

# Data sheet

## FUJITSU Integrated System PRIMEFLEX Cluster-in-a-box based on CX420-C

PRIMEFLEX Cluster-in-a-box  
Your fast track to hyper-converged continuous operation

### FUJITSU Integrated System PRIMEFLEX

Building datacenter infrastructures for a certain use case can be complex, error-prone and time-consuming. Moreover it requires a deep knowledge of all components involved and their dependencies to each other. Therefore, a do-it-yourself approach entails many risks for businesses.

These risks can be avoided by using integrated systems. FUJITSU Integrated System PRIMEFLEX is a pre-defined, pre-integrated and pre-tested combination of servers, storage, network connectivity and software. While management software is mandatory, software for virtualization, automation and orchestration, as well as databases and applications may be optionally included.

PRIMEFLEX encompasses factory-installed solutions which are ready-to-run and reference architectures which can be easily adjusted to customer-specific requirements. Along with its reference architectures, Fujitsu makes detailed configuration and installation descriptions available as a standard. Optional deployment and integration services ensure a smooth integration into the on-site environment. To ensure simplified operation and maintenance of PRIMEFLEX solutions, Fujitsu provides support on solution level, and further datacenter services including managed services and hosting.

### PRIMEFLEX Cluster-in-a-box based on PRIMERGY CX420-C (configurable)

With PRIMEFLEX Cluster-in-a-box you receive a hyper-converged solution including pre-installed Microsoft Windows Server 2012 R2 and pre-configured as a high availability cluster. It offers you an optimum combination of server, storage, and networking components in one compact 2U rack enclosure. The economic design provides continuous availability at an attractive price. PRIMEFLEX Cluster-in-a-box based on PRIMERGY CX420-C is available as Windows Server (physical) installation or as a complete Microsoft Hyper-V virtualized server environment. Just turn it on, spend some minutes with our self adopted configuration wizard and you are ready-to-work.

- 1x PRIMERGY CX420 S1
- 2x 1,200W Power Supply Units
- configurable SAS HDDs
- 2x PRIMERGY CX272 S1 Server, each with
  - 2x Intel® Xeon® E5-2600 processor (configurable)
  - configurable main memory
  - Dual port SAS HBA
  - 2x 500GB SATA HDDs (RAID 1)
  - 1x Microsoft Windows Server 2012 R2 OEM Datacenter **or** Standard (2 CPU)



### Simplified configuration

To get your individual PRIMEFLEX Cluster-in-a-box please use the following order codes to obtain the tailored solution by adding the necessary options:

- 1x CZK:1461V135-CLB25
- 2x CZK:1465V300-CLB26



# Features and benefits

## MAIN FEATURES

### PRIMEFLEX Cluster-in-a-box

- Integrated availability mechanisms with failover clustering and redundant hardware components
- Simplified configuration
- Pre-tested configuration
- Pre-configured, pre-installed configuration

### Based on PRIMERGY CX420

- Hyper-converged platform
- One enclosure for two servers with shared power and cooling
- No sharing of fabrics, I/O or management components
- Purely based on industry standards

### And Microsoft Windows Server 2012 R2

- Windows Server 2012 R2
- Storage Spaces

### Additionally, when Datacenter edition of Windows Server 2012 R2 is used

- Server virtualization with Hyper-V
- Unlimited number of licensed Windows Server virtual machines on each server

## BENEFITS

- Business continuity
- Easy to buy
- No implementation risk
- Ready-to-work a few minutes after receipt
- No separate disk storage system and SAN needed
- Up to 50% less space than traditional servers, all components are optimized to each other
- Lowered complexity vs. blade servers
- Seamless integration
- Enterprise-grade platform to cost-effectively optimize your business
- Option to use SSDs as I/O cache for every data access
- Use SSD and HDD in combination as tiered storage space incl. automated storage tiering
- Cost-effective and reliable usage of storage
- Server consolidation and much better utilized servers
- Less energy consumption
- Old services can be used on new hardware
- Flexible usage of shared resources
- New services are available in minutes, not months
- Many automation options to avoid human errors
- Your Windows Server operating system flatrate

