



# How to Order Guide M510/M710/M710F

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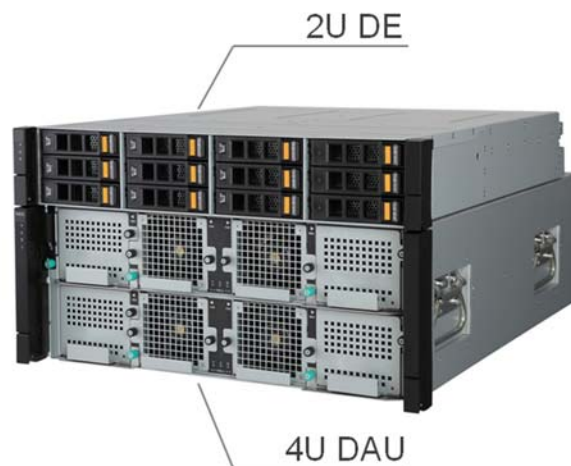
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## Step 1. Select Disk Array Unit

The M510/M710M/710F Disk Array Unit (DAU) is a disk storage device that contains storage controllers in its 4U chassis. The M510/M710 DAU attaches Disk Enclosures (DEs) with either 2.5” or 3.5” form factor drives to provide capacity. The M510 system can support a maximum of 768 drives and can intermix both 2.5” and 3.5” form factor drives. The M710 system can support a maximum of 960 drives and can intermix both 2.5” and 3.5” form factor drives. The M710F is an all flash array designed to maximize efficiency and speed by exploiting SSD units. The M710F is only available in a 2.5: form factor and supports SSD units only.

This guide will point out when something is different for the M710 All-Flash-Array but generally speaking scalability, controllers, dummy disks are all the same for all three models (M510/M710/M710F).

The M510/M710/M710F DAU requires at least one DE and three 2.5”/3.5” drives to be operational. Please refer to Step 3 for more information about the DE and drives.



**Figure 1-1: M510/M710 4U DAU and 2U DE Appearance**

The M510/M710/M710F DAU provides a dual controller configuration. Two controller canisters are attached to the DAU as standard. The M510/M710/M710F DAU comes with standard SAS disk port cards which are mounted in controller canisters and used to connect DEs to the DAU.

Also, controller canisters require additional disk port cards that are required to support large capacity configurations. A controller canister requires a host port card, Small Form Pluggable (SFP) modules and cache memory to be installed in it in order to be operational. The host port card, SFP and cache memory must be ordered separately. Additional disk port cards can be ordered as necessary. Please refer to Step 2 for more information about the host port card, disk port card, SFP module, and cache memory.

In addition to the controller canisters, the M510/M710/M710F DAU is also equipped with Power Supply Units (PSU) as standard. Power cables for the United States are included in the localization kit which is provided at no charge. The part numbers of localization kits are listed below in this chapter.

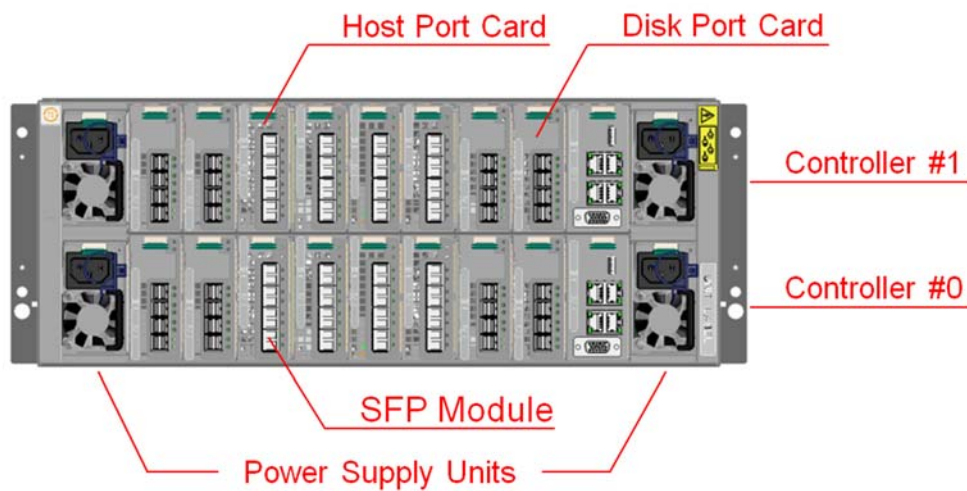


Figure 1-2: M710 dual controller DAU back view

The M510/M710/M710F DAU comes with the following accessories.

- A pair of 4U rack mount ear bezels with the NEC logo
- Rack mount kit

The 4U front bezel with NEC logo is available at a charge. Please refer to Step 4 for the part number and more details.

As for software, Base Software is included without charge for the M510 DAU, the M710 DAU and the M710F DAU. Chargeable 3-year standard software maintenance must be ordered for every Base Software provided to the DAU. Please refer to Step 5 for the details of Base Software and to Step 8 for detailed instructions on ordering the software maintenance.

Select a M510/M710/M710F DAU from the following list based on requirements for capacity, physical space, redundancy, performance, etc. Note that the M510 DAU is available in either AC or DC power supply models. The M710/M710F is only available in AC power.

**Table 1-1: Disk Array Unit Part Number**

Disk Array Unit				
PN	Description	M510	M710	M710F
NF5352-SR00E	M510 Dual Controller Disk Array Unit w Base SW (w 2 - 4 port Disk Port Cards, w/o Host Port Cards, SFP or Cache Memory)	✓		
NF5352-SR00DE	M510 Disk Array Unit(DC-48V)	✓		
NF5372-SR00E	M710 Dual Controller Disk Array Unit w Base SW (w 2 - 4 port Disk Port Cards, w/o Host Port Card, SFP or Cache Memory)		✓	
NF5372-SR00FE	M710 All Flash Disk Array Unit including 192GB of Cache (w/o Host port Card or SFP)			✓

The localization kit for the M510/M710 DAU includes power cables and is provided at no charge. The following list provides the part numbers of the localization kit.

**Table 1-2: Localization Kit Part Number**

Localization Kit (Free)				
PN	Description	M510	M710	M710F
Q24-HL000000072891	Localization Kit for M510/M710 Disk Array Unit AC Power	✓	✓	✓
Q24-HL000000106127	Localization Kit,M510 Base Unit DC	✓		

**Note**

- **If a DAU or DE is added to a quote manually, a localization kit must also be added in order to have power cables. A localization kit will be automatically added, when a DAU or DE is added using Configurator tool.**

The 60 Day Trial License Keys which include M510/M710/M710F base and optional software are provided at no charge. The following list provides the part numbers of the M510/M710/M710F trial license.

## Step 2. Add Host Port Card, SFP Module & Cache Memory

The M510/M710/M710F DAU does not have host ports as standard and requires host port cards and SFP modules to be mounted on its controller canisters. The host port card is an interface card that provides communication ports for the connection between the DAU and FC or iSCSI switches or direct connection to hosts. The M510, M710, and M710F support Fibre Channel (FC), iSCSI on copper/optical and a combo-card with FC and iSCSI (either copper or optical) interface host port card.

All optical fibre cable connections require acquisition of small form factor (SFP) modules which are mounted in the host interface card port slots. The transfer rates of those host port cards are specified by the SFP modules mounted. 8Gb and 16Gb SFPs for FC and 10Gb SFPs for iSCSI are available. Copper host ports for iSCSI and SAS are equipped with connectors which provides iSCSI 10Gb and SAS 12Gb transfer rates. The M510 supports up to 32 ports of FC or 16 ports of iSCSI. The M710/M710F supports up to 48 ports of FC or 24 ports of iSCSI. Both FC and iSCSI ports can be intermixed on the M510, M710, or the M710F. The following figure illustrates the various intermix options for the M510 and M710/M710F.

FC and iSCSI Optical			FC 8/16Gb		
			8ports	16ports	24ports
			HPE x1pair	HPE x2pair	HPE x3pair
10Gb iSCSI Optical	4ports	HPE x1pair	✓	✓	✓
	8ports	HPE x2pair	✓	✓	
	12ports	HPE x3pair	✓		

FC and iSCSI Copper			FC 8/16Gb		
			8ports	16ports	24ports
			HPE x1pair	HPE x2pair	HPE x3pair
10Gb iSCSI Copper	4ports	HPE x1pair	✓	✓	✓
	8ports	HPE x2pair	✓	✓	
	12ports	HPE x3pair	✓		

✓: Available

CAUTION ]  
M510 does not support mix of 10Gb SCSI(Optical) and 10Gb SCSI(Copper).

