# NGX STORAGE HYBRID SERIES

Hybrid series are highly scalable and cache centric products for enterprises. This product family designed for various workloads to enable virtualization, data warehousing, business intelligence, big data and database operations.

➔ Eliminate storage silos.
➔ Scale both in performance and capacity.
➔ Simplify management.
➔ Reduce costs and complexity.

## NGX-H Datasheet // GEN2 Systems

## Table 1) NGX Hybrid GEN2 Series Technical Specifications

| | H1000 | H1200 | H1400 | H1600 | H1800 |
|---|---|---|---|---|---|
| Maximum raw capacity | 1.1PB | 2PB | 3.1PB | 5.2PB | 7.8PB |
| Maximum drives | 144 | 200 | 250 | 380 | 500 |
| Max DRAM Cache | 192GB | 256GB | 384GB | 2048GB | 3096GB |
| Max Flash Cache | 20TB | 40TB | 40TB | 100TB | 200TB |
| Controller form factor | 2U | 2U | 2U | 2U | 2U |
| Supported drive types | SAS(10K,15K), NL-SAS(7.2K), SSD, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, NVMe, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, NVMe, FC |
| Fibre Channel | Up to 32Gb/s | Up to 32Gb/s | Up to 32Gb/s | Up to 64Gb/s | Up to 64Gb/s |
| Ethernet [1] | Up to 100Gb/s | Up to 100Gb/s | Up to 100Gb/s | Up to 100Gb/s | Up to 100Gb/s |
| SAS Backend | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 |
| Supported RAID Levels | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror |
| Max Hosts | 1024 | 1024 | 1024 | 2048 | 2048 |
| Max number of LUNs | 1000 | 1200 | 1500 | 2000 | 4000 |
| Max number of Share | 1000 | 1200 | 1500 | 2000 | 4000 |
| Max LUN size | 1024TB | 1024TB | 1024TB | 2048TB | 4096TB |
| Max Share size | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |
| Max Snapshots | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |
| Max Clone | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |
| Max Replica Profile | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |

1. 10/25/40/100G adapters have TCP Offload Engine.

## Table 2) NGX Hybrid GEN2 Series Technical Specifications

| | H2000 | H2400 | H2600 | H2800 |
|---|---|---|---|---|
| Maximum raw capacity | 20PB | 26PB | 34PB | 38PB |
| Maximum drives | 1024 | 2040 | 2040 | 2160 |
| Max DRAM Cache | 1024GB | 2048GB | 4096GB | 8192GB |
| Max Flash Cache | 80TB | 120TB | 120TB | 200TB |
| Controller form factor | 4U | 4U | 4U | 4U |
| Supported drive types | SAS(10K,15K), NL-SAS(7.2K), SSD, NVMe, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, NVMe, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, NVMe, FC | SAS(10K,15K), NL-SAS(7.2K), SSD, NVMe, FC |
| Fibre Channel | Up to 64Gb/s | Up to 64Gb/s | Up to 64Gb/s | Up to 64Gb/s |
| Ethernet [1] | Up to 100Gb/s | Up to 100Gb/s | Up to 100Gb/s | Up to 100Gb/s |
| SAS Backend | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 | SAS 3.0 / 4.0 |
| Supported RAID Levels | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror | 0, 1, 10, 5, 6, 50, 60, RAID-TP, TP-Mirror, 4way Mirror |
| Max Hosts | 8192 | 8192 | 8192 | Unlimited |
| Max number of LUNs | 65536 | 65536 | 65536 | Unlimited |
| Max number of Share | 65536 | 65536 | 65536 | Unlimited |
| Max LUN size | 8192TB | 8192TB | 16384TB | Unlimited |
| Max Share size | Unlimited | Unlimited | Unlimited | Unlimited |
| Max Snapshots | Unlimited | Unlimited | Unlimited | Unlimited |
| Max Clone | Unlimited | Unlimited | Unlimited | Unlimited |
| Max Replica Profile | Unlimited | Unlimited | Unlimited | Unlimited |

1. 10/25/40/100G adapters have TCP Offload Engine.

Table 3) NGX Hybrid GEN2 Series Software Specifications

| | |
|---|---|
| High Availability Features | • Active-Active Dual Controller<br>• Redundant hot swap disk drives, power supplies and fans<br>• Self-Healing array, Intelligent and Auto Data Rebuild Technology<br>• Non-disruptive software and firmware upgrades<br>• Non-disruptive Disk Pool Expansion<br>• Non-disruptive Volume and Share Expansion |
| Supported Operating Systems and Hypervisors | Windows Server 2016, Windows Server 2019, Windows Server 2022, Linux® (Pardus, RedHat, SuSE, Centos, Debian, Ubuntu, Oracle), Oracle® Solaris, AIX, HP-UX, Mac® OS, FreeBSD, NetBSD, VMware® , Hyper-V, Citrix |
| Virtualization API Integration | • VMware VAAI<br>• Microsoft ODX<br>• OpenStack Cinder and Manila<br>• Kubernetes CSI |
| Storage Protocols | Fibre Channel, iSCSI, NFSv3, NFSv4, SMB3/CIFS, Object S3 |
| Storage Efficiency | • Federated Pools (mixed SAS, SSD, NVMe)<br>• Inline Compression, Deduplication, Zero Detection, UNAMP/TRIM, Copy Reduction<br>• Adaptive Flash Cache, Auto Cache Tiering, Data Tiering<br>• Thin Provisioning, Thin Snapshot, Thin Clone<br>• Quality of Service and Application Priority<br>• Quota and Space Reservation |
| Data Protection | • Instant Snapshots, Scheduled Snapshots, Instant Clones<br>• MetroScale Cluster, business continuity and disaster recovery<br>• Syncronous Remote Replication<br>• Async Remote Replication<br>• Cloud Backup and Cloud Restore (Amazon S3, Google Cloud, OpenStack Swift) |
| Data Management | • Responsive Web GUI<br>• HTTP(S) RESTful API<br>• Multi-Factor Authentication<br>• SNMPv2/v3<br>• SNMP Trap<br>• E-Mail Alerts<br>• AI and ML driven predictive analytics<br>• Cloud based proactive support and system monitoring |
| NAS Features / Plugins | • Scale-out-NAS, up to 70PB single namespace<br>• Cluster Aggregated Pool<br>• Active Directory and LDAP Integration<br>• CIFS/SMB File Version Control<br>• WORM<br>• Veritas DataInsight Plugin<br>• Object access over NAS |
| Security and compliance | • Software encrypted data pools<br>• Self Encrypted Drives<br>• EN 60950-1, CISPR 22/CISPR 24 and EN 55022/55024 |