

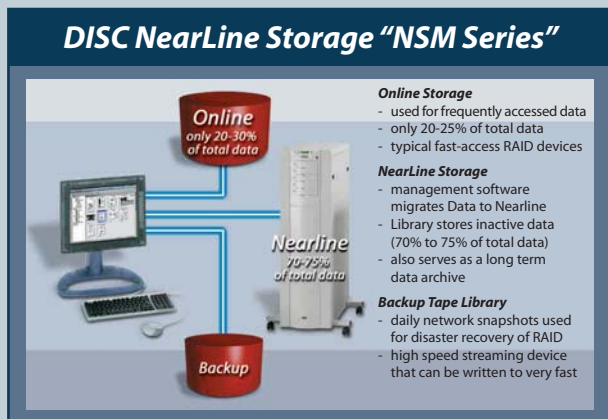


NSM Series

Modular CD and DVD Storage Libraries

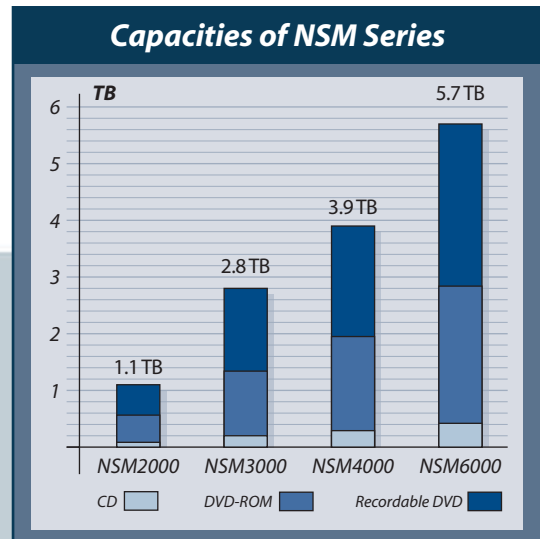
Automated Solutions for Enterprise Storage

DISC is a worldwide leader in the development and production of Near Line data storage systems. We provide a complete range of storage solutions built around the most reliable storage technologies ever created. Offering capacities from 60 GB up to 10 TB, DISC solutions add storage to networks for a fraction of the total cost of RAID.



The NSM Series

libraries use CD and DVD technology to deliver cost effective solutions for mid to high capacity storage requirements. The NSM Series provides reliable solutions for a wide range of applications including secondary storage, archiving and data library.



Four library models and three drive technologies

create numerous configuration options for reliable, NearLine storage and access of 60GB to over 5 TB of data. Each model combines fast read and write access with optimal media handling to provide solutions for an unlimited range of data capacity requirements. DISC's unique modular design concept gives users the flexibility to configure each library to meet the specific requirements of their application. Components such as drives, media magazines, and CapacityDoubler™ can be exchanged with one another to balance capacity and performance. DISC's modular design assures that as new technologies are introduced they can be easily incorporated into new and existing systems.



The CapacityDoubler™ allows the NSM Series to use double sided recordable DVD media. Available as an option, the CapacityDoubler™ can be added to existing customer units as a cost-effective way to increase storage capacity.



Reliable Systems for high data availability

Reliability is a hallmark of the NSM Series. Every model is rated to deliver more than 2.5 million robotic swaps, and all drives are specially prepared for automation usage. The CapacityDoubler™ is rated for more than 1.5 million cycles.



DISC's advanced high-speed robotics and automation enhanced drive technologies assure that system performance and reliability are second to none.

No other data storage system or technique provides this combination of capacity, security and flexibility.

Flexibility to meet the requirements of any application

Three drive technologies DVD/CD Read only, CD/DVD Write once and DVD ReWriteable can be incorporated into each of the models. DISC's unique Pack Technology and Offline Data Management system provide ideal long-term storage and system expansion capabilities. Older data may be migrated to off line packs for secure storage, which are easily reinserted into the library when needed.

The strength of the NSM Series is in its design:

- Adds capacity to networks for a fraction of the total cost of RAID.
- Modular architecture ensures quick and easy technology migration.
- Maximum storage capacity in a small footprint.
- Pack Technology for online & offline management.
- CapacityDoubler™ for dual sided media.

Intelligent Pack Technology, Secure Data Management and High Storage Capacity

DISC's intelligent Pack Technology provides unlimited managed storage capacity in our library solutions. Each Pack holds 15 media and can be easily exchanged while the system is fully operating. System software catalogues all files stored in each pack, and updates the active file system automatically each time a pack is exchanged. Data managed Offline in packs is easily put Online as needed. This unique feature delivers unlimited storage capacity with efficient and intelligent data workflow.





NSM6000

The NSM6000 delivers fast access to over 5 TB of data. Up to 14 drives can be installed to provide high performance multi-user access to data. NSM6000 offers DISC's highest capacity in a small footprint.

