

Model Comparison



Hardware Specifics	Hitachi NAS Platform 3080	Hitachi NAS Platform 3090	Hitachi NAS Platform 3100	Hitachi NAS Platform 3200
Rack Height	3U	3U	4U	4U
Power Supply	Dual	Dual	Dual	Dual
NIM2 (4 x 1Gb)	N/A	N/A	N/A	N/A
NIM2 (6 x 1Gb)	N/A	N/A	2.8GB	2.8GB
NIM3 (2 x 10Gb ports) Using Single 10Gb CHIP	N/A	N/A	3.8GB	3.8GB
FSA Module	N/A	N/A	4GB cache	NA
FSX Module	N/A	N/A	4GB cache	4GB cache
FSB Module	N/A	N/A	14GB cache (2GB NVRAM)	26.5GB cache (4GB NVRAM)
SIM Module	N/A	N/A	10GB cache, 4 Fibre Channel ports	21GB cache, 8 Fibre Channel ports
Hitachi NAS Platform FPGA Board	24GB (2GB NVRAM)	24GB (2GB NVRAM)	N/A	N/A
Hitachi NAS Platform Motherboard	8GB	8GB	N/A	N/A
<b>Performance</b>				
Random I/O (estimate) <sup>1</sup>	40,137 <sup>1</sup>	72,921 <sup>1</sup>	96,428 <sup>1</sup>	194,909 <sup>1</sup>
Throughput (MB/sec)	700	1,100	880	1,600
Overall Hitachi NAS Platform Speed (same chassis)	N/A	N/A	10Gb	20Gb
<b>Power and Cooling<sup>2</sup></b>				
Number of Cooling Fans	3 – Hot Swap	3 – Hot Swap	3 – Hot Swap	3 – Hot Swap
Number of Power Supplies	2 – Hot Swap	2 – Hot Swap	2 – Hot Swap	2 – Hot Swap
Voltage Range	110 VAC – 2.3A /2.8A 208 VAC – 1.2A /1.5A 230 VAC – 1.1A /1.4A	110 VAC – 2.3A /2.8A 208 VAC – 1.2A /1.5A 230 VAC – 1.1A /1.4A	100 to 240V 50Hz to 60Hz	100 to 240V 50Hz to 60Hz
Power Supply Rating	450W	450W	650W	650W
Average Thermal (BTU/hour)	853	853	1534	1534
Max Power Usage	310W	310W	450W	450W
Max Thermal (BTU/hour)	1057	1057	2046	2046

<sup>1</sup>Hitachi NAS Platform 3080/3090 based on SPECsfs\_2008 NFS benchmark; Hitachi NAS Platform 3100/3200 based on SPECsfs\_97 benchmark.

<sup>2</sup>Power supply ratings for dual power supply in chassis.

