EMC²

PARTS COMPATIBILITY DATABASE

Disk and FLARE®/OE Matrix.

Use for all VNX with MCx, VNX, VNXe2, VNXe, CLARiiON and Celerra drives including all models of CX4, CX3, CX, AX4-5, AX, and FC

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This is a comprehensive Field Guide for the Replacement and Substitutions of VNX with MCx, VNX, VNXe2, VNXe, all CLARiiON and Celerra Drives.

This document contains the following Disk and FLARE®/OE Matrices in the following order: VNX with MCx, VNX, VNXe2, VNXe, VNXe1600, CX4, CX3, CX, AX4-5, AX and FC

Note: VNX series has 3 docs:

1) One for VNX5200, 5400, 5600, 5800, 7600 and 8000.
2) One for VNX5500, 5700 and 7500 (Requires B-class drives)
3) The other is for VNX5100 and 5300 (Uses both J-class and B-class drives)

For proper drive replacement or substitution, use the appropriate Disk and FLARE® OE Matrix to match your drive and Model type.

Use the search function (<CTRL> F) to "find" your drive. Drives may be in multiple places within this document. Ensure that your Drive , Model Type, Array and FLARE combination all match.

NOTE: If logistics is out of the drive you require, drives can be substituted by other drives that match its Model type.

The following information is provided when there are known issues or caveats within this document.

VNX and VNX with MCx Drives

Note: At this time we do not support swapping of any VNX drives into a new VNX with MCx arrays. See KB article 168789 for more information.

All VNX and VNXe Drives:

VNX

Note: VNX series has 2 docs:

1) One for the VNX5500, 5700 and 7500 (B-class drives) *
2) The other is for VNX5100 and 5300 (J-class drives) *

*****All drives in logistics which are used for replacements will be able to be used in any VNX array. They are global spares and the firmware will be compatible for both B-class and J-class arrays.

VNXe

VNXe3100 (NEO B Jr) drives can only be used in a VNXe3100 as it has a unique assembly.

All CLARiiON and Celerra drives:

1) **005048750** This is a NEBS Drive. You will not find this drive in the Matrices. In most instances this drive will only be ordered by Comverse or FSC. If you have to replace this drive that is NOT in a NEBS array – replace it with a model CX-4G15-300 drive for your array type.

2) **005048748** This is a NEBS Drive. You will not find this drive in the Matrices. In most instances this drive will only be ordered by Comverse or FSC. If you have to replace this drive that is NOT in a NEBS array – replace it with a model CX-4G15-73 drive for your array type.

3) Note the changes regarding substitutions for 320GB ATA drives, model CX-AT05-320. If they are unavailable they may be replaced by 500GB ATA drives, model CX-AT07-500. Minimum FLARE requirements still apply.

4) **005048968** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 146GB drive, Model CX-4G15-146. Use any drive found under this Model/Array type and meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

5) **005048969** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 300GB drive, Model CX-4G15-300. Use any drive found under this Model/Array type and meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

6) **005048970** This is a short stroked drive and should not have ever made it into manufacturing however if some have escaped and is found in an Array, the replacement for it would be a 450GB drive, Model CX-4G15-450. Use any drive found under this Model/Array type and meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

7) **005048842** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 300GB drive, Model CX-4G10-300. Use any drive found under this Model/Array type and meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

8) **005048854** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 73GB drive, Model CX-4G15-73. Use any drive found under this Model/Array type and meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

9) **005048889** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 750GB drive Model CX-SA07-750 under this Model/Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

10) **005049098** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 36GB drive model CX-2G15-36 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

11) **005048704** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 73GB drive model CX-2G15-73 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

12) **005048973** This is a short stroked and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 400GB drive model CX-4G10-400 under the Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

13) **005048913** This is a NEBS Drive. You will not find this drive in the Disk and FLARE OE Matrices. In most instances this drive can only be ordered by Comverse or FSC. If you have to replace this drive that is NOT in a NEBS array – replace it with a model CX-4G15-300 drive for your array type.

14) **005048749** This is a NEBS Drive. You will not find this drive in the Disk and FLARE OE Matrices. In most instances this drive can only be ordered by Comverse or FSC. If you have to replace this drive that is NOT in a NEBS array – replace it with a model CX-4G15-146 drive for your array type.

15) **005049520** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 1000GB drive model CX-SA07-010 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

16) **005048843** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 73GB drive model CX-2G15-73 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

17) **005048707** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 73GB drive model CX-2G10-73 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

18) **005048705** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 73GB drive model CX-2G10-73 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

19) **005048965** This is a short stroked drive and was not generally released into manufacturing however they may have been used as a temporary substitute or substituted by logistics as a viable replacement. If you have one in an array and require a replacement use a 450GB drive model AX-SS15-450 under this Model/ Array type that meets the minimum FLARE requirement. However if this is the only available drive then it may be used.

EMC® VNX 5200, VNX5400, VNX5600, VNX5800, VNX7600 and VNX8000 Series Storage Systems

Disk and OE Matrix

P/N 302-000-318

To function properly, disks in an EMC® VNX® system require that each storage processor run minimum revisions of the EMC VNX Operating Environment (VNX OE). This document lists the disk part numbers supported for EMC VNX series storage systems and the minimum software revisions required for each disk model.

CAUTION

Verify that the proper version of VNX OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper VNX OE version is installed.

Before installing a new disk in a storage system, use the EMC Unisphere™ Manager to determine the VNX OE revision running on the storage system. In Unisphere Manager, the VNX OE revision appears on the **Software** tab of the **Storage System Properties** dialog box for the storage system. If this revision is lower than the minimum VNX OE revision required for the disk as listed in **Table 1 or Table 2** you must upgrade the VNX OE on the storage system before installing the disk. EMC recommends that you upgrade VNX OE using the wizards in the System Software section of the Unisphere Service Manager (USM).

Note 1: Changes and additions in the tables since the last revision of this document are noted in red type.

Note 2: The disk part number (PN) appears on a label on the front of the disk carrier. Note that although the OE GUI may display an alpha suffix at the end of the PN (like PWR or SSD) these characters are not part of the actual orderable PN.

Note 3: PNs in tables with a 'YES' entry in the Spin-Down Support column may report a suffix of PWR through the OE GUI (EX: 005049278PWR). This PWR suffix is used by the OE and is not part of the actual orderable PN.

Note 4: All PNs within this document are RoHS compliant.**Error! Reference source not found.** **Table 1** Standard 6Gb SAS interface disk modules - Minimum VNX OE revisions required

Disk Capacity	Model Number	Part Number	NEBS?	Spin-Down Support	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
4 TB	V4-VS07-040 15-disk	005050748 005050148 005050749 005050149 005050552 005050953	YES YES YES YES NO NO	YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS07-040 60-disk	005050750 005050150 005050555 005050955	YES YES NO NO	YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
3 TB	V4-VS07-030 15-disk	005049278 005049280 005049453 005049454 005049943 005050331 005050332 005050744 005050144 005050745 005050145 005050553 005050949	NO NO YES YES NO NO NO YES YES YES NO NO NO	YES YES YES YES YES YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS07-030 60-disk	005049210 005049930 005050746 005050146 005050556 005050951	NO NO YES YES NO NO	YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
2 TB	V4-VS07-020 15-disk	005049449 005049450 005049496 005049497	YES YES YES YES	YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800	Block: 05.33.000.5.015 File: 8.1.0.15

Disk Capacity	Model Number	Part Number	NEBS?	Spin-Down Support	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
		005050037 005050290 005050329 005050330 005050740 005050140 005049829 005050554 005050945	NO NO NO NO YES YES NO NO NO	YES YES YES YES YES YES YES YES YES			VNX7600 VNX8000	
	V4-DS07-020 60-disk	005049750 005049499 005050289 005050742 005050142 005050557 005050947	NO NO NO YES YES NO NO	YES YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
1.2 TB	V4-VS10-012 15-disk	005050826 005050082 005051456 005051455	YES YES NO NO	YES YES YES YES	6Gb SAS 3.5"	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S10-012 25-disk	005050828 005050084 005051470 005051469	YES YES NO NO	YES YES YES YES	6Gb SAS 2.5"	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS10-012 60-disk	005050830 005050086 005051482 005051481	YES YES NO NO	YES YES YES YES	6Gb SAS 3.5"	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S10-012 120-disk	005050828 005050084 005051470 005051469	NO NO NO NO	YES YES YES YES	6Gb SAS 2.5"	10K rpm	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96
1 TB	V4-2S07-010 25-disk	005050606 005050607 005050550 005050551	YES NO YES NO	YES YES YES YES	6Gb SAS 2.5"	7.2K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15

Disk Capacity	Model Number	Part Number	NEBS?	Spin-Down Support	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
900 GB	V4-VS10-900 15-disk	005049205 005049302 005049956 005049924 005049806 005049807 005050346 005050347 005050206 005050209 005050695 005051454 005051453	YES NO NO YES YES NO YES NO YES NO YES NO NO	YES NO NO YES YES YES YES YES YES YES YES YES YES	6Gb SAS 3.5”	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S10-900 25-disk	005049206 005049295 005049951 005049925 005049809 005050349 005050701 005050704 005050212 005050215 005051468 005051467	YES YES NO YES YES YES YES NO YES NO NO NO	YES NO YES YES YES YES YES YES YES YES YES YES	6Gb SAS 2.5”	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS10-900 60-disk	005049813 005050352 005049207 005049926 005050706 005050217 005051480 005051479	YES YES YES YES YES YES NO NO	YES YES YES YES YES YES YES YES	6Gb SAS 3.5”	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S10-900 120-disk	005051468 005051467 005049809 005050349	NO NO NO NO	YES YES YES YES				
600 GB	V4-VS15-600 15-disk	005049274 005049272 005049941 005049675 005049677 005050928 005050927	YES YES NO YES YES NO NO	NO NO NO YES YES YES YES	6Gb SAS 3.5”	15K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15

Disk Capacity	Model Number	Part Number	NEBS?	Spin-Down Support	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
		005050855 005050854	NO NO	YES YES				
	V4-VS10-600 15-disk	005049202 005049818 005050284 005050281 005049801 005049802 005050342 005050343 005050694 005050697 005050205 005050208 005051452 005051451 005051446 005051445	YES NO NO NO YES NO YES NO YES NO YES NO NO NO NO NO	NO NO YES YES YES YES YES YES YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S15-600 25-disk	005050936 005050935 005050847 005050846	NO NO	YES YES	6Gb SAS 2.5"	15K rpm	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.081 File: 8.1.3.79
	V4-DS15-600 60-disk	005050943 005050944 005050870 005050869	NO NO	YES YES	6Gb SAS 2.5"	15K rpm	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.081 File: 8.1.3.79
	V4-D2S15-600 120-disk	005050936 005050935 005050847 005050846	NO NO	YES YES	6Gb SAS 2.5"	15K rpm	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96
	V4-2S10-600 25-disk	005049203 005049820 005050285 005050282 005049804 005050344 005050700 005050703 005050211 005050214 005051466 005051465 005051460	YES NO NO NO YES YES YES NO YES NO NO NO NO	NO NO YES YES YES YES YES YES YES YES YES YES YES	6Gb SAS 2.5"	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15

Disk Capacity	Model Number	Part Number	NEBS?	Spin-Down Support	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
		005051459	NO	YES				
	V4-DS10-600 60-disk	005049812 005050351 005049204 005050283 005050705 005050216 005051478 005051477	YES YES NO YES YES YES NO NO	YES YES NO NO YES YES YES YES	6Gb SAS 3.5"	10K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S10-600 120-disk	005051466 005051465 005049804 005050344	NO NO NO NO	YES YES YES YES				
300 GB	V4-VS15-300 15-disk	005049273 005049271 005049940 005049673 005049671 005050926 005050925 005050853 005050852 005049996 005050686	YES YES NO YES YES NO NO NO NO NO NO	NO NO NO YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	15K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S15-300 25-disk	005050604 005050548 005050934 005050933 005050845 005050844	YES YES NO NO NO NO	YES YES YES YES YES YES	6Gb SAS 2.5"	15K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
300 GB	V4-DS15-300 60-disk	005050002 005050547 005050941 005050942 005050868 005050871	YES YES NO NO NO NO	YES YES YES YES YES YES	6Gb SAS 3.5"	15K rpm	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S15-300 120-disk	005050604 005050548 005050934 005050933 005050845 005050844	NO NO NO NO NO NO	YES YES YES YES YES YES	6Gb SAS 2.5"	15K rpm	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96

Table 2a Standard SSD SAS interface disk modules - Minimum OE revisions required

Drives shown in this table may be used for FAST Cache or FAST VP

SSD drives do not spin so they do not support spin-down

Disk Capacity	Model Number	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
200 GB	V4-VS6F-200 FLV4VS6F-200 15-disk	005050184 005050186 005050362 005050364 005049723 005050498 005050499 005051193 005051191	 YES NO YES NO NO YES YES	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S6F-200 FLV42S6F-200 25-disk	005049622 005050188 005050368 005050366 005050502 005050503 005051197 005051195	YES NO YES YES YES YES NO NO	6Gb SAS 2.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS6F-200 FLV4DS6F-200 60-disk	005050190 005050370 005050505 005051201 005051199	YES YES YES NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S6F-200 FLV4D2S6F-200 120-disk	005050502 005051197 005051195	NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96

Disk Capacity	Model Number	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
100GB	V4-VS6F-100 FLV4VS6F-100 15-disk	005050183 005050185 005050361 005050363 005050496 005050497 005051380 005051379	YES NO YES NO YES YES NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S6F-100 FLV42S6F-100 25-disk	005049621 005050187 005050367 005050365 005050500 005050501 005051388 005051387	YES NO YES NO YES YES NO NO	6Gb SAS 2.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS6F-100 FLV4DS6F-100 60-disk	005049189 005050369 005050504 005051396 005051395	YES YES YES NO NO	6Gb SAS 3.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S6F-100 FLV4D2S6F-100 120-disk	005050500 005051388 005051387	NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96

Table 2b Standard SSD SAS interface disk modules - Minimum OE revisions required

Drives shown in this table may be used for FAST- VP only! (Not for use with FAST Cache!!!)

