

| | Hitachi Unified Storage/ Hitachi NAS Platform 3080 G2 ¹ | Hitachi Unified Storage/ Hitachi NAS Platform 3090 G2 ¹ | Hitachi Unified Storage/ Hitachi NAS Platform 4040 | Hitachi Unified Storage/ Hitachi NAS Platform 4060 | Hitachi Unified Storage/ Hitachi NAS Platform 4080 | Hitachi Unified Storage/ Hitachi NAS Platform 4100 |
|--|--|--|--|--|---|---|
| Power and Cooling³ (continued) | | | | | | |
| 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 | 110 VAC – 2.3A / 2.8A 208 VAC – 1.2A / 1.5A 230 VAC – 1.1A / 1.4A | 100 VAC – 3.5A 110 VAC – 3.2A 200 VAC – 1.8A 208 VAC – 1.7A 240 VAC – 1.5A | 100 VAC – 3.5A 110 VAC – 3.2A 200 VAC – 1.8A 208 VAC – 1.7A 240 VAC – 1.5A | 100 VAC – 3.5A 110 VAC – 3.2A 200 VAC – 1.8A 208 VAC – 1.7A 240 VAC – 1.5A |
| Power Supply Rating | 450W | 450W | 450w | 550W | 550W | 550W |
| Average Thermal (BTU/hour) | 853 | 853 | 853 | 888 | 888 | 888 |
| Max. Thermal (BTU/hour) | 1057 | 1057 | 1057 | 1194 | 1194 | 1194 |
| Max. Power Usage | 310W | 310W | 310W | 350W | 350W | 350W |
| Dimensions | | | | | | |
| 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) | 3U, 5.1 in. (130mm)/ 17.2 in. (437mm)/27 in. (685mm) | 3U, 5.1 in. (130mm)/ 17.2 in. (437mm)/27 in. (685mm) | 3U, 5.1 in. (130mm)/ 17.2 in. (437mm)/27 in. (685mm) | 3U, 5.1 in. (130mm)/ 17.2 in. (437mm)/27 in. (685mm) |
| Weight | 55 lbs. (25kg) | 55 lbs. (25kg) | 55 lbs. (25kg) | 55 lbs. (25kg) | 55 lbs. (25kg) | 55 lbs. (25kg) |
| Regulatory Compliance | | | | | | |
| | RoHS 6 China RoHS Labeled Safety EU: EN 60950-1, Low Voltage 73/23/EEC Canada: CSA 60950-1 US: UL 60950-1 EMC EU: 55022 Class A, 55024, EN61000 US: FCC Part 15 Subpart B, Class A Japan: VDDI Class A | RoHS 6 China RoHS Labeled Safety EU: EN 60950-1, Low Voltage 73/23/EEC Canada: CSA 60950-1 US: UL 60950-1 EMC EU: 55022 Class A, 55024, EN61000 US: FCC Part 15 Subpart B, Class A Japan: VDDI Class A | RoHS 6 China RoHS Labeled Safety EU: EN 60950-1, Low Voltage 73/23/EEC Canada: CSA 60950-1 US: UL 60950-1 EMC EU: 55022 Class A, 55024, EN61000 US: FCC Part 15 Subpart B, Class A Japan: VDDI Class A | RoHS 6 China RoHS Labeled Safety EU: EN 60950-1, Low Voltage 73/23/EEC Canada: CSA 60950-1 US: UL 60950-1 EMC EU: 55022 Class A, 55024, EN61000 US: FCC Part 15 Subpart B, Class A Japan: VDDI Class A | RoHS 6 China RoHS Labeled Safety EU: EN 60950-1, Low Voltage 73/23/EEC Canada: CSA 60950-1 US: UL 60950-1; EMC EU: 55022 Class A, 55024, EN61000 US: FCC Part 15 Subpart B, Class A Japan: VDDI Class A | RoHS 6 China RoHS Labeled Safety EU: EN 60950-1, Low Voltage 73/23/EEC Canada: CSA 60950-1 US: UL 60950-1; EMC EU: 55022 Class A, 55024, EN61000 US: FCC Part 15 Subpart B, Class A Japan: VDDI Class A |

