

# Data sheet

## FUJITSU Integrated System PRIMEFLEX Cluster-in-a-box based on PRIMERGY CX400-M

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 CX400-M

With Fujitsu Cluster-in-a-box you receive a hyper-converged solution including pre-installed Microsoft Windows Server 2012 R2 Datacenter 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 CX400-M is 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 CX400 M1
- 2x 1.600W Power Supply Units
- 8x 1,2TB SAS HDDs
- 2x PRIMERGY CX2550 M2 Server, each with
  - 2x Intel® Xeon® processor E5-2630 v4
  - 128 GB main memory
  - Dual port SAS HBA
  - 128 GB SSD boot medium (SATADOM)
  - 1x Microsoft Windows Server 2012 R2 OEM Datacenter (2 CPU)



### One single order Number

Everything pre-configured, pre-installed and pre-tested to provide you with continuous availability some minutes after you receive PRIMEFLEX Cluster-in-a-box. Just use our single order code: **BDL:1530V400-CLB40**



# Features and benefits

## MAIN FEATURES

### PRIMEFLEX Cluster-in-a-box

- Integrated availability mechanisms with failover clustering and redundant hardware components
- Single order code (SKU)
- Pre-tested configuration
- Pre-configured, pre-installed configuration
- Delivered as fully virtualized environment

### Based on PRIMERGY CX400

- Hyper-converged platform
- One enclosure for two servers with shared power and cooling plus storage
- No sharing of fabrics, I/O or management components
- Expandable chassis (up to 4 nodes, up to 18 disks)

### And Microsoft Windows Server 2012 R2 Datacenter

- Windows Server 2012 R2
- Server virtualization with Hyper-V
- Unlimited number of licensed Windows Server virtual machines on each server
- Storage Spaces

## BENEFITS

- Business continuity
- Easy to buy
- No implementation risk
- Ready-to-work a few minutes after receipt
- Leverage all benefits of virtualization
- No separate disk storage system and SAN needed
- Up to 80% less space than traditional IT infrastructures, all components are optimized to each other
- Lowered complexity vs. blade servers
- Prepared for growth
- Enterprise-grade platform to cost-effectively optimize your business
- 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
- Cost-effective and reliable usage of storage
- 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

# Technical details

## PRIMEFLEX Cluster-in-a-box components

## based on PRIMERGY CX400 M1

### Housing

<b>System</b>	1x PRIMERGY CX400 M1 (Cib edition)
<b>Form factor</b>	Rack (2U)
<b>Power Supplies</b>	2x PRIMERGY Power Supplies 1600W 2x Power Cord 10A IEC 320 C19 -> C14
<b>HDD</b>	8x HDD SAS, 12 Gbit/s, 2.5" 1.2TB 10000rpm, 128MB Cache, 512e

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

#### Hardware

<b>CPU</b>	1x PRIMERGY CX2550 M2 2x Intel® Xeon® processor E5-2630 v4
<b>Memory</b>	128GB
<b>LAN onboard</b>	1x 1 Gbit/s dual port Ethernet
<b>Mezzanine Cards</b>	1x 10 Gbit/s dual port Ethernet (Base-T)
<b>SAS</b>	SAS Ctrl., 12 Gbit/s
<b>Boot Medium</b>	SSD SATA 6G 128GB DOM (SATADOM)

#### Operating System

1x Windows Server 2012 R2 Datacenter (2CPU) OEM  
Cluster Services - turned on  
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

#### Software

<b>Implementation Management</b>	Fujitsu Out-Of-the-Box-Experience (OOBE) Wizard Fujitsu ServerView Agents for Windows Server 2012 R2
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### Hardware Installation Specification

<b>Dimensions (W x D x H)</b>	447 x 774.7 x 87.3 mm
<b>Weight</b>	38 kg
<b>Power</b>	<b>Voltage</b> 100 V -240 V
	<b>Frequency</b> 47 Hz -63 Hz
	<b>Current</b> 24.2 A with two PSU (12.1A per PSU)
	<b>Electric value notes</b> ~1.300 VA

#### Environmental Conditions

<b>Temperature (Operating)</b>	5°C -40°C
<b>Altitude</b>	3000 m
<b>Operating temperature note</b>	DIN IEC 721-3-3 class 3K2
<b>Operating relative humidity</b>	10 -85% (non condensing)
<b>Maximum altitude</b>	3000 m
<b>Operating environment</b>	FTS 04230 -Guideline for Data Center (installation specification)
<b>Noise emission</b>	According to ISO09296
<b>Sound power</b>	5.2B (idle) / 5.3B (operation)
	(LWAd; 1 B = 10dB)

**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.
<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

**Specifications of additionally required prerequisites**

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

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 in general is a prerequisite. Microsoft Active Directory has to be in place at your network – either as existing one or newly generated as described above.

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.

**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 code:  
BDL:1530V400-CLB40  
PRIMEFLEX Cluster-in-a-box is always delivered as two server high availability environment. After its initial installation, the Microsoft Cluster may be extended with one or two further PRIMERGY CX2550 M2 servers at any time. Any manual and on-site extension is not part of PRIMEFLEX Cluster-in-a-box itself.

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**Licensing**

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**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 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/global/products/computing/integrated-systems/cluster-in-a-box.html>

## 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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