SSD drives do not spin so they do not support spin-down

Disk Capacity	Model Number	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
1600GB	F5000 & F7000 Bundles	005051141 005051126	NO NO	6Gb SAS 2.5" SSD	NA	VNX-F5000 VNX-F7000	Block: 05.33.005.5.081
	V4-VS6FX-1600 15-disk	005051158 005051159	NO NO	6Gb SAS 3.5" SSD	NA	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.081 File: 8.1.3.79
	V4-2S6FX-1600 25-disk	005051141 005051126	NO NO	6Gb SAS 2.5" SSD	NA	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.081 File: 8.1.3.79
	V4-DS6FX-1600 60-disk	005051127 005051128	NO NO	6Gb SAS 3.5" SSD	NA	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.081 File: 8.1.3.79
	V4-D2S6FX-1600 120-disk	005051141 005051126	NO NO	6Gb SAS 2.5" SSD	NA	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96
800 GB	V4-VS6FX-800 15-disk	005050784 005050783 005051160 005051151	NO NO NO NO	6Gb SAS 2.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.072 File: 8.1.3.72

Disk Capacity	Model Number	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
800GB	V4-2S6FX-800 25-disk	005050800 005050785 005051129 005051130	NO NO NO NO	6Gb SAS 2.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.072 File: 8.1.3.72
	F5000 & F7000 Bundles	005050800 005050785	NO NO	6Gb SAS 2.5" SSD	NA	VNX-F5000 VNX-F7000	Block: 05.33.005.5.081
	V4-DS6FX-800 60-disk	005050812 005050811 005051131 005051132	NO NO NO NO	6Gb SAS 2.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.072 File: 8.1.3.72
	V4-D2S6SFX-800 120-disk	005051129 005051130 005050800 005050785	NO NO NO NO	6Gb SAS 2.5" SSD	NA	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96
400 GB	V4-VS6FX-400 15-disk	005050114 005050527 005050536 005051162 005051163	YES YES NO NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S6FX-400 25-disk	005050600 005050524 005050533 005051133 005051134	YES YES NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS6FX-400 60-disk	005050117 005050530 005051135 005051136	YES YES NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800	Block: 05.33.000.5.015 File: 8.1.0.15

Disk Capacity	Model Number	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
						VNX7600 VNX8000	
	V4-D2S6FX-400 120-disk	005050524 005051133 005051134 005050600	NO NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96
200 GB	V4-VS6FX-200 15-disk	005050113 005050526 005050535 005051164 005051165	YES YES NO NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-2S6FX-200 25-disk	005050599 005050523 005050532 005051137 005051138	YES YES NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS6FX-200 60-disk	005050116 005050529 005051139 005051140	YES YES NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S6FX-200 120-disk	005050523 005051137 005051138 005050599	NO NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96
100GB	V4-VS6FX-100 15-disk	005050112 005050525 005050534 005051804 005051803	YES YES NO NO NO	6Gb SAS 3.5" SSD	N/A	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15

Disk Capacity	Model Number	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
	V4-2S6FX-100 25-disk	005050598 005050540 005050531 005051806 005051805	YES YES NO NO NO	6Gb SAS 2.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-DS6FX-100 60-disk	005050115 005050528 005051808 005051807	YES YES NO NO	6Gb SAS 3.5" SSD	NA	VNX5200 VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.000.5.015 File: 8.1.0.15
	V4-D2S6FX-100 120-disk	005050540 005050598 005051808 005051807	NO NO NO NO	6Gb SAS 2.5" SSD	N/A	VNX5400 VNX5600 VNX5800 VNX7600 VNX8000	Block: 05.33.006.5.096 File: 8.1.6.96

Available disk space

Table 3 lists the usable space for the disks listed in Tables 1 & 2

Usable disk space

Listed Capacity	Disk	Usable Capacity
4TB NLSAS	Disk 0-3 (vault disk)	Not supported as vault disk
	Other Disk	3668.66
3TB NLSAS	Disk 0-3 (vault disk)	Not supported as vault disk
	Other Disk	2751.49
2 TB NLSAS	Disk 0-3 (vault disk)	Not supported as vault disk
	Other Disk	1834.32GB
1.6TB ME SSD	Disk 0-3 (vault disk)	1199.0845GB
	Other Disk	1467.4546GB
1 TB NLSAS	Disk 0-3 (vault disk)	648.78GB
	Other disk	917.1648GB
1.2 TB 10K	Disk 0-3 (vault disk)	832.2155GB
	Other Disk	1100.58GB
900 GB 10K	Disk 0-3 (vault disk)	552.21GB
	Other disk	820.6008GB
600 GB 10K or 15K	Disk 0-3 (vault disk)	268.40GB
	Other disk	536.7907GB
300 GB 15K	Disk 0-3 (vault disk)	000.0028GB

Listed Capacity	Disk	Usable Capacity
	Other disk	268.3865GB
800 GB SSD	Disk 0-3 (vault disk)	465.1942
	Other disk	733.5643
400 GB SSD	Disk 0-3 (vault disk)	98.3964GB
	Other disk	366.7665GB
200 GB SSD	Disk 0-3 (vault disk)	Not supported as vault disk
	Other disk	183.4268GB
100 GB SSD	Disk 0-3 (vault disk)	Not supported as vault disk
	Other disk	91.7096GB

Supported disk-array enclosures

Table 4 lists the disk-array enclosures (DAEs) supported for these VNX storage systems.

Supported disk-array enclosures (DAEs)

DAE type	Model Number
3U 3.5" x 15	VNXB6GSDAE15
2U 2.5" x 25	VNXB6GSDAE25
4U 3.5" x 60	VNXB6GSDAE60

Table 5 lists the disk models supported for the DAEs.

Disk models supported by enclosure (DAE or DPE)

DAE Type	7200RPM	10K RPM	15K RPM	FAST Cache FLASH	FAST -VP FLASH
3U 3.5" x 15 DAE	V4-VS07-xxx	V4-VS10-xxx	V4-VS15-xxx	V4-VS6F-xxx	V4-VS6FX-xxx

2U 2.5" x 25 DAE 3U 2.5" x 25 DPE	V4-2S07-xxx	V4-2S10-xxx	V4-2S15-xxx	V4-2S6F-xxx	V4-2S6FX-xxx
4U 3.5" x 60 DAE	V4-DS07-xxx	V4-DS10-xxx	V4-DS15-xxx	V4-DS6F-xxx	V4-DS6FX-xxx

EMC® VNX5500, VNX5700 and VNX7500 Series Storage Systems

Disk and OE Matrix

P/N 300-012-419

To function properly, disks in an EMC® VNX® system require that each storage processor run minimum revisions of the EMC VNX Operating Environment (VNX OE). This document lists the disk part numbers supported for EMC VNX series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier. Note that although the OE GUI may display an alpha suffix at the end of the PN (like PWR or SSD) these characters are not part of the actual orderable PN.

CAUTION

Verify that the proper version of VNX OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper VNX OE version is installed.

VNX series storage systems

Before installing a new disk in a storage system, use the EMC Unisphere™ Manager to determine the VNX OE revision running on the storage system. In Unisphere Manager, the VNX OE revision appears on the **Software** tab of the **Storage System Properties** dialog box for the storage system. If this revision is lower than the minimum VNX OE revision required for the disk as listed in

Table 1, Table 2, Table 3, or Table 4, you must upgrade the VNX OE on the storage system before installing the disk. EMC recommends that you upgrade VNX OE using the wizards in the System Software section of the Unisphere Service Manager (USM).

Note: Changes and additions in the tables since the last revision of this document are noted in red type.

Note: PNs in table 1 with a 'YES' entry in the Spin-Down Support column may report a suffix of PWR through the OE GUI (EX: 005049278PWR). This PWR suffix is used by the OE and is not part of the actual orderable PN.

Note: NEBS model numbers are shown in (parenthesis). Only those part numbers with a 'YES' entry in the NEBS column may be used for NEBS models.

Note: All PNs within this document are RoHS compliant.

Table 1 lists the standard SAS interface disk modules that you can order with VNX series storage systems, and the minimum VNX OE required for each system.

Table 1 Standard 6Gb SAS interface disk modules - Minimum VNX OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
4TB	VX-VS07-040 (NB-VS07-040)	005050748 005050749 005050148 005050149 005050552 005050953	YES NO YES NO NO NO	YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
	VX-DS07-040 (NB-DS07-040)	005050750 005050150 005050555 005050955	YES YES NO NO	YES YES YES YES				
3 TB	VX-VS07-030 (NB-VS07-030) 15-disk	005049278 005049453 005049943 005050331 005050744 005050144 005050553 005050949	NO YES NO NO YES YES NO NO	YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
	VX-DS07-030 60-disk	005049210 005049930 005050746 005050556 005050951	NO NO YES NO NO	YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
2 TB	VX-VS07-020 (NB-VS07-020) 15-disk	005049277 005049748 005049449 005049496 005050037 005050329	NO NO YES YES YES	YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050740 005050741 005050140 005050554 005050945	NO YES NO NO NO	YES YES YES YES YES				
2 TB	VX-DS07-020 60-disk	005049188 005049750 005049499 005050289 005050742 005050142 005050557 005050947	YES NO NO NO YES YES NO NO	YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
1 TB	VX-VS07-010 15-disk	005049407 005049493 005050036 005050736 005050136	NO YES YES YES YES	YES YES YES YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
	VX-DS07-010 60-disk	005049408 005049495 005050286 005050738 005050138	NO NO NO YES YES	YES YES	6Gb SAS 3.5"	7.2K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
900 GB	VX-VS10-900 (NB-VS10-900) 15-disk	005049205 005049924 005049806 005050346 005050695 005050206 005051454 005051453	YES YES YES YES YES YES NO NO	YES YES YES YES YES YES YES YES	6Gb SAS 3.5	10K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
	VX-2S10-900 (NB-2S10-900) 25-disk	005049206 005049925 005049809	YES YES YES	YES YES YES	6Gb SAS 2.5"	10K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050349 005050701 005050212 005051468 005051467	YES YES YES NO NO	YES YES YES YES YES				
	VX-DS10-900 (NB-DS10-900) 60-disk	005049207 005049926 005049813 005050352 005050706 005050217 005051480 005051479	YES YES YES YES YES YES NO NO	YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	10K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
600 GB	VX-VS15-600 (NB-VS15-600) 15-disk	005049274 005049675 005050927 005050928 005050855 005050854	YES YES NO NO NO NO	NO YES YES YES YES YES	6Gb SAS 3.5"	15K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
	VX-VS10-600 (NB-VS10-600) 15-disk	005049249 005049202 005050281 005049801 005050342 005050694 005050205 005050335 005051452 005051451	YES YES NO YES YES YES YES NO NO NO	YES NO YES YES YES YES YES YES YES YES	6Gb SAS 3.5"	10K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
	VX-2S10-600 (NB-2S10-600) 25-disk	005049250 005049203 005050282 005049804 005050344 005050333 005050700 005050211	YES YES NO YES YES YES YES YES	YES NO YES YES YES YES YES YES	6Gb SAS 2.5"	10K rpm	VNX5500 VNX5700 VNX7500	

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005051466	NO	YES				
		005051465	NO	YES				
	VX-DS10-600 (NB-DS10-600) 60-disk	005049284	YES	YES	6Gb SAS 3.5"	10K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
		005049204	YES	YES				
		005050283	NO	YES				
		005049812	YES	YES				
		005050351	YES	YES				
		005050705	YES	YES				
		005050216	YES	YES				
		005050337	NO	YES				
		005051478	NO	YES				
		005051477	NO	YES				
300 GB	VX-VS15-300 (NB-VS15-300) 15-disk	005049273	YES	NO	6Gb SAS 3.5"	15K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
		005049671	YES	YES				
		005050925	NO	YES				
		005050926	NO	YES				
		005050853	NO	YES				
		005050852	NO	YES				
	VX-VS10-300 (NB-VS10-300) 15-disk	005049175	YES	NO	6Gb SAS 3.5"	10K rpm	VNX5500 VNX5700 VNX7500	
		005049196	YES	NO				
		005050280	NO	NO				
		005049796	YES	NO				
		005050338	YES	NO				
		005050693	NO	NO				
		005050204	NO	NO				
		005051449	NO	YES				
		005051450	NO	YES				
	VX-2S10-300 (NB-2S10-300) 25-disk	005048946	YES	NO	6Gb SAS 2.5"	10K rpm	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
		005049197	YES	NO				
		005049799	YES	NO				
		005050340	YES	NO				
		005050277	NO	NO				
		005050699	NO	NO				
		005050210	NO	NO				
		005051464	NO	NO				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005051463	NO	NO				

Table 2 lists the standard Enterprise Flash Drive (SSD) interface disk modules that you can order with VNX series storage systems and the minimum VNX OE required for each system.

