

PRODUCT SPECS

# Hitachi Virtual Storage Platform 5000 Series Family Matrix

	5200	5200H	5600	5600H
<b>Performance (IOPS)</b>	5.1M	5.1M	33M	33M
<b>Performance (Latency)</b>	as low as 39µs	as low as 39µs	as low as 39µs	as low as 39µs
<b>Performance (Bandwidth)</b>	52GB/s	52GB/s	312GB/s	312GB/s
<b>MAX. Raw Internal Capacity</b>	23.1PB (30TB SSD)	23.1PB (30TB SSD)	69.3PB (30TB SSD)	69.3PB (30TB SSD)
<b>MAX. Raw External Capacity</b>	287PB	287PB	287PB	287PB
<b>Data Availability</b>	100% Guaranteed	100% Guaranteed	100% Guaranteed	100% Guaranteed
<b>Data Reduction</b>	Compression Accelerator Module	Compression Accelerator Module	Compression Accelerator Module	Compression Accelerator Module
<b>Effective Capacity</b>	4:1	4:1	4:1	4:1
<b>Data-at-Rest Encryption for NVMe and SAS</b>	YES	YES	YES	YES
<b>MAX. Number of Drives, Including Spares</b>	<ul style="list-style-type: none"> <li>• 33 NVMe SCM</li> <li>• 96 NVMe</li> <li>• 768 SFF SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 33 NVMe SCM</li> <li>• 96 NVMe</li> <li>• 768 SFF SSD/HDD</li> <li>• 384 LFF HDD</li> </ul>	<ul style="list-style-type: none"> <li>• 99 NVMe SCM</li> <li>• 288 NVMe</li> <li>• 2,304 SFF SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 99 NVMe SCM</li> <li>• 288 NVMe</li> <li>• 2,304 SFF SSD/HDD</li> <li>• 1,152 LFF HDD</li> </ul>
<b>Drive Pack Upgrades (Sold in Packages of 4 Drives)</b>	<ul style="list-style-type: none"> <li>• 375GB NVMe SCM</li> <li>• 30TB NVMe SSD</li> <li>• 15TB NVMe SSD</li> <li>• 7.6TB NVMe SSD</li> <li>• 3.8TB NVMe SSD</li> <li>• 1.9TB NVMe SSD</li> <li>• 30TB SAS SSD</li> <li>• 15TB SAS SSD</li> <li>• 7.6TB SAS SSD</li> <li>• 3.8TB SAS SSD</li> <li>• 1.9TB SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 375GB NVMe SCM</li> <li>• 30TB NVMe SSD</li> <li>• 15TB NVMe SSD</li> <li>• 7.6TB NVMe SSD</li> <li>• 3.8TB NVMe SSD</li> <li>• 1.9TB NVMe SSD</li> <li>• 30TB SAS SSD</li> <li>• 15TB SAS SSD</li> <li>• 7.6TB SAS SSD</li> <li>• 3.8TB SAS SSD</li> <li>• 1.9TB SAS SSD</li> <li>• 2.4TB 10K SAS HDD</li> <li>• 14TB 7.2K SAS HDD</li> <li>• 18TB 7.2K SAS HDD</li> </ul>	<ul style="list-style-type: none"> <li>• 375GB NVMe SCM</li> <li>• 30TB NVMe SSD</li> <li>• 15TB NVMe SSD</li> <li>• 7.6TB NVMe SSD</li> <li>• 3.8TB NVMe SSD</li> <li>• 