# Technical details

## PRIMEFLEX Cluster-in-a-box components

## based on PRIMERGY CX420 S1

### Housing

<b>System</b>	1x PRIMERGY CX420 S1
<b>Form factor</b>	Rack (2U)
<b>Power Supplies</b>	2x PRIMERGY Power Supplies 1200W 2x Power cords 16A IEC320 C19->CEE 7/7
<b>HDD (configurable)</b>	12x 3.5" SAS disk slots Local, shared data drives: SAS only ( <b>min. 3 HDD</b> ) SSD SAS, 12 Gb/s, 800 GB, Mainstream Endurance, hot-plug, 3.5-inch, enterprise SSD SAS, 12 Gb/s, 400 GB, Mainstream Endurance, hot-plug, 3.5-inch, enterprise SSD SAS, 12 Gb/s, 200 GB, Mainstream Endurance, hot-plug, 3.5-inch, enterprise SSD SAS, 12 Gb/s, 1.6 TB, Mainstream Endurance, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 1.2 TB, 10,000 rpm, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 900 GB, 10,000 rpm, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 600 GB, 10,000 rpm, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 450 GB, 10,000 rpm, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 300 GB, 10,000 rpm, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 300 GB, 15,000 rpm, hot-plug, 3.5-inch, enterprise HDD SAS, 6 Gb/s, 4 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical HDD SAS, 6 Gb/s, 3 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical HDD SAS, 6 Gb/s, 2 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical HDD SAS, 6 Gb/s, 1 TB, 7,200 rpm, hot-plug, 3.5-inch, business critical

### Cluster Server Node 1 / 2, each with

#### Hardware

<b>CPU (configurable)</b>	1x PRIMERGY CX272 S1 2x Intel® Xeon® processor E5-2600 product family Intel® Xeon® processor E5-2609 Intel® Xeon® processor E5-2620 Intel® Xeon® processor E5-2630 Intel® Xeon® processor E5-2650
<b>Memory (configurable)</b>	8GB – 256GB – 16 slots/4 channels 4 GB (1 module 4 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM 8 GB (1 module 8 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM 16 GB (1 module 16 GB) DDR3 LV, registered, ECC, 1,600 MHz, PC3-12800, DIMM
<b>LAN onboard</b>	1x 1 Gb/s dual port Ethernet 1x 1 Gb/s internal Ethernet exclusively for cluster-heartbeat
<b>Mezzanine Cards optional configurable</b>	1x 1 Gb/s quad port Ethernet 1x 10 Gb/s dual port Ethernet
<b>SAS</b>	SAS Ctrl., SAS/SATA 6 Gbit/s
<b>Disk</b>	2x local 2.5" 500GB SATA Disks

<b>Operating System</b>	1x Windows Server 2012 R2 Standard <b>or</b> Datacenter (2CPU) OEM Cluster Services - turned on If the Windows Server Datacenter edition is selected, additionally: Hyper-V Role - turned on License includes unlimited virtual instances Four virtual machines of Windows Server 2012 R2 Datacenter are pre-installed and pre-activated 1x Windows Server 2012 R2 Standard <b>or</b> Datacenter (2CPU) OEM Cluster Services - turned on
<b>Software</b>	
<b>Implementation Management</b>	Fujitsu Out-Of-the-Box-Experience (OOBE) Wizard Fujitsu ServerView Agents for Windows Server 2012 R2

**Maintenance & Support Service**

Recommended, not included. For details please refer to the Classic 5x9 or 7x24 Fujitsu Support Pack data sheets

**Installation Specification**

<b>Dimensions (W x D x H)</b>	447 x 774.7 x 87.3 mm
<b>Weight</b>	up to 38 kg
<b>Power</b>	
<b>Voltage</b>	100 V – 240 V
<b>Frequency</b>	50 Hz - 60 Hz
<b>Current</b>	12 A
<b>Electric value notes</b>	For details see Power Configuration Tool.
<b>Environmental Conditions</b>	
<b>Temperature (Operating)</b>	10 – 35°C
<b>Humidity (Operating)</b>	10 - 85% RH
<b>Altitude</b>	3000 m

