How to Order Guide M110/M310/M310F

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Step 1. Select Disk Array Unit

The M110/M310 is standard hybrid storage devices that can operate with a combination of SSD, SAS, and NLSAS disk units. The M310F is an all flash array designed to maximize efficiency and speed by exploiting SSD units. The M310F is only available in a 2.5: form factor. This guide will point out when something is different for the M310 All-Flash-Array but generally speaking scalability, controllers, dummy disks are all the same for all three models (M110/M310/M310F).

The M110/M310 Disk Array Unit (DAU) is a disk storage device that can contain both storage controllers and disk/solid-state drives in its 2U chassis. The M110/M310 DAU supports both 2.5" and 3.5" form factor. The 2.5" DAU accommodates up to 24 2.5" drives and 3.5" DAU accommodates up to 12 3.5" drives. By adding Disk Enclosures (DE), the M110 system can support maximum 120 drives for both 2.5" and 3.5" form factor, while the M310 system can support maximum 240 drives for 3.5" form factor and 480 drives for 2.5" form factor. The M110/M310 DAU requires at least 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: M110/M310 DAU 2.5" and 3.5" form factor

The M110 DAU supports the both single and dual controller configuration, while M310 DAU supports only dual controller configuration. One or two controller canisters are installed on the DAU as standard depending on the single/dual controller configuration selected. For the single controller configuration, one controller canister and one dummy controller are attached. Two controller canisters are attached to the dual controller configuration. The controller canister is equipped with SAS disk ports which are used to connect the DAU and the DE. The controller canister requires a host port card, Small Form Pluggable (SFP) modules and cache memory to be installed on it in order to be operational. For M110, a controller canister is equipped with 8GB cache memory as standard. So there is no need to order the cache memory. The host port card and SFP must be ordered separately. For M310, the host port card, SFP and cache memory must be ordered separately. Please refer to Step 2 for more information about

the host port card, SFP module and cache memory. The M310F is populated with 24GB cache in each controller so no cache needs to be ordered..

In addition to the controller canisters, the M110/M310 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.
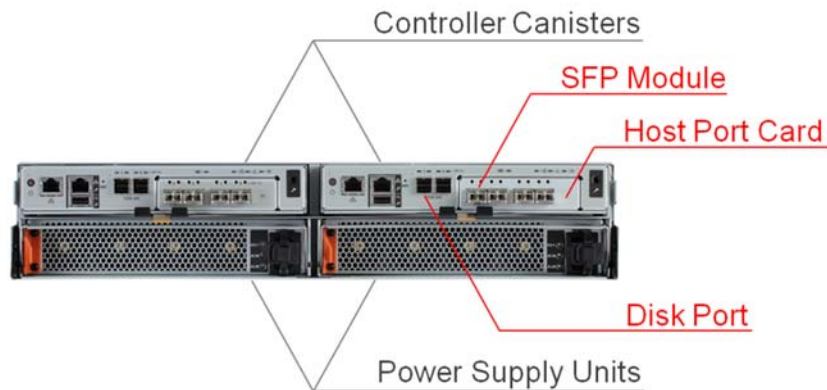
Figure 1-2: M110/M310 dual controller DAU back view

The M110/M310/M310F DAU comes with the following accessories.
- A pair of 2U rack mount ear bezels with the NEC logo
- Rack mount kit

The 2U front bezel with NEC logo is available at a charge. Please refer to Step 4 for the part number and more details.

Base Software is included without charge for the M110 DAU, the M310 DAU, and the M310F. 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 M110/M310/M310F DAU from the following list based on requirements for capacity, physical space, redundancy, performance, etc. Note that the M110/M310 DAU is available in either AC or DC power supply models. The M310F is only available in AC power.

Table 1-1: Disk Array Unit Part Number

Disk Array Unit				
PN	**Description**	**M110**	**M310**	**M310F**
NF5322-SR00E	M110 3.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)	✓		
NF5322-SR00SE	M110 3.5 inch Single Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)	✓		
NF5322-SR00DE	M110 Disk Array Unit(3.5" DC Power model)	✓		
NF5322-SR01E	M110 2.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)	✓		
NF5322-SR01SE	M110 2.5 inch Single Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)	✓		
NF5322-SR01DE	M110 Disk Array Unit(2.5" DC Power model)	✓		
NF5332-SR00E	M310 3.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card, SFP or Cache Memory)		✓	
NF5332-SR00DE	M310 Disk Array Unit(3.5" DC Power model)		✓	
NF5332-SR01E	M310 2.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card, SFP or Cache Memory)		✓	
NF5332-SR01DE	M310 Disk Array Unit(2.5" DC Power model)		✓	
NF5332-SR01FE	M310 All Flash DAU（2.5"） w/ Cache Memory (24GB x 2)			✓

The localization kit for the M110/M310/M310F includes power cables and is provided at no charge. The following list provides the part number of the AC and DC localization kits.