## Model Comparison

Dimensions	Hitachi NAS Platform 3080	Hitachi NAS Platform 3090	Hitachi NAS Platform 3100	Hitachi NAS Platform 3200
Height/Width/Depth	3U, 5.1 in. (130mm)/17.2 in. (437mm)/27 in. (685mm)	3U, 5.1 in. (130mm)/17.2 in. (437mm)/27 in. (685mm)	4U, 7 in. (178mm)/19 in. (484mm)/25 in. (636mm)	4U, 7 in. (178mm)/19 in. (484mm)/25 in. (636mm)
Weight	55 lbs. (25kg)	55 lbs. (25kg)	78 lbs. (35.5kg)	78 lbs. (35.5kg)
Regulatory Compliance				
	<b>RoHS 6</b> <ul style="list-style-type: none"> <li>China RoHS Labeled</li> </ul> <b>Safety</b> <ul style="list-style-type: none"> <li>EU: EN 60950-1, Low Voltage 73/23/EEC</li> <li>Canada: CSA 60950-1</li> <li>US: UL 60950-1</li> </ul> <b>EMC</b> <ul style="list-style-type: none"> <li>EU: 55022 class A, 55024, EN61000</li> <li>US: FCC Part 15 Subpart B, class A</li> <li>Japan: VDDI class A</li> </ul>	<b>RoHS 6</b> <ul style="list-style-type: none"> <li>China RoHS Labeled</li> </ul> <b>Safety</b> <ul style="list-style-type: none"> <li>EU: EN 60950-1, Low Voltage 73/23/EEC</li> <li>Canada: CSA 60950-1</li> <li>US: UL 60950-1</li> </ul> <b>EMC</b> <ul style="list-style-type: none"> <li>EU: 55022 class A, 55024, EN61000</li> <li>US: FCC Part 15 Subpart B, class A</li> <li>Japan: VDDI class A</li> </ul>	<ul style="list-style-type: none"> <li>CSA 60950-00, UL 60950, EN 60950</li> <li>FCC Part 15 Class A, EN 55022 Class A, EN 55024</li> <li>89/336/EEC Electromagnetic Compatibility Directive</li> <li>72/23/EEC Low Voltage Directive</li> <li>98/68/EEC CE Marking Directive</li> </ul>	<ul style="list-style-type: none"> <li>CSA 60950-00, UL 60950, EN 60950</li> <li>FCC Part 15 Class A, EN 55022 Class A, EN 55024</li> <li>89/336/EEC Electromagnetic Compatibility Directive</li> <li>72/23/EEC Low Voltage Directive</li> <li>98/68/EEC CE Marking Directive</li> </ul>
Software Specifics				
Max Number of Nodes per Cluster	2	4 <sup>3</sup>	8	8
Support Jumbo Frames	Yes	Yes	Yes	Yes
Max Number of File Systems	125	125	125	125
Max Number of Enterprise Virtual Servers (EVS)	64	64	64	64
Max File System Size	256TB	256TB	256TB	256TB
Max Storage Pool Size	256TB	256TB	256TB	256TB
Capacity	4PB <sup>4</sup>	8PB <sup>5</sup>	8PB <sup>5</sup>	16PB <sup>5</sup>
Max Number of Entries per Directory	16M <sup>7</sup>	16M <sup>7</sup>	16M <sup>7</sup>	16M <sup>7</sup>
Max Number of Snapshots per File System	1024	1024	1024	1024
Max Number of VVols	10,000	10,000	10,000	10,000
Max Number of User/Group Quotas	100,000	100,000	100,000	100,000
Max Number of IP Addresses per Hitachi NAS Platform	256	256	256	256
Max Number of IP Addresses per EVS	32	32	32	32
Number of Global Symlinks	10,000	10,000	10,000	10,000
Max Number of CNS Links	500	500	500	500
Max Number LUNs	256	256	256	256
Max LUN Size	64TB	64TB	64TB	64TB
Number of Logical Units per Stripe Set	32	32	32	32
Number of Logical Units per RAID Controller	32	32	32	32

<sup>3</sup>Initial release will support only two node clusters. This will increase to four nodes in 1H2010.

<sup>4</sup>Require storage LUN size greater than 4TB

<sup>5</sup>Require storage LUN size greater than 8TB

<sup>6</sup>Require storage LUN size greater than 16TB

<sup>7</sup>16M requires firmware 6.0 or higher.

