

# Data Sheet

## Fujitsu Storage ETERNUS HB5100

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### ETERNUS HB

FUJITSU Storage ETERNUS HB series is NVMe ready hybrid storage systems with performance and efficiency of block storage systems helping drive business value at a reduced cost. The ETERNUS HB is built for optimized for integration into existing business critical workloads like Microsoft SQL server, Oracle, SAP, etc. In addition to enhanced data protection features, a variety of APIs (REST-based), orchestration tools (Ansible), and plug-ins (Splunk, Nagios) are available for managing/monitoring HB Series systems.

### ETERNUS HB5100

ETERNUS HB5100 is a midrange hybrid storage array designed with adaptive caching algorithms to address a large range of application workloads – database collaboration, VMware, video and high performance computing. Supporting multiple high speed host interfaces, including NVMe over fabric (NVMe-OF); ETERNUS HB5100 delivers over 1 million sustained IOPS and response times in sub-microseconds which benefit performance intensive and data intensive workloads. ETERNUS HB5100 support twenty-four 2.5 inch SAS HDD and/or SSD

# Features & Benefits

Main Features	Benefits
Accelerates Business Applications	<ul style="list-style-type: none"><li>■ Significantly improve the overall efficiency of IT operations while continuing to meet performance requirements from business operations.</li><li>■ Accelerate write IOPS and read/write throughput with an end-to-end NVMe storage platform that's purpose-built for high-performance</li><li>■ Increases performance for big data analytics applications such as Splunk by up to 2x, enabling you to search and analyze data in half the time.</li><li>■ Higher performance with solid-state drives (SSDs) enables the ETERNUS HB5100 to maximize storage density, requiring fewer disks to meet your performance objectives.</li></ul>
Continuous availability	<ul style="list-style-type: none"><li>■ ETERNUS HB5100 storage systems enable you to achieve greater than 99.9999% availability and provide data integrity and security</li><li>■ Validates data integrity and protects against silent data corruption</li><li>■ All management tasks are carried out while the storage remains online with complete read/write data access. Storage administrators can make configuration changes and conduct maintenance without disrupting application I/O.</li><li>■ Background monitoring proactively scans media and tracks drive health against defined thresholds.</li></ul>
Flexible configuration Options	<ul style="list-style-type: none"><li>■ A Linux-based Docker Container service to embed applications on the ETERNUS HB5100. It enables cost-effective converged infrastructure for targeted workloads. Examples include applications related to analytics, video surveillance, and HPC workloads.</li><li>■ Enables the automation and agility that are needed in the DevOps-based IT revolution</li><li>■ Built in a 2U or 4U enclosure, delivering the performance of over two-thousand 15,000-RPM drives while requiring under 2% of the rack space, power, and cooling the HB5100 helps significantly improve the overall efficiency of IT operations while continuing to meet performance requirements from business operations</li></ul>

# Technical details

## General system information

	Base
No. of controllers	2
No. of host interfaces	12 Port [FC (4, 8, 16Gbit/s)] 8 Port [FC (32Gbit/s)] 8 Port [NVMe over FC (32Gbit/s)] 12 Port [iSCSI (10Gbit/s)] 8 Port [iSCSI (25Gbit/s)] 4 Port [IB (100Gbit/s)] 4 Port [NVMe over InfiniBand (100Gbit/s)] 4 Port [NVMe over RoCE(100Gbit/s)] 8 Port [SAS (12Gbit/s)]
Maximum System Memory	128 GB
Maximum Disk Drives	444
Max. no. of drive enclosures	7
Supported RAID levels	0, 1, 1+0, 3, 5, 6, DDP
Host Interfaces	FC (4, 8, 16, 32Gbit/s) NVMe over FC (32Gbit/s) iSCSI (10, 25Gbit/s) IB (100Gbit/s) NVMe over InfiniBand (100Gbit/s) NVMe over RoCE (100Gbit/s) SAS (12 Gbit/s)
Mixed host interfaces	Yes
Max. no. of hosts	512
Maximum Storage Capacity	7,927.2 TB
Maximum Storage Capacity HDD	7,927.2 TB
Maximum Storage Capacity SSD	1,836 TB
Drive Type	2.5-inch, SAS, 10krpm (1.8TB / 1.2TB) 2.5-inch, SAS (FIPS), 10krpm (1.8TB) HDDE, Nearline SAS, 7.2krpm (18TB / 12TB / 8TB / 4TB) HDDE, Nearline SAS (FIPS), 7.2krpm (10TB) 2.5-inch, SSD (7.6TB / 3.8TB / 1.9TB) 2.5-inch, SSD (SED) (15.3TB) 2.5-inch, SSD (FIPS) (1.6TB) HDDE, SSD (1.9TB) HDDE, SSD (FIPS) (1.6TB)
Max. no. of SSDs	120
Mixed 2.5 inch/ 3.5 inch drive enclosures	Yes
Drive interface	12G SAS(MiniSAS HD)
Back-end disk connectivity	2/Controller
Max. no. of RAID groups per system	222
Max. no. of LUNs per RAID group	2,048
Max. no. of LUNs	2,048
Max. LUN capacity	2 PiB
Max. no. of copy generations	128
Compatibility note	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.