Table 1-2: Localization Kit Part Number

Localization Kit (Free)				
PN	**Description**	**M110**	**M310**	**M310F**
Q24-HL000000072705	Localization Kit for M110/M310/M310F Disk Array Unit	✓	✓	✓
Q24-HL000000106125	Localization Kit for M110/M310 Disk Array Unit with DC Power cables	✓	✓	

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 Configuration tool. If necessary, manually select the AC or DC kit depending on the power supplies being ordered.**

The M110 is the only single controller offered in the M-Series family. An additional second controller canister for M110 single controller DAU is provided at a fee for those who would like to upgrade their single controller DAU to a dual controller DAU. The following list provides the part number used to add a second controller to a single controller M110 DAU.

Table 1-3: Second Controller for M110 Single Controller DAU

Second Controller for M110 Single Controller DAU			
PN	**Description**	**M110**	**M310**
NF5322-SP00E	M110 add 2d Controller (w/o Host Port Card or SFP)	✓	

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

The M110/M310/M310F 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 ports for connection between the DAU and FC switches or direct connection to hosts. Both the M110 and the M310 support Fibre Channel (FC), iSCSI on copper/optical and a combo-card with FC and iSCSI (either copper or optical) interface host port card. A SAS interface host port card is available for M110 only.

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 M110 supports 2 or 4 ports of FC or iSCSI and 4 ports of SAS. The M310 supports 4 ports for all interface host port cards (FC and iSCSI). The combo host port card provides 2 ports of FC and 2 ports of iSCSI (total 4 ports) for either the M110 or the M310.

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

Table 2-1: Host Port Card Part Number

Host Port Card				
PN	**Description**	**M110**	**M310**	**M310F**
NF5322-SF05E	M110 2 port FC Host Port Card w/o SFP	✓		

Host Port Card		M110	M310	M310F
PN	**Description**	**M110**	**M310**	**M310F**
NF5322-SF06E	M110/M310 4 port FC Host Port Card w/o SFP	✓	✓	✓
NF5322-SF21E	M110 2 port iSCSI Optical Host Port Card w/o SFP	✓		
NF5322-SF22E	M110/M310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓	✓
NF5322-SF23E	M110 2 port 10Gb iSCSI Copper Host Port Card	✓		
NF5322-SF24E	M110/M310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓	✓
NF5322-SF44E	M110 4 port 12Gb SAS Host Port Card	✓		
NF5322-SF83E	M110/M310 2 port FC and 2 port iSCSI Optical Combo Host Port Card w/o SFP	✓	✓	✓
NF5322-SF84E	M110/M310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓	✓

Note
- **Each of the host port cards includes one host port card. Please order quantity two for dual controller configuration.**
- **Pairing different type of host port cards on a dual controller is not supported. If both FC and iSCSI connections are required, please use the combo host port card in each controller.**

Table 2-2: SFP Module Part Number

SFP Module		M110	M310	M310F
PN	**Description**	**M110**	**M310**	**M310F**
NF5322-SFP08E	2 - 8Gb FC SFPs	✓	✓	✓
NF5322-SFP16E	2 - 16Gb FC SFPs	✓	✓	✓
NF5322-SFP10E	2 - 10Gb Optical iSCSI SFPs	✓	✓	✓

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).**

Figure 3: Small Form Factor Pluggable (SFP)

The M110 DAU is equipped with 8GB cache memory on each controller canister (total 16GB cache memory for dual controller configuration) as standard, so there is no need to order any cache memory. The M310 is not equipped with any cache memory as standard so cache memory must be ordered. The M310 supports two cache memory capacities, 12GB on each controller (total 24GB) or 24GB on each controller (total 48GB). The M310F is equipped with 24GB cache memory on each controller canister (total 48GB), so there is no need to order any cache memory.

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

Table 2-3: Cache Memory Part Number

Cache Memory					
PN	Description	M110	M310	M310F
NF5332-SC01SE	M310 Cache Memory 12GB for one Controller		✓	
NF5332-SC02SE	M310 Cache Memory 24GB for one Controller		✓	

Note

- **Each part number provides cache memory for one controller. Pairing different capacity of cache memories is not supported. Order quantity two of the same cache memories for each M310 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 either the M110 or M310 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 M110 system can support maximum 120 drives for both 2.5" and 3.5" form factor (4 DEs and 1 DAU for 2.5" form factor. 9 DEs and 1 DAU for 3.5" form factor). The M310 system can support maximum 240 drives for 3.5" form factor and 480 drives for 2.5" form factor (19 DEUs and one DAU for both form factors). 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 maximum number of DEs that can be connected to the DAU is specified by the following rules.

M110 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 120 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 4 - 2.5" DEs. (The total number of drive slots is 120.)
- The 3.5" DAU can connect with up to 9 - 3.5" DEs. (The total number of drive slots is 120.)
- 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 DAU and DEs is 120 or fewer. (The total number of drive slots varies depending on the combination of DAU and DEs. The maximum slot number is 120.)

M310 System

The M310 system has a different rule from the M110 system. **The total number of DE must be 19 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 19 - 2.5" DEs. (The total number of drive slots is 480.)
- The 3.5" DAU can connect with up to 19 - 3.5" DEs. (The total number of drive slots is 240.)

- The 2.5"/3.5" DAU can connect with both 2.5" and 3.5" DEs <u>as long as the total number of the DEs connected to the DAU is 19 or fewer.</u> (The total number of drive slots varies depending on the combination of DAU and DEs. The maximum slot number is 480.)

