



HYDRAsstor[®] HS8-50S

SCALE-OUT GLOBAL DEDUPLICATION
STORAGE FOR BACKUP AND ARCHIVE

NEC's HYDRAsstor HS8-50S is a scale-out grid storage system with high performance global deduplication for backup and archive. The HYDRAsstor HS8-50S delivers enterprise long-term data retention, exceeding 5PB/hr backup throughput and 350PB effective capacity.



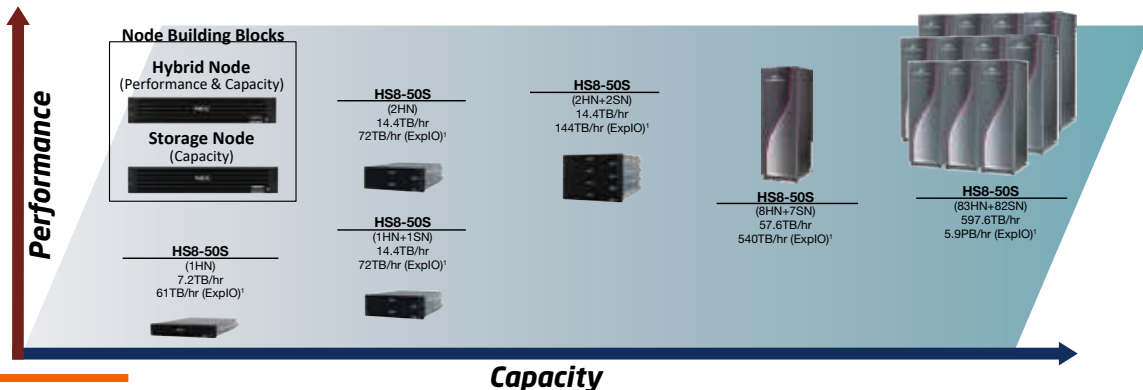
HYDRAsstor[®] HS8-50S
AT A GLANCE

- > High performance inline global deduplication
- > Massive linear scalability exceeding 5PB/hr & 350PB
- > High availability and no single point of failure
- > Advanced erasure-coded data resiliency
- > Investment protection and in-place hardware refresh

HYDRAsstor consists of two types of nodes: Hybrid Node (HN) for expanding both performance and capacity and Storage Node (SN) for expanding just capacity. Combining multiple HNs and SNs within the same grid system, enterprise customers can customize the configuration with high availability and no single point of

failure. To ensure greater data protection than traditional RAID, HYDRAsstor provides advanced erasure-coded data resiliency that can tolerate up to six concurrent hard drive failures.

HYDRAsstor can be further expanded and refreshed with no data migration by incorporating intermix of newer generation hardware into the same grid system. HYDRAsstor maximizes cost efficiency with DataReduce™ inline global deduplication and compression, as well as high availability and node-level resiliency with erasure-coded data protection. HYDRAsstor also provides investment protection with online upgrade/ expansion, as well as in-place technology refresh with intermix of multi-generation nodes within the same grid system.



HYDRASTOR® HS8-50S CONFIGURATIONS

	HS8-50S-72 (1HN)	HS8-50S-144 (1HN+1SN)	HS8-50S-144 (2HN)	HS8-50S-288 (2HN+2SN)	HS8-50S-1080 (8HN+7SN)	HS8-50S-11880 (83HN+82SN)
Capacity (72TB Nodes), Raw ²	18TB (up to 72 TB)	144TB	144TB	288TB	1.08PB	11.88PB
Capacity (72TB Nodes), Effective ^{2,3}	240TB (up to 960TB)	1.92PB	1.92PB (1.27PB)	3.84PB	14.4PB	158.4PB
Capacity (168TB Nodes), Raw ²	168TB	336TB	336TB	672TB	2.52PB	27.7PB
Capacity (168TB Nodes), Effective ^{2,3}	2.14PB	4.48PB	4.48PB (2.96PB)	8.56PB	32.11PB	353.20PB
Performance (Standard)	7.2TB/hr	7.2TB/hr	14.4TB/hr	14.4TB/hr	57.6TB/hr	597.6TB/hr
Performance (Deduped Standard)	61TB/hr	72TB/hr	72TB/hr	144TB/hr	540TB/hr	5.9PB/hr
Number of Hybrid Nodes	1	1	2	2	8	83
Number of Storages	0	1	0	2	7	82
Number of Racks	Customer-supplied				1	11
Input Voltage	AC 100-240V 50/60Hz				208V 3PH +/-10%	
Protocols	CIFS, NFS, OpenStorage, Express I/O					
Management	GUI, CLI, E-mail alerts and notification, SNMP					