1.9TB NVMe SSD</li> <li>• 30TB SAS SSD</li> <li>• 15TB SAS SSD</li> <li>• 7.6TB SAS SSD</li> <li>• 3.8TB SAS SSD</li> <li>• 1.9TB SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 375GB NVMe SCM</li> <li>• 30TB NVMe SSD</li> <li>• 15TB NVMe SSD</li> <li>• 7.6TB NVMe SSD</li> <li>• 3.8TB NVMe SSD</li> <li>• 1.9TB NVMe SSD</li> <li>• 30TB SAS SSD</li> <li>• 15TB SAS SSD</li> <li>• 7.6TB SAS SSD</li> <li>• 3.8TB SAS SSD</li> <li>• 1.9TB SAS SSD</li> <li>• 2.4TB 10K SAS HDD</li> <li>• 14TB 7.2K SAS HDD</li> <li>• 18TB 7.2K SAS HDD</li> </ul>
<b>Max. Flash Media Trays (Sold in Packages of 4)</b>	<ul style="list-style-type: none"> <li>• 4x NVMe SSD</li> <li>• 32x SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 4x NVMe SSD</li> <li>• 32x SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 12x NVMe SSD</li> <li>• 96x SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 12x NVMe SSD</li> <li>• 96x SAS SSD</li> </ul>
<b>Max. HDD Media Trays (Sold in Packages of 8)</b>	N/A	<ul style="list-style-type: none"> <li>• 32x 10K SAS HDD</li> <li>• 32x 7.2K SAS HDD</li> </ul>	N/A	<ul style="list-style-type: none"> <li>• 96x 10K SAS HDD</li> <li>• 96x 7.2K SAS HDD</li> </ul>
<b>No. Controller Blocks</b>	1	1	1, 2 or 3	1, 2 or 3
<b>Nodes Per System</b>	2	2	2, 4, 6	2, 4, 6
<b>No. Controllers Per System</b>	2	2	4, 8, 12	4, 8, 12
<b>Hitachi Accelerated Fabric</b>	2x Node Interconnect Switch	2x Node Interconnect Switch	2x Node Interconnect Switch	2x Node Interconnect Switch
<b>Controller Interconnectivity</b>	4x Fabric Acceleration Modules	4x Fabric Acceleration Modules	8, 16, 24x Fabric Acceleration Modules	8, 16, 24x Fabric Acceleration Modules
<b>Node Dimensions: Height Width Depth</b>	<ul style="list-style-type: none"> <li>• 4U, 6.9" (174mm)</li> <li>• 17.6" (446mm)</li> <li>• 30.1" (763mm)</li> </ul>	<ul style="list-style-type: none"> <li>• 4U, 6.9" (174mm)</li> <li>• 17.6" (446mm)</li> <li>• 30.1" (763mm)</li> </ul>	<ul style="list-style-type: none"> <li>• 4U, 6.9" (174mm)</li> <li>• 17.6" (446mm)</li> <li>• 30.1" (763mm)</li> </ul>	<ul style="list-style-type: none"> <li>• 4U, 6.9" (174mm)</li> <li>• 17.6" (446mm)</li> <li>• 30.1" (763mm)</li> </ul>
<b>Max. Weight per Block</b>	342 lbs. (155kg)	343 lbs. (155kg)	397 lbs. (180kg)	398 lbs. (180kg)

