Empowered by Innovation NEC

# 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 adjustement.

## 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 40ºC, reducing air conditioning usage

## High performance & availability

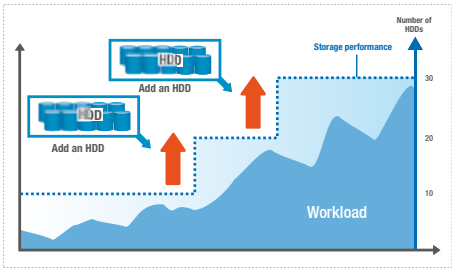
- Uses duplication and redundancy design for critical components
- Capacity and performance can be increased just by adding hard disk drives
- Can be managed remotly through status monitoring and log acquisition
- Uses a high-speed interface

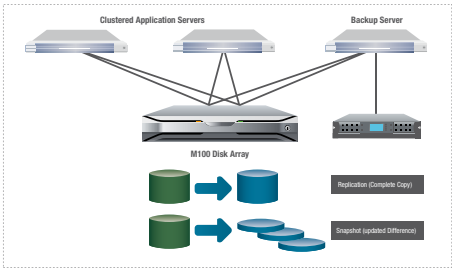
## Extremely economical

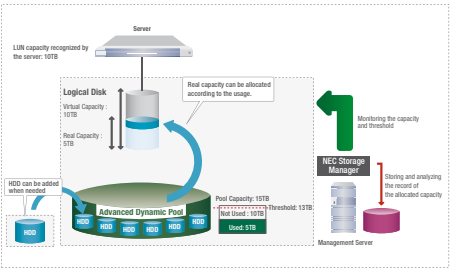
- Excellent cost-performance ratio
- Affordable management software
- iSCSI interface enables economical system configuration

## 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 | Capacity | | 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-UX, AIX, Solaris | |
| Chassis dimensions (WxDxH) | Disk array controller (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) | |
| | Disk enclosure ( 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) | |
| 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 cosumption (when operating in a 25°C environment) | Disk array controller *5 | SAS HDD | 510 W / 420 W | 505 W / 420 W |
| | | Nearline SAS HDD | 445 W / 360 W | 470 W / 385 W |
| | Disk enclosure | SAS HDD | 315 W / 265 W | 310W / 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 | • *6 |
| | | | NEC Storage Manager Express | • *6 |
| | Device Management | Integrated monitoring and control platform | NEC Storage Manager Integration Base | • *6 |
| | Performance Managment | Performance monitoring and performance analysis combined | NEC Storage PerformanceMonitor Suite | • |
| | | Performance monitoring | NEC Storage PerformanceMonitor | • |
| | | Performance analysis | NEC Storage PerformanceNavigator | • |
| Storage Control | Storage Control | Storage control | NEC Storage BaseProduct | Mandatory |
| | | Integrated operation commands | NEC Storage ControlCommand | • |
| | Replication Control | Copy and snapshot within an enclosure | NEC Storage DynamicDataReplication | • |
| | | | NEC Storage DynamicDataReplication Express | - |
| | | Copy across the enclosures | NEC Storage RemoteDataReplication | • *7 |
| | | | NEC Storage RemoteDataReplication Asynchronous | • *7 |
| | | Microsoft SQL Server link | NEC Storage ReplicationControl SQL Option | • |
| | | File system synchronization | NEC Storage ReplicationControl FileSystem Option | • |
| | Resource Control | Access control | NEC Storage AccessControl | • *6 |
| | | Data retention | NEC Storage VolumeProtect | • |
| | | Power saving | NEC Storage StoragePowerConserver | • *6 |
| | | Thin provisioning | NEC Storage ThinProvisioning | • *6 |
| | | Data migration | NEC Storage DataMigration | • |
| | High Availability | Path control | NEC Storage PathManager | • |

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***Ref : Datasheet - uk / NEC M300 Disk Array January 2012***

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***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.**

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