Figure 2-1 M510 FC/iSCSI Intermix Options

FC and iSCSI Optical			FC 8/16Gb				
			8ports	16ports	24ports	32ports	40ports
			HPE x1pair	HPE x2pair	HPE x3pair	HPE x4pair	HPE x5pair
10Gb iSCSI Optical	4ports	HPE x1pair	✓	✓	✓	✓	✓
	8ports	HPE x2pair	✓	✓	✓	✓	
	12ports	HPE x3pair	✓	✓	✓		
	16ports	HPE x4pair	✓	✓			
	20ports	HPE x5pair	✓				

FC and iSCSI Copper			FC 8/16Gb				
			8ports	16ports	24ports	32ports	40ports
			HPE x1pair	HPE x2pair	HPE x3pair	HPE x4pair	HPE x5pair
10Gb iSCSI Copper	4ports	HPE x1pair	✓	✓	✓	✓	✓
	8ports	HPE x2pair	✓	✓	✓	✓	
	12ports	HPE x3pair	✓	✓	✓		
	16ports	HPE x4pair	✓	✓			
	20ports	HPE x5pair	✓				

✓ : Available       Use xPE slots

[ CAUTION ]  
 · M710 does not support mix of 10Gb SCSI(Optical) and 10Gb SCSI(Copper).

Figure 2-2 M710/M710F Intermix Options

The M510/M710/M710F DAU comes with two 4-port disk port cards as standard. The disk port card is an interface card that provides ports for connection between the DAU and DEs. Additional disk port cards can be ordered for both the M510 and M710/M710F to connect more DEs in large capacity configurations.

M510/M710/M710F controller canisters are equipped with Host Port Extension (HPE) slots and Disk Port Extension (DPE) slots which accommodate host port cards and disk port cards respectively. The M510, M710, and M710F provide HPE #0 through HPE #7 and DPE #0 through DPE #3. In addition to the HPE/DPE slots, the M710 and M710F provide xPE #0 through xPE #3 which can be used as either HPE or DPE. The HPE/DPE/xPE slots must be used as pairs (e.g. HPE #0 and HPE #1 are a pair). Each pair must use the same type of host or disk port cards. Pairing different type of host/disk port cards in a pair or having a single HPE/DPE/xPE card is not supported. Please refer to Figure 2-3 and Figure 2-4 for the M510, M710, and M710F HPE/DPE/xPE layout information.





Figure 2-3: M510 Host and Disk Port Extension Slot Layout



Figure 2-4: M710 and M710F Host and Disk Port Extension Slot Layout

The M510/M710/M710F requires additional disk port cards to support the maximum number of hard-disk/solid-state drives. Two standard disk port cards support 384 drives for the M510, M710, and M710F. Two additional disk port cards extend the capacity of both the M510 and M710/M710F to 768 drives (maximum number for the M510). Expanding the M710 or M710F beyond 768 drives affects the number of host port cards that can be mounted on the M710/M710F because this requires xPE slots to be used as DPE slots, not as HPE slots. Using 2 xPE slots for disk port cards extend the capacity to the M710 maximum of 960 drives. Adding disk port cards beyond what is necessary for number of drives installed does not increase drive capacity but can be utilized to distribute the I/O access across a larger number of disk ports and maximum performance. Please refer to Table 2-1 and Table 2-2 for the details of how the drive capacity changes depending on the number of host/disk port cards for the M510 and M710/M710F.

Table 2-1: M510 Host Port Card and Disk Port Card Combination

Maximum number of drives		Number of Host Port Card			
		<u>2 cards</u> 8 ports	<u>4 cards</u> 16 ports	<u>6 cards</u> 24 ports	<u>8 cards</u> 32 ports
Number of Disk Port Card	<u>2 cards</u> 8 ports	384 drives	384 drives	384 drives	384 drives
	<u>4 cards</u> 16 ports	768 drives	768 drives	768 drives	768 drives

Table 2-2: M710/M710F Host Port Card and Disk Port Card Combination

Maximum number of drives		Number of Host Port Card					
		<u>2 cards</u> 8 ports	<u>4 cards</u> 16 ports	<u>6 cards</u> 24 ports	<u>8 cards</u> 32 ports	<u>10 cards</u> 40 ports	<u>12 cards</u> 48 ports
Number of Disk Port Card	<u>2 cards</u> 8 ports	384 drives	384 drives	384 drives	384 drives	384 drives	384 drives
	<u>4 cards</u> 16 ports	768 drives	768 drives	768 drives	768 drives	768 drives	768 drives
	<u>6 cards</u> 24 ports	960 drives	960 drives	960 drives	960 drives	960 drives	
	<u>8 cards</u> 32 ports	960 drives	960 drives	960 drives	960 drives		

All optical fibre cable connections require acquisition of small form factor (SFP) modules which are mounted in the host interface card port slots. The transfer rates of those host port cards are specified by the SFP modules mounted. 8Gb and 16Gb SFPs for FC are available and 10Gb iSCSI is available.

Select the disk port cards, host port cards and SFP modules from the following lists based on your requirements (interface, transfer rate, number of ports required, etc).

Table 2-3: Disk Port Card Part Number

Disk Port Card				
PN	Description	M510	M710	M710F
NF5352-SD01WE	M510 2 - 4 port Disk Port Cards (4 ports per controller)	✓		
NF5372-SD01WE	M710 2 - 4 port Disk Port Cards (4 ports per controller)		✓	✓

Table 2-4: Host Port Card Part Number

Host Port Card				
PN	Description	M510	M710	M710F
NF5352-SF06WE	M510 Host Port(FC 8Port)	✓		
NF5352-SF21WE	M510 Host Port(10Gb iSCSI Optical 4Port)	✓		
NF5352-SF23WE	M510 Host Port(10Gb iSCSI Copper 4Port)	✓		
NF5372-SF06WE	M710 Host Port(FC 8Port)		✓	✓
NF5372-SF21WE	M710 Host Port(10Gb iSCSI Optical 4Port)		✓	✓
NF5372-SF23WE	M710 Host Port(10Gb iSCSI Copper 4Port)		✓	✓

**Note**

- Each of the host port cards above includes two host port cards. Please order quantity one for each HPE or xPE pair needed.

Table 2-5: SFP Module Part Number

SFP Module				
PN	Description	M510	M710	M710F
NF5322-SFP08E	2 - 8Gb FC SFPs	✓	✓	✓
NF5322-SFP16E	2 - 16Gb FC SFPs	✓	✓	✓
NF5322-SFP10E	2 - 10Gb Optical iSCSI SFPs	✓	✓	✓



Figure 2-5: Small Form Factor Pluggable (SFP)

**Note**

- Each SFP module above includes two SFPs. Please order enough SFP modules to match the total number of host ports required.
- Mixing 8Gb and 16Gb SFPs on a FC host port card is supported. A higher speed SFP will speed match to support a slower speed if required (i.e.; 16Gb SFP connected to an 8Gb FC switch port).

The M510/M710 is not equipped with any cache memory as standard so cache memory must be ordered. The M510 supports two cache memory capacities, 24GB on each controller (total 48GB) or 48GB on each controller (total 96GB). The M710 supports two cache memory capacities, 48GB on each controller (total 96GB) or 96GB on each controller (total 192GB). The M710F is equipped with 96GB cache memory on each controller canister (total 192GB), so there is no need to order any cache memory.

Select cache memory set from the following list based on your requirements.

Table 2-6: Cache Memory Part Number

Cache Memory				
PN	Description	M510	M710	M710F
NF5352-SC02E	M510 Cache Memory 24GB per Controller (48GB total cache)	✓		
NF5352-SC03E	M510 Cache Memory 48GB per Controller (96GB total cache)	✓		
NF5352-SC12E	M510 Cache Memory Upgrade 24GB to 48GB per Controller (48GB to 96GB total cache)	✓		
NF5372-SC03E	M710 Cache Memory 48GB per Controller (96GB total cache)		✓	
NF5372-SC04E	M710 Cache Memory 96GB per Controller (192GB total cache)		✓	

Cache Memory				
PN	Description	M510	M710	M710F
NF5372-SC13E	M710 Cache Memory Upgrade 48GB to 96GB per Controller (96GB to 192GB total cache)		✓	

**Note**

- Each part number provides cache memory for both controllers. Order one for each M510/M710 DAU.

### Step 3. Add Disk Enclosures and Drives

The NEC Disk Enclosure (DE) is a storage extension device that can contain disk and/or solid-state drives in its 2U chassis and be connected to the M510, M710 or M710F DAU for scaling capacity. DEs are available to support either 2.5” or 3.5” form factor. The 2.5” DE accommodates up to 24 2.5” drives and 3.5” DE accommodates up to 12 3.5” drives.