M310F System

The M310F system has a different rule from the M310 system. **The total number of DE must be 19 or fewer.** The M310F only supports attachment of the 2.5" DAU.

- The 2.5" DAU can connect with up to 19 - 2.5" DEs. (The total number of drive slots is 480.)

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.

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

Table 3-1: Disk Enclosure Part Number

Disk Enclosure				
PN	**Description**	**M110**	**M310**	**M310F**
NF5322-SE80E	Disk Enclosure 3.5 inch for Mx10	✓	✓	
NF5322-SE81E	Disk Enclosure 2.5 inch for Mx10	✓	✓	✓
NF5322-SE80DE	Disk Enclosure 3.5 inch DC Power Model for Mx10	✓	✓	
NF5322-SE80DE	Disk Enclosure 3.5 inch DC Power Model for Mx10	✓	✓	

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	M110	M310	M310F
Q24-HL000000072706	Localization Kit for Mx10 Disk Enclosure	✓	✓	✓
Q24-HL000000106125	Localization Kit ,M110/M310 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 the Configurator tool.**

The M110/M310 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 M110/M310/M310F 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

Hard-Disk/Solid-State Drives				
PN	Description	M110	M310	M310F
2.5" Disk Drives				
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-SMB6CE	SAS Disk Drive(2.5" 10krpm/1.8TB 12Gbps)	✓	✓	
NF5322-SMB56E	NLSAS Disk Drive(2.5" 7.2krpm/1TB)	✓	✓	
NF5322-SMB58E	NLSAS Disk Drive(2.5" 7.2krpm/2TB)	✓	✓	
3.5" Disk Drives				
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)	✓	✓	
Solid State Drives				
NF5322-SSAR5E	High Endurance SAS SSD (3.5" 200GB)	✓	✓	
NF5322-SSAR5LE	High Endurance SAS SSD(3.5" 200GB Encryption)	✓	✓	
NF5322-SSAF6E	SAS SSD (3.5" 400GB)	✓	✓	
NF5322-SSAFAE	SAS SSD (3.5" 1.6TB)	✓	✓	
NF5322-SSAUFE	SAS SSD(3.5" 3.84TB)	✓	✓	
NF5322-SSASCE	Very Read Intensive SAS SSD(3.5", 2TB)	✓	✓	
NF5322-SSASHE	Very Read Intensive SAS SSD(3.5", 4TB)	✓	✓	

Hard-Disk/Solid-State Drives				
PN	Description	M110	M310	M310F
NF5322-SSAG5E	High Endurance SAS SSD (2.5" 200GB)	✓	✓	✓
NF5322-SSAG5LE	High Endurance SAS SSD(2.5" 200GB Encryption)	✓	✓	✓
NF5322-SSA96E	SAS SSD (2.5" 400GB)	✓	✓	✓
NF5322-SSA9AE	SAS SSD (2.5" 1.6TB)	✓	✓	✓
NF5322-SSAKFE	SAS SSD(2.5" 3.84TB)	✓	✓	✓
NF5322-SSAHCE	Very Read Intensive SAS SSD(2.5", 2TB)	✓	✓	✓
NF5322-SSAHHE	Very Read Intensive SAS SSD(2.5", 4TB)	✓	✓	✓

Note

- **The M110 supports up to 12 SSDs for either 2.5" or 3.5" form factor. The M310 supports up to 480 SSDs for 2.5" form factor and 240 SSDs for 3.5" form factor. The M310F supports up to 480 2.5" form factor SSDs.**

To ensure maximum cooling and lower costs the M510/M710/M710F places no charge dummy drives in empty drive slots.

Table 3-4: Dummy HDD Part Number

Dummy Drive (Free)				
PN	Description	M110	M310	M310F
NF9100-CZ55	Dummy HDD (3.5")	✓	✓	
NF9100-CZ59	Dummy HDD (2.5")	✓	✓	✓

Step 4. Add Optional Accessories

The 2U front bezel is a cover with key lock that prevents the drives in chassis from accidents. It can be used for M110 and M310 DAU as well as DE units.
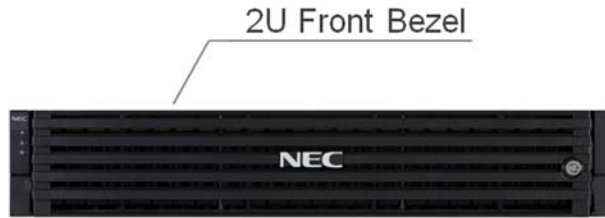
Figure 4-1: 2U Ear and Front Bezel Appearance

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	M110	M310	M310F
NF9100-SF22E	Front Bezel (2U 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)	✓	✓	✓

<u>Note</u>

- **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 M110, M310, and M310F come with no-charge Base Software. The Base Software provides various features as shown in the table below. The only difference between Base Software of M110 and M310/M310F is that M110 Base Software includes Dynamic Data Replication Express.

Table 5-1: Standard Software Part Number

Base Software (Free)				
PN	Description	M110	M310	M310F
Q24-HL000000072864	M110 Base Software	✓		
Q24-HL000000072865	M310 Base Software		✓	
Q24-HL000000124752	M310F 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 M110, M310 and M310F. See Step 8 for details of SW maintenance support.**
- **The DAU must have at least one FC interface to use DataMigration software.**

The following table provides a brief description of the function performed by the base software solution set.