Important Note: PNs in table 2 may report a suffix of SSD through the OE GUI (EX: 005049185SSD). This SSD suffix is used by the OE and is not part of the actual orderable PN.

Table 2 Standard SSD SAS interface disk modules - Minimum OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
200 GB	VX-VS6F-200 (NB-VS6F-200) FLVXVS6F-200 15-disk	005049185 005049884	YES YES	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
		005050184 005050362 005051193 005051191	YES YES NO NO	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
		005050498 **005050499**	YES YES	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.32.000.5.217 File: 7.1.79.6
	VX-DS6F-200 (NB-DS6F-200) FLVXDS6F-200 60-disk	005049190 005049887 005050190 005050370 005051201 005051199	YES NO YES YES NO NO	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
		005050505	YES	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.32.000.5.217 File: 7.1.79.6

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
	VX-2S6F-200 (NB-2S6F-200) FLVX2S6F-200 25-disk	005049264 005049622 005050366 005050368 005051197 005051195	YES YES YES YES NO NO	NA	6Gb SAS 2.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
		005050502 **005050503**	YES YES	NA	6Gb SAS 2.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.32.000.5.217 File: 7.1.79.6
100GB	VX-VS6F-100 (NB-VS6F-100) FLVXVS6F-100 15-disk	005049184 005049882	YES YES	NA	6Gb SAS 3.5" SSD	NA	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.006 File: 7.0.12.0
		005050183 005050361 005051380 005051379	YES YES NO NO	NA	6Gb SAS 2.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
		005050496 **005050497**	YES YES	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.32.000.5.217 File: 7.1.79.6
	VX-DS6F-100 (NB-DS6F-100) FLVXDS6F-100 60-disk	005049189 005049886 005050189 005050369 005051396 005051395	YES NO YES YES NO NO	NA	6Gb SAS 3.5" SSD	NA	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3
		005050504	YES	NA	6Gb SAS 3.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.32.000.5.217 File: 7.1.79.6
	VX-2S6F-100 (NB-2S6F-100) FLVX2S6F-100 25-disk	005049263 005049621 005050367 005050365 005051388 005051387	YES YES YES NO NO NO	NA	6Gb SAS 2.5" SSD	NA	VNX5500 VNX5700 VNX7500	Block: 05.31.000.5.502 File: 7.0.35.3

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050500 **005050501**	YES YES	NA	6Gb SAS 2.5" SSD	N/A	VNX5500 VNX5700 VNX7500	Block: 05.32.000.5.217 File: 7.1.79.6

Available disk space

Table 3 lists the usable space for the disks listed in Table 1and Table 2.

Table 3 Usable disk space

Listed capacity[1]	USABLE CAPACITY PER DISK		
	Disk	VNX5500	VNX5700, VNX7500
4TB	Disk 0-3 (vault disk)	3613.7965GB	Not Supported as vault disk
	Other disk	3668.6685GB	
3TB	Disk 0-3 (vault disk)	2568.0829GB	Not supported as vault disk
	Other disk	2751.5097GB	
2 TB	Disk 0-3 (vault disk)	1640.1520GB	Not supported as vault disk
	Other disk	1834.3236GB	
1 TB	Disk 0-3 (vault disk)	733.7379GB	Not supported as vault disk
	Other disk	917.1648GB	

[1] The listed capacity is the disk capacity listed for the disks in Table 1 and Table 2.

Listed capacity[1]	USABLE CAPACITY PER DISK		
	Disk	VNX5500	VNX5700, VNX7500
900 GB	Disk 0-3 (vault disk)	637.1739GB	
	Other disk	820.6008GB	
600 GB	Disk 0-3 (vault disk)	353.3638GB	
	Other disk	536.7907GB	
300 GB	Disk 0-3 (vault disk)	84.9597GB	
	Other disk	268.3865GB	
200 GB	Disk 0-3 (vault disk)	Not supported as vault disk	
	Other disk	183.4268GB	
100 GB	Disk 0-3 (vault disk)	Not supported as vault disk	
	Other disk	91.7096GB	

Supported disk-array enclosures

Table 4 lists the disk-array enclosures (DAEs) supported for VNX storage systems.

Table 4 Supported disk-array enclosures (DAEs)

DAE type	VNX		
	VNX5500	VNX5700	VNX7500
4U 3.5" x 60	VNX6GSDAE60	VNX6GSDAE60 VNX6GSDAE60P	VNX6GSDAE60 VNX6GSDAE60P
3U 3.5" x 15	VNX6GSDAE15 VNX6GSDAE15F	VNX6GSDAE15 VNX6GSDAE15F VNX6GSDAE15P VNX6GSDAE15PF	VNX6GSDAE15 VNX6GSDAE15F VNX6GSDAE15P VNX6GSDAE15PF

2U 2.5" x 25	VNX6GSDAE25 VNX6GSDAE25F	VNX6GSDAE25 VNX6GSDAE25F VNX6GSDAE25P VNX6GSDAE25PF	VNX6GSDAE25 VNX6GSDAE25F VNX6GSDAE25P VNX6GSDAE25PF

Table 5 lists the disk models supported for the DAEs.

Table 5 Disk models supported for disk-array enclosures (DAEs)

	Storage systems: VNX5500, VNX5700, VNX7500			
DAE type	**7200RPM**	**10K RPM**	**15K RPM**	**FLASH**
4U 3.5" x 60	VX-DS07-xxx	VX-DS10-xxx	N/A	VX-DS6F-xxx
3U 3.5" x 15	VX-VS07-xxx	VX-VS10-xxx	VX-VS15-xxx	VX-VS6F-xxx
2U 2.5" x 25	N/A	VX-2S10-xxx	N/A	VX-2S6F-xxx

EMC²

EMC® VNX5100 and VNX5300 Series Storage Systems

Disk and OE Matrix

P/N 300-012-417

To function properly, disks in an EMC® VNX® system require that each storage processor run minimum revisions of the EMC VNX Operating Environment (VNX OE). This document lists the disk part numbers supported for EMC VNX series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier. Note that although the OE GUI may display an alpha suffix at the end of the PN (like PWR or EFD) these characters are not part of the actual orderable PN.

CAUTION

Verify that the proper version of VNX OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper VNX OE version is installed.

VNX series storage systems

Before installing a new disk in a storage system, use the EMC Unisphere™ Manager to determine the VNX OE revision running on the storage system. In Unisphere Manager, the VNX OE revision appears on the **Software** tab of the **Storage System Properties** dialog box for the storage system. If this revision is lower than the minimum VNX OE revision required for the disk as listed in

Table 1 or Table 2, you must upgrade the VNX OE on the storage system before installing the disk. EMC recommends that you upgrade VNX OE using the wizards in the System Software section of the Unisphere Service Manager (USM).

Note: Changes and additions in the tables since the last revision of this document are noted in red type.

Note: PNs in tables with a 'YES' entry in the Spin-Down Support column may report a suffix of PWR through the OE GUI (EX: 005049278PWR). This PWR suffix is used by the OE and is not part of the actual orderable PN.

Note: NEBS model numbers are shown in (parenthesis). Only those part numbers with a 'YES' entry in the NEBS column may be used for NEBS models.

Note: All PNs within this document are RoHS compliant.

Table 1 lists the standard SAS interface disk modules that you can order with VNX series storage systems and the minimum VNX OE required for each system.

Table 1 Standard 6Gb SAS interface disk modules - Minimum VNX OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
4 TB	V3-VS07-040 (N3-VS07-040)	005050749 005050748 005050149 005050148 005050552 005050953 005050587 005050954	NO YES NO YES NO NO NO NO	YES YES YES YES YES YES YES YES	6Gb SAS 3.5”	7.2K rpm	VNX5300 VNX5100	Block: 05.31.000.5.502 File: 7.0.35.3
3 TB	V3-VS07-030 (N3-VS07-030) 15-disk	005049278 **005049280** 005049453 **005049454** 005049943 **005049945** 005050331 005050332 005050744 005050745 005050144 005050145 005050553 005050949 005050585 005050950	NO NO YES YES NO NO YES NO YES NO YES NO NO NO NO NO	YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES YES	6Gb SAS 3.5”	7.2K rpm	VNX5300 VNX5100	Block: 05.31.000.5.502 File: 7.0.35.3
2 TB	V3-VS07-020 (N3-VS07-020) 15-disk	005049277 **005049279** 005049449 **005049450** 005049748 005049496 **005049497** 005050037	NO NO YES YES NO YES YES YES	YES YES YES YES YES YES YES YES	6Gb SAS 3.5”	7.2K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050290	YES	YES				
		005050329	NO	YES				
		005050330	NO	YES				
		005050740	YES	YES				
		005050741	NO	YES				
		005050140	YES	YES				
		005050141	NO	YES				
		0050500554	NO	YES				
		005050945	NO	YES				
		005050583	NO	YES				
		005050946	NO	YES				
1 TB	V3-VS07-010 15-disk	**005049305**	NO	YES	6Gb SAS 3.5"	7.2K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049494	YES	YES				
		005049407	NO	YES				
		005049493	YES	YES				
		005050036	YES	YES				
		005050287	YES	YES				
		005050736	YES	YES				
		005050737	YES	YES				
		005050136	YES	YES				
		005050137	YES	YES				
900 GB	V3-2S10-900 (N3-2S10-900) 25-disk	005049206	YES	YES	6Gb SAS 2.5"	10K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049295	YES	NO				
		005049951	NO	YES				
		005049925	YES	YES				
		005049810	NO	YES				
		005049809	YES	YES				
		005050350	NO	YES				
		005050349	YES	YES				
		005050701	YES	YES				
		005050212	YES	YES				
		005050704	NO	YES				
		005050215	NO	YES				
		005051468	NO	YES				
		005051467	NO	YES				
		005051462	NO	YES				
		005051461	NO	YES				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
600 GB	V3-VS10-900 (N3-VS10-900) 15-disk	005049205	YES	YES	6Gb SAS 3.5"	10K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049302	YES	NO				
		005049956	YES	NO				
		005049924	YES	YES				
		005049806	YES	YES				
		005049807	YES	YES				
		005050346	YES	YES				
		005050347	NO	YES				
		005050695	YES	YES				
		005050206	YES	YES				
		005050698	YES	YES				
		005050209	YES	YES				
		005051454	NO	YES				
		005051453	NO	YES				
		005051448	NO	YES				
		005051447	NO	YES				
	V3-VS15-600 (N3-VS15-600) 15-disk	005049274	YES	NO	6Gb SAS 3.5"	15K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049272	YES	NO				
		005049675	YES	YES				
		005049677	YES	YES				
		005050928	NO	YES				
		005050927	NO	YES				
		005050924	NO	YES				
		005050957	NO	YES				
		005050855	NO	YES				
		005050854	NO	YES				
		005050851	NO	YES				
		005050850	NO	YES				
	V3-VS10-600 (N3-VS10-600) 15-disk	005049249	YES	YES	6Gb SAS 3.5"	10K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049301	YES	YES				
		005049202	YES	YES				
		005049818	NO	YES				
		005050281	NO	YES				
		005050284	NO	YES				
		005049801	NO	YES				
		005049802	NO	YES				
		005050342	NO	YES				
		005050343	YES	YES				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050694	YES	YES				
		005050205	YES	YES				
		005050697	YES	YES				
		005050208	NO	YES				
		005051452	NO	YES				
		005051451	NO	YES				
		005051446	NO	YES				
		005051445						
	V3-2S10-600 (N3-2S10-600) 25-disk	005049250	YES	YES	6Gb SAS 2.5"	10K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049294	YES	YES				
		005049203	NO	NO				
		005049820	NO	NO				
		005050282	YES	YES				
		005050285	NO	YES				
		005049804	NO	YES				
		005049805	NO	YES				
		005050344	NO	YES				
		005050345	NO	YES				
		005050336	YES	YES				
		005050700	YES	YES				
		005050211	YES	YES				
		005050703	NO	YES				
		005050214	NO	YES				
		005051466	NO	YES				
		005051465	NO	YES				
		005051460	NO	YES				
		005051459	NO	YES				
300 GB	V3-VS15-300 (N3-VS15-300) 15-disk	005049273	YES	NO	6Gb SAS 3.5"	15K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049271	YES	NO				
		005049671	YES	YES				
		005049673	YES	YES				
		005050926	NO	YES				
		005050925	NO	YES				
		005050922	NO	YES				
		005050921	NO	YES				
		005050853	NO	YES				
		005050852	NO	YES				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050849	NO	YES				
		005050848	NO	YES				
	V3-VS10-300 (N3-VS10-300) 15-disk	005049175	YES	NO	6Gb SAS 3.5"	10K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049299	YES	NO				
		005049196	NO	NO				
		005049819	NO	NO				
		005050280	NO	NO				
		005050278	NO	NO				
		005049796	NO	NO				
		005049797	NO	NO				
		005050338	NO	NO				
		005050339	NO	NO				
		005050693	NO	NO				
		005050696	NO	NO				
		005050204	NO	NO				
		005050207	NO	NO				
		005051450	NO	NO				
		005051449	NO	NO				
		005051444	NO	NO				
		005051443	NO	NO				
	V3-2S10-300 (N3-2S10-300) 25-disk	005048946	YES	NO	6Gb SAS 2.5"	10K rpm	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005049292	YES	NO				
		005049197	NO	NO				
		005049821	NO	NO				
		005050277	NO	NO				
		005050279	NO	NO				
		005049799	NO	NO				
		005049800	NO	NO				
		005050340	NO	NO				
		005050341	NO	NO				
		005050702	NO	NO				
		005050213	NO	NO				
		005051464	NO	NO				
		005051463	NO	NO				
		005051458	NO	NO				
		005051457	NO	NO				

Table 2 lists the standard Enterprise Flash Drive (EFD) interface disk modules that you can order with VNX series storage systems and the minimum VNX OE required for each system.

