

# M300 DISK ARRAY

**DISK ARRAY SUITABLE FOR VIRTUALIZATION ENVIRONMENTS WITH HIGH PERFORMANCE, HIGH AVAILABILITY AND RICH SOLUTIONS**



**High performance & availability**

**Advanced eco features**

**Easy to install & operate**

**Extremely economical**

## **Complete setup in a matter of minutes**

Simplified initial setup procedure: with the preinstalled management software, just select the desired capacity and RAID level, and let M300 Disk Array perform its own settings to enable the best performance.

## **User-friendly GUI for storage management**

The highly visual Web browser screens let you quickly grasp the status of storage capacity, disk load, and connected servers. Even first-time users, can easily make changes to the replication settings or capacity, and can handle fault in the event of a failure.

## **Advanced power-saving design**

M300 Disk Array slashes previous power consumption levels to achieve one of the best power ratings in the industry. It uses a power-efficient processor and autonomously controls the operating mode to reduce the power consumption of the entire system. Low-power components have been used to the greatest extent possible.

## **Easily ramp up capacity and performance**

M300 Disk Array offers a newly developed Advanced Dynamic Pool technology. Pool capacity can be increased simply by adding hard disk drives. The data will be automatically organized into the optimal configuration to raise the performance of the entire data pool.

## **Non disturbing data backup**

M300 Disk Array provides a snapshot function to save only the modified data and a function to replicate an entire data volume without disrupting operations. The replicated volume can be used for tape backup, batch processing, or tests, using actual data.

## **Thin provisioning in virtual environment**

Answering needs, the capacity of physical volumes can be allocated to virtual drives and hard disk drives added without disrupting operations. In this way, capacity usage is optimized, improving utilization, reducing initial investment layout, and lowering power consumption. There is no inefficient stoppage and schedule adjustment.

**Advanced eco features**

- Silent and Autonomously switches to low-power mode
- Uses a power-efficient processor with a TDP (thermal design power) of 30 W
- Includes a highly efficient power supply
- Operates in environments with temperatures up to 40°C, reducing air conditioning usage

**High performance & availability**

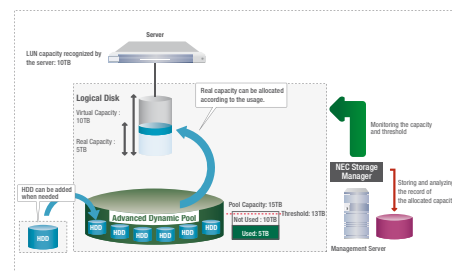
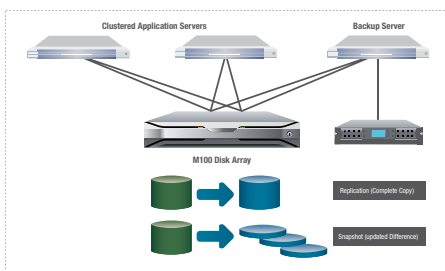
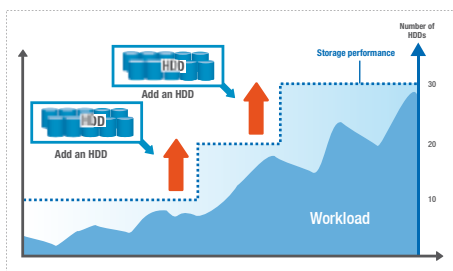
- Uses duplication and redundancy design for critical components
- Capacity and performance can be increased just by adding hard disk drives
- Can be managed remotely through status monitoring and log acquisition
- Uses a high-speed interface

**Extremely economical**

- Excellent cost-performance ratio
- Affordable management software
- iSCSI interface enables economical system configuration

**Easy to install & operate**

- No management server required
- Setup is simple and quick
- Can be easily managed and operated thanks to an intuitive, user-friendly GUI (CLI supported)
- Executes self-diagnosis and displays appropriate response measures if faults occur
- Firmware updates can be applied during operation