Table 5-2: Standard Software - 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	•ExtExtend 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

Note

- **To use Local Replication Pack or Remote Replication Pack, the DAU must have two controllers.**

Step 6. Add Optional Software

Three chargeable SW products are available for both the M110 and M310. The table below shows detailed features included in each solution kit.

Table 6-1: Optional Software Part Number

Individual Optional Software				
PN	**Description**	**M110**	**M310**	**M310F**
UFSMS5-100C00AM	M110 Replication Navigator Suite for Oracle	✓		
UFSM2J-100402AM	M110 JobCenter Lite	✓		
UFSM71-110000AM	M110 DirectDataShadow Option for HS	✓		
UFSMS5-300C00AM	M310 Replication Navigator Suite for Oracle		✓	
UFSM2J-300402AM	M310 JobCenter Lite		✓	✓
UFSM71-310000AM	M310 NEC Storage DirectDataShadow Option for HS		✓	✓

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

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

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	**"Next Business Day Response"** (Advanced CRU Delivery or Onsite Repair Response)	**"Next Day Response"** (Advanced CRU Delivery or Onsite Repair Response)	**"Same Day 4-hour Response"** (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.

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

PN	Description	M110	M310	M310F
Hardware Warranty for Disk Array Unit				
NF5322-SR00E M110 3.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)				
Q24-DN000000072451	3 Years Upgrade to Gold M110 3.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072452	5 Years Upgrade to Gold M110 3.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072453	3 Years Upgrade to Platinum M110 3.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072454	5 Years Upgrade to Platinum M110 3.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072455	1 Year Extended Gold M110 3.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072456	1 Year Extended Platinum M110 3.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072457	1 Year Extended Standard M110 3.5 inch Dual Controller w/Base SW	✓		
NF5322-SR00SE M110 3.5 inch Single Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)				
Q24-DN000000072458	3 Years Upgrade to Gold M110 3.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072459	5 Years Upgrade to Gold M110 3.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072460	3 Years Upgrade to Platinum M110 3.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072461	5 Years Upgrade to Platinum M110 3.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072462	1 Year Extended Gold M110 3.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072463	1 Year Extended Platinum M110 3.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072464	1 Year Extended Standard M110 3.5 inch Single Controller w/Base SW	✓		
NF5322-SR01E M110 2.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)				

Hardware Warranty for Disk Array Unit				
PN	**Description**	**M110**	**M310**	**M310F**
Q24-DN000000072465	3 Years Upgrade to Gold M110 2.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072466	5 Years Upgrade to Gold M110 2.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072467	3 Years Upgrade to Platinum M110 2.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072468	5 Years Upgrade to Platinum M110 2.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072469	1 Year Extended Gold M110 2.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072470	1 Year Extended Platinum M110 2.5 inch Dual Controller w/Base SW	✓		
Q24-DN000000072471	1 Year Extended Standard M110 2.5 inch Dual Controller w/Base SW	✓		
NF5322-SR01SE M110 2.5 inch Single Controller Disk Array Unit w Base SW (w/o Host Port Card or SFP)				
Q24-DN000000072472	3 Years Upgrade to Gold M110 2.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072473	5 Years Upgrade to Gold M110 2.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072474	3 Years Upgrade to Platinum M110 2.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072475	5 Years Upgrade to Platinum M110 2.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072476	1 Year Extended Gold M110 2.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072477	1 Year Extended Platinum M110 2.5 inch Single Controller w/Base SW	✓		
Q24-DN000000072478	1 Year Extended Standard M110 2.5 inch Single Controller w/Base SW	✓		
NF5322-SR01DE M110 2.5 inch Dual Controller Disk Array Unit DC Power Model w Base SW (w/o Host Port Card or SFP)				
Q24-DN000000105230	3 Years Upgrade to Gold M110 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105241	5 Years Upgrade to Gold M110 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105242	3 Years Upgrade to Platinum M110 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105243	5 Years Upgrade to Platinum M110 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105244	1 Year Extended Gold M110 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105245	1 Year Extended Platinum M110 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105246	1 Year Extended Standard M110 Dual Controller DC Power Model w/Base SW	✓		
NF5322-SR00DE M110 Disk Array Unit 3.5 Inch Dual Controller Disk Array Unit DC Power Model w Base SW (w/o Host Port Card or SFP)				
Q24-DN000000105247	3 Years Upgrade to Gold M310 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105248	5 Years Upgrade to Gold M310 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105249	3 Years Upgrade to Platinum M310 Dual Controller DC Power Model w/Base SW	✓		