Table 2 Standard EFD (enterprise flash drive) SAS interface disk modules - Minimum OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
200 GB	V3-2S6F-200 (N3-2S6F-200) FLV32S6F-200 25-disk	005049264 **005049297** 005049622 **005050188** 005050368 **005050366** 005051197 005051195	YES YES NO NO NO NO NO NO	NA	6Gb SAS 2.5" EFD	NA	VNX5300 VNX5100	Block: 05.31.000.5.502 File: 7.0.35.3
		005050502 **005050503**	YES YES	NA	6Gb SAS 2.5" EFD	NA	VNX5300 VNX5100	Block: 05.32.000.5.217 File: 7.1.79.6
200 GB	V3-VS6F-200 (N3-VS6F-200) FLV3VS6F-200 15-disk	005049185 **005049298** 005049884 **005049885**	YES NO YES YES	NA	6Gb SAS 3.5" EFD	N/A	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005050184 **005050186** **005050364** 005050362 005051193 005051191	NO NO NO NO NO NO	NA	6Gb SAS 3.5" EFD	N/A	VNX5300 VNX5100	Block: 05.31.000.5.502 File: 7.0.35.3
		005050498 **005050499**	YES YES	NA	6Gb SAS 3.5" EFD	NA	VNX5300 VNX5100	Block: 05.32.000.5.217 File: 7.1.79.6
100 GB	V3-2S6F-100 (N3-2S6F-100) FLV32S6F-100 25-disk	005049263 **005049296** 005049621 **005050187** **005050367** 005050365 005051388	YES YES NO NO NO NO NO	NA	6Gb SAS 2.5" EFD	NA	VNX5300 VNX5100	Block: 05.31.000.5.502 File: 7.0.35.3

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005051387	NO					
		005050500 **005050501**	YES YES	NA	6Gb SAS 2.5" EFD	NA	VNX5300 VNX5100	Block: 05.32.000.5.217 File: 7.1.79.6
100 GB	V3-VS6F-100 (N3-VS6F-100) FLV3VS6F-100 15-disk	005049184 **005049229** 005049882 **005049883**	YES NO YES YES	NA	6Gb SAS 3.5" EFD	NA	VNX5300 VNX5100	Block: 05.31.000.5.006 File: 7.0.12.0
		005050183 **005050185** **005050363** 005050361 005051380 005051379	YES YES YES YES NO NO	NA	6Gb SAS 3.5" EFD	NA	VNX5300 VNX5100	Block: 05.31.000.5.502 File: 7.0.35.3
		005050496 **005050497**	YES YES	NA	6Gb SAS 3.5" EFD	NA	VNX5300 VNX5100	Block: 05.32.000.5.217 File: 7.1.79.6

Available disk space

Table 3 lists the usable space for the disks listed in Table 1and Table 2.

Table 3 Usable disk space

Listed capacity[1]	USABLE CAPACITY PER DISK	
	Disk	VNX5100, VNX5300
4 TB	Disk 0-3 (vault disk)	3613.7965GB

[1] The listed capacity is the disk capacity listed for the disks in Table **1** and Table 2.

Listed capacity[1]	USABLE CAPACITY PER DISK	
	Disk	VNX5100, VNX5300
	Other disk	3668.6685GB
3 TB	Disk 0-3 (vault disk)	2568.0829GB
	Other disk	2751.5097GB
2 TB	Disk 0-3 (vault disk)	1650.9104GB
	Other disk	1834.3373GB
1 TB	Disk 0-3 (vault disk)	733.7379GB
	Other disk	917.1648GB
900 GB	Disk 0-3 (vault disk)	637.1739GB
	Other disk	820.6008GB
600 GB	Disk 0-3 (vault disk)	353.3638GB
	Other disk	536.7907GB
300 GB	Disk 0-3 (vault disk)	84.9597GB
	Other disk	268.3865GB
200 GB	Disk 0-3 (vault disk)	Not supported as vault disk
	Other disk	183.4268GB
100 GB	Disk 0-3 (vault disk)	Not supported as vault disk
	Other disk	91.7096GB

Supported disk-array enclosures

Table 4 lists the disk-array enclosures (DAEs) supported for VNX storage systems.

Table 4 Supported disk-array enclosures (DAEs)

DAE type	VNX	
	VNX5100	VNX5300
3U 3.5" x 15	V31-DAE-R-15 V31-DAE-N-15	V31-DAE-R-15 V31-DAE-N-15
2U 2.5" x 25	V2-DAE-R-25-A V2-DAE-N-25-A	V2-DAE-R-25-A V2-DAE-N-25-A

Table 5 lists the disk models supported for the DAEs.

Table 5 Disk models supported for disk-array enclosures (DAEs)

DAE type	Storage systems: VNX5100, VNX5300			
	7200RPM	10K RPM	15K RPM	FLASH
3U 3.5" x 15	V3-VS07-xxx	V3-VS10-xxx	V3-VS15-xxx	V3-VS6F-xxx
2U 2.5" x 25	N/A	V3-2S10-xxx	N/A	V3-2S6F-xxx

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EMC® VNXe® 3200 Series

Storage Systems

Disk and OE Matrix

To function properly, disks in an EMC® VNXe® 3200 system require that each storage processor run minimum revisions of the Operating Environment (OE). This document lists the disk part numbers supported for VNXe series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier. Note that although the OE GUI may display an alpha suffix at the end of the PN (like EFD) these characters are not part of the actual orderable PN.

CAUTION

Verify that the proper version of the OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper OE version is installed.

VNXe 3200 series storage systems

Before installing a new disk in a storage system, use EMC Unisphere® to determine the OE revision running on the storage system. In Unisphere, the OE revision can be found by navigating to **Settings** --> **More Configuration** --> **Update Software**. The OE revision appears on the **Software** tab in the **Software Version** dialog box. If this revision is lower than the minimum revision required for the disk, as listed in Table 1 or Table 2, you must upgrade the OE on the storage system before installing the disk. EMC recommends that you upgrade the OE from the **Update Software** page in EMC Unisphere, though you can use the Unisphere CLI.

Note 1: VNXe3200 drives do not support Spin Down.

Note 2: All drives listed in this document are RoHS compliant.

Table 1 VNXe3200 3.5" 12-Slot Enclosures:

Disk Capacity	Model Number (NEBS Model)	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
100 GB	V6-PS6F-100 (N6-PS6F-200)	005050427 005050873 005050506 005051392 005051391	YES YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754
100 GB	V6-PS6FX-100 (N6-PS6FX-100)	005050424 005050537 005051802 005051801	YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754
200 GB	V6-PS6F-200 (N6-PS6F-200)	005050428 005050874 005050507 005051189 005051187	YES YES YES NO NO	6Gb SAS EFD	N/A	VNXe3200	3.0.0.2960754

Disk Capacity	Model Number (NEBS Model)	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
200 GB	V6-PS6FX-200 (N6-PS6FX-200)	005050425 005050538 005051175 005051176	YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754
300 GB	V6-PS15-300 (N6-PS15-300)	005049037 005049905 005049674 005050938 005050937 005050860 005050861	YES YES YES NO NO NO NO	6Gb SAS	15K rpm	VNXe3200	3.0.0.2960754
600 GB	V6-PS10-600 (N6-PS10-600)	005050624 005050627 005050399 005051097 005051472 005051471	YES YES NO NO NO NO	6Gb SAS	10K rpm	VNXe3200	3.0.0.2960754
600 GB	V6-PS15-600 (N6-PS15-600)	005049039 005049906 005049678 005050940 005050939 005050863 005050862	YES YES YES NO NO NO NO	6Gb SAS	15K rpm	VNXe3200	3.0.0.2960754
800 GB	V6-PS6FX-800 (No NEBS Yet)	005050810 005050809 005051171 005051172	NO NO NO NO	6Gb SAS SSD	N/A	VNXe3200	3.1.1.4823793
900 GB	V6-PS10-900 (N6-PS10-900)	005049808 005050348 005050707 005050398 005051474 005051473	YES YES NO NO NO NO	6Gb SAS	10K rpm	VNXe3200	3.0.0.2960754
1200 GB	V6-PS10-012 (N6-PS10-012)	005050825 005050081 005051476 005051475	YES YES NO NO	6Gb SAS	10K rpm	VNXe3200	3.1.1.4823793

Disk Capacity	Model Number (NEBS Model)	Part Number	NEBS?	Drive Type	Spindle Speed	Platform	Minimum OE Software Revision
2 TB	V6-PS07-020 (N6-PS07-020)	005050743 005050143 005050584 005050948	YES YES NO NO	6Gb SAS	7.2K rpm	VNXe3200	3.0.0.2960754
4 TB	V6-PS07-040 (N6-PS07-040)	005050751 005050151 005050588 005050956	YES YES NO NO	6Gb SAS	7.2K rpm	VNXe3200	3.0.0.2960754

Table 2 VNXe3200 2.5" 25-Slot Enclosures:

Disk capacity	Model number (NEBS Model)	Part number	NEBS?	Drive type	Spindle speed	Platform	Minimum OE software revision
100 GB	V6-2S6F-100 (N6-2S6F-100)	005049621 005050367 005050500 005051388 005051387	YES YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754
100 GB	V6-2S6FX-100 (N6-2S6FX-100)	005050598 005050540 005051806 005051807	YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754
200 GB	V6-2S6F-200 (N6-2S6F-200)	005049622 005050368 005050502 005051197 005051195	YES YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754

Disk capacity	Model number (NEBS Model)	Part number	NEBS?	Drive type	Spindle speed	Platform	Minimum OE software revision
200 GB	V6-2S6FX-200 (N6-2S6FX-200)	005050599 005050523 005051137 005051138	YES YES NO NO	6Gb SAS SSD	N/A	VNXe3200	3.0.0.2960754
300 GB	V6-2S15-300 (N6-2S15-300)	005050604 005050548 005050933 005050934 005050845 005050844	YES YES NO NO NO NO	6Gb SAS	15K rpm	VNXe3200	3.0.0.2960754
600 GB	V6-2S10-600 (N6-2S10-600)	005050700 005050211 005049804 005050344 005051466 005051465	YES YES YES YES NO NO	6Gb SAS	10K rpm	VNXe3200	3.0.0.2960754
600 GB	V6-2S15-600	005050936 005050935 005050847 005050846	NO NO NO NO	6Gb SAS	10K rpm	VNXe3200	3.0.0.2960754
800 GB	V6-2S6FX-800 (no NEBS yet)	005050800 005050785 005051129 005051130	NO NO NO NO	6Gb SAS SSD	N/A	VNXe3200	3.1.1.4823793
900 GB	V6-2S10-900 (N6-2S10-900)	005050701 005050212 005049809 005050349 005051468 005051467	YES YES YES YES NO NO	6Gb SAS	10K rpm	VNXe3200	3.0.0.2960754
1200 GB	V6-2S10-012 (N6-2S10-012)	005050828 005050084 005051470 005051469	YES YES NO NO	6Gb SAS	10K rpm	VNXe3200	3.1.1.4823793

Supported disk-array enclosures

Table 4 lists the disk-array enclosures (DAEs) supported for VNXe3200 storage systems.