The M510 system can support maximum 768 drives for both 2.5” and 3.5” form factor (32 DEs for 2.5” form factor. 64 DEs for 3.5” form factor). Since the M510 DAU supports DC power there is also a DE with DC power.

The M710 system can support maximum 960 drives for both 2.5” and 3.5” form factor (40 DEs for 2.5” form factor. 80 DEs for 3.5” form factor). DE form factors can be mixed on a single system (2.5” and 3.5” DEs) but the capacity is limited by the total number of drive slots supported.

The M710F only supports 2.5” SSDs so only the 2.5” form factor DE applies to the M710F.

The maximum number of DEs that can be connected to the DAU is specified by the following rules.

**M510 System**

The maximum number of DEs is specified by the total number of the drive slots counted in the DEs. **The total number of drive slots counted in a system must be 768 or fewer.** As long as this rule is satisfied, the 2.5”/3.5” DAU can connect with the both 2.5” DE and 3.5” DE. Mixing different form factor DAU and DEs in a system is also supported.

- The 2.5" DAU can connect with up to 32 - 2.5" DEs. (The total number of drive slots is 768.)
- The 3.5" DAU can connect with up to 64 - 3.5" DEs. (The total number of drive slots is 768.)
- The 2.5"/3.5" DAU can connect with both 2.5" and 3.5" DE as long as the total number of drive slots counted in the DEs is 768 or fewer. (The total number of drive slots varies depending on the combination of DEs. The maximum slot number is 768.)

### **M710 System**

The maximum number of DEs is specified by the total number of the drive slots counted in the DAU and DEs. **The total number of drive slots counted in a system must be 960 or fewer.** As long as this rule is satisfied, the 2.5"/3.5" DAU can connect with the both 2.5" DE and 3.5" DE. Mixing different form factor DEs in a system is also supported.

- The 2.5" DAU can connect with up to 40 - 2.5" DEs. (The total number of drive slots is 960.)
- The 3.5" DAU can connect with up to 80 - 3.5" DEs. (The total number of drive slots is 960.)
- The 2.5"/3.5" DAU can connect with both 2.5" and 3.5" DE as long as the total number of the drive slots counted in the DEs is 960 or fewer. (The total number of drive slots varies depending on the combination of DEs. The maximum slot number is 960.)

### **M710F System**

The maximum number of DEs is specified by the total number of the drive slots counted in the DAU and DEs. **The total number of drive slots counted in a system must be 960 or fewer.**

- The 2.5" DAU can connect with up to 40 - 2.5" DEs. (The total number of drive slots is 960.)

The DE comes with the following accessories.

- A pair of 2U rack mount ear bezels with the NEC logo
- A pair of mini SAS HD cables (1m)
- Rack mount kit

The mini SAS HD cables (1m) are used to attach a DE to either a DAU or a DE. It is long enough to connect the DAU/DE if they are located next to each other in the same rack. Locating the DE in the different rack from the DAU/DE connected may require longer mini SAS HD cables. Either 3m or 5m mini SAS HD cables are available as optional. Also, a 2U front bezel with NEC logo is available at a charge. Please refer to Step 4 for the part number of these optional accessories.

The M510, M710, and M710F DAU require at least one DE to be operational because the DAUs do not have any slots to accommodate hard-disk/solid-state drives.

Select the disk enclosures based on your capacity and form factor needs.

**Table 3-1: Disk Enclosure Part Number**

Disk Enclosure				
PN	Description	M510	M710	M710F
NF5322-SE80E	Disk Enclosure 3.5 inch for Mx10	✓	✓	
NF5322-SE80DE	Disk Enclosure(3.5", 12Gbps, DC Power model)	✓		
NF5322-SE81E	Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
NF5322-SE81DE	Disk Enclosure(2.5", 12Gbps, DC Power model)	✓		

It is also necessary to order a no charge localization kit which includes a pair of power cables for a DE.

**Table 3-2: Localization Kit for Disk Enclosure Part Number**

Localization Kit for Disk Enclosure				
PN	Description	M510	M710	M710F
Q24-HL000000072706	Localization Kit for Mx10 Disk Enclosure	✓	✓	✓
Q24-HL000000106126	Localization Kit ,MX10 Disk Enclosure DC Power	✓		

**Note**

- **If a DAU or DE is added to a quote manually, a localization kit must also be added in order to have power cables. A localization kit will be automatically added, when a DAU or DE is added using the Configurator tool.**

The M510/M710/M710F system requires at least 3 hard-disk/solid-state drives to be operational. All drive slots not being used for drives must be filled with dummy drives to ensure optimum air flow and cooling.

For situations that require protection of data at rest, the M510/M710/M710F supports self encrypting HDD and SSD devices.

Select drives required based on capacity and performance requirements.

**Table 3-3: Hard-Disk/Solid-State Drive Part Number**

<b>Hard-Disk/Solid-State Drives</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
<b>2.5" Disk Drives</b>				
NF5322-SMA75E	SAS Disk Drive (2.5" 15krpm/300GB)	✓	✓	
NF5322-SMA78E	SAS Disk Drive (2.5" 15krpm/600GB)	✓	✓	
NF5322-SMA78LE	SAS Disk Drive (2.5" 15krpm/600GB Encryption)	✓	✓	
NF5322-SM768E	SAS Disk Drive (2.5" 10krpm/600GB)	✓	✓	
NF5322-SM768LE	SAS Disk Drive (2.5" 10krpm/600GB Encryption)	✓	✓	
NF5322-SM76AE	SAS Disk Drive (2.5" 10krpm/1.2TB)	✓	✓	
NF5322-SMB56E	NLSAS Disk Drive(2.5" 7.2krpm/1TB)	✓	✓	
NF5322-SMB58E	NLSAS Disk Drive(2.5" 7.2krpm/2TB)	✓	✓	
<b>3.5" Disk Drives</b>				
NF5322-SMAD5E	SAS Disk Drive(3.5" 15krpm/300GB)	✓	✓	
NF5322-SM708E	NLSAS Disk Drive (3.5" 7.2krpm/2TB)	✓	✓	
NF5322-SM70AE	NLSAS Disk Drive (3.5" 7.2krpm/4TB)	✓	✓	
NF5322-SM70ALE	NLSAS Disk Drive (3.5" 7.2krpm/4TB Encryption)	✓	✓	
NF5322-SMB0CE	NLSAS Disk Drive(3.5" 7.2krpm/6TB 12Gbps)	✓	✓	
NF5322-SMB0DE	NLSAS Disk Drive(3.5" 7.2krpm/8TB)	✓	✓	
NF5322-SMB0FE	NLSAS Disk Drive(3.5" 7.2krpm/10TB)	✓	✓	
<b>Solid State Drives</b>				





## Step 4. Add Optional Accessories

The 4U front bezel is a cover with key lock that prevents the drives in chassis from accidents. It can be used for M510, M710 and M710F DAU. A 2U front bezel is also provided for DE units.

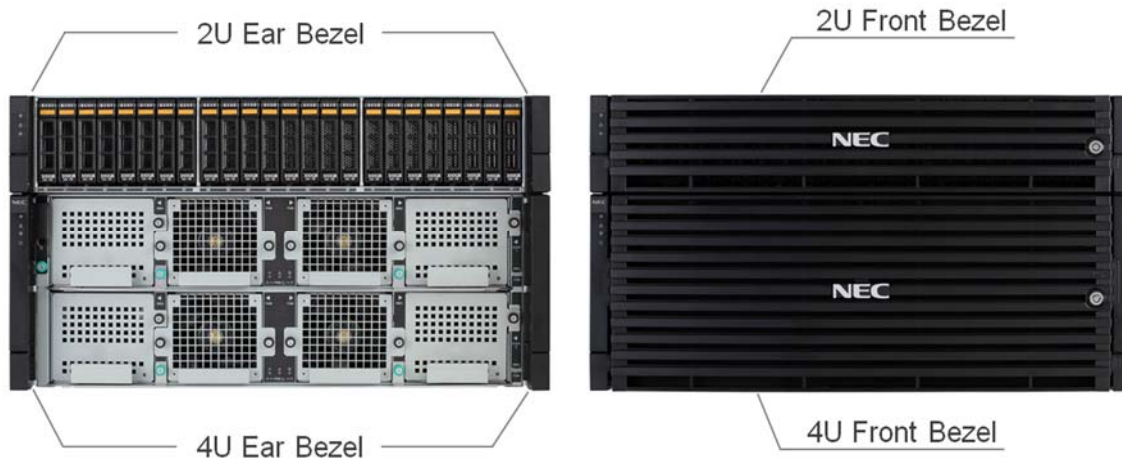


Figure 4-1: 2U Ear and Front Bezel Appearance

The optional 3m and 5m mini SAS HD cables are provided in case the DAU/DE units being connected each other are located more than 1m apart.

