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

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<tr>
<th>Main Features</th>
<th>Benefits</th>
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<tr>
<td><strong>High Availability</strong></td>
<td>- High Availability with a small budget and little expert knowledge as all hardware prerequisites for an entirely clustered solution are delivered standard</td>
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<td>- Cost efficient cluster-ready CX server node with</td>
<td>- 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</td>
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<td>- Apart from two onboard GbE ports, an integrated cluster node interconnect via midplane is standard</td>
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<td>- Expansion of storage drive access via internal 6 Gbps SAS Host Bus Adapter plus standard SAS expander</td>
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<td><strong>High IT uptime</strong></td>
<td>- 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</td>
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<td>- Enhanced standard features of Microsoft® Windows Server® 2012:</td>
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<td>- Failover clustering with activated Cluster Shared Volumes</td>
<td>- Stay flexible to adapt to the exact requirements in terms of</td>
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<td>- Storage spaces incl. mirroring of defined shares</td>
<td>- 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.</td>
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<td>- Operation with real as well as virtualized applications leveraging the integrated Hyper-V role</td>
<td>- Memory capacity and bandwidth</td>
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<td><strong>Save on investment costs</strong></td>
<td>- External I/O connections</td>
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<td>- Use the local disk storage as a commonly shared storage pool:</td>
<td>- The suitable drive technology, best supporting the application demands</td>
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<td>- 12 2.5” or 3.5” hot-plug SAS storage drives of PRIMERGY CX420 provided to both server nodes</td>
<td>- Decreased energy consumption, lower investment, yet still redundant operation.</td>
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<td>- Optional access to external JBOD (e. g. dual ported Fujitsu Storage ETERNUS JX40) from both nodes</td>
<td>- Lower energy budgets for a comparable performance as with standard rack servers.</td>
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<td><strong>Performance and Flexibility</strong></td>
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<td>- Configurable 2U, half-wide server node with</td>
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<td>- 2 CPUs out of the Intel® Xeon® processor E5-2600 family with 4, 6 or 8 cores</td>
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<tr>
<td>- Up to 256 GB main memory with 16 high speed (1,600 MHz) memory DIMMs</td>
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<td>- 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)</td>
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<tr>
<td>- One or two onboard 2.5” SATA boot disk drives (HDD or SSD)</td>
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<td><strong>Less energy w/o performance loss</strong></td>
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<tr>
<td>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.</td>
<td></td>
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</tbody>
</table>
## 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)

#### Drive bays
- **Storage drive bays**: 6x 2.5-inch or 6x 3.5-inch local in CX420 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
### 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
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Software
www.fujitsu.com/software/

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

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

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