Table 4 Supported disk-array enclosures (DAEs)

DAE type	VNXe3200
2U 3.5" x 12 DAE	V32-DAE-12
2U 2.5" X25 DAE	V32-DAE-25

Table 5 lists the 3.5" disk models supported for these DAEs.

Table 5 Disk models supported for VNXe 3.5" & 2.5" disk-array enclosures (DAEs)

DAE TYPE	7200RPM	10K RPM	15K RPM	FAST Cache FLASH	FAST -VP FLASH
2U 3.5" x 12 DAE	V6-PS07-xxx	V6-PS10-xxx	V6-PS15-xxx	V6-PS6F-xxx	V6-PS6FX-xxx
2U 2.5" X25 DAE	V6-2S07-xxx	V6-2S10-xxx	V6-2S15-xxx	V6-2S6F-xxx	V6-2S6FX-xxx

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EMC® VNXe® Series

Storage Systems

Disk and OE Matrix

P/N 300-012-418

To function properly, disks in an EMC® VNXe® system require that each storage processor run minimum revisions of the Operating Environment (OE). This document lists the disk part numbers supported for VNXe series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier. Note that although the OE GUI may display an alpha suffix at the end of the PN (like EFD) these characters are not part of the actual orderable PN.

CAUTION

Verify that the proper version of the OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper OE version is installed.

VNXe series storage systems

Before installing a new disk in a storage system, use EMC Unisphere® to determine the OE revision running on the storage system. In Unisphere, the OE revision can be found by navigating to **Settings** --> **More Configuration** --> **Update Software**. The OE revision appears on the **Software** tab in the **Software Version** dialog box. If this revision is lower than the minimum revision required for the disk, as listed in Table 1 or Table 2, you must upgrade the OE on the storage system before installing the disk. EMC recommends that you upgrade the OE from the **Update Software** page in EMC Unisphere, though you can use the Unisphere CLI.

NOTE: All disk drives listed within are RoHS compliant.

Table 1 VNXe3100 & VNXe3150 3.5" 12-Slot Enclosures:

Disk capacity	Model number	Part number	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
4 TB	V2-PS07-040	**005050751** **005050151** **005050588** **005050956**	NO NO NO NO	6Gb SAS	7.2K rpm	VNXe3100 VNXe3150	2.4.0.20932
3 TB	V2-PS07-030	**005049291** **005049948** **005050747** **005050147** **005050586** **005050592**	NO NO NO NO NO NO	6Gb SAS	7.2K rpm	VNXe3100 VNXe3150	2.3.1.19462
3 TB SED	V2-PS07E-030	**005049584** **005050458**	NO NO	6Gb SAS	7.2K rpm	VNXe3150	2.4.0.20932
2 TB	V2-PS07-020	**005049225**	NO	6Gb	7.2K rpm	VNXe3100	2.0.0.12628

Disk capacity	Model number	Part number	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005049498 **005050291** **005050743** **005050143** **005050584** **005050948**	NO NO NO NO NO NO	SAS		VNXe3150	
1 TB	V2-PS07-010	**005049306** **005049503** **005050288** **005050739** **005050139**	NO NO NO NO NO	6Gb SAS	7.2K rpm	VNXe3100 VNXe3150	2.0.0.12628
900 GB	V2-PS10-900	**005049577** **005050276** **005049808** **005050348** **005050707** **005050398** **005051474** **005051473**	NO NO NO NO NO NO NO NO	6Gb SAS	10K rpm	VNXe3100 VNXe3150	2.3.1.19462
900 GB SED	V2-PS10**E**-900	**005050243** **005050457**	NO NO	6Gb SAS	10K rpm	VNXe3150	2.4.0.20932
600 GB	V2-PS15-600	**005049039** **005049678** **005049906** **005050940** **005050939**	NO NO NO NO NO	6Gb SAS	15K rpm	VNXe3100 VNXe3150	2.0.0.12628
		005050863 **005050862**	NO NO	6Gb SAS	15K rpm	VNXe3100 VNXe3150	2.4.4.22283
300 GB	V2-PS15-300	**005049037** **005049674** **005049905**	NO NO NO	6Gb SAS	15K rpm	VNXe3100 VNXe3150	2.0.0.12628

Disk capacity	Model number	Part number	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050938 **005050937**	NO NO				
		005050860 **005050861**	NO NO	6Gb SAS	15K rpm	VNXe3100 VNXe3150	2.4.4.22283

Table 2 VNXe3100 & VNXe3150 2.5" 25-Slot Enclosures:

Disk capacity	Model number	Part number	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
300 GB	V2-2S10-300	**005049821** 005049197 **005050279** 005049799 **005049800** 005050340 **005050341** 005050699 005050210 **005050702** **005050213** 005051464 005051463 **005051458** **005051457**	NO	6Gb SAS	10K rpm	VNXe3100 VNXe3150	2.3.1.19462
600 GB	V2-2S10-600	**005049820** 005049203	NO	6Gb SAS	10K rpm	VNXe3100 VNXe3150	2.3.1.19462

Disk capacity	Model number	Part number	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050285 005049804 **005049805** 005050344 **005050345** 005050700 005050211 **005050703** **005050214** 005051466 005051465 **005051460** **005051459**					
900 GB	V2-2S10-900	**005049295** 005049206 **005049951** 005049809 **005049810** 005050349 **005050350** 005050701 005050212 **005050704** **005050215** 005051468 005051467 **005051462** **005051461**	NO	6Gb SAS	10K rpm	VNXe3100 VNXe3150	2.3.1.19462
900 GB SED	V2-2S10E-900	**005049574** **005050454**	NO	6Gb SAS	10K rpm	VNXe3150	2.4.0.20932
100 GB	V2-2S6F-100	**005049296** 005049263 005051388	NA	6Gb SAS 2.5" EFD	NA	VNXe3150	2.3.1.19462

Disk capacity	Model number	Part number	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005051387					
		005050187 005049621 **005050367**	NA	6Gb SAS 2.5" EFD	NA	VNXe3150	2.4.0.20932
200 GB	V2-2S6F-200	**005049297** 005049264 005051197 005051195	NA	6Gb SAS 2.5" EFD	NA	VNXe3150	2.3.1.19462
		005050188 005049622 **005050368**	NA	6Gb SAS 2.5" EFD	NA	VNXe3150	2.4.0.20932

Note: NEBS models are shown in (parenthesis). Only those part numbers with a 'YES' entry in the NEBS column may be used for NEBS models.

Table 3 VNXe3300 3.5" 15-Slot Enclosures:

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
4 TB	V3-VS07-040E	005050748 **005050749** **005050149**		NO	6Gb SAS	7.2K rpm	VNXe3300	2.4.0.20932
3 TB	V3-VS07-030E	005049278 **005049280**		NO	6Gb SAS	7.2K rpm	VNXe3300	2.3.1.19462

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005049945 005050744 **005050745** **005050145** **005050144** 005050553 005050949 **005050585** **005050950**						
3 TB SED	V3-VS07**E**-030E	**005049582** **005050456**		NO	6Gb SAS	7.2K rpm	VNXe3300	2.4.0.20932
2 TB	V3-VS07-020E	005049277 **005049279** **005049497** **005049450** 005049496 **005050290** 005050740 **005050741** **005050141** 005050554 005050945 **005050583** **005050946** 005050140 005049496		NO	6Gb SAS	7.2K rpm	VNXe3300	2.0.0.12628
1 TB	V3-VS07-010E	005049407 **005049305** **005049494** 005049493 **005050287** 005050736 **005050737**		NO	6Gb SAS	7.2K rpm	VNXe3300	2.1.0.14097

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050137						
900 GB	V3-VS10-900E (N3-VS10-900E)	**005049302** 005049205 **005049956** 005049806 **005049807** 005050346 **005050347** 005050695 005050206 **005050698** **005050209** 005051454 005051453 **005051448** **005051447**	YES YES YES NO NO NO NO NO NO NO NO NO NO NO NO	NO	6Gb SAS	10K rpm	VNXe3300	2.3.1.19462
900 GB SED	V3-VS10**E**-900E	**005050242** **005050455**	NO NO	NO	6Gb SAS	10K rpm	VNXe3300	2.4.0.20932
600 GB	V3-VS15-600E & (N3-VS15-600E)	005049274 **005049272** 005049675 **005049677** **005049939** **005050928** **005050927** **005050924** **005050957**	YES YES NO NO YES NO NO NO NO	NO	6Gb SAS	15K rpm	VNXe3300	2.0.0.12628
		005050855 005050854	NO NO	NO NO	6Gb SAS	15K rpm	VNXe3100	2.4.4.22283

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
		005050851 **005050850**					VNXe3150	
300 GB	V3-VS15-300E & (N3-VS15-300E)	005049273 **005049271** 005049671 **005049673** **005050926** **005050925** **005050922** **005050921**	YES YES YES YES NO NO NO NO	NO	6Gb SAS	15K rpm	VNXe3300	2.0.0.12628
		005050853 005050852 **005050849** **005050848**	NO NO	NO NO	6Gb SAS	15K rpm	VNXe3100 VNXe3150	2.4.4.22283
100 GB	V3-VS6F-100E & (N3-VS6F-100E)	005049184 **005049229** 005049882 005051380 005051379	YES NO YES NO NO	NO	6Gb SAS 3.5" EFD	NA	VNXe3300	2.1.0.14097
		005050185 005050183 **005050363** 005050361	NO NO NO NO	NO	6Gb SAS 3.5" EFD	NA	VNXe3300	2.4.0.20932

Table 4 VNXe3300 2.5" 25-Slot Enclosures:

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
300 GB	V3-2S10-300E & (N3-2S10-300E)	**005049821** 005049197	YES YES	NO	6Gb SAS	10K rpm	VNXe3300	2.3.1.19462

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
600 GB	V3-2S10-600E & (N3-2S10-600E)	**005050279**	YES	NO	6Gb SAS	10K rpm	VNXe3300	2.3.1.19462
		005049799	YES					
		005050340	YES					
		005049800	YES					
		005050341	YES					
		005050699	YES					
		005050210	YES					
		005050702	YES					
		005050213	YES					
		005051464	NO					
		005051463	NO					
		005051458	NO					
		005051457	NO					
		005049820	YES					
		005049203	YES					
		005050285	YES					
		005049804	YES					
		005050344	YES					
		005049805	YES					
		00505034	YES					
		005050700	YES					
		005050211	YES					
		005050703	YES					
		005050214	YES					
		005049250	NO					
		005051466	NO					
		005051465	NO					
		005051460	NO					
		005051459	NO					

Disk capacity	Model number (NEBS Model)	Part number	NEBS	Spin-Down Support	Drive type	Spindle speed	Platform	Minimum OE software revision
900 GB	V3-2S10-900E & (N3-2S10-900E)	**005049295** 005049206 **005049951** 005049809 005050349 **005049810** **005050350** 005050701 005050212 **005050704** **005050215** 005051468 005051467 **005051462** **005051461**	YES YES YES YES YES YES YES YES YES YES YES NO NO NO NO	NO	6Gb SAS	10K rpm	VNXe3300	2.3.1.19462
900 GB SED	V3-2S10E-900E	**005049574** **005050454**	NO NO	NO	6Gb SAS	10K rpm	VNXe3300	2.4.0.20932
100 GB	V3-2S6F-100E & (N3-2S6F-100E)	**005049296** 005049263 005051388 005051387	YES YES NO NO	NA	6Gb SAS 2.5" EFD	NA	VNXe3300	2.3.1.19462
		005050187 005049621 **005050367**	NO NO YES	NA	6Gb SAS 2.5" EFD	NA	VNXe3300	2.4.0.20932
200 GB	V3-2S6F-200E & (N3-2S6F-200E)	**005049297** 005049264 005051197 005051195	YES YES NO NO	NA	6Gb SAS 2.5" EFD	NA	VNXe3300	2.3.1.19462
		005050188 005049622 **005050368**	NO NO NO	NA	6Gb SAS 2.5" EFD	NA	VNXe3300	2.4.0.20932

Supported disk-array enclosures

Table 5 lists the disk-array enclosures (DAEs) supported for VNXe3100, VNXe3150 and VNXe3300 storage systems.

Table 5 Supported disk-array enclosures (DAEs)

	Storage systems supported		
DAE type	**VNXe3100**	**VNXe3150**	**VNXe3300**
V31-DAE-R-15E	N/A	N/A	YES
V31-DAE-N-15E	N/A	N/A	YES
V31-DAE-R-25E	N/A	N/A	YES
V31-DAE-N-25E	N/A	N/A	YES
V2-DAE-12	YES	YES	N/A
V2-DAE-25	YES	YES	N/A

Table 6 lists the 3.5" disk models supported for these DAEs.

Table 6 Disk models supported for VNXe 3.5" disk-array enclosures (DAEs)

	Disk Models Supported						
DAE type	**V2-PS07**	**V2-PS10**	**V2-PS15**	**V3-VS07**	**V3-VS10**	**V3-VS15**	**V3-VS6F**
V31-DAE-R-15E	N/A	N/A	N/A	YES	YES	YES	YES
V31-DAE-N-15E	N/A	N/A	N/A	YES	YES	YES	YES
V2-DAE-12	YES	YES	YES	N/A	N/A	N/A	N/A

Table 7 lists the 2.5" disk models supported for these DAEs.