Select the optional parts from the following list if necessary.

Table 4-1: Optional Accessory Part Number

Optional Accessories				
PN	Description	M510	M710	M710F
NF9100-SF22E	Front Bezel (2U Black, w/ NEC Logo)	✓ (DE)	✓ (DE)	✓ (DE)
NF9100-SF26E	Front Bezel (4U Black, w/ NEC Logo)	✓	✓	✓
NF9120-SJ93	2 - 3M Mini SAS HD Cables	✓	✓	✓
NF9120-SJ95	2 - 5M Mini SAS HD Cables (Only for Connection between DEs)	✓	✓	✓

**Note**

- Each mini SAS HD cables above includes two cables and covers redundant connection between units (DAU/DE or DE/DE).

- **Connecting the DAU to the DE can be accomplished with either the 1m or 3m mini SAS HD cables. Connecting two DEs can be accomplished with either the 1m, 3m, or 5m mini SAS HD cables.**

## Step 5. Add Base Software

The M510, M710, and M710F come with no-charge Base Software. The Base Software provides various features as shown in the table below. The M710F has base software tuned to best performance of all flash.

**Table 5-1: Standard Software Part Number**

Base Software (Free)				
PN	Description	M510	M710	M710F
Q24-HL000000072866	M510 Base Software	✓		
Q24-HL000000072867	M710 Base Software		✓	
Q24-HL000000124954	M710F Base Software			✓

**Note**

- **Make sure to add Base Software manually if a DAU is manually added to a quote rather than using the Configurator tool.**
- **Chargeable standard or platinum SW maintenance support must be ordered for Base Software for M510, M710, and M710F. See Step 8 for details of SW maintenance support.**
- **The DAU must have at least one FC interface to use DataMigration software.**

Table 5-2: Standard Software Pack - Contents and Functions

Solution	Contents	Description
Storage Control	•Storage Manager Express	•Server-less management (Status monitoring and configuration display)
	•Storage Manager	•Integrated management (Status monitoring and configuration display)
	•Storage Manager Command	•Control the M-series with CLI commands
Perf. Mgmt.	•PerformanceMonitor	•Monitor real time performance and load on storage through Storage Manager GUI
	•PerformanceNavigator	•Analyze monitored log data graphically for insightful diagnostics
Resource Control	•ThinProvisioning	•Minimize cost and utilize storage efficiently with virtualized capacity
	•StoragePowerConserver	•Disk spin down for power saving
	•Data Migration	•Array-to-array data migration
	•AccessControl	•Define volume access rights for secure shared storage
High Availability	•PathManager	•Redundant data path control
VMware Productivity	•vCenter Plugin	•Control and Monitor M-series with VMware vCenter Server
	•vSphere Web Client Plugin	•Control and Monitor M-series with VMware vSphere Web Client
	•Storage Replication Adapter	•Automated disaster recovery of M-series with VMware SRM
	•VASA Provider	•Monitor M-series capability with VMware vCenter Server
	•VAAI Support	•Offload storage relevant tasks from virtual machines
	•Analyzer for VMware vCenter Operations	•Integrated single-pane-of-glass performance management for storage and server via vCenter for VMware system
	•Virtual Volume (VVOL) Support	•Extend data tiering, remote and local replication and QoS to VVOL levelend data tiering, remote and local replication and QoS to VVOL level
Advanced Performance	•PerforOptimizer	•Automated data tiering
	•PerforCache	•SSD 2nd tier read/write cache
Quality-of-Service	•IO Load Manager	•Controlling minimum and maximum I/O flow on a logical disk basis to stabilize performance across all servers in a large-scale server integration operation
	•Virtual Cache Partitioning (M310/M510/M710 only)	•Allocate cache memory to applications to ensure maximum application performance with guaranteed cache availability
Local Replication	•DynamicDataReplication / SnapVolume	•Replicate / Snapshot volumes within same system using non-disruptive command for host or storage manager GUI / CLI
	•Replication Express (M110 only)	•Replicate / Snapshot volumes within same system
Application Consistent Backup	•ReplicationControl SQL	•Non-disruptive back up of Microsoft SQL server
	•ReplicationControl FileSystem	•Non-disruptive back up of file system
Data Security	•VolumeProtect	•Prevent data modification by setting access rights and data retention period to satisfy compliance requirements (WORM)
	•SecureEraser	•Delete data using DoD5220.22-M method to prevent unwanted recovery of classified data
OpenStack Cooperation	•Use M-series as OpenStack SAN	•Use M-series as OpenStack FC and/or iSCSI SAN
Remote Replication	•RemoteDataReplication	•Replicate volumes between systems (asynchronous, synchronous, or semi-synchronous)
Application Consistency	•Disaster Recovery (M510/M710 only)	•Replicate application consistency groups

## Step 6. Add Optional Software

Three chargeable SW products are available for the M510, M710 and M710F. The table below shows detailed features included in each solution kit. The M710F software is tuned to operate on an all flash array.

**Table 6-1: Optional Software Part Number**

Solution Kit				
PN	Description	M510	M710	M710F
UFSMS5-500C00AM	M510 Replication Navigator Suite for Oracle	✓		
UFSM2J-500402AM	M510 JobCenter Lite	✓		
UFSM71-510000AM	M510 NEC Storage DirectDataShadow Option for HS	✓		
UFSMS5-700C00AM	M710 Replication Navigator Suite for Oracle		✓	
UFSM2J-700402AM	M710 JobCenter Lite		✓	
UFSM71-710000AM	M710 NEC Storage DirectDataShadow Option for HS		✓	
UFSM2J-700402AM	M710F JobCenter Lite			✓
UFSM71-71F000AM	M710F NEC Storage DirectDataShadow Option for HS			✓

**Table 6-2: Optional Software Pack - Contents and Functions**

Solution	Contents	Description
<b>Replication Automation</b>	▪Replication Navigator for Oracle	•Simplify Oracle backup
<b>Schedule Management</b>	▪JobCenterLite	•Automate recurring process schedule
<b>Serverless Backup</b>	▪Direct Data Shadow	•Direct backup from M-Series to HYDRAsstor

## Step 7. Add Hardware Warranty

NEC offers 3 service levels of hardware warranty: Standard, Gold, and Platinum. The available warranty period is 3 to 5 years for all service levels. Please refer to the table below for the service level details.

Table 7-1: Service Level Comparison

	Standard	Gold	Platinum
Coverage Period	3 to 5 Years	3 to 5 Years	3 to 5 Years
Technical Support	Mon - Fri, 8AM - 5PM Local Time Toll Free Telephone and E-mail Support Excludes Holidays  24x7 Access to Support Web Site	24x7x365 Toll Free Telephone Support, E-mail Support and E-mail Alert Monitoring  24x7 Access to Support Web Site	24x7x365 Toll Free Telephone Support, E-mail Support and E-mail Alert Monitoring  24x7 Access to Support Web Site
Hardware Repair Support	<b>“Next Business Day Response”</b> (Advanced CRU Delivery or Onsite Repair Response)	<b>“Next Day Response”</b> (Advanced CRU Delivery or Onsite Repair Response)	<b>“Same Day 4-hour Response”</b> (Advanced CRU Delivery or Onsite Repair Response)
Core Software Support	Technical Support for Core Software  Management and Recovery Software, Firmware and BIOS 90 Day defective media replacement	Technical Support for Core Software  Management and Recovery Software, Firmware and BIOS 90 Day defective media replacement	Technical Support for Core Software  Management and Recovery Software, Firmware and BIOS 90 Day defective media replacement

A 3-year standard hardware warranty is included with all hardware parts at no charge except SFP modules and accessory parts which are regarded as consumables. The standard warranty period can be extended to 4 years or 5 years for a fee. To extend standard warranty term, please order one or two 1-year extended warranty item. The standard warranty service level can be upgraded to a 3-year gold/platinum plan for a fee. The 3-year gold/platinum warranty can be extended to 4 years or 5 years gold/platinum support program for a fee. To extend gold/platinum warranty term to 4 years, please order one 1-year extended warranty item. To extend gold/platinum warranty term to 5 years, please order two 1-year extended warranty items or one 5-year upgrade warranty item to take advantage of the up-front rate.

M510/M710 DAU warranty covers two disk port cards attached to DAU as standard. The additional disk port cards require warranty items to extend or upgrade warranty program from the 3-year standard hardware warranty. DAU/DE warranty covers all HDDs in the cabinet, so there is no need to order HDD warranty separately no matter what capacity/form factor of HDDs are used. DAU/DE warranty does not cover SSDs, so extended/upgrade SSD warranty item

needs to be ordered separately according to the capacity/form factor of SSD purchased if extension/upgrade is required.