## Model Comparison

Protocol Limits	Hitachi NAS Platform 3080	Hitachi NAS Platform 3090	Hitachi NAS Platform 3100	Hitachi NAS Platform 3200
Max Number of CIFS Shares	10,000	10,000	10,000	10,000
Max Number of NFS Exports	10,000	10,000	10,000	10,000
Max Number of Concurrent NFS and/or CIFS Clients	30,000 <sup>a</sup>	30,000 <sup>a</sup>	30,000 <sup>a</sup>	30,000 <sup>a</sup>
Max Number of Concurrent FTP Clients	100	100	100	100
CIFS/NFS File Name Length	255 Characters	255 Characters	255 Characters	255 Characters
CIFS Path Name Length	65535 Characters	65535 Characters	65535 Characters	65535 Characters
NFS Path Name Length	1024 Characters	1024 Characters	1024 Characters	1024 Characters
iSCSI Targets per EVS	32	32	32	32
iSCSI Logical Units per Target	32	32	32	32
iSCSI Sessions per Target	64	64	64	64
iSCSI Logical Unit Size	2TB	2TB	2TB	2TB
<b>Network Limits</b>				
Number of VLANs	256	256	256	256
1Gb Ports	6	6	6	6
10Gb Ports	2	2	2	2
<b>Storage Management Utility (SMU) Limits</b>				
External SMU — Number of Managed Servers	8	8	8	8
Internal SMU — Number of Managed Servers	1	1	0	0
<b>Hitachi Storage Support</b>				
Hitachi Workgroup Modular Storage	No	No	No	No
Hitachi Adaptable Modular Storage 2000 family	Yes	Yes	Yes	Yes
Hitachi Universal Storage Platform®/ Hitachi Network Storage Controller	Yes	Yes	Yes	Yes
Hitachi Universal Storage Platform® V/ Hitachi Universal Storage Platform VM	Yes	Yes	Yes	Yes
<b>Included in Hitachi NAS Platform Operating System</b>				
Protocol	NFS/CIFS/ftp	NFS/CIFS/ftp	NFS/CIFS/ftp	NFS/CIFS/ftp
Number of EVS	2	2	64	64
Replication	Optional	Optional	Optional	Optional
Storage Pool	Yes	Yes	Yes	Yes

<sup>a</sup>30,000 for single node or 15K per node for cluster configuration. This is to protect failover scenario (NVRAM mirroring).

## Model Comparison

Included in Hitachi NAS Platform Operating System, continued	Hitachi NAS Platform 3080	Hitachi NAS Platform 3090	Hitachi NAS Platform 3100	Hitachi NAS Platform 3200
Quick Snapshot Restore	Optional	Optional	Optional	Optional
File System Rollback (FSR)	Yes	Yes	Yes	Yes
Virtual Volume	Yes	Yes	Yes	Yes
WFS-2	Yes	Yes	Yes	Yes
Tiered File System (TFS)	Yes	Yes	No	No
File System Auditing	From version 6.5	From version 6.5	From version 6.1	From version 6.1
Dynamic Read/Write Balancing	Yes	Yes	Yes	Yes
<b>Optional Modules</b>				
10Gb NIM3	N/A	N/A	Yes	Yes
FSX Module	N/A	N/A	Yes	Included
<b>Optional Licenses</b>				
Additional Protocol	Yes	Yes	Yes	Yes
Additional EVS	Yes	Yes	N/A	N/A
Replication	Yes	Yes	Yes	Yes
File System Recover from Snapshot	Yes	Yes	From version 6.1	From version 6.1
WORM (write once, read many)	Yes	Yes	Yes	Yes
Quick Snapshot Restore	Yes	Yes	Yes	Yes
iSCSI	Yes	Yes	Yes	Yes
Data Migrator	Yes	Yes	Yes	Yes
Cross Volume Link (XVL)	Yes	Yes	Yes	Yes
Cluster [High Availability (HA)]	Yes	Yes	Yes	Yes
Cluster Name Space (CNS)	Yes	Yes	Yes	Yes
ReadCache	Yes	Yes	Yes	Yes
Server Farm Migration (SFM)	Yes	Yes	Yes	Yes
EVS Security	Yes	Yes	Yes	Yes
<b>Upgrade Paths</b>				
To 2100 Model	—	—	—	—
To 2200 Model	—	—	—	—
To 3100 Model	System Swap	System Swap	—	—
To 3200 Model	System Swap	System Swap	Yes	—
To 3080 Model	—	—	System Swap	System Swap
To 3090 Model	System Swap	—	System Swap	System Swap