Hardware Warranty for Disk Array Unit				
PN	Description	M110	M310	M310F
Q24-DN000000105250	5 Years Upgrade to Platinum M310 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105251	1 Year Extended Gold M310 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105252	1 Year Extended Platinum M310 Dual Controller DC Power Model w/Base SW	✓		
Q24-DN000000105253	1 Year Extended Standard M310 Dual Controller DC Power Model w/Base SW	✓		
NF5332-SR00E M310 3.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card, SFP or Cache Memory)				
Q24-DN000000072479	3 Years Upgrade to Gold M310 3.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072480	5 Years Upgrade to Gold M310 3.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072481	3 Years Upgrade to Platinum M310 3.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072482	5 Years Upgrade to Platinum M310 3.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072483	1 Year Extended Gold M310 3.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072484	1 Year Extended Platinum M310 3.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072485	1 Year Extended Standard M310 3.5 inch Dual Controller w/Base SW		✓	
NF5332-SR01E M310 2.5 inch Dual Controller Disk Array Unit w Base SW (w/o Host Port Card, SFP or Cache Memory)				
Q24-DN000000072486	3 Years Upgrade to Gold M310 2.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072487	5 Years Upgrade to Gold M310 2.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072488	3 Years Upgrade to Platinum M310 2.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072489	5 Years Upgrade to Platinum M310 2.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072490	1 Year Extended Gold M310 2.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072491	1 Year Extended Platinum M310 2.5 inch Dual Controller w/Base SW		✓	
Q24-DN000000072492	1 Year Extended Standard M310 2.5 inch Dual Controller w/Base SW		✓	
NF5332-SR00DE M310 Disk Array Unit(3.5" DC Power model) Unit w Base SW (w/o Host Port Card, SFP or Cache Memory)				
Q24-DN000000105254	3 Years Upgrade to Gold M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105255	5 Years Upgrade to Gold M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105256	3 Years Upgrade to Platinum M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105257	5 Years Upgrade to Platinum M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105258	1 Year Extended Gold M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105259	1 Year Extended Platinum M310 Dual Controller DC Power Model w/Base SW		✓	

Hardware Warranty for Disk Array Unit				
PN	**Description**	**M110**	**M310**	**M310F**
Q24-DN000000105260	1 Year Extended Standard M310 Dual Controller DC Power Model w/Base SW		✓	
NF5332-SR01DE **M310 Disk Array Unit(2.5" DC Power model) Unit w Base SW (w/o Host Port Card, SFP or Cache Memory)**				
Q24-DN000000105247	3 Years Upgrade to Gold M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105248	5 Years Upgrade to Gold M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105249	3 Years Upgrade to Platinum M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105250	5 Years Upgrade to Platinum M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105251	1 Year Extended Gold M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105252	1 Year Extended Platinum M310 Dual Controller DC Power Model w/Base SW		✓	
Q24-DN000000105253	1 Year Extended Standard M310 Dual Controller DC Power Model w/Base SW		✓	
NF5332-SR01FE **M310 All Flash Disk Array Unit（2.5"）including 24 GB Cache per Controller (w/o Host Port Card or SFP)**				
Q24-DN000000119542	3 Years Upgrade to Gold M310F Dual Controller w/Base SW			✓
Q24-DN000000125374	5 Years Upgrade to Gold M310F Dual Controller w/Base SW			✓
Q24-DN000000119543	3 Years Upgrade to Platinum M310F Dual Controller w/Base SW			✓
Q24-DN000000125375	5 Years Upgrade to Platinum M310F Dual Controller w/Base SW			✓
Q24-DN000000119540	1 Year Extended Gold M310F Dual Controller w/Base SW			✓
Q24-DN000000119541	1 Year Extended Platinum M310F Dual Controller w/Base SW			✓
Q24-DN000000119539	1 Year Extended Standard M310F Dual Controller w/Base SW			✓

Table 7-3: Hardware Warranty for 2nd Controller for M110 Single DAU Part Number

Hardware Warranty for Second Controller for M110 Single Controller DAU			
PN	**Description**	**M110**	**M310**
NF5322-SP00E **M110 add 2nd Controller (w/o Host Port Card or SFP)**			
Q24-DN000000072507	3 Years Upgrade to Gold M110 Add 2d Controller (w/o Host Port or SFP)	✓	
Q24-DN000000072508	5 Years Upgrade to Gold M110 Add 2d Controller (w/o Host Port or SFP)	✓	
Q24-DN000000072509	3 Years Upgrade to Platinum M110 Add 2d Controller (w/o Host Port or SFP)	✓	
Q24-DN000000072510	5 Years Upgrade to Platinum M110 Add 2d Controller (w/o Host Port or SFP)	✓	
Q24-DN000000072511	1 Year Extended Gold M110 Add 2d Controller (w/o Host Port or SFP)	✓	
Q24-DN000000072512	1 Year Extended Platinum M110 Add 2d Controller (w/o Host Port or SFP)	✓	

PN	Description	M110	M310
Hardware Warranty for Second Controller for M110 Single Controller DAU			
Q24-DN000000072513	1 Year Extended Standard M110 Add 2d Controller (w/o Host Port or SFP)	✓	

