High-performance computing optimized node for scale-out workloads

Fujitsu offers a fantastic blend of systems, solutions and expertise to guarantee maximum productivity, efficiency and flexibility, delivering confidence and reliability. Fujitsu Server PRIMERGY systems deliver workload-optimized x86 industry standard servers for any workload and business demand. Since there is no single server solution to meet all these needs, Fujitsu offers a broad server portfolio consisting of expandable tower servers for remote and branch offices, versatile rack-mount servers and density-optimized multi-node servers. Whatever the size of your business – large enterprise with multiple sites, or a small or medium-sized company with limited space and budget – with the right choice of server, your IT can become the business enabler you have always wanted it to be.

PRIMERGY CX2550 M7
The Fujitsu server PRIMERGY CX2550 M7 is a cost-effective multi-node system with maximum power and the best protection of your data. The dual-socket server node comes with the 4th Generation Intel® Xeon® Scalable processors. It delivers high performance (up to 185W TDP), four UPI links per socket as well as a high core count of up to 32 cores per CPU. Ideal for memory intensive HPC workloads the DDR5 modules have a high bandwidth of up to 4800MT/s and room for up to 16xDIMM modules per node. The CX2550 M7 makes it possible to scale capacity and performance with up to two 2.5” SATA/PCIeSSD as well as the choice of DynamicLoM adapter via OCP V3 and up to two PCI-Express Gen5 slots. In order to best meet the needs of HPC environments, in particular the requirement for high density, the node can be used with standard air cooling. The PRIMERGY CX400 M7 enclosure, in which the CX2550 M7 node is used, allows the sharing of power and cooling to reduce costs. The CX400 M7 is a modular 2U shared infrastructure chassis for up to four nodes with all the traditional data center attributes such as standard 19” racks, cabling and rear-aisle serviceability access.
# Features & Benefits

<table>
<thead>
<tr>
<th>Main Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compact and modular foundation</strong></td>
<td>With PRIMERGY CX400 M7 multi-node server, you get much more server density compared to the standard rack servers. This makes it ideal for service providers, the automotive industry modeling new designs, state and local authorities to provide citizen services or a retailer analyzing consumer trends. In case the requirements change, the CX400 M7 makes it possible to gradually add or remove server nodes as required by your business needs.</td>
</tr>
<tr>
<td>The PRIMERGY CX2550 M7 together with the PRIMERGY CX400 M7 chassis is Fujitsu's densest computing solution. There is room for up to four 1U dual-socket server nodes plus up to 8 storage drives. The CX400 M7 allows nodes and components to share power, cooling and management. Hot-plug and redundant power supply units and fan modules ensure maximum reliability.</td>
<td>The PRIMERGY CX2550 M7 enables a flexible and fast response to rapidly changing IT demands. It provides the best performance for scale-out workloads such as high performance.</td>
</tr>
<tr>
<td><strong>Superior performance in a dense form factor</strong></td>
<td>With up to 4 TB of DDR5 memory, combine performance and versatility to adapt to a variety of applications to meet future needs. The higher bandwidth let the applications run smoothly, without any problems. Save time and money, and focus on business goals.</td>
</tr>
<tr>
<td>The PRIMERGY CX2550 M7 comes with latest 4th generation Intel® Xeon® processors that delivers high performance (up to 185W TDP), four UPI links per socket as well as a high core count of up to 32 cores per CPU.</td>
<td>Fujitsu offers comprehensive infrastructure management and server management solutions, which is key to efficient data center operations. They provide all the functions for flexible and automated 24x7 IT operations and improve end-user productivity via intelligent and innovative system management solutions. Fujitsu Software Infrastructure Manager enables organizations to drive towards the path of achieving software-defined infrastructure, by automating and simplifying infrastructure operations across compute, storage and networking.</td>
</tr>
<tr>
<td><strong>Increased power at low cost</strong></td>
<td><strong>Ideal for memory intensive high performance computing workloads, the DDR5 DIMM modules have a high bandwidth of up to 4800MT/s and room for up to 16xDIMM modules per node. PRIMERGY CX2550 M7 comes with DynamicLoM adapters via OCP V3 as well as flexible PCIe riser cards with support for up to 2 x PCIe Gen5 slots.</strong></td>
</tr>
<tr>
<td><strong>Comprehensive expansion options</strong></td>
<td>Fujitsu provides an overarching management for the new era of IT infrastructure with Fujitsu Software Infrastructure Manager (ISM) Advanced as well as the free-of-charge Essential version. ISM simplifies and automates IT operations and provides single, converged management for both the physical and the virtual environment, encompassing of computing, storage and network devices. The ISM Essential license is available free-of-charge and provides converged infrastructure monitoring and essential server management.</td>
</tr>
</tbody>
</table>