## System Management Unit (SMU)



Part Number	Previous SMU 100 (SX320111)	New SMU 200 (SX345205)
Processor	Pentium 4, 2.8GHz	Pentium Dual Core 1.8GHz
Memory Type	DDR	DDR2
Memory Size	1GB	1GB
Hard Disk Drive (HDD)	80GB	500GB (SATA)
CD-ROM/DVD	24x CD-ROM Reader	8x DVD-ROM, 24x CD-RW
Floppy Disk	Yes	No
Size	1U, Rackmount	1U, Rackmount
USB Ports	USB 1.1: 2 front, 2 back	USB 2.0/1.1: 2 front, 2 back
Parallel Port	1 x ECP/EPP Parallel Port	None (not used)
LAN	2 x RJ45 LAN Port, 10/100/1GbE	2 x RJ45 LAN Port, 10/100/1GbE
Video Graphics Accelerator (VGA)	1 x VGA Port	1 x VGA Port
Keyboard and Mouse	PS/2 Keyboard and Mouse Port	PS/2 Keyboard and Mouse Port
Serial Ports	1 x Fast UART 16550 Serial Port	1 x Fast UART 16550 Serial Port
Power Supply	200W	260W
AC Voltage	100-240V, 60-50Hz, 3 Amp	100-240V, 60-50Hz, 3 Amp
Color	Black	Black
Rackmount Rails	Included in Box	Included in Box
Minimum SMU Code Level	No Minimum Level	No Minimum Level
Number of Manageable Entities (a node or cluster)	4.3 SMU Code: 8 5.0 SMU Code: 3	4.3 SMU Code: 8 5.0 SMU Code: 8
Power Usage	105 W, 119 VA, 358 BTU/Hour	150 W, 167 VA, 512 BTU/Hour
Dimensions	H: 43mm (1.7 in.) x W: 426mm (16.8 in.) x D: 356mm (14.0 in.) — Plus Mounting Hardware	H: 43mm (1.7 in.) x W: 426mm (16.8 in.) x D: 356mm (14.0 in.) — Plus Mounting Hardware
Weight	5.8 kgs (13 lbs) — Plus Mounting Hardware	5.8 kgs (13 lbs) — Plus Mounting Hardware

## Hitachi NAS Platform Software Bundle Purchase Option

Entry Bundle	Value Bundle	Ultra Bundle
CIFS or NFS	CIFS	CIFS
	NFS	NFS
Tiered File System	Tiered File System	Tiered File System
2x Virtual Server	64 Virtual Server	64 Virtual Server
Storage Pool	Storage Pool	Storage Pool
File System Audit	File System Audit	File System Audit
File System Rollback	File System Rollback	File System Rollback
File System Recover from Snapshot (WFS2 required)	File System Recover from Snapshot (WFS2 required)	File System Recover from Snapshot (WFS2 required)
Quick Snapshot Restore	Quick Snapshot Restore	Quick Snapshot Restore
Cluster Name Space	Cluster Name Space	Cluster Name Space
Replication Bundle (IDR, IBR, ADC)	Replication Bundle (IDR, IBR, ADC)	Replication Bundle (IDR, IBR, ADC)
Data Migrator (DM)	Data Migrator (DM)	Data Migrator (DM)
XVL (Cross Volume Links)	XVL (Cross Volume Links)	XVL (Cross Volume Links)
WORM (write once, read many)	WORM (write once, read many)	WORM (write once, read many)
High Availability Cluster (HAC)	High Availability Cluster (HAC)	High Availability Cluster (HAC)
Server Farm Migration (SFM)	Server Farm Migration (SFM)	Server Farm Migration (SFM)
iSCSI	iSCSI	iSCSI
Read Caching	Read Caching	Read Caching
Virtual Server Security	Virtual Server Security	Virtual Server Security

### Notes:

- Gray shaded software modules are included in the bundles.
- All software for Hitachi NAS Platform is pre-loaded from the factory. Separate license keys are purchased to activate the software.

Entry Cluster
Entry Bundle + High Availability Cluster
Value Cluster
Value Bundle + High Availability Cluster
Ultra Cluster
Ultra Bundle + High Availability Cluster

### Notes:

- All cluster bundles are priced for better value than purchasing HAC licenses separately.
- Special F16 EVS pack is available with any Entry Bundle.
- Migrator Bundle includes XVL + DM modules.

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