Table 7 Disk models supported for VNXe 2.5” disk-array enclosures (DAEs)

DAE type	Disk Models Supported			
	V2-2S10	V2-2S6F	V3-2S10	V3-2S6F
V31-DAE-R-25	N/A	N/A	YES	YES
V31-DAE-N-25	N/A	N/A	YES	YES
V2-DAE-25	YES	YES	N/A	N/A

EMC²

EMC® VNXe®1600 Series

Storage Systems

Drive and OE Matrix

To function properly, drives in an EMC® VNXe® 1600 system require that each storage processor run minimum revisions of the Operating Environment (OE). This document lists the drive part numbers supported for VNXe1600 series storage systems and the minimum software revisions required for each drive model. Drive refers to both Flash (SSD) and Disk drive storage devices in this document.

The drive part number (PN) appears on a label on the front of the drive carrier. Note that although the OE GUI may display an alpha suffix at the end of the PN (like EFD) these characters are not part of the actual orderable PN.

CAUTION

Verify that the proper version of the OE is running on the storage system before installing any drives. Results ranging from non-recognition of the drives to data loss may occur if an improper OE version is installed.

VNXe 1600 series storage systems

Before installing a new drive in a storage system, use EMC Unisphere® to determine the OE revision running on the storage system. In Unisphere, the OE revision can be found by navigating to **Settings** --> **More Configuration** --> **Update Software**. The OE revision appears on the **Software** tab in the **Software Version** dialog box. If this revision is lower than the minimum revision required for the drive, as listed in Table 1 or Table 2, you must upgrade the OE on the storage system before installing the drive. EMC recommends that you upgrade the OE from the **Update Software** page in EMC Unisphere, though you can use the Unisphere CLI.

Note 1: VNXe1600 drives do not support Spin Down.

Note 2: All drives listed in this document are RoHS compliant.

Table 1 VNXe1600 3.5" 12-Slot Enclosures:

Drive Capacity	Model Number	Part Number	Interface	Spindle Speed or Type	Platform	Minimum OE Software Revision
100 GB	FLV5PS6F-100	005050427 005050873 005050506 005051392 005051391	6Gb SAS	SSD	VNXe1600	3.1.3.5754151
200 GB	FLV5PS6F-200	005050428 005050874 005050507 005051189 005051187	6Gb SAS	EFD	VNXe1600	3.1.3.5754151
200 GB	V5-PS6FX-200	005050425 005050538 005051175 005051176	6Gb SAS	SSD	VNXe1600	3.1.3.5754151

Drive Capacity	Model Number	Part Number	Interface	Spindle Speed or Type	Platform	Minimum OE Software Revision
300 GB	V5-PS15-300	005049037 005049905 005049674 005050938 005050937 005050860 005050861	6Gb SAS	15K rpm	VNXe1600	3.1.3.5754151
600 GB	V5-PS10-600	005050624 005050627 005050399 005051097 005051472 005051471	6Gb SAS	10K rpm	VNXe1600	3.1.3.5754151
600 GB	V5-PS15-600	005049039 005049906 005049678 005050940 005050939 005050863 005050862	6Gb SAS	15K rpm	VNXe1600	3.1.3.5754151
800 GB	V5-PS6FX-800	005050810 005050809 005051171 005051172	6Gb SAS	SSD	VNXe1600	3.1.3.5754151
900 GB	V5-PS10-900	005049808 005050348 005050707 005050398 005051474 005051473	6Gb SAS	10K rpm	VNXe1600	3.1.3.5754151
1200GB	V-PS10-012	005050825 005050081 005051476 005051475	6Gb SAS	10K rpm	VNXe1600	3.1.3.5754151

Drive Capacity	Model Number	Part Number	Interface	Spindle Speed or Type	Platform	Minimum OE Software Revision
2 TB	V5-PS07-020	005050743 005050143 005050584 005050948	6Gb SAS	7.2K rpm	VNXe1600	3.1.3.5754151
4 TB	V5-PS07-040	005050751 005050151 005050588 005050956	6Gb SAS	7.2K rpm	VNXe1600	3.1.3.5754151

Table 2 VNXe1600 2.5" 25-Slot Enclosures:

Drive Capacity	Model Number	Part Number	interface	Spindle Speed or Type	Platform	Minimum OE Software Revision
100 GB	FLV52S6F-100	005049621 005050367 005050500 005051388 005051387	6Gb SAS	SSD	VNXe1600	3.1.3.5754151
200 GB	FLV52S6F-200	005049622 005050368 005050502 005051197 005051195	6Gb SAS	SSD	VNXe1600	3.1.3.5754151
200 GB	V5-2S6FX-200	005050599 005050523 005051137 005051138	6Gb SAS	SSD	VNXe1600	3.1.3.5754151
300 GB	V5-2S15-300	005050604 005050548 005050933 005050934 005050845 005050844	6Gb SAS	15K rpm	VNXe1600	3.1.3.5754151

Drive Capacity	Model Number	Part Number	interface	Spindle Speed or Type	Platform	Minimum OE Software Revision
600 GB	V5-2S10-600	005050700 005050211 005049804 005050344 005051466 005051465	6Gb SAS	10K rpm	VNXe1600	3.1.3.5754151
600 GB	V5-2S15-600	005050936 005050935 005050847 005050846	6Gb SAS	15K rpm	VNXe1600	3.1.3.5754151
800 GB	V5-2S6FX-800	005050800 005050785 005051129 005051130	6Gb SAS	SSD	VNXe1600	3.1.3.5754151
900 GB	V5-2S10-900	005050701 005050212 005049809 005050349 005051468 005051467	6Gb SAS	10K rpm	VNXe1600	3.1.3.5754151
1200GB	V5-2S10-012	005050828 005050084 005051470 005051469	6Gb SAS	10K rpm	VNXe1600	3.1.3.5754151

EMC²

EMC® CX4 Series Storage Systems

Disk and FLARE OE Matrix

P/N 300-007-437

To function properly, disks in an EMC® CLARiiON® system require that each storage processor run minimum revisions of the FLARE® Operating Environment (FLARE OE). This document lists the disk part numbers supported for CX4 series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier.

CAUTION

Verify that the proper version of FLARE OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper FLARE OE version is installed.

CX4 series storage systems

Before installing a new disk in a storage system, use the EMC Navisphere® Manager to determine the FLARE OE revision running on the storage system. In Navisphere Manager, the FLARE OE revision appears on the **Software** tab of the **Storage System Properties** dialog box for the storage system. If this revision is lower than the minimum FLARE OE revision required for the disk as listed in Table 1, Table 2, Table 3, or Table 4, you must upgrade FLARE OE on the storage system before installing the disk. EMC recommends that you upgrade FLARE OE with the CLARiiON Software Assistant in the Navisphere Service Taskbar (NST) or use the Navisphere Secure Command Line Interface (CLI).

Table 1 lists the standard Fibre Channel interface disk modules that you can order with CX4 series storage systems and the minimum FLARE OE required for each system.

Table 2 lists the standard Enterprise Flash Drive (EFD) interface disk modules that you can order with CX4 series storage systems and the minimum FLARE OE required for each system.

Table 3 lists the legacy Fibre Channel interface disk modules that you can re-purpose in CX4 series storage systems (move from CX series or CX3 series storage systems to CX4 series storage systems) and the minimum FLARE OE required for each system.

Table 4 lists the legacy ATA interface disk modules that you can re-purpose in CX4 series storage systems (move from CX series or CX3 series storage systems to CX4 series storage systems) and the minimum FLARE OE required for each system.

CAUTION

If you install a 2 Gb legacy disk in a disk-array enclosure (DAE) on a 4 Gb bus, you cannot use the disk in a RAID group or thin pool until you change the bus speed to 2 Gb. You can change the bus speed with the Backend Bus Speed Reset Wizard, which is available from the Service option on the Navisphere Manager Tools menu. The speed reset operation reboots the storage processors.

CX3 to CX4 conversions

All CX3 to CX4 conversions require FLARE OE version 04.28.000.5.501 or later.

Power savings disks

Table 5 lists the disks that support the disk power savings feature in Navisphere Manager version 6.29 and later.

Available disk space

Table 6 gives the usable space for the disks listed in Table 1 and Table 2.

Supported disk-array enclosures

Table 7 lists the DAEs supported for CLARiiON storage systems. Table 8 lists the disk models supported for these DAEs.

Note: Changes and additions in the tables since the last revision of this document are noted in red type.

Table 1 Standard Fibre Channel interface disk modules - Minimum FLARE OE revisions required

Note: NEBS models are shown in (parenthesis). Only those part numbers with a 'Yes' entry in the NEBS column may be used for NEBS models. NEBs parts may be used for non-NEBS models however non-NEBS parts cannot be used for NEBS.

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
3 TB	CX-SA07-030	005049697 005050135 005051051	N/A	CO	4 Gb FC	7.2K rpm	All CX4 models	04.30.000.5.524
2 TB	CX-SA07-020	005049058 005049061 005049071 005049259 005049552 005050480 005050041 005049457	N/A	CO CO CO CO CO CO CO CO	4 Gb FC	7.2K rpm	All CX4 models	04.28.000.5.003
	CX-LP05-020	005049085 005049457 005050480 005051021	N/A	CO CO CO CO	4 Gb FC	5.4K rpm	All CX4 models	04.28.000.5.003

[1] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
1 TB	CX-SA07-010	005048797 005048829 005049238 005049070 005049520 005049412 005049700 005049541 005049687 005049258 005049542 005049976 005049520 005051104 005051105	N/A	CO CO CO CO CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	7.2K rpm	All CX4 models	04.28.000.5.003
	Spare ONLY for CX4-LP010-15 or CX4-LP010-15U[2]	005048853	N/A	CO	4 Gb FC	5.4K rpm	All CX4 models	04.28.000.5.003
600 GB	CX-4G15-600	005048952 005049033 005049118 005049160 005049694	N/A	CO CO CO CO CO	4 Gb FC	15K rpm	All CX4 models	04.28.000.5.003
		005050919 005050920	N/A	CO CO	4 Gb FC	15K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)

[2] The 1 TB 5.4K rpm disk modules are available only as spares for DAE models CX4-LP010-15 and CX4-LP010-15U, which ship from the factory fully loaded with fifteen 1TB 5.4K rpm disks. These DAE models can not be the DAE-OS, which is DAE enclosure 0 on bus 0.

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
	CX-4G10-600	005048955 005049116 005049166 005049690 005049683	N/A	CO CO CO CO CO	4 Gb FC	10K rpm	All CX4 models	04.28.000.5.003
		005049894 005050221	NA NA	CO CO	4 Gb FC	10K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)
450 GB	CX-4G15-450 (NB-4G15-450)	005048849 005048970 005048951 005049032 005049120 005049158 005049693	Yes Yes Yes No No Yes No	CO CO CO CO CO CO CO	4 Gb FC	15K rpm	All CX4 models	04.28.000.5.003
		005050918 005050917	NO NO	CO CO	4 Gb FC	15K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)
	CX-4G10-450	005048954 005049115 005048974 005049164 005049689 005049682	N/A	CO CO CO CO CO CO	4 Gb FC	10K rpm	All CX4 models	04.28.000.5.003
		005049893 005050220	N/A	CO CO	4 Gb FC	10K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)
400 GB	CX-4G10-400	005048775 005048837 005049681	N/A	CO CO CO CO	4 Gb FC	10K rpm	All CX4 models	04.28.000.5.003

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
		005050104 005050219	N/A	CO CO	4 Gb FC	10K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)
300 GB	CX-4G15-300 (NB-4G15-300)	005048731 005048741 005048848 005048926 005048950 005049031 005049119 005048840 005048835 005048969 005049156 005048856 005049692 005048750 005048913	Yes No Yes No No No No No No Yes No No No Yes Yes	CO CO CO CO CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	15K rpm	All CX4 models	04.28.000.5.003
		005050916 005050915	N/A	CO CO	4 Gb FC	10K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)
300 GB	CX-4G10-300 (NB-4G10-300)	005048751 005048836 005048953 005048841 005048972 005049162 005048842 005049117 005049691 005049680 005049679	Yes No No No No No Yes No No No No	CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	10K rpm	All CX4 Models	04.28.000.5.003

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
		005049892 005050218	N/A N/A	CO CO	4 Gb FC	10K rpm	All CX4 models	04.30.000.5.525 (Zeus SP11)
146 GB	CX-4G15-146 (NB-4G15-146)	005048619 005048660 005048701 005048730 005048740 005048839 005048834 005048846 005048968 005048844 005048855 005049431 005048749 005048968 005048749	No No No Yes No No No No No Yes No No Yes No Yes	NC CO CO CO CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	15K rpm		04.28.000.5.003