**SPECIFICATIONS**

MODEL	M300 DISK ARRAY SUPPORTING 3.5" DRIVE	M300 DISK ARRAY SUPPORTING 2.5" DRIVE		
Chassis structure (rack mount)	Up to 7 (seven) 3.5" and 2.5" Disk Enclosures can be connected to the Disk Array Controller under the condition that the number of HDD slots should be up to 144. Disk Array Controller(3.5");12 HDD max Disk Enclosure(3.5");12 HDD max Disk Enclosure(2.5");24 HDD max	Up to 7 (seven) 3.5" and 2.5" Disk Enclosures can be connected to the Disk Array Controller under the condition that the number of HDD slots should be up to 144. Disk Array Controller(3.5");12 HDD max Disk Enclosure(3.5");12 HDD max Disk Enclosure(2.5");24 HDD max		
Host interface	Fibre Channel (8Gbps), iSCSI (1 Gbps or 10 Gbps), SAS (6Gbps)*4			
Number of host ports	8x FC, 8x SAS, 4x iSCSI, (4x FC + 4x iSCSI 1G)			
Cache memory	8GB or 16 GB			
Backup method	Save to flash memory			
RAID level	RAID-0, 1, 5, 6, 10, 50, 60, TM			
Drive specifications	Disk interface	SAS (6Gbps)		
	Type / Capacity / Rotation speed	SAS HDD	3.5" 300 GB, 450 GB, 600 GB (15,000 rpm)	2.5" 300 GB, 450 GB, 600 GB (10,000 rpm), 300 GB (15 000 rpm)
		Nearline SAS HDD	3.5" 1 TB, 2 TB (7,200 rpm)	2.5" 1 TB (7,200 rpm)
		SSD	3.5" 400 GB	2.5" 100 GB
		Encryption SAS HDD	3.5" 600 GB (15,000 rpm)	2.5" 600 GB (10,000 rpm)
Device capacity *1 (maximum capacity)	SAS HDD	45.5 TB	68.3 TB	
	Nearline SAS HDD	155.5 TB	117.0 TB	
	SAS SSD	3.4 TB	836 GB	
	Encryption SAS HDD	45.5 TB	68.3 TB	

MODEL	M300 DISK ARRAY SUPPORTING 3.5" DRIVE	M300 DISK ARRAY SUPPORTING 2.5" DRIVE	
Number of Drives *2	3-96 (3.5-HDD) ; 3-144 (2.5-HDD)		
Supported operating systems *3	Windows, Linux, VMware, HP-LUX, AIX, Solaris		
Chassis dimensions (U count)	482 x 513.2 x 87.8 mm (2U, no front bezel) / 482 x 545.2 x 87.8 mm (2U, with front bezel)		
Chassis dimensions (WxDxH)	482 x 513.2 x 87.8 mm (2U, no front bezel) / 482 x 545.2 x 87.8 mm (2U, with front bezel)		
Weight	Disk array controller 31 kg max. Disk enclosure 29 kg max.		
Power conditions	100 to 240 VAC, single-phase 50/60 Hz		
Maximum power consumption (when operating in a 25°C environment)	Disk array controller *5	SAS HDD 510 W / 420 W Nearline SAS HDD 445 W / 360 W	SAS HDD 505 W / 420 W Nearline SAS HDD 470 W / 385 W
	Disk enclosure	SAS HDD 315 W / 265 W	310 W / 260 W
		Nearline SAS HDD 250 W / 200 W	275 W / 225 W
	Ambient operating conditions	Temperature	5 to 40°C (41 to 104°F) (while operating), -10 to 60°C (14 to 140°F) (Non operating)
Humidity		10 to 80% RH (while operating), 5 to 80% RH (Non-Operating)	



	FUNCTIONS	PRODUCT NAME	M300	
Integrated System Operation Management	Integrated Management	Integrated management and integrated monitoring/control platform combined	NEC Storage Manager Suite	
		Integrated management (status monitoring and configuration display)	NEC Storage Manager	
	Device Management	Integrated monitoring and control platform	NEC Storage Manager Express	
Performance Management	Performance monitoring and performance analysis combined	NEC Storage Manager Integration Base	• *6	
	Performance monitoring	NEC Storage PerformanceMonitor Suite	• *6	
Storage Control	Storage Control	Performance analysis	NEC Storage PerformanceMonitor	
		Storage control	NEC Storage PerformanceNavigator	
	Replication Control	Integrated operation commands	NEC Storage BaseProduct	Mandatory
		Copy and snapshot within an enclosure	NEC Storage ControlCommand	•
		Copy across the enclosures	NEC Storage DynamicDataReplication	•
		Microsoft SQL Server link	NEC Storage DynamicDataReplication Express	•
		File system synchronization	NEC Storage RemoteDataReplication	• *7
	Resource Control	Access control	NEC Storage RemoteDataReplication Asynchronous	• *7
		Data retention	NEC Storage ReplicationControl SQL Option	•
		Power saving	NEC Storage ReplicationControl FileSystem Option	•
		Thin provisioning	NEC Storage AccessControl	• *6
		Data migration	NEC Storage VolumeProtect	•
		Path control	NEC Storage StoragePowerConserver	• *6
			NEC Storage ThinProvisioning	• *6
			NEC Storage DataMigration	•
	NEC Storage PathManager	•		

©2012 NEC. The information and specification contained in this publication are subject to modification without prior notice. All other names of products and brands cited are the property of their respective owners. Products can be photographed with the optional components available. NEC declines all responsibility in the case of photographic or typing errors. Photos and documents are not contractual.

\*1 : Calculated on «1GB=1,024^3B», «1TB=1,024^4B» basis.  
 \*2 : Up to 12 SSD can be installed.  
 \*3 : There might be some restrictions on the OS when connected with disk arrays. For more information, please feel free to contact NEC.  
 \*4 : SAS interface will be supported in CYQ4,2011.  
 \*5 : Host interface is FC+iSCSI(1Gbps).  
 \*6 : Bundled with NEC BaseProduct.  
 \*7 : Only FC models are supported.