Order the same warranty program and term for all hardware and software items to ensure service is co-terminus for the entire system.

Select the hardware warranty with required service level and term from the following lists.

**Table 7-2: Hardware Warranty for Disk Array Unit Part Number**

Hardware Warranty for Disk Array Unit				
PN	Description	M510	M710	M710F
<b>NF5352-SR00E</b> M510 Dual Controller Disk Array Unit w Base SW (w 2 - 4 port Disk Port Cards, w/o Host Port Cards, SFP or Cache Memory)				
Q24-DN000000072493	3 Years Upgrade to Gold M510 Dual Controller w/Base SW	✓		
Q24-DN000000072494	5 Years Upgrade to Gold M510 Dual Controller w/Base SW	✓		
Q24-DN000000072495	3 Years Upgrade to Platinum M510 Dual Controller w/Base SW	✓		
Q24-DN000000072496	5 Years Upgrade to Platinum M510 Dual Controller w/Base SW	✓		
Q24-DN000000072497	1 Year Extended Gold M510 Dual Controller w/Base SW	✓		
Q24-DN000000072498	1 Year Extended Platinum M510 Dual Controller w/Base SW	✓		
Q24-DN000000072499	1 Year Extended Standard M510 Dual Controller w/Base SW	✓		
<b>NF5352-SR00DE</b> M510 Dual Controller Disk Array Unit DC Power Model w Base SW (w 2 - 4 port Disk Port Cards, w/o Host Port Cards, SFP or Cache Memory)				
Q24-DN000000105254	3 Years Upgrade to Gold M510 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105255	5 Years Upgrade to Gold M510 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105256	3 Years Upgrade to Platinum M510 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105257	5 Years Upgrade to Platinum M510 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105258	1 Year Extended Gold M510 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105259	1 Year Extended Platinum M510 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105260	1 Year Extended Standard M510 Dual Controller DC Power Model w/Base SW	✓		
<b>NF5372-SR00E</b> M710 Dual Controller Disk Array Unit w Base SW (w 2 - 4 port Disk Port Cards, w/o Host Port Card, SFP or Cache Memory)				
Q24-DN000000072500	3 Years Upgrade to Gold M710 Dual Controller w/Base SW		✓	

Hardware Warranty for Disk Array Unit				
PN	Description	M510	M710	M710F
Q24-DN000000072501	5 Years Upgrade to Gold M710 Dual Controller w/Base SW		✓	
Q24-DN000000072502	3 Years Upgrade to Platinum M710 Dual Controller w/Base SW		✓	
Q24-DN000000072503	5 Years Upgrade to Platinum M710 Dual Controller w/Base SW		✓	
Q24-DN000000072504	1 Year Extended Gold M710 Dual Controller w/Base SW		✓	
Q24-DN000000072505	1 Year Extended Platinum M710 Dual Controller w/Base SW		✓	
Q24-DN000000072506	1 Year Extended Standard M710 Dual Controller w/Base SW		✓	
<b>NF5372-SR00FE</b> M710 All Flash Disk Array Unit including 192GB of Cache (w/o Host port Card or SFP)				
Q24-DN000000119547	3 Years Upgrade to Gold M710F Dual Controller w/Base SW			✓
Q24-DN000000125376	5 Years Upgrade to Gold M710F Dual Controller w/Base SW			✓
Q24-DN000000119548	3 Years Upgrade to Platinum M710F Dual Controller w/Base SW			✓
Q24-DN000000125377	5 Years Upgrade to Platinum M710F Dual Controller w/Base SW			✓
Q24-DN000000119545	1 Year Extended Gold M710F Dual Controller w/Base SW			✓
Q24-DN000000119546	1 Year Extended Platinum M710F Dual Controller w/Base SW			✓
Q24-DN000000119544	1 Year Extended Standard M710F Dual Controller w/Base SW			✓

Table 7-3: Hardware Warranty for Disk Port Card Part Number

Hardware Warranty for Disk Port Card			
PN	Description	M510	M710 / M710F
<b>NF5352-SD01WE</b> M510 2 - 4 port Disk Port Cards (4 ports per Controller)			
Q24-DN000000072684	3 Years Upgrade to Gold M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
Q24-DN000000072685	5 Years Upgrade to Gold M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
Q24-DN000000072686	3 Years Upgrade to Platinum M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
Q24-DN000000072687	5 Years Upgrade to Platinum M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
Q24-DN000000072688	1 Year Extended Gold M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
Q24-DN000000072689	1 Year Extended Platinum M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
Q24-DN000000072690	1 Year Extended Standard M510 2 - 4 port Disk Port Cards (4 ports per Controller)	✓	
<b>NF5372-SD01WE</b> M710 2 - 4 port Disk Port Cards (4 ports per Controller)			



Hardware Warranty for Disk Port Card			
PN	Description	M510	M710 / M710F
Q24-DN000000072698	3 Years Upgrade to Gold M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓
Q24-DN000000072699	5 Years Upgrade to Gold M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓
Q24-DN000000072700	3 Years Upgrade to Platinum M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓
Q24-DN000000072701	5 Years Upgrade to Platinum M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓
Q24-DN000000072702	1 Year Extended Gold M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓
Q24-DN000000072703	1 Year Extended Platinum M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓
Q24-DN000000072704	1 Year Extended Standard M710 2 - 4 port Disk Port Cards (4 ports per Controller)		✓

Table 7-4: Hardware Warranty for Host Port Card Part Number

Hardware Warranty for Host Port Card			
PN	Description	M510	M710 / M710F
NF5352-SF06WE M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP			
Q24-DN000000072677	3 Years Upgrade to Gold M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
Q24-DN000000072678	5 Years Upgrade to Gold M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
Q24-DN000000072679	3 Years Upgrade to Platinum M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
Q24-DN000000072680	5 Years Upgrade to Platinum M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
Q24-DN000000072681	1 Year Extended Gold M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
Q24-DN000000072682	1 Year Extended Platinum M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
Q24-DN000000072683	1 Year Extended Standard M510 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP	✓	
NF5372-SF06WE M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP			
Q24-DN000000072691	3 Years Upgrade to Gold M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓
Q24-DN000000072692	5 Years Upgrade to Gold M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓
Q24-DN000000072693	3 Years Upgrade to Platinum M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓
Q24-DN000000072694	5 Years Upgrade to Platinum M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓
Q24-DN000000072695	1 Year Extended Gold M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓
Q24-DN000000072696	1 Year Extended Platinum M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓
Q24-DN000000072697	1 Year Extended Standard M710 2 - 4 port FC Host Port Cards (4 ports per Controller) w/o SFP		✓

Table 7-5: Hardware Warranty for Cache Memory Part Number

Hardware Warranty for Cache Memory (not for M710F)			
PN	Description	M510	M710
NF5352-SC02E M510 Cache Memory 24GB per Controller (48GB total cache)			
Q24-DN000000072528	3 Years Upgrade to Gold M510 Cache Memory 24GB per Controller (48GB Total)	✓	
Q24-DN000000072529	5 Years Upgrade to Gold M510 Cache Memory 24GB per Controller (48GB Total)	✓	
Q24-DN000000072530	3 Years Upgrade to Platinum M510 Cache Memory 24GB per Controller (48GB Total)	✓	
Q24-DN000000072531	5 Years Upgrade to Platinum M510 Cache Memory 24GB per Controller (48GB Total)	✓	
Q24-DN000000072532	1 Year Extended Gold M510 Cache Memory 24GB per Controller (48GB Total)	✓	
Q24-DN000000072533	1 Year Extended Platinum M510 Cache Memory 24GB per Controller (48GB Total)	✓	
Q24-DN000000072534	1 Year Extended Standard M510 Cache Memory 24GB per Controller (48GB Total)	✓	
NF5352-SC03E M510 Cache Memory 48GB per Controller (96GB total cache)			
Q24-DN000000072535	3 Years Upgrade to Gold M510 Cache Memory 48GB per Controller (96GB Total)	✓	
Q24-DN000000072536	5 Years Upgrade to Gold M510 Cache Memory 48GB per Controller (96GB Total)	✓	
Q24-DN000000072537	3 Years Upgrade to Platinum M510 Cache Memory 48GB per Controller (96GB Total)	✓	
Q24-DN000000072538	5 Years Upgrade to Platinum M510 Cache Memory 48GB per Controller (96GB Total)	✓	
Q24-DN000000072539	1 Year Extended Gold M510 Cache Memory 48GB per Controller (96GB Total)	✓	
Q24-DN000000072540	1 Year Extended Platinum M510 Cache Memory 48GB per Controller (96GB Total)	✓	
Q24-DN000000072541	1 Year Extended Standard M510 Cache Memory 48GB per Controller (96GB Total)	✓	
NF5352-SC12E M510 Cache Memory Upgrade 24GB to 48GB per Controller (48GB to 96GB total cache)			
Q24-DN000000072542	3 Years Upgrade to Gold M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
Q24-DN000000072543	5 Years Upgrade to Gold M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
Q24-DN000000072544	3 Years Upgrade to Platinum M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
Q24-DN000000072545	5 Years Upgrade to Platinum M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
Q24-DN000000072546	1 Year Extended Gold M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
Q24-DN000000072547	1 Year Extended Platinum M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
Q24-DN000000072548	1 Year Extended Standard M510 Cache Upgrade 24GB->48GB per Controller (48GB->96GB Total)	✓	
NF5372-SC03E M710 Cache Memory 48GB per Controller (96GB total cache)			