Table 2 Standard enterprise flash drive (EFD) Fibre Channel interface disk modules - Minimum FLARE OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
400 GB	CX-FC04-400	005048999	N/A	CO	4 Gb SSD FC	N/A	All CX4 Models	04.28.000.5.501
200 GB	CX-FC04-200	005048998 005049695	N/A	CO	4 Gb SSD FC	N/A		04.28.000.5.501
	CX-AF04-200	005049076 005049696 005049703 005049261 005049889	N/A	CO	4Gb SSD FC	N/A		04.30.000.5.003
		005050578	N/A	CO	4Gb SSD FC	NA		04.30.000.5.526 (Zeus SP12)
100GB	CX-AF04-100	005049074 005049702 005049260 005049888	N/A	CO	4Gb SSD FC	NA		04.30.000.5.003
		005050577	N/A	CO	4Gb SSD FC	NA		04.30.000.5.526 (Zeus SP12)
73 GB	CX-FC04-073	005048920 005048941	N/A	CO	4 Gb SSD FC	N/A		04.28.000.5.501

[3] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Table 3 Supported legacy Fibre Channel interface disk modules - Minimum FLARE OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
750 GB	CX-SA07-750	005048726 005048796 005048828 005048889	N/A	CO CO CO CO	4 Gb FC	7.2K rpm	All CX4 Models	04.28.000.5.003
500 GB	CX-SA07-500	005048608 005048720 005048795 005048886	N/A	CO CO CO CO	4 Gb FC	7.2K rpm	All CX4 Models	04.28.000.5.003
	CX-2G72-500	005048596 005048696 005048809	N/A	CO CO CO	2 Gb FC	7.2K rpm	All CX4 Models	04.28.000.5.003

[4] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
	CX-2G10-300 (NB-2G10-300)	005048532	No	NC	2 Gb FC	10K rpm	All CX4 Models	04.28.000.5.003
		005048597	No	NC				
		005048633	No	NC				
		005048564	No	NC				
		005048582	Yes	CO				
		005048616	No	NC				
		005048625	Yes	NC				
		005048699	No	CO				
		005048703	No	NC				
		005048751	No	NC				
		005048808	No	CO				
		005048836	No	CO				
		005048953	No	CO				
		005049117	No	CO				
		005048841	No	CO				
		005048972	No	CO				
		005049162	No	CO				
		005048842	Yes	CO				
		005049691	No	CO				
		005049680	No	CO				
		005049679	No	CO				
146 GB	CX-4G15-146 (NB-4G15-146)	005048619	No	NC	4 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
		005048660	No	CO				
		005048701	No	CO				
		005048730	Yes	CO				
		005048740	No	CO				
		005048847	Yes	CO				
		005048839	No	CO				
		005048834	No	CO				
		005048846	No	CO				
		005048844	Yes	CO				
		005048855	No	CO				
		005048968	No	CO				
		005048749	Yes	CO				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
	CX-4G15-146 (NB-4G15-146) CX-2G15-146 (NB-2G15-146)	005048730	Yes	CO	4/2 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
		005048847	Yes	CO				
		005048740	No	CO				
		005048839	No	CO				
		005048834	No	CO				
		005048846	No	CO				
		005048968	No	CO				
		005048844	Yes	CO				
		005048855	No	CO				
		005048749	Yes	CO				
		005048749	Yes	CO				
	CX-2G15-146 (NB-4G15-146)	005048534	No	NC	2 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
		005048584	Yes	CO				
		005048588	No	NC				
		005048602	No	NC				
		005048618	No	NC				
		005048627	Yes	CO				
		005048730	No	CO				

Table 3 Supported legacy Fibre Channel interface disk modules - Minimum FLARE OE revisions required (continued)

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
146 GB	CX-2G10-146 (NB-2G10-146)	005048031	No	NC	2 Gb FC	10K rpm	All CX4 Models	04.28.000.5.003
		005048128	No	CO				
		005048255	No	NC				
		005048442	No	NC				
		005048491	No	NC				
		005048495	No	CO				
		005048531	No	NC				
		005048563	No	NC				
		005048581	Yes	CO				
		005048598	No	CO				
		005048604	No	NC				
		005048615	No	NC				
		005048624	Yes	CO				
		005048632	No	NC				
		005048698	No	CO				
		005048702	No	CO				
		005048807	No	CO				
		005048971	No	CO				
73 GB	CX-4G15-73 (NB-4G15-73)	005048646	No	NC	4 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
		005048659	No	CO				
		005048700	No	CO				
		005048729	Yes	CO				
		005048739	No	CO				
		005048833	No	CO				
		005048845	No	CO				
		005049015	No	CO				
		005048843	Yes	CO				
		005048854	No	CO				
		005048748	Yes	CO				
		005048854	No	CO				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
73 GB	CX-2G15-73 (NB-2G15-73)	005048290	No	NC	2 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
		005048533	No	NC				
		005048583	Yes	CO				
		005048589	No	NC				
		005048600	No	NC				
		005048617	No	NC				
		005048626	Yes	CO				
		005048843	Yes	CO				
		005048700	No	CO				
		005048704	Yes	CO				
		005048843	Yes	CO				
	CX-2G10-73 (NB-2G10-73)	005047873	No	NC	2 Gb FC	10K rpm	All CX4 Models	04.28.000.5.003
		005048129	No	NC				
		005048257	No	NC				
		005048443	No	NC				
		005048492	No	NC				
		005048496	No	CO				
		005048516	No	NC				
		005048519	No	NC				
		005048530	No	NC				
		005048538	No	CO				
		005048580	Yes	CO				
		005048562	No	NC				
		005048614	No	NC				
		005048623	Yes	CO				
		005048631	No	NC				
		005048806	No	CO				
		005048812	No	CO				
		005048707	No	CO				
		005048705	No	CO				

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
	CX-4G15-73 (NB-4G15-73) CX-2G15-73 (NB-2G15-73)	005048729 005048843 005049015 005048845 005048833 005048748 005048854 005048704 005048843	Yes Yes No No No Yes No No No	CO CO CO CO CO CO CO CO CO	4/2 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
36 GB[5]	CX-2G15-36	005047879 005048293 005048539 005048610 005048611 005049098	N/A	NC NC NC NC CO CO	2 Gb FC	15K rpm	All CX4 Models	04.28.000.5.003
36 GB[6]	CX-2G10-36	005047874 005048357 005048360 005048498 005048556 005048566 005048636	N/A	NC CO NC NC NC NC NC	2 Gb FC	10K rpm	All CX4 Models	04.28.000.5.003

Table 4 Supported legacy ATA interface disk modules - Minimum FLARE OE revisions required

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[7]	Drive type	Spindle speed	Platforms	Minimum FLARE OE software revision

[5] Cannot be used as a vault disk.

[6] Cannot be used as a vault disk.

[7] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[7]	Drive type	Spindle speed	Platforms	Minimum FLARE OE software revision
1 TB	CX-AT07-010	005048800 005048823	N/A	CO CO	SATA	7.2K rpm	All CX4 Models	04.28.000.5.003
750 GB	CX-AT07-750	005048723 005048799 005048822 005048828	N/A	CO CO CO CO	SATA	7.2K rpm	All CX4 Models	04.28.000.5.003
500 GB	CX-AT07-500 (All part numbers spares for CX-AT05-320)	005048574 005048697 005048716 005048798	N/A	NC CO CO CO	S A T A	7.2K rpm	All CX4 Models	04.28.000.5.003

Disk capacity	Model number (NEBS Model)	Part number	NEBS	RoHS[7]	Drive type	Spindle speed	Platforms	Minimum FLARE OE software revision
320 GB	CX-AT05-320	005048012	N/A	NC	ATA	5.4K rpm	All CX4 Models	04.28.000.5.003
	Spare for CX-AT05-320	005048715	N/A	CO	SATA	7.2K rpm	All CX4 Models	04.28.000.5.003
250 GB	CX-AT05-250	005047939	N/A	NC	ATA	5.4K rpm	All CX4 Models	04.28.000.5.003
	CX-AT07-250	005048427 005048821	N/A	NC CO	SATA	7.2K rpm	All CX4 Models	04.28.000.5.003
	Spare for CX-AT05-250 or CX-AT07-250	005048711	N/A	CO	SATA	7.2K rpm	All CX4 Models	04.28.000.5.003

Table 5 Power saving disks

Disk capacity	Model number	Part number
3 TB	CX-SA07-030	005049697
2 TB	CX-LP05-020	005049085
2TB	CX-SA07-020	005049058 005049061 005049071 005049259 005049552 005049457
1 TB	CX-SA07-010[8]	005048797 005048829 005049070 005049412 005049700 005049541 005049687 005049520
	Spare only for CX4-LP010-15 and CX4-LP010-15U[9]	005048853

[8] The 1 TB 7.2K rpm disk modules can be vault disks (disks 0-4 in the DAE-OS) only in a CX4-120 storage system.

[9] The 1 TB 5.4K rpm disk modules are available only as spares for DAE models CX4-LP010-15 and CX4-LP010-15U, which ship from the factory fully loaded with fifteen 1TB 5.4K rpm disks. These DAE models cannot be the DAE-OS, which is DAE enclosure 0 on bus 0.

Table 6 Usable disk space

Listed capacity[10]	Usable space per disk[11]		
	Disk	**CX4-120**	**CX4-120, CX4-240, CX4-960**
2 TB	Disk 0-4 (vault disk)	Not supported as vault disk	Not supported as vault disk
	Other disk	2751.4941 GB	2751.4941 GB
2 TB	Disk 0-4 (vault disk)	1761.5965 GB	Not supported as vault disk
	Other disk	1823.5632 GB	1823.5632 GB
1 TB	Disk 0-4 (vault disk)	855.1824 GB	Not supported as vault disk
	Other disk	917.1492 GB	917.1492 GB
600 GB	Disk 0-4 (vault disk)	474.8083 GB	474.8083 GB
	Other disk	536.7751 GB	536.7751 GB
450 GB	Disk 0-4 (vault disk)	340.6062 GB	340.6062 GB
	Other disk	402.5730 GB	402.5730 GB
400 GB	Disk 0-4 (vault disk)	304.7978 GB	304.7978 GB
	Other disk	366.7646 GB	366.7646 GB
300 GB	Disk 0-4 (vault disk)	206.4041 GB	206.4041 GB
	Other disk	268.3709 GB	268.3709 GB
200 GB	Disk 0-4 (vault disk)	121.4444 GB	121.4444 GB

[10] The listed capacity is the disk capacity listed for the disks in Table 1 and Table 2.

[11] 1 GB = 1,073,741,824 bytes (1024^3).

Table 6 Usable disk space (continued)

	Other disk	1832.4112 GB	1832.4112 GB
146 GB	Disk 0-4 (vault disk)	71.6806 GB	71.6806 GB
	Other disk	133.6473 GB	133.6473 GB
73 GB	Disk 0-4 (vault disk)	Not supported as vault disk	Not supported as vault disk
	Other disk	66.6055 GB	66.6055 GB

Table 7 Supported disk-array enclosures (DAEs)

DAE type	Storage systems supported			
	CX200, CX400, CX600	CX300, CX500, CX700	CX3 series[12]	CX4 series[13]
DAE2	Yes	Yes	Yes	Yes[14]
DAE2-ATA	Yes	Yes	Yes	Yes[14]
DAE2P	No	Yes	Yes	Yes[14]
DAE3P (DAE4P)	No	No	Yes	Yes

Table 8 Disk models supported for disk-array enclosures (DAEs)

DAE type	Storage systems supported				
	CX-SA	CX-2G[15]	CX-4G[15]	CX-AT[16]	CX-FC (EFDs)
DAE2	No	Yes	Yes	No	No
DAE2-ATA	No	No	No	Yes	No
DAE2P	No	Yes	Some[17]	No	No
DAE3P (DAE4P)	Yes[18]	Yes	Yes[19]	No	Yes[20]

[12] The CX3 series models are CX3-10c, CX3-20, CX3-20c, CX3-20f, CX3-40, CX3-40c, CX3-40f, and CX3-80.

[13] The CX4 series models are CX4-120, CX4-240, CX4-480, and CX4-960.

[14] The DAE2, DAE2-ATA, and DAE2P are supported in CX4 series storage systems. If you repurpose any of these DAEs (that is, reuse them from an older storage system) in a CX4 series storage system, you may have to run "Refresh Management Server State" from the Navisphere Manager Setup page for the drives to come online, and, if that does not work, you will need to reboot the SPs. Knowledgebase solution emc200651 provides more information.

[15] You can mix CX-2G and CX-4G model disks in the same DAE, but the maximum speed will be 2 Gb/s for the buses connected to the DAE with both these model disks.

[16] CX-AT model disks cannot co-exist with other disk models in the same DAE.

[17] The specific CX-4G model disks supported for a DAE2P depend on the storage system with the DAE2P. This document lists the supported CX-4G model disks for CX4 series storage systems. The *EMC CX Series Storage Systems Disk and FLARE OE Matrix* and the *EMC CX3 UltraScale Series Storage Systems Disk and FLARE OE Matrix* list the supported CX-4G model disks for the CX series storage systems and the CX3 series storage systems, respectively.

