Fsas Technologies
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Data Sheet
PRIMERGY CX2550 M7 Multi-Node Server

High-performance computing optimized node for scale-out workloads

PRIMERGY portfolio offers a fantastic blend of systems, solutions and expertise to guarantee maximum productivity, efficiency and flexibility, delivering confidence and reliability. PRIMERGY server 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, PRIMERGY provides 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 PRIMERGY CX2550 M7 server 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 5th Generation Intel® Xeon® Scalable processors. It delivers high performance (up to 270W 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 5.0 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

Main Features	Benefits
Compact and modular foundation	
■ The PRIMERGY CX2550 M7 together with the PRIMERGY CX400 M7 chassis is PRIMERGY 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.	■ 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.
Superior performance in a dense form factor	
■ The PRIMERGY CX2550 M7 comes with latest 5th generation Intel® Xeon® processors that delivers high performance (up to 270W TDP), four UPI links per socket as well as a high core count of up to 32 cores per CPU.	■ 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.
Increased power at low cost	
■ 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.	■ 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.
Comprehensive expansion options	
■ Providing an overarching management for the new era of IT infrastructure with 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.	■ Comprehensive infrastructure and server management solutions are 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. Infrastructure Manager (ISM) enables organizations to drive towards the path of achieving software-defined infrastructure, by automating and simplifying infrastructure operations across compute, storage and networking.

Technical details

PRIMERGY CX2550 M7		
Base unit	PRIMERGY CX2550 M7 air cooling	PRIMERGY CX2550 M7 air cooling all SSD
Housing types	Air-cooled node	Air-cooled node
Product Type	Dual Socket 1U Server Node	Dual Socket 1U Server Node
Mainboard		
Mainboard type	D 3988	
Chipset	Intel® C741	
Processor quantity and type	1 - 2 x Intel® Xeon® Gold 5xxx processor / Intel® Xeon® Gold 6xxx processor / Intel® Xeon® Silver 4xxx processor	
Intel® Xeon® Bronze Processor	Intel® Xeon® Bronze 3508U (8C, 2.1 GHz, TLC: 22.5 MB, Turbo: 2.20 GHz, 4,400MHz, 125 W)	
Intel® Xeon® Silver Processor	Intel® Xeon® Silver 4410T (10C, 2.7 GHz, TLC: 26.25 MB, Turbo: 3.40 GHz, 16 GT/s, 4,000MHz, 150 W)	
	Intel® Xeon® Silver 4416+ (20C, 2.0 GHz, TLC: 37.5 MB, Turbo: 2.90 GHz, 16 GT/s, 4,000MHz, 165 W)	
	Intel® Xeon® Silver 4509Y (8C, 2.6 GHz, TLC: 22.5 MB, Turbo: 3.60 GHz, 16 GT/s, 4,400MHz, 125 W)	
	Intel® Xeon® Silver 4510 (12C, 2.4 GHz, TLC: 30 MB, Turbo: 3.30 GHz, 16 GT/s, 4,400MHz, 150 W)	
	Intel® Xeon® Silver 4510T (12C/24T, 2.0 GHz, TLC: 30 MB, Turbo: 2.80 GHz, 16 GT/s, 4,400MHz, 115 W)	
	Intel® Xeon® Silver 4514Y (16C, 2.0 GHz, TLC: 30 MB, Turbo: 2.60 GHz, 16 GT/s, 4,400MHz, 150 W)	
	Intel® Xeon® Silver 4516Y+ (24C, 2.2 GHz, TLC: 45 MB, Turbo: 2.90 GHz, 16 GT/s, 4,400MHz, 185 W)	
Intel® Xeon® Gold Processor	Intel® Xeon® Gold 5416S (16C, 2.0 GHz, TLC: 30 MB, Turbo: 2.80 GHz, 16 GT/s, 4,400MHz, 150 W)	
	Intel® Xeon® Gold 5418N (24C, 1.8 GHz, TLC: 45 MB, Turbo: 2.60 GHz, 16 GT/s, 4,000MHz, 165 W)	
	Intel® Xeon® Gold 5512U (28C, 2.1 GHz, TLC: 52.5 MB, Turbo: 3.00 GHz, 4,800MHz, 185 W)	
	Intel® Xeon® Gold 5515+ (8C, 3.2 GHz, TLC: 22.5 MB, Turbo: 3.60 GHz, 20 GT/s, 4,800MHz, 165 W)	
	Intel® Xeon® Gold 6428N (32 C, 1.8 GHz, TLC: 60 MB, Turbo: 2.50 GHz, 16 GT/s, 4,000MHz, 185 W)	
Processor	N/A	
	Intel® Xeon® Silver processor 4516Y+ (24C, 2.2 GHz, up to 2.9 GHz, 16 GT/s)	
	Intel® Xeon® Silver processor 4514Y (16C, 2.0 GHz, up to 2.6 GHz, 16 GT/s)	
	Intel® Xeon® Silver processor 4510T (12C/24T, 2.0 GHz, up to 2.8 GHz, 16 GT/s)	
	Intel® Xeon® Silver processor 4510 (12C, 2.4 GHz, up to 3.3 GHz, 16 GT/s)	
	Intel® Xeon® Silver processor 4509Y (8C, 2.6 GHz, up to 3.6 GHz, 16 GT/s)	
	Intel® Xeon® Silver processor 4416+ (20C, 2.0 GHz, up to 2.9 GHz, 16 GT/s)	
	Intel® Xeon® Silver processor 4410T (10C, 2.7 GHz, up to 3.4 GHz, 16 GT/s)	
	Intel® Xeon® Gold processor 6428N (32 C, 1.8 GHz, up to 2.5 GHz, 16 GT/s)	
	Intel® Xeon® Gold processor 5515+ (8C, 3.2 GHz, up to 3.6 GHz, 20 GT/s)	
	Intel® Xeon® Gold processor 5512U (28C, 2.1 GHz, up to 3.0 GHz)	
	Intel® Xeon® Gold processor 5418N (24C, 1.8 GHz, up to 2.6 GHz, 16 GT/s)	
	Intel® Xeon® Gold processor 5416S (16C, 2.0 GHz, up to 2.8 GHz, 16 GT/s)	
Memory slots	16 (8 DIMMs per CPU, 8 channels with 1 slot per channel)	
Memory slot type	DIMM (DDR5)	
Memory capacity (min. - max.)	8 GB - 4 TB	
Memory protection	ECC Memory Scrubbing SDDC	
Memory notes	Support RDIMM	
Standard memory modules	16 GB (1 module(s) 16 GB) DDR5, registered, ECC, 4,800 MT/s, PC5-38400, DIMM, 1Rx8	
	32 GB (1 module(s) 32 GB) DDR5, registered, ECC, 4,800 MT/s, PC5-38400, DIMM, 1Rx4	
	32 GB (1 module(s) 32 GB) DDR5, registered, ECC, 4,800 MT/s, PC5-38400, DIMM, 2Rx8	
	64 GB (1 module(s) 64 GB) DDR5, registered, ECC, 4,800 MT/s, PC5-38400, DIMM, 2Rx4	
	128 GB (1 module(s) 128 GB) DDR5, registered, ECC, 4,800 MT/s, PC5-38400, DIMM, 4Rx4	
	256 GB (1 module(s) 256 GB) DDR5, registered, ECC, 4,800 MT/s, PC5-38400, DIMM, 8Rx4	
Notes	4x in PRIMERGY CX400 M7	