- Modular design architecture
- Up to 5.6 TB
- 605 slots max.
- 1 to 14 drives
- Multiple SCSI busses, with SCSI-2 single ended, or optional LVD

NSM4000

NSM4000 offers the same features and performance as NSM6000 but with fewer slots and drives. Up to 7 drives and 415 pieces of media make the NSM4000 an ideal solution for high capacity data storage.

- Modular design architecture
- Up to 3.7 TB
- 415 Slots max.
- 1 to 7 drives
- Multiple SCSI busses, with SCSI-2 single ended, or LVD option

NSM3000

The NSM3000 provides a mid-range capacity, high performance storage solution in a smaller form factor. Up to 2.6 terabytes of data can be stored and quickly accessed. Up to 6 drives can be installed, and DISC Intelligent Pack Technology is included.

- Modular design architecture
- Up to 2.6 TB
- 285 Slots max.
- 1 to 6 drives
- Multiple SCSI busses, with SCSI-2 single ended, or LVD option

NSM2000

The NSM2000 offers a cost-effective solution that can provide high capacity storage in an extremely compact form. Up to 1 TB of data can be stored and accessed. The DISC Modular design allows it to offer from 1 to 5 drives for optimum performance.

- Modular design architecture
- Up to 1 TB
- 120 Slots max.
- 1 to 5 drives
- Dual bus SCSI-2 single ended

Four models, one technology

The NSM Series offers NearLine storage and access up to 6 TB of data.



The Common Family Architecture for NSM Series models.

Drives	
CD-R	
Type	Plextor PX-W 1210S
Data transfer rate	1.8 MB/s write 2.1 - 4.8 MB/s read
Access time	150 ms at 32x
DVD-ROM	
Type	Hitachi GD 8000
Data transfer rate	DVD: 22.1 MB/s CD: 6 MB/s
Access time	DVD: 120 ms CD: 90ms
DVD-R	
Type	Panasonic SD-W 9501
Data transfer rate	1.38 MB/s read/write
Access time	330 ms
DVD-RAM	
Type	Hitachi GF 2050
Data transfer rate	1.38 MB/s write with verify 2.7 MB/s read
Access time	210 ms
Reliability	
Robotic MSBF	2,500,000 cycles
Electronic MTBF	60,000 cycles
Drive MLBF	250,000 cycles
System	
Mailslot	Standard
Operator panel	Standard, 16 key, 32 character display
Media handling	no-touch tray technology
Pack capacity	15 media

Features:

- Modular Design for Flexibility
- Ruggedized Architecture
- CapacityDoubler™ available for double sided media
- Intelligent Pack Technology
- CD, DVD-ROM, DVD-R and DVD-RAM Technologies
- Built in Diagnostics
- Intuitive user interface, with password protected security scheme
- Auto sensing power supply
- Multiple SCSI busses, with SCSI-2, or optional LVD interface.



Reliability

- Lab Tested and field proven dependability
- MSBF over 2.5 million cycles
- MTBF (POH) 60,000
- MLBF (Drives) 250,000
- Media lifetime exceeds 30 years
- No Touch tray technology
- Automation Enhanced drives

NSM Series

Specific technical data



Model	NSM2000	NSM3000	NSM4000	NSM6000
Number of slots/1 Drive	120*	285*	415*	605*
	* each additional drive reduce the number of slots by 15			
Number of drives	1 - 5	1 - 6	1 - 7	1 - 14
Max. data capacities				
CD (0.7 GB)	84 GB	200 GB	290 GB	420 GB
DVD-ROM (4.7 GB)	564 GB	1340 GB	1950 GB	2840 GB
Recordable DVD (9.4 GB) (DVD-R, DVD-RAM)	987 GB**	2538 GB**	3760 GB**	5546 GB**
	** including CapacityDoubler™			
Media exchange time	2.5 sec. average	3 sec. average	4 sec. average	6 sec. average
System				
Data interface optional	Dual bus SCSI-2	Single/dual bus SCSI-2 Single/dual LVD-SCSI	Single/dual bus SCSI-2 Single/dual LVD-SCSI	Dual/triple bus SCSI-2 Single/dual/triple LVD-SCSI
Robotics control interface	RS 232, SCSI-2 opt.	SCSI-2/RS 232 switchable	SCSI-2/RS 232 switchable	SCSI-2/RS 232 switchable
Weight (maximum)	26 kg, 57 lb.	54 kg, 120 lb.	62 kg, 137 lb.	85 kg, 188 lb.
Height	409 mm, 16.1 in.	778 mm, 30.6 in.	980 mm, 38.6 in.	1290 mm, 50.8 in.
Width	204 mm, 8.0 in.	365/487 mm, 14.4/19.2 in.	365/621 mm, 14.4/24.4 in.	365/621 mm, 14.4/24.4 in.
Depth	642 mm, 25.3 in.	655 mm, 25.8 in.	655 mm, 25.8 in.	655 mm, 25.8 in.



Typical examples for applications:

- Document image management
- Legal and medical records
- Banking, finance transaction records
- Photo and image archives
- Graphics and Multimedia images
- E-mail, Internet and Intranet data



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