<b>Hardware Warranty for Cache Memory (not for M710F)</b>			
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>
Q24-DN000000072549	3 Years Upgrade to Gold M710 Cache Memory 48GB per Controller (96GB Total)		✓
Q24-DN000000072550	5 Years Upgrade to Gold M710 Cache Memory 48GB per Controller (96GB Total)		✓
Q24-DN000000072581	3 Years Upgrade to Platinum M710 Cache Memory 48GB per Controller (96GB Total)		✓
Q24-DN000000072582	5 Years Upgrade to Platinum M710 Cache Memory 48GB per Controller (96GB Total)		✓
Q24-DN000000072583	1 Year Extended Gold M710 Cache Memory 48GB per Controller (96GB Total)		✓
Q24-DN000000072584	1 Year Extended Platinum M710 Cache Memory 48GB per Controller (96GB Total)		✓
Q24-DN000000072585	1 Year Extended Standard M710 Cache Memory 48GB per Controller (96GB Total)		✓
<b>NF5372-SC04E M710 Cache Memory 96GB per Controller (192GB total cache)</b>			
Q24-DN000000072586	3 Years Upgrade to Gold M710 Cache Memory 96GB per Controller (192GB Total)		✓
Q24-DN000000072587	5 Years Upgrade to Gold M710 Cache Memory 96GB per Controller (192GB Total)		✓
Q24-DN000000072588	3 Years Upgrade to Platinum M710 Cache Memory 96GB per Controller (192GB Total)		✓
Q24-DN000000072589	5 Years Upgrade to Platinum M710 Cache Memory 96GB per Controller (192GB Total)		✓
Q24-DN000000072590	1 Year Extended Gold M710 Cache Memory 96GB per Controller (192GB Total)		✓
Q24-DN000000072591	1 Year Extended Platinum M710 Cache Memory 96GB per Controller (192GB Total)		✓
Q24-DN000000072592	1 Year Extended Standard M710 Cache Memory 96GB per Controller (192GB Total)		✓
<b>NF5372-SC13E M710 Cache Memory Upgrade 48GB to 96GB per Controller (96GB to 192GB total cache)</b>			
Q24-DN000000072593	3 Years Upgrade to Gold M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓
Q24-DN000000072594	5 Years Upgrade to Gold M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓
Q24-DN000000072595	3 Years Upgrade to Platinum M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓
Q24-DN000000072596	5 Years Upgrade to Platinum M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓
Q24-DN000000072597	1 Year Extended Gold M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓
Q24-DN000000072598	1 Year Extended Platinum M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓
Q24-DN000000072599	1 Year Extended Standard M710 Cache Memory 48GB->96GB per Controller (96GB->192GB Total)		✓

Table 7-6: Hardware Warranty for Disk Enclosure Part Number

Hardware Warranty for Disk Enclosure				
PN	Description	M510	M710	M710F
<b>NF5322-SE80E</b> Disk Enclosure 3.5 inch for M510/M710				
Q24-DN000000072600	3 Years Upgrade to Gold Disk Enclosure 3.5 inch for Mx10	✓	✓	
Q24-DN000000072601	5 Years Upgrade to Gold Disk Enclosure 3.5 inch for Mx10	✓	✓	
Q24-DN000000072602	3 Years Upgrade to Platinum Disk Enclosure 3.5 inch for Mx10	✓	✓	
Q24-DN000000072603	5 Years Upgrade to Platinum Disk Enclosure 3.5 inch for Mx10	✓	✓	
Q24-DN000000072604	1 Year Extended Gold Disk Enclosure 3.5 inch for Mx10	✓	✓	
Q24-DN000000072605	1 Year Extended Platinum Disk Enclosure 3.5 inch for Mx10	✓	✓	
Q24-DN000000072606	1 Year Extended Standard Disk Enclosure 3.5 inch for Mx10	✓	✓	
<b>NF5322-SE80DE</b> Disk Enclosure 3.5 inch DC Power for M510/M710				
	3 Years Upgrade to Gold DEU DC Power Model 3.5 inch for M110/M310/M510/M710	✓	✓	
	5 Years Upgrade to Gold DEU DC Power Model 3.5 inch for M110/M310/M510/M710	✓	✓	
	3 Years Upgrade to Platinum DEU DC Power Model 3.5 inch for M110/M310/M510/M710	✓	✓	
	5 Years Upgrade to Platinum DEU DC Power Model 3.5 inch for M110/M310/M510/M710	✓	✓	
	1 Year Extended Gold DEU DC Power Model 3.5 inch for M110/M310/M510/M710	✓	✓	
	1 Year Extended Platinum DEU DC Power Model 2.5 inch for M110/M310/M510/M710	✓	✓	
	1 Year Extended Standard DEU DC Power Model 3.5 inch for M110/M310/M510/M710	✓	✓	
<b>NF5322-SE81E</b> Disk Enclosure 2.5 inch for M510/M710/M710F				
Q24-DN000000072607	3 Years Upgrade to Gold Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
Q24-DN000000072608	5 Years Upgrade to Gold Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
Q24-DN000000072609	3 Years Upgrade to Platinum Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
Q24-DN000000072610	5 Years Upgrade to Platinum Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
Q24-DN000000072611	1 Year Extended Gold Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
Q24-DN000000072612	1 Year Extended Platinum Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
Q24-DN000000072613	1 Year Extended Standard Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
<b>NF5322-SE81DE</b> Disk Enclosure DC Power 2.5 inch for M110/M310/M510/M710				
Q24-DN000000105261	3 Years Upgrade to Gold DEU DC Power Model 2.5 inch for M110/M310/M510/M710	✓	✓	✓

Hardware Warranty for Disk Enclosure				
PN	Description	M510	M710	M710F
Q24-DN000000105262	5 Years Upgrade to Gold DEU DC Power Model 2.5 inch for M110/M310/M510/M710	✓	✓	✓
Q24-DN000000105263	3 Years Upgrade to Platinum DEU DC Power Model 2.5 inch for M110/M310/M510/M710	✓	✓	✓
Q24-DN000000105264	5 Years Upgrade to Platinum DEU DC Power Model 2.5 inchfor M110/M310/M510/M710	✓	✓	✓
Q24-DN000000105265	1 Year Extended Gold DEU DC Power Model 2.5 inchfor M110/M310/M510/M710	✓	✓	✓
Q24-DN000000105266	1 Year Extended Platinum DEU DC Power Model 2.5 inch for M110/M310/M510/M710	✓	✓	✓
Q24-DN000000105267	1 Year Extended Standard DEU DC Power Model 2.5 inchfor M110/M310/M510/M710	✓	✓	✓

Table 7-7: Hardware Warranty for SSD Part Number

Hardware Warranty for SSD				
PN	Description	M510	M710	M710F
<b>NF5322-SSAR5E SAS SSD (3.5" 200GB)</b>				
Q24-DN000000073151	3 Years Upgrade to Gold SAS SSD (3.5" 200GB)	✓	✓	
Q24-DN000000073152	5 Years Upgrade to Gold SAS SSD (3.5" 200GB)	✓	✓	
Q24-DN000000073153	3 Years Upgrade to Platinum SAS SSD (3.5" 200GB)	✓	✓	
Q24-DN000000073154	5 Years Upgrade to Platinum SAS SSD (3.5" 200GB)	✓	✓	
Q24-DN000000073155	1 Year Extended Gold SAS SSD (3.5" 200GB)	✓	✓	
Q24-DN000000073156	1 Year Extended Platinum SAS SSD (3.5" 200GB)	✓	✓	
Q24-DN000000073157	1 Year Extended Standard SAS SSD (3.5" 200GB)	✓	✓	
<b>NF5322-SSAR5LE SAS SSD (3.5" 200GB Encryption)</b>				
Q24-DN000000105296	3 Years Upgrade to Gold SAS SSD (3.5" 200GB Encryption)	✓	✓	
Q24-DN000000105297	5 Years Upgrade to Gold SAS SSD (3.5" 200GB Encryption)	✓	✓	
Q24-DN000000105298	3 Years Upgrade to Platinum SAS SSD (3.5" 200GB Encryption)	✓	✓	
Q24-DN000000105299	5 Years Upgrade to Platinum SAS SSD (3.5" 200GB Encryption)	✓	✓	
Q24-DN000000105300	1 Year Extended Gold SAS SSD (3.5" 200GB Encryption)	✓	✓	
Q24-DN000000105301	1 Year Extended Platinum SAS SSD (3.5" 200GB Encryption)	✓	✓	
Q24-DN000000105302	1 Year Extended Standard SAS SSD (3.5" 200GB Encryption)	✓	✓	
<b>NF5322-SSAF6E SAS SSD (3.5" 400GB)</b>				
Q24-DN000000073158	3 Years Upgrade to Gold SAS SSD (3.5" 400GB)	✓	✓	