	5200	5200H	5600	5600H
<b>Host Interface Types</b>	<ul style="list-style-type: none"> <li>FC-NVMe: 32Gb/s</li> <li>FC: 16Gb/s</li> <li>FC: 32Gb/s</li> <li>IBM® FICON®: 16Gb/s</li> <li>IBM® FICON®: 32Gb/s</li> <li>IBM® FICON® (with EDiF): 32Gb/s</li> <li>iSCSI: 10Gb/s</li> </ul>	<ul style="list-style-type: none"> <li>FC-NVMe: 32Gb/s</li> <li>FC: 16Gb/s</li> <li>FC: 32Gb/s</li> <li>IBM® FICON®: 16Gb/s</li> <li>IBM® FICON®: 32Gb/s</li> <li>IBM® FICON® (with EDiF): 32Gb/s</li> <li>iSCSI: 10Gb/s</li> </ul>	<ul style="list-style-type: none"> <li>FC-NVMe: 32Gb/s</li> <li>FC: 16Gb/s</li> <li>FC: 32Gb/s</li> <li>IBM® FICON®: 16Gb/s</li> <li>IBM® FICON®: 32Gb/s</li> <li>IBM® FICON® (with EDiF): 32Gb/s</li> <li>iSCSI: 10Gb/s</li> </ul>	<ul style="list-style-type: none"> <li>FC-NVMe: 32Gb/s</li> <li>FC: 16Gb/s</li> <li>FC: 32Gb/s</li> <li>IBM® FICON®: 16Gb/s</li> <li>IBM® FICON®: 32Gb/s</li> <li>IBM® FICON® (with EDiF): 32Gb/s</li> <li>iSCSI: 10Gb/s</li> </ul>
<b>MAX HOST Port Count</b>	<ul style="list-style-type: none"> <li>32 x FC-NVMe</li> <li>32 x FC</li> <li>32 x FICON</li> <li>32 x FICON (with EDiF)</li> <li>16 x iSCSI</li> </ul>	<ul style="list-style-type: none"> <li>32 x FC-NVMe</li> <li>32 x FC</li> <li>32 x FICON</li> <li>32 x FICON (with EDiF)</li> <li>16 x iSCSI</li> </ul>	<ul style="list-style-type: none"> <li>192 x FC-NVMe</li> <li>192 x FC</li> <li>192 x FICON</li> <li>192 x FICON (with EDiF)</li> <li>96 x iSCSI</li> </ul>	<ul style="list-style-type: none"> <li>192 x FC-NVMe</li> <li>192 x FC</li> <li>192 x FICON</li> <li>192 x FICON (with EDiF)</li> <li>96 x iSCSI</li> </ul>
<b>Max Fibre Bandwidth to Host</b>	102.4GB/s	102.4GB/s	614.4GB/s	614.4GB/s
<b>Back-end Disk Interface and Links</b>	32 x SAS or NVMe	32 x SAS or NVMe	192 x SAS and NVMe	192 x SAS and NVMe
<b>Max. Cache</b>	1TiB	1TiB	<ul style="list-style-type: none"> <li>2TiB: 1x Controller Block</li> <li>4TiB: 2x Controller Block</li> <li>6TiB: 3x Controller Block</li> </ul>	<ul style="list-style-type: none"> <li>2TiB: 1x Controller Block</li> <li>4TiB: 2x Controller Block</li> <li>6TiB: 3x Controller Block</li> </ul>
<b>RAID Supported</b>	<ul style="list-style-type: none"> <li>RAID-1* (2D+2D/4D+4D)</li> <li>RAID-5 (3D+1P/7D+1P)</li> <li>RAID-6 (6D+2P/14D+2P)</li> </ul>	<ul style="list-style-type: none"> <li>RAID-1* (2D+2D/4D+4D)</li> <li>RAID-5 (3D+1P/7D+1P)</li> <li>RAID-6 (6D+2P/14D+2P)</li> </ul>	<ul style="list-style-type: none"> <li>RAID-1* (2D+2D/4D+4D)</li> <li>RAID-5 (3D+1P/7D+1P)</li> <li>RAID-6 (6D+2P/14D+2P)</li> </ul>	<ul style="list-style-type: none"> <li>RAID-1* (2D+2D/4D+4D)</li> <li>RAID-5 (3D+1P/7D+1P)</li> <li>RAID-6 (6D+2P/14D+2P)</li> </ul>
<b>MAX. LUN Size</b>	256TB	256TB	256TB	256TB
<b>MAX. Number of LUNS</b>	65,280	65,280	65,280	65,280
<b>MAX. Number of Snapshots</b>	<ul style="list-style-type: none"> <li>1,024 per LUN;</li> <li>1,048,575 per system</li> </ul>	<ul style="list-style-type: none"> <li>1,024 per LUN;</li> <li>1,048,575 per system</li> </ul>	<ul style="list-style-type: none"> <li>1,024 per LUN;</li> <li>1,048,575 per system</li> </ul>	<ul style="list-style-type: none"> <li>1,024 per LUN;</li> <li>1,048,575 per system</li> </ul>
<b>MAX. Number of Hosts per Fibre Channel Port</b>	255	255	255	255

\*RAID 1 selection mirrors blocks across two drives and then creates a striped set across multiple drive pairs. This is commonly referred to as RAID 1+0.

1TB = 1,000,000,000,000 bytes

LFF = large form factor

NVMe = non-volatile memory express

HDD = hard disk drive

1TiB = 1,099,511,627,776 bytes

SCM = storage class memory

SSD = solid state drive

FC = Fibre Channel

SFF = small form factor

SAS = serial attached SCSI

FMD = flash module drive

iSCSI = internet small computer systems interface

EDiF = encryption of data in flight



**Corporate Headquarters**  
 2535 Augustine Drive  
 Santa Clara, CA 95054 USA  
[hitachivantara.com](http://hitachivantara.com) | [community.hitachivantara.com](http://community.hitachivantara.com)

**Contact Information**  
 USA: 1-800-446-0744  
 Global: 1-858-547-4526  
[hitachivantara.com/contact](http://hitachivantara.com/contact)

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