Interfaces	
USB 3.x ports	2 x USB 3.0 (rear) with high density connector
Graphics (15-pin)	1 x VGA (1x rear) with high density connector
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 M7 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
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	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 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.
Manufacturer	Fsas Technologies Inc. 13-2, Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa, 211-0012, Japan

Components

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, 7.68 TB, Read-Intensive, hot-plug, 2.5-inch, Flash drive, 1.0 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, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, Flash drive, 3.0 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	PSAS CP600i LP SAS Ctrl. 12 Gbit/s PCIe 3.0 x8
	PSAS CP600e LP SAS Ctrl. 12 Gbit/s PCIe 3.0 x8
	PSAS CP 2100-8i LP SAS Ctrl. 12 Gbit/s 8 ports int. PCIe 3.0 x8

RAID Controller	pre-configured RAID1 Array for M.2 in PDUAL,
	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
	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
	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
	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 Fsas Technologies Inc. as a manufacturer does not make any policy prescriptions or advocacy statements regarding IT security best practices and/or general product operation.

Warranty	
Manufacturer warranty period	3 years
Warranty type Product Support - the perfect extension	Onsite warranty
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

Fsas Technologies products, solutions & services

In addition to PRIMERGY CX2550 M7, Fsas Technologies provides a range of platform solutions. They combine reliable Fsas Technologies products with the best in services, know-how and worldwide partnerships.

Fsas Technologies Portfolio
Built on industry standards, Fsas Technologies offers a full portfolio of datacenter hardware, software and related services. This allows customers to select alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Data Center Solutions
www.fujitsu.com/global/products/computing/

More information

Learn more about PRIMERGY CX2550 M7, please contact your Fsas Technologies sales representative or Business partner, or visit our website.
http://www.fujitsu.com/emeia/products/computing/servers/primergy/scale-out/cx2550m7/

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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Please note that the data sheet reflects the technical specification with the maximum selection of components for the named system and not the detailed scope of delivery. The scope of delivery is defined by the selection of components at the time of ordering. The product was developed for normal business use.
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