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

PN	Description	M110	M310 / M310F
Hardware Warranty for Host Port Card			
NF5322-SF05E M110 2 port FC Host Port Card w/o SFP			
Q24-DN000000072614	3 Years Upgrade to Gold M110 2 port FC Host Port Card w/o SFP	✓	
Q24-DN000000072615	5 Years Upgrade to Gold M110 2 port FC Host Port Card w/o SFP	✓	
Q24-DN000000072616	3 Years Upgrade to Platinum M110 2 port FC Host Port Card w/o SFP	✓	
Q24-DN000000072617	5 Years Upgrade to Platinum M110 2 port FC Host Port Card w/o SFP	✓	
Q24-DN000000072618	1 Year Extended Gold M110 2 port FC Host Port Card w/o SFP	✓	
Q24-DN000000072619	1 Year Extended Platinum M110 2 port FC Host Port Card w/o SFP	✓	
Q24-DN000000072620	1 Year Extended Standard M110 2 port FC Host Port Card w/o SFP	✓	
NF5322-SF06E M110/M310 4 port FC Host Port Card w/o SFP			
Q24-DN000000072621	3 Years Upgrade to Gold M110/310 4 port FC Host Port Card w/o SFP	✓	✓
Q24-DN000000072622	5 Years Upgrade to Gold M110/310 4 port FC Host Port Card w/o SFP	✓	✓
Q24-DN000000072623	3 Years Upgrade to Platinum M110/310 4 port FC Host Port Card w/o SFP	✓	✓
Q24-DN000000072624	5 Years Upgrade to Platinum M110/310 4 port FC Host Port Card w/o SFP	✓	✓
Q24-DN000000072625	1 Year Extended Gold M110/310 4 port FC Host Port Card w/o SFP	✓	✓
Q24-DN000000072626	1 Year Extended Platinum M110/310 4 port FC Host Port Card w/o SFP	✓	✓
Q24-DN000000072627	1 Year Extended Standard M110/310 4 port FC Host Port Card w/o SFP	✓	✓
NF5322-SF21E M110 2 port iSCSI Optical Host Port Card w/o SFP			
Q24-DN000000072628	3 Years Upgrade to Gold M110 2 port iSCSI Host Port Card w/o SFP	✓	
Q24-DN000000072629	5 Years Upgrade to Gold M110 2 port iSCSI Host Port Card w/o SFP	✓	
Q24-DN000000072630	3 Years Upgrade to Platinum M110 2 port iSCSI Host Port Card w/o SFP	✓	
Q24-DN000000072631	5 Years Upgrade to Platinum M110 2 port iSCSI Host Port Card w/o SFP	✓	
Q24-DN000000072632	1 Year Extended Gold M110 2 port iSCSI Host Port Card w/o SFP	✓	

Hardware Warranty for Host Port Card

PN	Description	M110	M310 / M310F
Q24-DN000000072633	1 Year Extended Platinum M110 2 port iSCSI Host Port Card w/o SFP	✓	
Q24-DN000000072634	1 Year Extended Standard M110 2 port iSCSI Host Port Card w/o SFP	✓	
NF5322-SF22E M110/M310 4 port iSCSI Optical Host Port Card w/o SFP			
Q24-DN000000072635	3 Years Upgrade to Gold M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
Q24-DN000000072636	5 Years Upgrade to Gold M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
Q24-DN000000072637	3 Years Upgrade to Platinum M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
Q24-DN000000072638	5 Years Upgrade to Platinum M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
Q24-DN000000072639	1 Year Extended Gold M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
Q24-DN000000072640	1 Year Extended Platinum M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
Q24-DN000000072641	1 Year Extended Standard M110/310 4 port iSCSI Optical Host Port Card w/o SFP	✓	✓
NF5322-SF23E M110 2 port 10Gb iSCSI Copper Host Port Card			
Q24-DN000000072642	3 Years Upgrade to Gold M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
Q24-DN000000072643	5 Years Upgrade to Gold M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
Q24-DN000000072644	3 Years Upgrade to Platinum M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
Q24-DN000000072645	5 Years Upgrade to Platinum M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
Q24-DN000000072646	1 Year Extended Gold M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
Q24-DN000000072647	1 Year Extended Platinum M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
Q24-DN000000072648	1 Year Extended Standard M110 2 port 10Gb iSCSI Copper Host Port Card	✓	
NF5322-SF24E M110/M310 4 port 10Gb iSCSI Copper Host Port Card			
Q24-DN000000072649	3 Years Upgrade to Gold M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓
Q24-DN000000072650	5 Years Upgrade to Gold M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓
Q24-DN000000072651	3 Years Upgrade to Platinum M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓
Q24-DN000000072652	5 Years Upgrade to Platinum M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓
Q24-DN000000072653	1 Year Extended Gold M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓
Q24-DN000000072654	1 Year Extended Platinum M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓
Q24-DN000000072655	1 Year Extended Standard M110/310 4 port 10Gb iSCSI Copper Host Port Card	✓	✓