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|--|--|--|--|---|---|---|
| Software Specifics (continued) | | | | | | |
| Max. # of CNS Links | 500 | 500 | 500 | 500 | 500 | 500 |
| Max. # Logical Units (LUNs) | 512 ⁹ | 512 ⁹ | 512 ⁹ | 512 ⁹ | 512 ⁹ | 512 ⁹ |
| Max. LUN Size | 64TB | 64TB | 64TB | 64TB | 64TB | 64TB |
| Number of LUNs per Stripe Set | 32 | 32 | 32 | 32 | 32 | 32 |
| Number of LUNs per Storage System Fibre Channel Target Port | 32 | 32 | 32 | 32 | 32 | 32 |
| Protocol Limits | | | | | | |
| Max. # SMB Shares | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Max. # NFS Exports | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Max. # Connections (NFS/SMB) | 15,000 ¹⁰ | 30,000 ¹⁰ | 24,000 ¹⁰ | 45,000 (64,000 with tuning enabled. Consult GSS before enabling tuning) | 45,000 (64,000 with tuning enabled. Consult GSS before enabling tuning) | 64,000 |
| Max. # Concurrent Open Files per Node: SMB | 22,500 | 90,000 | 72,000 | 227,000 / (565,000 with tuning enabled. Consult GSS before enabling tuning) | 227,000 (565,000 with tuning enabled. Consult GSS before enabling tuning) | 1,178,000 (1,500,000 with tuning enabled. Consult GSS before enabling tuning) |
| Max. # Concurrent FTP Clients | 100 | 100 | 100 | 100 | 100 | 100 |
| SMB/NFS File Name Length | 255 Characters | 255 Characters | 255 Characters | 255 Characters | 255 Characters | 255 Characters |
| SMB Path Name Length | 65,535 Characters | 65,535 Characters | 65,535 Characters | 65,535 Characters | 65,535 Characters | 65,535 Characters |
| NFS Path Name Length | 1024 Characters | 1024 Characters | 1024 Characters | 1024 Characters | 1024 Characters | 1024 Characters |
| iSCSI Targets per EVS | 32 | 32 | 32 | 32 | 32 | 32 |

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|--|--|--|--|--|--|--|
|--|--|--|--|--|--|--|

Included in Hitachi NAS Platform Operating System

| | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Protocol | NFS/SMB/FTP | NFS/SMB/FTP | NFS/SMB/FTP | NFS/SMB/FTP | NFS/SMB/FTP | NFS/SMB/FTP |
| Number of EVS | 2 | 2 | 2 | 2 | 2 | 2 |
| Replication | Optional | Optional | Optional | Optional | Optional | Optional |
| Storage Pool | Yes | Yes | Yes | Yes | Yes | Yes |
| Quick Snapshot Restore | Optional | Optional | Optional | Optional | Optional | Optional |
| File System Rollback (FSR) | Yes | Yes | Yes | Yes | Yes | Yes |
| Virtual Volume | Yes | Yes | Yes | Yes | Yes | Yes |
| WFS-2 | Yes | Yes | Yes | Yes | Yes | Yes |
| TFS | Yes | Yes | Yes | Yes | Yes | Yes |
| File System Auditing | From v6.5 | From v6.5 | From v6.5 | Yes | Yes | Yes |
| Dynamic Read/Write Balancing | Yes | Yes | Yes | Yes | Yes | Yes |
| Nondisruptive Cluster Upgrades (NDU) | Yes | Yes | Yes | Yes | Yes | Yes |
| Sparse File Reporting | Yes | Yes | Yes | Yes | Yes | Yes |
| RADIUS User Authentication | Yes | Yes | Yes | Yes | Yes | Yes |

