Features
- Handles Over 80,000 I/Os per Second
- Battery Protected Cache Memory: Up to 4GB
- System Memory: Up to 512MB
- 8 Hot-Swap SATA Hard Drive Bays
- 8TB Capacity with 1TB Hard Drives (Supports higher capacity drives as they are introduced)
- SATA-II Support
- 400 Watt Redundant Power Supply
- Industry Standard 2U 19-inch Chassis

RAID Support
- 0, 1, 1+0, and 5

High Performance iSCSI Interface
- Four 1GbE Ports

Storage Network Management
- IP SAN Device Manager (IDM)
- Remote Monitoring and Configuration
- CHAP Authentication Helps Halt Intruders
- SSL Security to Management Console

D-Link 4x1GbE iSCSI SAN Array

The D-Link DSN-2100-10 Storage Area Network (SAN) Array provides a smaller, more value oriented solution for entry-level and SMB customers. The heart of the DSN-2100-10 is based on the same powerful System-on-a-Chip (SoC) design found in larger arrays such as the DSN-3000 series of products, but housed in a smaller chassis. Utilizing a 10Gbit iSCSI SoC solution that can handle over 80,000 I/Os per second, the DSN-2100-10 is capable of supporting 8TBs of raw capacity using 1TB hard drives (and even higher capacity hard drives as they are introduced). The DSN-2100-10 can easily be implemented as nearline storage or as a supplement to your primary backup and recovery device. This evolutionary advancement in performance is a testament to the tightly integrated storage architecture and is a sharp contrast to the discrete implementation of competing products.

iSCSI for IP Networks
SAN has been traditionally reserved for Fibre Channel networks until the recent introduction of iSCSI extended this powerful yet simple centralized backend storage system to IP networks. By utilizing existing Ethernet technology, the cost associated with separate host bus adapters and the per-Gigabyte cost for storage is significantly reduced. iSCSI SANs can leverage the Ethernet infrastructure and standards that are already familiar to your IT staff.

Four 1GbE Interfaces
The DSN-2100-10 implements four 1GbE ports and supports IEEE 802.3ad Link Aggregation Groups (LAG) for full offload capability so that all four ports can be grouped together, totaling up to 425MB/s bandwidth, for increased throughput and redundancy.

System-on-a-Chip (SoC) Implementation
By utilizing a SoC design, the DSN-2100-10 combines both networking and storage functions into a single specialized Application Specific Integrated Circuit (ASIC). The SoC solution combines 10Gbps iSCSI, TCP & IP offload, embedded processors, and storage virtualization firmware onto a single chip. The tight integration of these functions eliminates interoperability, timing, and support issues found in competitive products that offer "discrete implementation" wherein a chassis, a main motherboard, a RAID storage controller, iSCSI software or controller, network interface cards, and operating system software are choosen separately and then assembled. The DSN-2100-10 outperforms these discrete implementations and does so at a lower price point, while delivering mission critical data quickly with state-of-the-art reliability.

RAID for Efficiency
The DSN-2100-10 features eight hot swappable Serial ATA (SATA) disk drive bays supporting 8TB raw capacity using 1TB hard drives (and even higher capacity hard drives as they are introduced) in RAID level 0, 1, 1+0 and 5 configurations. You can quickly deploy a SAN using inexpensive SATA disk drives and, depending on your growing storage needs, you can simply add more drives as you go.

Embedded Centralized Storage Management
The embedded, user-friendly IP-SAN Device Manager (IDM) provides comprehensive network storage management.

Advanced Management Features
The DSN-2100-10 provides additional advanced features for efficient management of network storage and optimal performance.

Cache Management provides adaptive and persistent cache management. This provides write-back, write-through, write coalescing, and multi-stream read-ahead on a volume basis, optimizing cache utilization and performance in an application-dependent manner.

VLAN Zoning supports IEEE 802.1q VLAN tagging to segregate traffic into isolated zones for secure access and jumbo frames, improving network throughput and reducing CPU overhead.

D-Link 4x1GbE iSCSI SAN Array
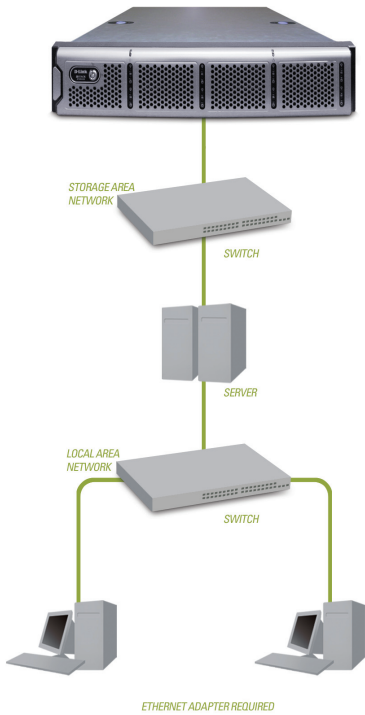
Volume Virtualization utilizes the concept of storage Extents. Extents are the fundamental building blocks used to enable features such as RAID, online capacity expansion and volume migration. Drives of dissimilar size can be used to create volumes. Growth can occur without volume migration or reconstruction. Single drives can contain multiple and divergent RAID technologies.

