DSN-6000 Series
xStack Storage Arrays

Product Highlights:

- Complete solution including Snapshots and Remote Replication
- Redundant architecture:
  - RAID controllers
  - Power supplies
  - Fan modules
  - Battery backup modules
  - JBOD expansion
- Advanced data protection:
  - RAID Level 0,1,0+1,3,5,6,10,30,50,60
  - Writeable Snapshot
  - Windows VSS support
- Flexible volume management for multiple applications & environments:
  - Virtualisation (VMware, Microsoft Hyper-V and Citrix)
  - Cloud storage
  - SQL
  - Exchange
  - IP Surveillance
  - Backup and Restore
- Scheduled remote replication:
  - Asynchronous replications for up to 8 logical volumes
  - Full replication and incremental replication support
  - Manual & schedule tasks support
  - Dedicated port reservation for replication usage
  - Windows and Linux host utilities support
- 19” rack mountable, 2U
- Four 1GbE or two 10GbE iSCSI ports per controller
- Up to 200,000 IOPS
- Up to 900 MB/sec throughput
- Hot-pluggable design
- High connection availability:
  - Load Balancing
  - Failover
- Expandable capacity up to 60 Drives (180 TB)
- Hardware iSCSI offloaded engine
- Energy-saving design:
  - Auto disk spin-down
  - Auto fan speed
  - 80 PLUS energy-efficient power supplies

The DSN-6000 Series are a range of high performance, fully redundant storage solutions that are simple to deploy and manage.

All DSN-6000 storage solutions are supplied complete with snapshot capabilities and remote replication as standard so there is no need for additional licenses. Also each RAID controller is equipped with 4GB cache to ensure maximum performance straight out of the box.

As with all D-Link storage solutions, the DSN-6000 Series uses an integrated and intuitive management GUI to ensure the system can be up and running in no time, even with limited IT knowledge. D-Link also provides optional comprehensive on-site service and support ensuring that your storage solution will be repaired quickly should the worst happen.

The DSN-6000 Series currently supports 36TB of raw capacity per shelf using 3TB drives (and even greater capacity as larger disk drives become available), and overall scalability to 180TB using DSN-6020 Expansion Enclosure.

D-Link’s DSN-6000 Series provides 1GbE or 10GbE host interface connectivity which can handle over 200,000 I/O per second. The DSN-6000 Series integrates D-Link’s xStack storage architecture and supports services for applications demanding high throughput, scalability and flexible storage planning.

The DSN-6000 Series can be easily implemented as primary storage, as secondary storage to supplement an existing infrastructure, or as a nearline storage device to improve backup and recovery times. Using the intuitive and integrated management GUI, the DSN-6000 Series Arrays can be seamlessly incorporated in both Physical and Virtual Server environments.

High Availability

The DSN-6000 Series can provide the failover and redundancy capabilities required for mission critical scenarios such as Virtual Machine (VM) shares, database hosting, Online Transactional Processing (OLTP), email hosting, storage consolidation and other primary storage needs. It is equipped with fully redundant components for all major functions, such as RAID controllers, power supplies, fan modules, battery backup modules, and SAS JBOD expansion ports. The Hot-pluggable design is capable of providing uninterrupted services.

Remote replication provides continuous data protection ensuring your valuable data is safe in the event of a catastrophic system failure in your primary site or data centre, one source target can be setup with multiple destination targets, allowing administrators to replicate data to different locations. Snapshot technology ensures data can be restored quickly and easily without the need for lengthy restore from a back-up. Remote replication and Snapshot technology are supplied as standard with all DSN-6000 Series storage solutions.

In addition, the DSN-6000 Series incorporates advanced high availability features such as RAID 6 and RAID 60, writable snapshot, Microsoft Windows™VSS support, and volume configuration restoration. These advanced features help to reduce or eliminate any system downtime. Unlike other vendors, D-Link’s DSN-6000 Series is able to upgrade to firmware without the system going offline. Both firmware image and volume handling are well protected by the redundant RAID controllers; when one RAID controller is down or has lost connection, the other RAID controller takes over its tasks immediately. This feature ensures that volumes and services are transferred seamlessly and simultaneously.
If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly-trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

**D-Link Assist Gold** - for comprehensive 24-hour support
D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

**D-Link Assist Silver** - for prompt same-day assistance
D-Link Assist Silver is designed for ‘high availability’ businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

**D-Link Assist Bronze** - for guaranteed response on the next business day
D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

**Applications**
The optimised Input/Output Operations per second and unparalleled throughput are capable of providing run-time critical online services, such as Cloud storage, SQL, Exchange, and high-end surveillance storage. Furthermore, with its iSCSI interface, D-Link’s DSN-6000 Series is ideal for virtualisation environments - VMWare, Hyper-V, and Citrix. System administrators can install up to 32 Operating Systems onto the iSCSI system through the Boot-from-SAN functionality. With this feature, the multiple Operating Systems/ Servers can be easily managed and protected by D-Link advanced data protection features, avoiding system downtime caused by single points of failure.

**Expansion Options**
The capacity of the DSN-6000 Series storage arrays can be easily expanded with the addition of the DSN-6020 Expansion Enclosure, which supports up to 12 SAS and SATA hard drives. Up to 4 DSN-6020 enclosures can be mounted in a storage array to expand the overall capacity to 180TB, and even higher capacity as larger hard drives are introduced.