- With up to 4 TB of DDR5 memory, combine performance and versatility to adapt to a variety of applications to meet future needs. The higher bandwidth let the applications run smoothly, without any problems. Save time and money, and focus on business goals.
## Technical details

### PRIMERGY CX2550 M7

<table>
<thead>
<tr>
<th>Base unit</th>
<th>PRIMERGY CX2550 M7 air cooling</th>
<th>PRIMERGY CX2550 M7 air cooling all SSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing types</td>
<td>Air-cooled node</td>
<td>Air-cooled node</td>
</tr>
<tr>
<td>Product Type</td>
<td>Dual Socket 1U Server Node</td>
<td>Dual Socket 1U Server Node</td>
</tr>
</tbody>
</table>

### Mainboard

<table>
<thead>
<tr>
<th>Mainboard type</th>
<th>D 3988</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
</tr>
</tbody>
</table>

### Processor

<table>
<thead>
<tr>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Xeon® Bronze Processor</td>
<td>Intel® Xeon® Bronze 3408U (8C, 1.8 GHz, TLC: 22.5 MB, Turbo: 1.90 GHz, 16 GT/s, Mem bus: 4,000MHz, 125 W)</td>
</tr>
<tr>
<td>Intel® Xeon® Silver Processor</td>
<td>Intel® Xeon® Silver 44110Y (10C, 2.7 GHz, TLC: 26.25 MB, Turbo: 3.40 GHz, 16 GT/s, Mem bus: 4,000MHz, 150 W)</td>
</tr>
<tr>
<td>Intel® Xeon® Gold Processor</td>
<td>Intel® Xeon® Gold 5412U (24C, 2.1 GHz, TLC: 45 MB, Turbo: 2.90 GHz, 16 GT/s, Mem bus: 4,000MHz, 185 W)</td>
</tr>
</tbody>
</table>

### Memory slots

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 GB - 4 TB</td>
<td>DIMM (DDR5)</td>
</tr>
</tbody>
</table>

### Memory protection

<table>
<thead>
<tr>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECC</td>
<td></td>
</tr>
<tr>
<td>Memory Scrubbing</td>
<td></td>
</tr>
<tr>
<td>SDDC</td>
<td></td>
</tr>
</tbody>
</table>

### Standard memory modules

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 GB (1 module(s)) 16 GB DDR5, registered, ECC, 4,800 MT/s, PCS-4800, DIMM, 1Rx8</td>
<td></td>
</tr>
<tr>
<td>32 GB (1 module(s)) 32 GB DDR5, registered, ECC, 4,800 MT/s, PCS-4800, DIMM, 1Rx4</td>
<td></td>
</tr>
<tr>
<td>64 GB (1 module(s)) 64 GB DDR5, registered, ECC, 4,800 MT/s, PCS-4800, DIMM, 2Rx8</td>
<td></td>
</tr>
<tr>
<td>128 GB (1 module(s)) 128 GB DDR5, registered, ECC, 4,800 MT/s, PCS-4800, DIMM, 4Rx4</td>
<td></td>
</tr>
<tr>
<td>256 GB (1 module(s)) 256 GB DDR5, registered, ECC, 4,800 MT/s, PCS-4800, DIMM, 8Rx4</td>
<td></td>
</tr>
</tbody>
</table>

### Notes

<table>
<thead>
<tr>
<th>Notes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x in PRIMERGY CX400 M7</td>
<td></td>
</tr>
</tbody>
</table>