Optional Licenses

| | | | | | | |
|----------------------------|-----|-----|-----|-----|-----|-----|
| Additional Protocol | Yes | Yes | Yes | Yes | Yes | Yes |
| Additional EVS | Yes | Yes | Yes | Yes | Yes | Yes |
| Replication | Yes | Yes | Yes | Yes | Yes | Yes |

Optional Licenses (continued)

| | | | | | | |
|---|------------------|-------------------|------------------|------------------|------------------|------------------|
| File System Recover From Snapshot | Yes | Yes | Yes | Yes | Yes | Yes |
| WORM (write once, read many) | Yes | Yes | Yes | Yes | Yes | Yes |
| Quick Snapshot Restore | Yes | Yes | Yes | Yes | Yes | Yes |
| iSCSI | Yes | Yes | Yes | Yes | Yes | Yes |
| Data Migrator Feature | Yes | Yes | Yes | Yes | Yes | Yes |
| Data Migrator to the Cloud Feature | Yes | Yes | Yes | Yes | Yes | Yes |
| Cross Volume Link (XVL) | Yes | Yes | Yes | Yes | Yes | Yes |
| Virtual Server Security (Multitenancy feature included as part of license) | Yes | Yes | Yes | Yes | Yes | Yes |
| Primary Data Deduplication Premium | Yes | Yes | Yes | Yes | Yes | Yes |
| Cluster (High Availability, HA) | Yes | Yes | Yes | Yes | Yes | Yes |
| Cluster Name Space (CNS) | Yes | Yes | Yes | Yes | Yes | Yes |
| Cluster Read Cache | Yes | Yes | Yes | Yes | Yes | Yes |
| Server Farm Migration (SFM) | Yes | Yes | Yes | Yes | Yes | Yes |
| File / Directory Clone | Yes ⁸ | Yes ⁸ | Yes ⁸ | Yes ⁸ | Yes ⁸ | Yes ⁸ |
| Performance Accelerator | No | Yes ¹³ | No ¹³ | No | No | No |
| Universal Migrator | Yes ⁸ | Yes ⁸ | Yes ⁸ | Yes ⁸ | Yes ⁸ | Yes ⁸ |
| Universal Migration Director | Yes | Yes | Yes | Yes | Yes | Yes |
| EVS Security | Yes | Yes | Yes | Yes | Yes | Yes |
| Model Upgrade License | No | No | Yes | No | No | No |

Upgrade Paths

| | | | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| To HNAS 3080/HUS M1 | — | — | — | System Swap | System Swap | System Swap |
| To HNAS 3090/HUS M2 | System Swap | — | — | System Swap | System Swap | System Swap |
| To HNAS 4040 | System Swap | System Swap | — | — | — | — |
| To HNAS 4060 | System Swap | System Swap | System Swap | — | License Key | System Swap |
| To HNAS 4080 | System Swap | System Swap | System Swap | License Key | — | System Swap |
| To HNAS 4100 | System Swap | System Swap | System Swap | System Swap | System Swap | — |

(1) Withdrawn from sales.

(2) Based on SPECsfs_2008 NFS v3 benchmark testing. Published results are available at www.spec.org/sfs2008/results/sfs2008nfs.html

(3) Power supply ratings for dual power supply in chassis.

(4) 128 file systems in a single entity configuration but only 125 file systems in a clustered configuration.

(5) Require storage LUN size greater than 16TB.

(6) Require storage LUN size greater than 32TB.

(7) 16M requires firmware 6.0 or higher.

(8) Requires WFS-2 as file system format, HNAS operating system v11.3 or later, assessment service from Hitachi Data Systems Global Solution Services is recommended.

(9) NAS operating system v8.x or later required.

(10) These are the single-node max. limits. The default values are set to half in order to ensure enough failover capacity in a clustered configuration. This is to protect a failover scenario (NVRAM mirroring). A client connection is considered to be a mounted SMB share or NFS export from a physical client.

(11) Depending on the used SMU version or type, please refer to the SMU details sheet.

(12) NAS operating system v11.3.3450 or later required.

(13) Requires HNAS operating system v10.0 or later.

 Hitachi Data Systems



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