster-ready CX server node with■ - Apart from two onboard GbE ports, an integrated cluster node interconnect via midplane is standard■ - Expansion of storage drive access via internal 6 Gbps SAS Host Bus Adapter plus standard SAS expander	<ul style="list-style-type: none">■ High Availability with a small budget and little expert knowledge as all hardware prerequisites for an entirely clustered solution are delivered standard■ High IT uptime for data and applications granted by standard operating system features w/o hidden price uplifts and with freedom to run even virtualized environments■ Save on investment costs for complex and often expensive storage network infrastructure like Fibre Channel based SANs – plus the necessary FC controller in the server node■ Stay flexible to adapt to the exact requirements in terms of<ul style="list-style-type: none">■ - CPU performance and energy consumption: Up to 70% performance improvement over Xeon 56xx series, 60 % improvement in I/O bandwidth for heavy load I/O communication.■ - Memory capacity and bandwidth■ - External I/O connections■ - The suitable drive technology, best supporting the application demands■ Decreased energy consumption, lower investment, yet still redundant operation.■ Lower energy budgets for a comparable performance as with standard rack servers.
High IT uptime <ul style="list-style-type: none">■ Enhanced standard features of Microsoft® Windows Server® 2012:■ - Failover clustering with activated Cluster Shared Volumes■ - Storage spaces incl. mirroring of defined shares■ - Operation with real as well as virtualized applications leveraging the integrated Hyper-V role	
Save on investment costs <ul style="list-style-type: none">■ Use the local disk storage as a commonly shared storage pool:■ - 12 2.5" or 3.5" hot-plug SAS storage drives of PRIMERGY CX420 provided to both server nodes■ - Optional access to external JBOD (e. g. dual ported Fujitsu Storage ETERNUS JX40) from both nodes	
Performance and Flexibility <ul style="list-style-type: none">■ Configurable 2U, half-wide server node with■ - 2 CPUs out of the Intel® Xeon® processor E5-2600 family with 4, 6 or 8 cores■ - Up to 256 GB main memory with 16 high speed (1,600 MHz) memory DIMMs■ - 2 free PCIe 3.0 slots for high performance low profile I/O controllers (1x for 10 GbE, FCoE, 8 Gbps FC, 56 Gbps Infiniband, plus one additional for 10 GbE)■ - One or two onboard 2.5" SATA boot disk drives (HDD or SSD)	
Less energy w/o performance loss <ul style="list-style-type: none">■ PRIMERGY CX272 S1 server nodes come without local fans or power supplies. Instead they share central cooling fans and hot plug power supplies per PRIMERGY CX420.	

Technical details

PRIMERGY CX272 S1

Mainboard

Mainboard type	D 3306
Chipset	Intel® C600
Processor quantity and type	2 x Intel® Xeon® processor E5-2600 product family
Memory slots	16 / 4 channels per CPU with 8 DIMMs per CPU = 16 DIMMs in total
Memory capacity (min. - max.)	8 GB - 256 GB
Memory protection	Advanced ECC SDDC (only for registered DIMMs)
Memory notes	Supports LV-U-DIMM, LV-R-DIMM
Upgrade notes	2x in CX420 S1

Interfaces

USB 2.0 ports	2 x USB 2.0 (rear)
Graphics (15-pin)	1 x VGA (1x rear)
LAN / Ethernet (RJ-45)	3 / 2x Gbit/s Ethernet + 1x 100Mbit service LAN Onboard
Management LAN (RJ45)	Management LAN traffic can be switched to shared onboard Gbit LAN port

Onboard or integrated Controller

RAID controller	RAID 0/1 for internal drives
SATA Controller	Intel® C600, for 2x 2.5-inch SATA HDD / SSD Mega SR RAID 0/1 boot disk drive
LAN Controller	Intel® Ethernet Controller I350. 2 x 10/100/1000 Mbit/s Ethernet (TCP/IP acceleration)
Remote management controller	Baseboard management controller (BMC) IPMI 2.0 compatible

Slots

PCI-Express 3.0 x8	3 x low profile via x16 riser (1x fix for SAS HBA, 1x for any released card, 1x for optional 10 GbE)
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Drive bays

Storage drive bays	6x 2.5-inch or 6x 3.5-inch local in CX420 S1 2x 2.5-inch internal in CX272 S1
Storage drive bay configuration	Local, shared data drives: SAS only Internal OS boot drives: SATA only

General system information

Number of fans	0
Fan configuration	Centralized non-hot plug fans part of CX420 Chassis

Operating panel

Operating buttons	On/off switch ID button
Status LEDs	Power (green) System status (orange) LAN speed (green / yellow) LAN connection (green) Identification (blue)

BIOS

BIOS features	Remote PXE boot support
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Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	Microsoft® Hyper-V Server 2012 R2
	Microsoft® Windows Server® 2012 R2 Datacenter
	Microsoft® Windows Server® 2012 R2 Standard
	Microsoft® Windows Storage Server 2012 R2 Standard
	Microsoft® Hyper-V Server 2012
	Microsoft® Windows Server® 2012 Datacenter
	Microsoft® Windows Server® 2012 Standard
	Microsoft® Windows Storage Server 2012 Standard

Operating system notes

Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473
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Dimensions

Weight	5.5 kg
Node size	2 U half wide (W176 x D500 x H82 mm)

Environment

Operating ambient temperature	10 - 35 °C (50 - 95 °F)
Operating relative humidity	10 - 85 % (non condensing)
Maximum altitude	3000 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

Compliance

Global	CB RoHS (Substance limitations in accordance with global RoHS regulations) WEEE (Waste electrical and electronic equipment) IEC 60950
Europe	CE Class A * EN 60950 - 1 EN 50371 EN 55022 EN 61000-3-3 EN 55024
USA/Canada	UL/CSA ICES-003 / NMB-003 Class A FCC Class A
South Korea	KCC (KN22, KN24)
Taiwan	CNS 13436 CNS 13438 class A

Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates
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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.
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Components

Notes storage drives	Configuration rules for the above listed drives: Server node internal boot drives must be non hot-plug 2.5-inch drives of type HDD or SSD with SATA interface. Shared drives, mounted in the CX420 chassis, must be hot-plug 2.5-inch or 3.5-inch drives of type SSD or HDD with SAS interface. At least 4 drives must be configured in a CX420 chassis (3 as shared drives + 1 hot-spare drive), all of same type and capacity.
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SCSI / SAS Controller	Fujitsu PSAS CP200i SAS Ctrl. 6 Gbit/s 8 ports int. PCIe 2.0 x8
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
Communication, Network	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
Warranty type	Onsite warranty
Product Support Services - the perfect extension	
Recommended Service	24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Service Weblink	http://www.fujitsu.com/fts/services/support

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu PRIMERGY CX272 S1, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Build 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 offering. This allows customers to leverage 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 PRIMERGY CX272 S1, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
<http://www.fujitsu.com/primergy>

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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