### Interfaces

<table>
<thead>
<tr>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB 3.x ports</td>
<td>2 x USB 3.0 (rear) with high density connector</td>
</tr>
<tr>
<td>Graphics (15-pin)</td>
<td>1 x VGA (1x rear) with high density connector</td>
</tr>
</tbody>
</table>
Interfaces

LAN / Ethernet (RJ-45) 1 x shared management LAN port for iRMC S6 (10/100/1000 Mbit/s)

Onboard or integrated Controller

RAID controller 8 Port RAID 0/1 or RAID 5/6 controller as option
SATA Controller Intel® C741
LAN Controller BCM5727 (On board LAN) (on D3893-Axx)
10/100/1000 Mbit/s Ethernet
Remote management controller IPMI 2.0 compatible
Integrated Remote Management Controller (iRMC S6, 1024 MB attached memory incl. graphics controller)

PCI-Express 5.0 x8

PCI-Express 4.0 x16 2 x low profile (via riser card)

Slots (Base unit specific)

Drive bays

Storage drive bays up to 2x 2.5-inch drive bay per node (in the PRIMERGY CX400 M7 chassis), and 2x M.2 device (in the CX2550 M7 node)

General system information

Fan configuration Redundant and hot-plug fans part of CX400 M6 chassis

Operating panel

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

BIOS

BIOS features UEFI compliant
IPMI support
BIOS settings save and restore
Remote PXE boot support

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 Use of certified or supported operating systems and virtualization software is subject to proactive acceptance of the respective License Agreements/ EULAs/ Subscription and support terms of the Software manufacturer as applicable for the relevant Software whether preinstalled or optional. The software may only be available bundled with a software support subscription which – depending on the Software - may be subject to separate remuneration.

Infrastructure and Server Management

DC Infrastructure Management Infrastructure Manager (ISM)
Essential Edition
Advanced Edition

Server Management Infrastructure Manager (ISM)
Essential Edition
Advanced Edition
ServerView Suite

Management notes For further information regarding ISM and ServerView Suite see dedicated data sheets.
Manageability link http://docs.ts.fujitsu.com/dl.aspx?id=9e92297a-16fb-4c69-8559-e38e7b42fee6

Dimensions

Dimensions (W x D x H) 193.5 x 580.5 x 40 mm
Height Unit Rack 1 U
Weight 5.1 kg
Node size 1 U half wide

Environment

Operating ambient temperature 5 - 35 °C
Environment

Operating temperature note
PRIMERGY servers are designed for the usage with operating temperatures of up to 35°C. There could be configurations that are not able to work within this normal operation class. Please use the Fujitsu WebArchitect (www.fujitsu.com/configurator/public) to get detailed information on the corresponding configurations.

Operating relative humidity
8 - 85 % (non condensing)

Temperature and humidity notes
Air cooling can support up to 185W CPU

Maximum altitude
3,050 m

Operating environment
FTS 04230 – Guideline for Data Center (installation specification)

Operating environment link

Compliance

Global
CB
RoHS (Substance limitations in accordance with global RoHS regulations)
WEEE (Waste electrical and electronical equipment)

Europe
CE

USA/Canada
cTUVus
ICES-003 Class A
FCC Class A

Japan
VCCI Class A

South Korea
KN32
KN35

Australia/New Zealand
AS/NZS CISPR32 Class A

Taiwan
CNS 13438 class A

Compliance link
https://sp.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

SSD SATA 2.5-inch
SSD SATA, 6 Gb/s, 960 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 960 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.9 DWPD
SSD SATA, 6 Gb/s, 960 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3.0 DWPD
SSD SATA, 6 Gb/s, 960 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 0.9 DWPD
SSD SATA, 6 Gb/s, 480 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 480 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.9 DWPD
SSD SATA, 6 Gb/s, 480 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3.0 DWPD
SSD SATA, 6 Gb/s, 480 GB, Mixed-use, hot-plug, 2.5-inch, enterprise, 0.9 DWPD
SSD SATA, 6 Gb/s, 240 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.4 DWPD
SSD SATA, 6 Gb/s, 240 GB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 7.68 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 3.84 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 3.84 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3.0 DWPD
SSD SATA, 6 Gb/s, 3.84 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 1.92 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 1.0 DWPD
SSD SATA, 6 Gb/s, 1.92 TB, Read-Intensive, hot-plug, 2.5-inch, enterprise, 0.9 DWPD
SSD SATA, 6 Gb/s, 1.92 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3.0 DWPD
SSD SATA, 6 Gb/s, 1.92 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 0.9 DWPD