**Performance management**

Operation Management Client	Google Chrome 47, Microsoft Internet Explorer 11, Microsoft Edge EdgeHTML 12, Mozilla Firefox 31, Safari 9
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Note	Use of browser software is subject to proactive acceptance of the respective License Agreements/ EULAs of the Software manufacturer as applicable for the relevant Software whether preinstalled or optional.
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**Continuity management**

Remote Copy functionality	Synchronous and asynchronous
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Note	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.
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**Information security management**

Data confidentiality	HTTPS (SSL), SSH, iSCSI (CHAP, Bidirectional CHAP)
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Data integrity	Replace drive logically, Rebuild (DDP Rebuild, hot spare converge works), Cache Protection (Backup method, Backup data, Backup retention time: No limit), Data Encryption (Self encryption disk), Media scan, Data Assurance, T10-PI, Check Volume Redundancy
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Note	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.
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**Availability management**

Non-disruptive firmware upgrade	Yes
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Hot part replacement	Yes
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**Capacity management**

Thin Provisioning	Yes
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Reporting function	Yes (Performance, Capacity, host connectivity)
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Hot part expansion	Yes
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Non-disruptive firmware upgrade	Yes
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**Management**

Interfaces	1Gb Ethernet
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Supported protocols	SNMP v2c, REST
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Administration	SANtricity System Manager(GUI: Graphical user interface), SMcli(CLI: Command Line Interface), REST API, SANtricity Unified Manager
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**Supported OS for Management software**

Operation Management Client	Google Chrome 47 Microsoft Internet Explorer 11 Microsoft Edge EdgeHTML 12 Mozilla Firefox 31 Safari 9
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**Installation specification**

19" rackmount	Yes
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Power voltage	AC200-240V/AC100V-120V (DE460C Support only AC200V-240V)
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Power frequency	50 / 60 Hz
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Maximum Power Consumption	AC200-240V/AC100V-120V (DE460C Support only AC200V-240V): Controller Shelf: 694W 2U-Drive Shelf: 423W HD-Drive Shelf: 1,486W
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Power phase	Single
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	Base
Dimensions (W x D x H)	480 x 483 x 85 mm 18.9 x 19 x 3.3 inch 2 U

Weight	25.1 kg (55 lb)
Note	Numbers do not include Rack Mount Kits. Rack Mount Kits increase the weight by 4 kg.
<b>Environment</b>	
Maximum Heat Generation	AC200-240V/AC100V-120V (DE460C Support only AC200V-240V): 39937: kJ/h
Temperature (operating)	5 - 40 °C
Humidity (operating)	8 - 85 %
<b>Compliance</b>	
Product	HB5100
Model	NAJ-1501
Product safety	IEC 60950-1, IEC 62368-1, EN 62368-1, ANSI/UL 62368-1, 2nd Ed, CAN/CSA C22.2 No. 62368-1-14, CNS 14336-1, TP TC 004
Electromagnetic Compatibility	EN 55032 Class A, EN 61000-3-2, EN 61000-3-3, FCC Part-15 Subpart B Class A, ICES-003 Class A, VCCI Class A, JIS C 61000-3-2, CNS 13438, AS/NZS CISPR 32 class A, TP TC 020, KN32 Class A, KN35
Electromagnetic Immunity	EN 55035
Environmental compliance	RoHS compliant, WEEE compliant
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>
<b>Warranty</b>	
Warranty period	3 years
Warranty type	Onsite warranty
Warranty Terms & Conditions	<a href="http://www.fujitsu.com/warranty">www.fujitsu.com/warranty</a>
<b>Product Support - the perfect extension</b>	
Service Lifecycle	at least 5 years after shipment, for details see <a href="https://support.ts.fujitsu.com/">https://support.ts.fujitsu.com/</a>
Service Weblink	<a href="http://www.fujitsu.com/services/product-services">www.fujitsu.com/services/product-services</a>

Fujitsu products, solutions & services

In addition to Fujitsu ETERNUS HB5100, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Built 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 offerings. This allows customers to select 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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More information

Learn more about Fujitsu ETERNUS HB5100, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.  
[www.fujitsu.com/global/products/computing/storage/disk/eternus-hb/hb5100/](http://www.fujitsu.com/global/products/computing/storage/disk/eternus-hb/hb5100/)

Fujitsu green policy innovation

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Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.  
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