Hardware Warranty for Host Port Card

PN	Description	M110	M310 / M310F
NF5322-SF44E **M110 4 port 12Gb SAS Host Port Card**			
Q24-DN000000072656	3 Years Upgrade to Gold M110 4 port 12Gb SAS Host Port Card	✓	
Q24-DN000000072657	5 Years Upgrade to Gold M110 4 port 12Gb SAS Host Port Card	✓	
Q24-DN000000072658	3 Years Upgrade to Platinum M110 4 port 12Gb SAS Host Port Card	✓	
Q24-DN000000072659	5 Years Upgrade to Platinum M110 4 port 12Gb SAS Host Port Card	✓	
Q24-DN000000072660	1 Year Extended Gold M110 4 port 12Gb SAS Host Port Card	✓	
Q24-DN000000072661	1 Year Extended Platinum M110 4 port 12Gb SAS Host Port Card	✓	
Q24-DN000000072662	1 Year Extended Standard M110 4 port 12Gb SAS Host Port Card	✓	
NF5322-SF83E **M110/M310 2 port FC and 2 port iSCSI Optical Combo Host Port Card w/o SFP**			
Q24-DN000000072663	3 Years Upgrade to Gold M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
Q24-DN000000072664	5 Years Upgrade to Gold M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
Q24-DN000000072665	3 Years Upgrade to Platinum M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
Q24-DN000000072666	5 Years Upgrade to Platinum M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
Q24-DN000000072667	1 Year Extended Gold M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
Q24-DN000000072668	1 Year Extended Platinum M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
Q24-DN000000072669	1 Year Extended Standard M110/310 2 Port FC and 2 Port iSCSI Optical Combo Host Port Card	✓	✓
NF5322-SF84E **M110/M310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card**			
Q24-DN000000072670	3 Years Upgrade to Gold M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓
Q24-DN000000072671	5 Years Upgrade to Gold M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓
Q24-DN000000072672	3 Years Upgrade to Platinum M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓
Q24-DN000000072673	5 Years Upgrade to Platinum M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓
Q24-DN000000072674	1 Year Extended Gold M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓
Q24-DN000000072675	1 Year Extended Platinum M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓
Q24-DN000000072676	1 Year Extended Standard M110/310 2 port FC (w/o SFP) and 2 port 10Gb iSCSI Copper Combo Host Port Card	✓	✓

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

Hardware Warranty for Cache Memory				
PN	**Description**	**M110**	**M310**	**M310F**
NF5332-SC01SE M310 Cache Memory 12GB for one Controller				
Q24-DN000000072514	3 Years Upgrade to Gold M310 Cache Memory 12GB for one Controller		✓	
Q24-DN000000072515	5 Years Upgrade to Gold M310 Cache Memory 12GB for one Controller		✓	
Q24-DN000000072516	3 Years Upgrade to Platinum M310 Cache Memory 12GB for one Controller		✓	
Q24-DN000000072517	5 Years Upgrade to Platinum M310 Cache Memory 12GB for one Controller		✓	
Q24-DN000000072518	1 Year Extended Gold M310 Cache Memory 12GB for one Controller		✓	
Q24-DN000000072519	1 Year Extended Platinum M310 Cache Memory 12GB for one Controller		✓	
Q24-DN000000072520	1 Year Extended Standard M310 Cache Memory 12GB for one Controller		✓	
NF5332-SC02SE M310 Cache Memory 24GB for one Controller				
Q24-DN000000072521	3 Years Upgrade to Gold M310 Cache Memory 24GB for one Controller		✓	
Q24-DN000000072522	5 Years Upgrade to Gold M310 Cache Memory 24GB for one Controller		✓	
Q24-DN000000072523	3 Years Upgrade to Platinum M310 Cache Memory 24GB for one Controller		✓	
Q24-DN000000072524	5 Years Upgrade to Platinum M310 Cache Memory 24GB for one Controller		✓	
Q24-DN000000072525	1 Year Extended Gold M310 Cache Memory 24GB for one Controller		✓	
Q24-DN000000072526	1 Year Extended Platinum M310 Cache Memory 24GB for one Controller		✓	
Q24-DN000000072527	1 Year Extended Standard M310 Cache Memory 24GB for one Controller		✓	

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

Hardware Warranty for Disk Enclosure				
PN	**Description**	**M110**	**M310**	**M310F**
NF5322-SE80E Disk Enclosure 3.5 inch for M110/M310/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	✓	✓	

Hardware Warranty for Disk Enclosure				
PN	Description	M110	M310	M310F
Q24-DN000000072606	1 Year Extended Standard Disk Enclosure 3.5 inch for Mx10	✓	✓	
NF5322-SE80DE Disk Enclosure DC Power 3.5 inch for M110/M310/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 inchfor M110/M310/M510/M710	✓	✓	
	1 Year Extended Gold DEU DC Power Model 3.5 inchfor 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 inchfor M110/M310/M510/M710	✓	✓	
NF5322-SE81E Disk Enclosure 2.5 inch for M110/M310/M510/M710				
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	✓	✓	✓
NF5322-SE81DE 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	✓	✓	✓
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

PN	Description	M110	M310	M310F
Hardware Warranty for SSD				
NF5322-SSAR5E SAS SSD (3.5" 200GB)				
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)	✓	✓	
NF5322-SSAR5LE SAS SSD (3.5" 200GB Encryption)				
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)	✓	✓	
NF5322-SSAF6E SAS SSD (3.5" 400GB)				
Q24-DN000000073158	3 Years Upgrade to Gold SAS SSD (3.5" 400GB)	✓	✓	
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)	✓	✓	
NF5322-SSAFAE SAS SSD (3.5" 1.6TB)				
Q24-DN000000073165	3 Years Upgrade to Gold SAS SSD (3.5" 1.6TB)	✓	✓	