**Distribution, Implementation, Documentation, Support**

<b>User Interface</b>	English (default), German, French, Italian, Japanese, Spanish
<b>Implementation</b>	By the end customers or through Fujitsu partners in accordance with the installation guide, the related characteristic documents, and the Fujitsu Out-of-the-Box-Experience (OOBE) wizard.
<b>User Skills</b>	Knowledge of Microsoft Windows Server and Active Directory is presumed. Implementation requires basic knowledge and can be done by server administrators.
<b>Documentation</b>	User manuals are part of the Recovery DVD media or can be downloaded from <a href="http://manuals.ts.fujitsu.com">http://manuals.ts.fujitsu.com</a>
<b>Conditions</b>	The software products are supplied under conditions described in Fujitsu’s current license agreement and the End User License Terms for Windows Server 2012 R2 OEM Datacenter or OEM Standard.
<b>Optional Software Assurance</b>	Software Assurance (SA) is Microsoft’s maintenance program providing benefits that may include new version rights, additional use rights, spread payments, consulting services, training, support and more. If a customer is interested in SA, it must be acquired within 90 days of OEM/ROK license purchase and is only available via Microsoft’s Volume Licensing Programs (e.g. Select Plus and Open). SA and Microsoft Volume Licenses have to be sourced from authorized Microsoft Large Account Resellers (LARs). Fujitsu is authorized Microsoft LAR in a number of territories around the world. Fujitsu Technology Solutions GmbH is authorized Microsoft LAR for the region European Union (EU) and the European Free Trade countries (EFTA). For further assistance please contact <a href="mailto:PM-Team-LAR@ts.fujitsu.com">PM-Team-LAR@ts.fujitsu.com</a> .
<b>Warranty</b>	Standard Warranty

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**Specifications of additionally required prerequisites**

Microsoft Active Directory, a feature of Windows Server 2012 R2 Datacenter or Standard, Windows Server 2012 Datacenter or Standard, Windows Server 2008 R2 SP1 Datacenter, Enterprise, or Standard, or Windows Server 2008 SP2 Datacenter, Enterprise, or Standard is a prerequisite. Microsoft Active Directory has to be in place at your network.

With PRIMEFLEX Cluster-in-a-box using Windows Server 2012 R2 Datacenter, an existing Active Directory is not mandatory, but recommended. The Windows Server 2012 R2 Datacenter edition used in these configurations, allows you to create a new virtual domain controller and to generate an own Active Directory.

Additionally, DHCP (Dynamic Host Configuration Protocol) has to be enabled on your network. Your PRIMEFLEX Cluster-in-a-box is configured to automatically obtain an IP address from the DHCP server.

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**Ordering & Delivery**

This PRIMEFLEX Cluster-in-a-box solution may be obtained from Fujitsu partners, the local Fujitsu sales representative, or regional office. Just use the following order codes for basic configuration and add the mandatory option:

1x CZK:1461V135-CLB25

2x CZK:1465V300-CLB26

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**Licensing**

**Right to use**

The software is licensed per server system based on the number of processors and instances of server software.

The software license is permanently assigned to the FUJITSU Server PRIMERGY with which you acquired the software. That server is the licensed server for that particular license. You may assign other software licenses to the same server, but you may not assign the same license to more than one server.

Windows Server 2012 R2 Datacenter and Standard requires CALs, although not included. CALs are required for every user or device accessing a server. Licensing details:

<http://www.microsoft.com/en-us/server-cloud/windows-server/2012-editions.aspx>

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**End User License Terms**

Delivered with the product, either electronically or printed on paper. By using the software, you accept the license terms. If you do not accept them, do not use the software. Instead, contact Fujitsu to determine our return policy for a refund or credit.

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**Product Activation Notice to End Users – OEM**

Certain Microsoft Products included with this computer may use technological measures for copy protection. Unless the software is activated, you have no right to use the software after the time permitted for activation. This is to prevent its unlicensed use. You are not permitted to bypass or circumvent activation. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the Software or reconfigurations of this computer, and may be completed by Internet or telephone (toll charges may apply). The software will remind you to activate it until you do. New PRIMERGY server systems ship pre-activated when sold with Windows Server 2012 R2 directly ex-factory (OEM).

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# More information

## Fujitsu platform solutions

In addition to PRIMEFLEX Cluster-in-a-box, 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 data center 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/](http://www.fujitsu.com/global/services/computing/)

- PRIMERGY: Industrial standard server
- SPARC Enterprise: UNIX server
- PRIMEQUEST: Mission-critical x86 server
- ETERNUS: Storage system

### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

## More information

Learn more about PRIMEFLEX Cluster-in-a-box, please contact your Fujitsu business partner, Fujitsu sales representative, or visit our website.

<http://www.fujitsu.com/fts/products/computing/servers/primergy/solutions/>

## 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:

[www.fujitsu.com/global/about/environment/](http://www.fujitsu.com/global/about/environment/)



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