RAID Support for RAID Levels 0, 1, 1+0 and 5 (striped sets, mirrored sets, striped mirrored sets, and parity sets) allows for different storage options.

Online Capacity Expansion and RAID Level Migration is performed online with minimal impact on users. For example, a mirror volume of two drives can easily be converted to a parity volume of three or more drives while users continue to access this storage.

Micro Rebuilds provide protection against unresponsive SATA commands by forcing a response within a preset time limit.

An iSCSI array can prove to be a valuable tool to supplement your network storage foundation. Whether providing a low-cost block-based solution for data backup and recovery, replacement of Direct-Attached Storage (DAS) drives, or providing a cost-effective entry-level nearline storage solution, the DSN-2100-10 can meet all of your immediate needs.

Technical Specifications

Features

Drive Bays	8
Drive Interface Support	SATA-II support
System Memory	256MB to 512MB (512MB standard)
Cache Memory	256MB to 4GB (512MB standard)
Battery Backup for Cache	Standard (approximately 72 hours on full charge)
Bandwidth	Up to 425MB/s
Storage Capacity	8TB capacity with 1TB hard drives (supports for higher capacity drives as they are introduced)
Operating Systems Supported Please see support.dlink.com for latest support information	Windows Vista® 32-bit & x64 (Ultimate & Enterprise) with Built-in iSCSI initiator
	Windows® Server 2003® 32-bit & x64 SP1 (Standard & Enterprise) with v2.07 iSCSI initiator
	Windows Server 2003 R2 32-bit & x64 (Standard & Enterprise) with v2.07 iSCSI initiator
	Windows XP Pro 32-bit & x64 with v2.07 iSCSI initiator
	Windows 2000 Advanced Server with v1.6 & v2.01 iSCSI initiator
	Red Hat® 7.3
	Red Hat Enterprise AS update 5
	SuSE Enterprise Server 10.2 32-bit (x86)
	SuSE® Professional 9.3 32-bit & x64
	Mac OS X (10.4 & 10.5)

D-Link 4x1GbE iSCSI SAN Array

Supported NICs, iSCSI Accelerators and iSCSI HBAs Please see support.dlink.com for latest support information	Intel® Pro 1000MT & XT [1GbE]
	Alacritech® SES2104ET (drivers: SNP 9.1.0.1092 & 7.3.1.0)
	Alacritech SES2102ET (drivers: SNP 9.1.0.1092 & 7.3.1.0)
	QLogic® 4010C, 4052C, & 4062C

iSCSI Network Interface

iSCSI Network Interface	Four 1GbE Copper Ports
Host Interface	iSCSI Draft 20 compliant initiator
Connections	1,024 hosts
CHAP Authentication	Yes
Access Control of Management	Yes
iSCSI/TCP/IP Full HW Offload	Yes
Jumbo Frames Support	Yes
LAG Support (Link Aggregation)	Yes – Up to four LAGs (IEEE802.3ad Link Aggregation Group)
VLAN Support	Up to eight 1-to-1 mapping between IP subnet and VLAN. Multiple VLANs per physical port with VLAN tag. All physical ports in LAG belong to same VLAN (IEEE802.1Q Tag)

Volume & RAID Support

RAID Controller	Single- Integrated in ASIC
RAID Support	RAID Levels 0, 1, 1+0 and 5
Volumes	1,024 Virtual Volumes (256 accessible per initiator)
Target Nodes	1,024
Online Capacity Expansion	Yes
Hot Swappable Drives	Yes
Instant Volume Access	Yes
Free Space Defragmentation	Yes
Auto-Detection Failed Drive	Yes
Auto-Rebuild Spare Drive	Yes
RAID Level Migration	Yes
Drive Roaming in Power Off (configured drives are not bay-specific)	Yes
Micro Rebuilds	Yes

Storage Management

Embedded IP-based Management GUI	Create, manage, expand and monitor storage pool, volumes, and RAID
	Event manager to view and persist events
Firmware Field Upgradeable	Yes

Power

Supply Type	Redundant 2U 400 Watt
Input Voltage	100-240 VAC

D-Link 4x1GbE iSCSI SAN Array

Input Frequency	47-63 Hz
Input Current	8A Maximum at 100VAC and 4A Maximum at 240VAC (maximum amps vs. voltage varies linearly throughout this voltage range)
Power Factor Correction	95%@110V, Full load
Power Consumption	360W (full configuration)
Thermal	1260 BTU / hour (full configuration)

Environmental

Operating Temperature	32° to 104°F (0° to 40°C)
Storage Temperature	-4° to 158°F (-20° to 70°C)
Operating Humidity	20% ~ 90% (Non-condensing)
Storage Humidity	10% ~ 95% (Non-condensing)

Physical (approximate)

Form Factor	2U industry-standard 19-inch rack
Dimesnsions (D x W x H)	25in x 17.2in x 3.5in (635mm x 438mm x 89mm) * 18.7in (476mm) wide at the mounting brackets
Weight	45 lbs (20.4 kg) full configuration

International Approvals

Emissions	CE Class A, FCC Class A, C-Tick Class A, VCCI Class A
Safety	CSA 60950-1, UL60950-1, IEC 60950-1, EN 60950-1