<b>Hardware Warranty for SSD</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
Q24-DN000000073159	5 Years Upgrade to Gold SAS SSD (3.5" 400GB)	✓	✓	
Q24-DN000000073160	3 Years Upgrade to Platinum SAS SSD (3.5" 400GB)	✓	✓	
Q24-DN000000073161	5 Years Upgrade to Platinum SAS SSD (3.5" 400GB)	✓	✓	
Q24-DN000000073162	1 Year Extended Gold SAS SSD (3.5" 400GB)	✓	✓	
Q24-DN000000073163	1 Year Extended Platinum SAS SSD (3.5" 400GB)	✓	✓	
Q24-DN000000073164	1 Year Extended Standard SAS SSD (3.5" 400GB)	✓	✓	
<b>NF5322-SSAFAE SAS SSD (3.5" 1.6TB)</b>				
Q24-DN000000073165	3 Years Upgrade to Gold SAS SSD (3.5" 1.6TB)	✓	✓	
Q24-DN000000073166	5 Years Upgrade to Gold SAS SSD (3.5" 1.6TB)	✓	✓	
Q24-DN000000073167	3 Years Upgrade to Platinum SAS SSD (3.5" 1.6TB)	✓	✓	
Q24-DN000000073168	5 Years Upgrade to Platinum SAS SSD (3.5" 1.6TB)	✓	✓	
Q24-DN000000073169	1 Year Extended Gold SAS SSD (3.5" 1.6TB)	✓	✓	
Q24-DN000000073170	1 Year Extended Platinum SAS SSD (3.5" 1.6TB)	✓	✓	
Q24-DN000000073171	1 Year Extended Standard SAS SSD (3.5" 1.6TB)	✓	✓	
<b>NF5322-SSAUFE SAS SSD(3.5" 3.84TB)</b>				
Q24-DN000000125681	3 Years Upgrade to Gold SAS SSD (3.5" 3.84TB)	✓	✓	
Q24-DN000000125682	5 Years Upgrade to Gold SAS SSD (3.5" 3.84TB)	✓	✓	
Q24-DN000000125683	3 Years Upgrade to Platinum SAS SSD (3.5" 3.84TB)	✓	✓	
Q24-DN000000125684	5 Years Upgrade to Platinum SAS SSD (3.5" 3.84TB)	✓	✓	
Q24-DN000000125685	1 Year Extended Gold SAS SSD (3.5" 3.84TB)	✓	✓	
Q24-DN000000125686	1 Year Extended Platinum SAS SSD (3.5" 3.84TB)	✓	✓	
Q24-DN000000125687	1 Year Extended Standard SAS SSD (3.5" 3.84TB)	✓	✓	
<b>NF5322-SSASCE VRI SSD (3.5" 2 TB)</b>				
Q24-DN000000126944	3 Years Upgrade to Gold VRI SSD (3.5" 4TB)	✓	✓	
Q24-DN000000126935	5 Years Upgrade to Gold VRI SSD (3.5" 2TB)	✓	✓	
Q24-DN000000126936	3 Years Upgrade to Platinum VRI SSD (3.5" 2TB)	✓	✓	
Q24-DN000000126941	5 Years Upgrade to Platinum VRI SSD (3.5" 2TB)	✓	✓	

<b>Hardware Warranty for SSD</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
Q24-DN000000126932	1 Year Extended Gold SAS VRI (3.5" 2TB)	✓	✓	
Q24-DN000000126938	1 Year Extended Platinum VRI SSD (3.5" 2TB)	✓	✓	
Q24-DN000000126928	1 Year Extended Standard VRI SSD (3.5" 2TB)	✓	✓	
<b>NF5322-SSASHE VRI SSD (3.5" 4 TB)</b>				
Q24-DN000000126944	3 Years Upgrade to Gold VRI SSD (3.5" 4TB)	✓	✓	
Q24-DN000000126949	5 Years Upgrade to Gold VRI SSD (3.5" 4TB)	✓	✓	
Q24-DN000000126950	3 Years Upgrade to Platinum VRI SSD (3.5" 4TB)	✓	✓	
Q24-DN000000126955	5 Years Upgrade to Platinum VRI SSD (3.5" 4TB)	✓	✓	
Q24-DN000000126946	1 Year Extended Gold SAS VRI (3.5" 4TB)	✓	✓	
Q24-DN000000126952	1 Year Extended Platinum VRI SSD (3.5" 4TB)	✓	✓	
Q24-DN000000126942	1 Year Extended Standard VRI SSD (3.5" 4TB)	✓	✓	
<b>NF5322-SSAG5E SAS SSD (2.5" 200GB)</b>				
Q24-DN000000073172	3 Years Upgrade to Gold SAS SSD (2.5" 200GB)	✓	✓	✓
Q24-DN000000073173	5 Years Upgrade to Gold SAS SSD (2.5" 200GB)	✓	✓	✓
Q24-DN000000073174	3 Years Upgrade to Platinum SAS SSD (2.5" 200GB)	✓	✓	✓
Q24-DN000000073175	5 Years Upgrade to Platinum SAS SSD (2.5" 200GB)	✓	✓	✓
Q24-DN000000073176	1 Year Extended Gold SAS SSD (2.5" 200GB)	✓	✓	✓
Q24-DN000000073177	1 Year Extended Platinum SAS SSD (2.5" 200GB)	✓	✓	✓
Q24-DN000000073178	1 Year Extended Standard SAS SSD (2.5" 200GB)	✓	✓	✓
<b>NF5322-SSAG5LE SAS SSD (2.5" 200GB Encryption)</b>				
Q24-DN000000105303	3 Years Upgrade to Gold SAS SSD (2.5" 200GB Encryption)	✓	✓	✓
Q24-DN000000105304	5 Years Upgrade to Gold SAS SSD (2.5" 200GB Encryption)	✓	✓	✓
Q24-DN000000105305	3 Years Upgrade to Platinum SAS SSD (2.5" 200GB Encryption)	✓	✓	✓
Q24-DN000000105306	5 Years Upgrade to Platinum SAS SSD (2.5" 200GB Encryption)	✓	✓	✓
Q24-DN000000105307	1 Year Extended Gold SAS SSD (2.5" 200GB Encryption)	✓	✓	✓
Q24-DN000000105308	1 Year Extended Platinum SAS SSD (2.5" 200GB Encryption)	✓	✓	✓
Q24-DN000000105309	1 Year Extended Standard SAS SSD (2.5" 200GB Encryption)	✓	✓	✓