HYDRASTOR HS8-50S HYBRID NODE SPECIFICATIONS

Model	HS8-50S HN
Capacity, Raw ²	72TB or 168TB
Capacity, Effective ^{2,3}	960TB or 2.2PB
Performance (Standard)	7.2TB/hr
Performance (Deduped Transfer)	72TB/hr
NIC Ports	6x 1GbE, 4 x 1GbE + 2x 10GbE, or 2x 1GbE + 4x 10GbE
Disk Drives	12x 3.5" 6TB SATA drives 7,200rpm (user data) or 12x 3.5" 14TB NLSAS drives 7,200rpm (user data)
Weight	70.5lbs (32kg)
Dimensions (WxDxH)	17.6" x 26.9" x 3.4" (448mm x 684mm x 87mm), 2U
Power Consumption ⁴ (maximum/typical)	665W/573W (671VA/579VA)
Thermal Dissipation	2,268BTU/hr

HYDRASTOR HS8-50S SOFTWARE

Standard Software Features	DynamicStor™, DataRedux™, Distributed Resilient Data™ (DRD), Application-aware Deduplication, Filesystem Quotas, Filesystem Clones/Snapshots, Dynamic Data Shredding, Instant File Copy
Optional Software Features	RepliGrid™ WAN-Optimized Replication with In-flight Encryption, HYDRALock™ Write-Once Read Many (WORM), HYDRASTOR Advanced Data Services, Encryption at Rest, Global Name Space (GNS), Openstorage Suite for Veritas (including AIR, optimized Copy and Synthetec) and Nakivo Synthetic full backup accelerator

HYDRASTOR HS8-50S STORAGE NODE SPECIFICATIONS

Model	HS8-50S SN
Capacity, Raw ²	72TB or 168TB
Capacity, Effective ^{2,3}	960TB or 2.2PB
Disk Drives	12x 3.5" 6TB SATA drives 7,200rpm (user data) or 12x 3.5" 14TB NLSAS drives 7,200rpm (user data)
Weight	70.5lbs (32kg)
Dimensions (WxDxH)	17.6" x 26.9" x 3.4" (448mm x 684mm x 87mm), 2U
Power Consumption (maximum/typical)	540W/405W (545VA/409VA)
Thermal Dissipation	1,842BTU/hr

HYDRASTOR HS8-50S ENVIRONMENTAL SPECIFICATIONS

System Thermal Rating	50°F (10°C)/hr
Operating Acoustic Noise ⁵	58dB
Regulatory Approvals	Safety: UL 60950-1, CAN/CSA-C22.2 No. 60950-1-03, EN60950-1 Electromagnetic Compatibility: FCC 15:109(g) Class A, ICES-003:2012 Class A, EN55022, CISPR22 EN61000-3-2, EN61000-3-3, EN55024, CISPR24, AS/ NZS CISPR 22 Others: RoHS, WEEE

- 1 - Performance with Express I/O Deduped Transfer option
- 2 - One (1) Terabyte (TB) = 1,000,000,000,000 bytes.
- 3 - Assumption: full backup weekly and incremental backup daily, and 3 months retention period to achieve 20:1 data reduction ratio; 9+3 resiliency level.
- 4 - Specifications of the 1GbE Model
- 5 - Typical value per node under 77°F (25°C)

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