**Green Energy Savings**
The DSN-6000 Series is equipped with D-Link Green features for saving power. A hard drive can be a very power-hungry component in a SAN. When properly configured, the power consumption of hard drives can be reduced to a minimum using the auto disk spin down feature. The DSN-6000 Series systems monitor environmental temperatures to optimise the cooling mechanism. The fan modules respond only when needed. The power supply modules are all 80 PLUS power efficient, providing a more favorable power conversion rate. When combined, these power-saving features help to greatly reduce energy consumption and increase the product’s lifespan.
## Technical Specifications

<table>
<thead>
<tr>
<th>Hardware Components</th>
<th>DSN-6110</th>
<th>DSN-6120</th>
<th>DSN-6410</th>
<th>DSN-6420</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAID Controller</td>
<td>Single controller</td>
<td>Dual controllers</td>
<td>Single controller</td>
<td>Dual controllers</td>
</tr>
<tr>
<td>No. of Host Channels Per Controller</td>
<td>4 x 1 GbE iSCSI Ports</td>
<td>8 x 1 GbE iSCSI Ports</td>
<td>2 x 10 GbE iSCSI Ports</td>
<td>4 x 10 GbE iSCSI Ports</td>
</tr>
<tr>
<td>Expansion Enclosure</td>
<td>DSN-6020</td>
<td>DSN-6020</td>
<td>DSN-6020</td>
<td>DSN-6020</td>
</tr>
<tr>
<td>Cache Memory Per Controller</td>
<td>4GB</td>
<td>4GB</td>
<td>4GB</td>
<td>4GB</td>
</tr>
<tr>
<td>No. of Hard Drives (SAS &amp; SATA II)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Maximum Number of Hard Drives Supported</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Power Supply</td>
<td>2 x 500W</td>
<td>2 x 500W</td>
<td>2 x 500W</td>
<td>2 x 500W</td>
</tr>
<tr>
<td>Dimensions</td>
<td>2U 19” Rackmount</td>
<td>2U 19” Rackmount</td>
<td>2U 19” Rackmount</td>
<td>2U 19” Rackmount</td>
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<tr>
<td></td>
<td>442.8mm x 500.6mm x 88.0mm (W x D x H)</td>
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<td>442.8mm x 500.6mm x 88.0mm (W x D x H)</td>
</tr>
<tr>
<td>D-Link Green</td>
<td>Auto disk spin down</td>
<td>Advanced cooling mechanism</td>
<td>80 PLUS energy-efficient power supplies</td>
<td>80 PLUS energy-efficient power supplies</td>
</tr>
<tr>
<td>iSCSI</td>
<td>Hardware iSCSI off-load engine</td>
<td>iSCSI jumbo frame</td>
<td>Header/Data digest</td>
<td>CHAP authentication</td>
</tr>
<tr>
<td></td>
<td>Up to 32 multiple nodes support</td>
<td>Up to 128 sessions per controller</td>
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<tr>
<td>RAID &amp; Volume</td>
<td>RAID level 0,1,0+1,3,5,6,10,30,50, 60, JBOD, N-way mirror</td>
<td>Up to 1024 logical volumes</td>
<td>Up to 32 hard drives per volume group</td>
<td>One logic volume can be shared by as many as 16 hosts</td>
</tr>
<tr>
<td></td>
<td>Global and dedicated hot spare</td>
<td>Write-through or write-back cache policy</td>
<td>Online volume expansion</td>
<td>Instant RAID volume availability</td>
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<tr>
<td></td>
<td>Auto volume rebuilding</td>
<td></td>
<td></td>
<td>Auto volume rebuilding</td>
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<td></td>
<td>On-line volume migration without system down time</td>
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</tr>
<tr>
<td>High Availability</td>
<td>Dual-active RAID controller</td>
<td>Cache mirroring through high bandwidth channels</td>
<td>Flexible RAID group ownership management</td>
<td>Management port seamless take-over</td>
</tr>
<tr>
<td></td>
<td>Online firmware upgrade, no system down time</td>
<td></td>
<td></td>
<td>Multi-path &amp; load-balancing support (Microsoft MPIO, MC/S, Trunking, LACP)</td>
</tr>
<tr>
<td>Advanced Data Protection</td>
<td>Writable snapshot</td>
<td>Microsoft Windows Volume Shadow Copy Services (VSS)</td>
<td>Configurable N-way mirror</td>
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<td></td>
<td>Online disk roaming</td>
<td></td>
<td>Instant volume configuration restoration</td>
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<td></td>
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<td></td>
<td>Hot pluggable battery backup module (BBM)</td>
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<tr>
<td>Management</td>
<td>LCM; Serial console; SSH telnet; HTTP Web UI; Secured Web (HTTPS); iSNS; S.E.S.</td>
<td></td>
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</tr>
<tr>
<td>Data Security</td>
<td>Volume replication tool with multipath support</td>
<td>VLAN 802.1Q, 802.1p support</td>
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<tr>
<td>Notification</td>
<td>Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger</td>
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<tr>
<td>OS Support</td>
<td>Windows; Linux; Solaris; Mac</td>
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<tr>
<td>Virtualisation</td>
<td>VMware; Hyper-V; Citrix</td>
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<tr>
<td>Warranty</td>
<td>3-year Warranty for system</td>
<td>1-year Warranty for battery backup module</td>
<td></td>
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</tr>
</tbody>
</table>
D-Link Europe

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The heart of the network