<b>Hardware Warranty for SSD</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
<b>NF5322-SSA96E SAS SSD (2.5" 400GB)</b>				
Q24-DN000000073179	3 Years Upgrade to Gold SAS SSD (2.5" 400GB)	✓	✓	✓
Q24-DN000000073180	5 Years Upgrade to Gold SAS SSD (2.5" 400GB)	✓	✓	✓
Q24-DN000000073181	3 Years Upgrade to Platinum SAS SSD (2.5" 400GB)	✓	✓	✓
Q24-DN000000073182	5 Years Upgrade to Platinum SAS SSD (2.5" 400GB)	✓	✓	✓
Q24-DN000000073183	1 Year Extended Gold SAS SSD (2.5" 400GB)	✓	✓	✓
Q24-DN000000073184	1 Year Extended Platinum SAS SSD (2.5" 400GB)	✓	✓	✓
Q24-DN000000073185	1 Year Extended Standard SAS SSD (2.5" 400GB)	✓	✓	✓
<b>NF5322-SSA9AE SAS SSD (2.5" 1.6TB)</b>				
Q24-DN000000073186	3 Years Upgrade to Gold SAS SSD (2.5" 1.6TB)	✓	✓	✓
Q24-DN000000073187	5 Years Upgrade to Gold SAS SSD (2.5" 1.6TB)	✓	✓	✓
Q24-DN000000073188	3 Years Upgrade to Platinum SAS SSD (2.5" 1.6TB)	✓	✓	✓
Q24-DN000000073189	5 Years Upgrade to Platinum SAS SSD (2.5" 1.6TB)	✓	✓	✓
Q24-DN000000073190	1 Year Extended Gold SAS SSD (2.5" 1.6TB)	✓	✓	✓
Q24-DN000000073191	1 Year Extended Platinum SAS SSD (2.5" 1.6TB)	✓	✓	✓
Q24-DN000000073192	1 Year Extended Standard SAS SSD (2.5" 1.6TB)	✓	✓	✓
<b>NF5322-SSAKFE SAS SSD (2.5" 3.84TB)</b>				
Q24-DN000000125688	3 Years Upgrade to Gold SAS SSD (2.5" 3.84TB)	✓	✓	✓
Q24-DN000000125689	5 Years Upgrade to Gold SAS SSD 2.5" 3.84TB)	✓	✓	✓
Q24-DN000000125690	3 Years Upgrade to Platinum SAS SSD (2.5" 3.84TB)	✓	✓	✓
Q24-DN000000125691	5 Years Upgrade to Platinum SAS SSD (2.5" 3.84TB)	✓	✓	✓
Q24-DN000000125692	1 Year Extended Gold SAS SSD (2.5" 3.84TB)	✓	✓	✓
Q24-DN000000125693	1 Year Extended Platinum SAS SSD (2.5" 3.84TB)	✓	✓	✓
Q24-DN000000125694	1 Year Extended Standard SAS SSD (2.5" 3.84TB)	✓	✓	✓
<b>NF5322-SSAHCE VRI SSD (2.5" 2 TB)</b>				
Q24-DN000000126931	3 Years Upgrade to Gold VRI SSD (2.5" 2TB)	✓	✓	✓
Q24-DN000000126934	5 Years Upgrade to Gold VRI SSD (2.5" 2TB)	✓	✓	✓



Hardware Warranty for SSD				
PN	Description	M510	M710	M710F
Q24-DN000000126937	3 Years Upgrade to Platinum VRI SSD (2.5" 2TB)	✓	✓	✓
Q24-DN000000126940	5 Years Upgrade to Platinum VRI SSD (2.5" 2TB)	✓	✓	✓
Q24-DN000000126933	1 Year Extended Gold SAS VRI (2.5" 2TB)	✓	✓	✓
Q24-DN000000126939	1 Year Extended Platinum VRI SSD (2.5" 2TB)	✓	✓	✓
Q24-DN000000126940	5 Years Upgrade to Platinum VRI SSD (2.5" 2TB)	✓	✓	✓
<b>NF5322-SSAHHE VRI SSD (2.5" 4 TB)</b>				
Q24-DN000000126945	3 Years Upgrade to Gold VRI SSD (2.5" 4TB)	✓	✓	✓
Q24-DN000000126948	5 Years Upgrade to Gold VRI SSD (2.5" 4TB)	✓	✓	✓
Q24-DN000000126951	3 Years Upgrade to Platinum VRI SSD (2.5" 4TB)	✓	✓	✓
Q24-DN000000126954	5 Years Upgrade to Platinum VRI SSD 2.5" 4TB)	✓	✓	✓
Q24-DN000000126947	1 Year Extended Gold SAS VRI (2.5" 4TB)	✓	✓	✓
Q24-DN000000126953	1 Year Extended Platinum VRI SSD (2.5" 4TB)	✓	✓	✓
Q24-DN000000126943	1 Year Extended Standard VRI SSD 2.5" 4TB)	✓	✓	✓
Q24-DN000000126945	3 Years Upgrade to Gold VRI SSD (2.5" 4TB)	✓	✓	✓

**Note: Each SSD Warranty is applied once per disk expansion unit that will have SSDs installed in it.**

Some installations have extreme security requirements and want to keep hard disk drives and SSDs after they are done using them or they have failed. They will destroy the media to protect sensitive information. NEC offers a retention program for disk and SSD media.

Select the appropriate retention program for your situation. Specifying retention in the configurator will include the appropriate retention. If you do not use the configurator you must manually add the retention part numbers you need.

**Table 7-8: Retention Programs for Disk and SSD Media**

Hard Disk Drive and SSD Retention				
PN	Description	M510	M710	M710F
<b>Hard Disk Drives</b>				
Q24-DN000000013614	3YRS HDD Retention Program Per Drawer	✓	✓	
Q24-DN000000070096	5YRS HDD Retention Program Per Drawer	✓	✓	

Hard Disk Drive and SSD Retention				
PN	Description	M510	M710	M710F
<b>Solid State Disk Drives</b>				
Q24-DN000000069095	3YRS SSD Retention Program Per Drawer	✓	✓	✓
Q24-DN000000069097	5YRS SSD Retention Program Per Drawer	✓	✓	✓

## Step 8. Add Software Maintenance Support

NEC offers software maintenance support for all software products at 2 service levels: standard and platinum. Please refer to the table in the Step 7 for service level details.

Unlike hardware warranty, no software maintenance support is included with any software items as standard. Software maintenance must be ordered for each optional and standard software product. Software maintenance support offers 1 year support for all software items. Order 1 unit of support for each year of software support required for this system (1 to 5). Ensure that number of years equals the terms of hardware warranty ordered to ensure that both hardware and software warranty has the same term for the system.

Select the software maintenance support parts to meet required service level and terms from the following lists.

**Table 8-1: Software Maintenance Support for Part Number**

Software Maintenance Support				
PN	Description	M510	M710	M710F
<b>Base Software Support</b>				
Q24-DN000000072928	1Y STD M510 Base SW Maint	✓		
Q24-DN000000072927	1Y PLT M510 Base SW Maint	✓		
Q24-DN000000072940	1Y STD M710 Base SW Maint		✓	
Q24-DN000000072939	1Y PLT M710 Base SW Maint		✓	
Q24-DN000000125147	1Y STD M710F Base SW Maint			✓
Q24-DN000000125177	1Y PLT M710F Base SW Maint			✓
<b>Optional Software Support</b>				
Q24-DN000000125247	1Y STD M510 Replication Navigator Suite for Oracle	✓		
Q24-DN000000125255	1Y STD M510 JobCenter Lite	✓		
Q24-DN000000126958	1YR STD M510 Direct Data Shadow	✓		

<b>Software Maintenance Support</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
Q24-DN000000125251	1Y PLT M510 Replication Navigator Suite for Oracle	✓		
Q24-DN000000125259	1Y PLT M510 JobCenter Lite	✓		
Q24-DN000000126964	1YR PLT M510 Direct Data Shadow	✓		
Q24-DN000000125248	1Y STD M710 Replication Navigator Suite for Oracle		✓	
Q24-DN000000125256	1Y STD M710 JobCenter Lite		✓	
Q24-DN000000126959	1YR STD M710 Direct Data Shadow		✓	
Q24-DN000000125252	1Y PLT M710 Replication Navigator Suite for Oracle		✓	
Q24-DN000000125260	1Y PLT M710 JobCenter Lite		✓	
Q24-DN000000126965	1YR PLT M710 Direct Data Shadow		✓	
Q24-DN000000125163	1Y STD M710F JobCenter Lite			✓
Q24-DN000000126961	1YR STD M710F Direct Data Shadow			✓
Q24-DN000000125193	1Y PLT M710F JobCenter Lite			✓
Q24-DN000000126967	1YR PLT M710F Direct Data Shadow			✓

**Note**

- **Software support for base software must be ordered manually if a Base Unit is manually added to a quote rather than using Configurator tool as the Base Software and Support needs to be manually added.**
- **The M310F does not currently support Replication Navigator**

## **Step 9. Add NEC Storage Manager Software Training**

Training on the M510/M710 hardware and software is available. Please select the training items from the following list if required.

**Table 9-1: Training Part Number**

<b>Training</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
TRN-TECH-L1-STOR	ITPG Certification and Training NEC Storage Hardware and Storage Manager Basic Software Training - 2 days	✓	✓	✓
TRN-TECH-L2-STOR	ITPG Certification and Training NEC Storage Manager Advanced Software Training - 2 days	✓	✓	✓

## Step 10. Add Installation

Installation service for the M510/M710 is available. Please select the installation service item from the following list if required.

**Table 10-1: Installation Part Number**

<b>Installation</b>				
<b>PN</b>	<b>Description</b>	<b>M510</b>	<b>M710</b>	<b>M710F</b>
Q24-DN000000011361	M510/M710 Standard Installation - Hardware/OS/Network connection and configuration - North America	✓	✓	✓

**Note**

- **If you wish to quote onsite installation service, please uncheck the remote installation line item on the configurator when quoting. The remote installation service is added to every quote by default.**