Hardware Warranty for SSD				
PN	Description	M110	M310	M310F
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)	✓	✓	
NF5322-SSAUFE SAS SSD (3.5" 3.84TB)				
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)	✓	✓	
NF5322-SSASCE VRI SSD (3.5" 2 TB)				
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)	✓	✓	
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)	✓	✓	
NF5322-SSASHE VRI SSD (3.5" 4 TB)				
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)	✓	✓	

Hardware Warranty for SSD				
PN	**Description**	**M110**	**M310**	**M310F**
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)	✓	✓	
NF5322-SSAG5E **SAS SSD (2.5" 200GB)**				
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)	✓	✓	✓
NF5322-SSAG5LE **SAS SSD (2.5" 200GB Encryption)**				
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)	✓	✓	✓
NF5322-SSA96E **SAS SSD (2.5" 400GB)**				
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)	✓	✓	✓

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Hardware Warranty for SSD				
PN	Description	M110	M310	M310F
NF5322-SSA9AE SAS SSD (2.5" 1.6TB)				
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)	✓	✓	✓
NF5322-SSAKFE SAS SSD (2.5" 3.84TB)				
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)	✓	✓	✓
NF5322-SSAHCE VRI SSD (2.5" 2 TB)				
Q24-DN000000126931	3 Years Upgrade to Gold VRI SSD (2.5" 2TB)	✓	✓	✓
Q24-DN000000126934	5 Years Upgrade to Gold VRI SSD (2.5" 2TB)	✓	✓	✓
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-DN000000126929	1 Year Extended Standard VRI SSD 2.5" 2TB)	✓	✓	✓
NF5322-SSAHHE VRI SSD (2.5" 4 TB)				
Q24-DN000000126945	3 Years Upgrade to Gold VRI SSD (2.5" 4TB)	✓	✓	✓
Q24-DN000000126948	5 Years Upgrade to Gold VRI SSD (2.5" 4TB)	✓	✓	✓

Hardware Warranty for SSD				
PN	Description	M110	M310	M310F
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)	✓	✓	✓

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

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

Hard Disk Drive and SSD Retention				
PN	Description	M110	M310	M310F
Hard Disk Drives				
Q24-DN000000013614	3YRS HDD Retention Program Per Drawer	✓	✓	
Q24-DN000000070096	5YRS HDD Retention Program Per Drawer	✓	✓	
Solid State Disk Drives				
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 Part Number

Software Maintenance Support				
PN	**Description**	**M110**	**M310**	**M310F**
Base Software Support				
Q24-DN000000072904	1Y STD M110 Base SW Maint	✓		
Q24-DN000000072903	1Y PLT M110 Base SW Maint	✓		
Q24-DN000000072916	1Y STD M310 Base SW Maint		✓	
Q24-DN000000072915	1Y PLT M310 Base SW Maint		✓	
Q24-DN000000125146	1Y STD M310F Base SW Maint			✓
Q24-DN000000125176	1Y PLT M310F Base SW Maint			✓
Optional Software Support				
Q24-DN000000125245	1Y STD M110 Replication Navigator Suite for Oracle(with DDR)	✓		
Q24-DN000000125249	1Y PLT M110 Replication Navigator Suite for Oracle(with DDR)	✓		
Q24-DN000000125253	1Y STD M110 JobCenter Lite	✓		
Q24-DN000000125257	1Y PLT M110 JobCenter Lite	✓		
Q24-DN000000126956	1YR STD M110 Direct Data Shadow	✓		
Q24-DN000000126962	1YR PLT M110 Direct Data Shadow	✓		
Q24-DN000000125246	1Y STD M310 Replication Navigator Suite for Oracle		✓	
Q24-DN000000125250	1Y PLT M310 Replication Navigator Suite for Oracle		✓	
Q24-DN000000125254	1Y STD M310 JobCenter Lite		✓	
Q24-DN000000125258	1Y PLT M310 JobCenter Lite		✓	
Q24-DN000000126957	1YR STD M310 Direct Data Shadow		✓	
Q24-DN000000126963	1YR PLT M310 Direct Data Shadow		✓	
Q24-DN000000125162	1Y STD M310F JobCenter Lite			✓
Q24-DN000000125192	1Y PLT M310F JobCenter Lite			✓
Q24-DN000000126960	1YR STD M310F Direct Data Shadow			✓
Q24-DN000000126966	1YR PLT M310F 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 M110/M310 hardware and software is available. Please select the training items from the following list if required.

Table 9-1: Training Part Number

Training			
PN	Description	M110	M310 / M310F
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 M110/M310 is available. Please select the installation service item from the following list if required.

Table 10-1: Installation Part Number

Installation			
PN	Description	M110	M310 / M310F
Q24-DN000000008185	M110/M310 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.**

Revision History

Revision	Date	Notes
1.0	11/07/2014	Initial version
1.1	1/21/2015	Part numbers of 60 days trial license bundles have been updated.
1.2	3/31/2016	Add flash array and new software (VVol, Replication Navigator and JobCenter Lite)
2.0	01/16/17	Add new HDD, SSD, and new bundle software
2.1	04/27/2017	Cleaned up minor errors
2.2	07/22/2017	Removed Replication Navigator Support