HDD 2.5-inch
HDD SATA, 6 Gb/s, 2 TB, 7,200 rpm, 512n, hot-plug, 2.5-inch, business critical
### PCIe SSD & SATA DOM SSD

- **PCIe-SSD SFF, 15.36 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD**
- **PCIe-SSD SFF, 12.8 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD**
- **PCIe-SSD SFF, 6.4 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD**
- **PCIe-SSD SFF, 3.84 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD**
- **PCIe-SSD SFF, 1.92 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 DWPD**
- **PCIe-SSD SFF, 1.6 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 DWPD**

### SCSI / SAS Controller

- **Broadcom® PSAS CP600i LP SAS Ctrl. 12 Gbit/s PCIe 3.0 x8**
- **Broadcom® PSAS CP600e LP SAS Ctrl. 12 Gbit/s PCIe 3.0 x8**

### RAID Controller

- **Fujitsu PRAID EP680i LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, NVMe-PCIe 16 GT/s, 16 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 8 GB, Optional FBU based on LSI SAS3916**
- **Fujitsu PRAID EP680e LP, RAID 5/6 Ctrl., SAS 12 Gbit/s, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 8 GB, Optional FBU based on LSI SAS3516**
- **Fujitsu PRAID EP640i LP, RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 4 GB, Optional FBU based on LSI SAS3908**
- **Fujitsu PRAID EP640e LP, RAID 5/6 Ctrl., SAS 12 Gbit/s, 8 ports ext. RAID level: 0, 1, 10, No FBU support**
- **Broadcom® PRAID CP600i LP, RAID Ctrl., SAS/SATA 12 Gbit/s, 8 ports int. RAID level: 0, 1, 10, No FBU support**

### InfiniBand HCA

- **1 x 200Gb/s PCIe x16 QSFP for the US market max. one IB HCA 200Gb controller can be installed (Mellanox)**

### Notes

**Compatibility**

If and to the extent a list of components or certain compatibilities are specified in the product data sheet, these component lists and compatibility specifications are exhaustive. Using deviating or other system components and applications together with the product may but does not necessarily have to lead to compatibility problems. A final statement and/or commitment on the compatibility of such deviating or other system components and applications can only be provided after a corresponding verification through a dedicated compatibility testing.

**Continuity management**

The product may in connection with and depending on the specific configuration include elements to support time- and performance-critical applications, however high availability (e.g., 99.9999%) and failsafe performance is not a standalone product feature. If and to the extent the product is to be used in such business-critical environments, it is within the sole responsibility of the user to set up the specific additional technical features (e.g., Storage Cluster), redundancies, and operational conditions as required to ensure such high availability or failsafe performance.

**Security**

The properties of the product provide a baseline for product security and therefore end-customer IT security. However, these properties are not sufficient on their own to protect the product from all existing threats, such as intrusion attempts, data exfiltration and other forms of cyberattacks. To customize security settings, please use the configuration options as available for the respective product. During operation, the IT security of this product is within the responsibility of the respective administrator/end-user of the product. Please note, that Fujitsu as a manufacturer does not make any policy prescriptions or advocacy statements regarding IT security best practices and/or general product operation.

### Warranty

- **Warranty period**: 3 years
- **Warranty type**: Onsite warranty

**Product Support - the perfect extension**

- **Recommended Service**: 24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
- **Service Lifecycle**: at least 5 years after shipment, for details see https://support.ts.fujitsu.com/
- **Service Weblink**: https://www.fujitsu.com/emeia/support/
More information

In addition to Fujitsu PRIMERGY CX2550 M7, 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 CX2550 M7, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. 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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Contact
Fujitsu LIMITED
Website: www.fujitsu.com
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