[18] CX-SA model disks cannot co-exist with other disk models in the same DAE.

[19] This document lists the specific CX-4G model disks supported for the DAE3P in a CX4 series storage system.

[20] This document lists the specific CX-FC (EFDs) model disks supported for the DAE3P in a CX4 series storage system.

EMC²

EMC® CX3 UltraScale Series Storage Systems

Disk and FLARE OE Matrix

P/N 300-009-312

REV A18

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To function properly, disks in an EMC® CLARiiON® system require that each storage processor run minimum revisions of the FLARE® Operating Environment (FLARE OE). This document lists the disk part numbers supported for EMC CX3 UltraScale™ series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier.

CAUTION

Verify that the proper version of FLARE OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper FLARE OE version is installed.

CX3 series storage systems

Before installing a new disk in a storage system, use the EMC Navisphere® Manager to determine the FLARE OE revision running on the storage system. In Navisphere Manager, the FLARE OE revision appears on the **Software** tab of the **Storage System Properties** dialog box for the storage system. If this revision is lower than the minimum FLARE OE revision required for the disk as listed in Table 1 or Table 2, you must upgrade FLARE OE on the storage system before installing the disk. EMC recommends that you upgrade FLARE OE with the Software Assistant in the Navisphere Service Taskbar (NST) or use the Navisphere Secure Command Line Interface (CLI).

Table 1 lists the Fibre Channel interface disk modules that you can order with CX3 series storage systems and the minimum FLARE OE required for each system.

Table 2 lists the ATA interface disk modules supported when upgrading from a CX series system to a CX3 series system, which includes support for the DAE2-ATA enclosure. Table 2 also indicates CX3 series support for 2 Gb/15K drive upgrades. These upgrades require the minimum FLARE OE revision indicated in Table 2 and include support for the DAE2 and DAE2P enclosures.

Available disk space

Table 3 gives the usable space for the disks listed in Table 1.

Supported disk-array enclosures

Table 4 lists the disk array enclosures (DAEs) supported for CLARiiON storage systems. Table 5 lists the disk models supported for these DAEs.

Note: Changes and additions in the tables since the last revision of this document are noted in **red** type.

Table 1 Fibre Channel interface disk modules - Minimum FLARE OE revisions required

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
2 TB	CX-SA07-020	005049058 005049061 005049071 005049457 005049552 005049259	CO CO CO CO CO CO	4 Gb FC	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.504
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.006 03.22.040.5.504
						CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.006 03.22.020.5.504
						CX3-10c	03.26.010.5.005 03.24.010.5.011

[1] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
2 TB	CX-LP05-020	005049085 005049457	CO CO	4 Gb FC	5.4K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.504
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.006 03.22.040.5.504
						CX3-20 CX3-20c CX3-20f	03.26.040.5.005 03.24.040.5.006 03.22.040.5.504
						CX3-10c	03.24.010.5.011
1 TB	CX-SA07-010	005048797 005048829 005049238 005049070 005049028 005049520 005049412 005049700 005049541 005049687 005049258 005049542	CO CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.014
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.014
						CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.014
						CX3-10c	03.26.010.5.005 03.24.010.5.014
	Spare ONLY for CX3-LP010-15 or CX3-LP010-15U[2]	005048853	CO	4 Gb FC	5.4K rpm	CX3-80	03.26.080.5.005 03.24.080.5.014
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.014

[2] The 1 TB 5.4K rpm disk modules are available only as spares for DAE models CX3-LP010-15 and CX3-LP010-15U, which ship from the factory fully loaded with fifteen 1TB 5.4K rpm disks. These DAE models cannot be the DAE-OS (DAE enclosure 0 on bus 0).

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
1 TB	Spare ONLY for CX3-LP010-15 or CX3-LP010-15U[3]	005048853	CO	4 Gb FC	5.4K rpm	CX3-20 CX3-20c CX3-20f	03.26.040.5.005 03.24.040.5.014
						CX3-10c	03.26.040.5.005 03.24.040.5.014
750GB	CX-SA07-750	005048828 005049028 005048726 005048889	CO CO CO CO	4 Gb FC	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.008 03.22.080.5.510
						CX3-40 CX3-40c	03.26.040.5.005 03.24.040.5.008 03.22.040.5.510
						CX3-40f	03.26.040.5.005 03.24.040.5.006
						CX3-20 CX3-20c	03.26.020.5.005 03.24.020.5.008 03.22.020.5.510
						CX3-20f	03.26.020.5.005 03.24.020.5.006
						CX3-10c	03.26.010.5.005 03.24.010.5.008
750GB	CX-SA07-750	005048796	CO	4 Gb FC	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.510
						CX3-40 CX3-40c	03.26.040.5.005 03.24.040.5.006 03.22.040.5.510
						CX3-40f	03.26.040.5.005 03.24.040.5.006

[3] The 1 TB 5.4K rpm disk modules are available only as spares for DAE models CX3-LP010-15 and CX3-LP010-15U, which ship from the factory fully loaded with fifteen 1TB 5.4K rpm disks. These DAE models cannot be the DAE-OS (DAE enclosure 0 on bus 0).

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
750GB	CX-SA07-750	005048796	CO	4 Gb FC	7.2K rpm	CX3-20 CX3-20c	03.26.020.5.005 03.24.020.5.006 03.22.020.5.510
						CX3-20f	03.26.020.5.005 03.24.020.5.006
						CX3-10c	03.26.010.5.005 03.24.010.5.008
750GB	CX-SA07-750	005048828	CO	4 Gb FC	72.K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.504
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.006 03.22.040.5.504
						CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.006 03.22.020.5.504
600 GB	CX-4G15-600	005048952 005049033 005049118 005049160 005049694	CO CO CO CO CO	4 Gb FC	15K rpm	CX3-80	03.26.080.5.025
						CX3-40 CX3-40c CX3-40f	03.26.040.5.025
						CX3-20 CX3-20c CX3-20f	03.26.020.5.025
						CX3-10c	03.26.010.5.025
600 GB	CX-4G10-600	005048955 005049116 005049166 005049690 005049683	CO CO CO CO CO	4 Gb FC	10K rpm	CX3-80	03.26.080.5.025
						CX3-40 CX3-40c CX3-40f	03.26.040.5.025

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
600 GB	CX-4G10-600	005048955 005049116 005049166 005049690 005049683	CO CO CO CO CO	4 Gb FC	10K rpm	CX3-20 CX3-20c CX3-20f	03.26.020.5.025
						CX3-10c	03.26.010.5.025
500GB	CX-SA07-500	005048608	CO	4 Gb FC	72.K rpm	CX3-80	03.22.080.5.505
						CX3-40 CX3-40c	03.22.040.5.505
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.505
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008
		005048720	CO	4 Gb FC	72.K rpm	CX3-80	03.22.080.5.510
						CX3-40 CX3-40c	03.22.040.5.510
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.510
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008
		005048795 005048886	CO CO	4 Gb FC	72.K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.510
						CX3-40 CX3-40c	03.26.040.5.005 03.24.040.5.006 03.22.040.5.510
						CX3-40f	03.26.040.5.005 03.24.040.5.006

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
500GB	CX-SA07-500	005048795 005048886	CO CO	4 Gb FC	72.K rpm	CX3-20 CX3-20c	03.26.020.5.005 03.24.020.5.006 03.22.020.5.510
						CX3-20f	03.26.020.5.005 03.24.020.5.006
						CX3-10c	03.26.010.5.005 03.24.010.5.008
500GB	CX-2G72-500	005048596	CO	2 Gb FC	7.2K rpm	CX3-80	03.26.010.5.005 03.24.010.5.008
						CX3-40 CX3-40c	03.22.080.5.005
						CX3-40f	03.22.040.5.005
						CX3-20 CX3-20c	03.24.040.5.006
						CX3-20f	03.22.020.5.005
		005048696 005048809	CO CO	2 Gb FC	7.2K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
450 GB	CX-4G15-450	005048849 005048927 005048951 005049032 005049120	CO CO CO CO CO	4 Gb FC	15K rpm	CX3-80	03.26.080.5.014
						CX3-40 CX3-40c CX3-40f	03.26.040.5.014

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
450 GB	CX-4G15-450	005048970 005049158 005049693	CO CO CO	4 Gb FC	15K rpm	CX3-20 CX3-20c CX3-20f	03.26.020.5.014
						CX3-10c	03.26.010.5.014
450 GB	CX-4G10-450	005048954 005049115 005048974 005049164 005049689 005049682	CO CO CO CO CO CO	4 Gb FC	10K rpm	CX3-80	03.26.080.5.014
						CX3-40 CX3-40c CX3-40f	03.26.040.5.014
						CX3-20 CX3-20c CX3-20f	03.26.020.5.014
						CX3-10c	03.26.010.5.014
400 GB	CX-4G10-400	005048775 005048837 005048973 005049681	CO CO CO CO	4 Gb FC	10K rpm	CX3-80	03.26.080.5.005 03.24.080.5.014
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.014
						CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.014
						CX3-10c	03.26.010.5.005 03.24.010.5.014
300 GB	CX-4G15-300	005048731 005048741 005048848	CO CO CO	4 Gb FC	15K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.005

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
300 GB	CX-4G15-300	005048926 005048950 005049031 005049119 005048856 005048840 005048835 005049156 005049692	CO CO CO CO CO CO CO CO CO	4 Gb FC	15K rpm	CX3-40 CX3-40c	03.26.040.5.005 03.24.040.5.006 03.22.040.5.005
							03.26.040.5.005 03.24.040.5.006 03.22.040.5.005
300 GB	CX-4G15-300	005048731 005048741 005048848 005048926 005048950 005049031 005049119 005048856 005048840 005048835 005049156 005049692	CO CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	15K rpm	CX3-40f	03.26.040.5.005 03.24.040.5.006
						CX3-20 CX3-20c	03.26.020.5.005 03.24.020.5.006 03.22.020.5.005
						CX3-20f	03.26.020.5.005 03.24.020.5.006
						CX3-10c	03.26.010.5.005 03.24.010.5.011
300 GB	CX-4G10-300	005048751 005048836 005048841 005048972 005049162 005048842 005048953 005049117 005049691 005049680 005049679	CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	10K rpm	CX3-80	03.26.080.5.005 03.22.080.5.005
						CX3-40 CX3-40c	03.26.040.5.005 03.22.040.5.005
						CX3-40f	03.26.040.5.005 03.24.040.5.006
						CX3-20 CX3-20c	03.26.020.5.005 03.22.020.5.005
						CX3-20f	03.26.020.5.005 03.24.020.5.006

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
300 GB	CX-2G10-300	005048532 005048582 005048597 005048633 005048564 005048616 005048625 005048699 005048703 005048751 005048808 005048836 005048953 005048841 005048972 005049162 005048842	NC CO NC NC NC NC NC CO NC NC CO CO CO CO CO CO CO	2 Gb FC	10K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008
146 GB	CX-4G15-146	005048619 005048660 005048701 005048730 005048740 005048847 005048844 005048855 005048839 005048834 005048846 005049431 005049440 005048749	NC CO CO CO CO CO CO CO CO CO CO CO CO CO CO	4 Gb FC	15K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
146 GB	CX-4G15-146 CX-2G15-146	005048730 005048844 005048855 005048839 005048834 005048846 005049431 005049440 005048749	CO CO CO CO CO CO CO CO CO	2/4 Gb FC	15K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
46 GB	CX-2G10-146	005048128 005048255 005048491 005048495 005048531 005048563 005048581 005048702 005048615 005048624 005048632 005048698 005048807 005048971	CO NC NC CO NC NC CO CO NC CO NC CO CO CO	2 Gb FC	10K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008
		005048031 005048442 005048598 005048604	NC NC CO NC	2 Gb FC	10K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008
73 GB	CX-4G15-73	005048646 005048659 005048700 005048729 005048739 005048843 005048854 005048833 005048845 005049015	NC CO CO CO CO CO CO CO CO CO	4 Gb FC	15K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
73 GB	CX-2G15-73	005048729 005048843 005048854 005048833 005048845 005049015	CO CO CO CO CO CO	2 Gb FC	15K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008
	CX-2G10-73	005047873 005048129 005048257 005048443 005048492 005048496 005048516 005048519 005048530 005048538 005048580 005048562 005048614 005048631 005048806 005048812 005049016	NC NC NC NC NC CO NC NC NC CO CO NC NC NC CO CO CO	2 Gb FC	10K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006
						CX3-10c	03.24.010.5.008

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
36 GB4	CX-2G10-36	005047879 005048293 005048539 005048610 005048611 005049098	NC NC NC NC CO CO	2 Gb FC	15K rpm	CX3-80	03.22.080.5.005
						CX3-40 CX3-40c	03.22.040.5.005
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.005
						CX3-20f	03.24.020.5.006

[4] Cannot be used as a vault disk.

Table 2 CX series to CX3 series upgrade- Minimum FLARE OE revisions required

Disk capacity	Model number	Part number	RoHS[5]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
1 TB	CX-AT07-10	005048800	CO	SATA	7.2K rpm	CX3-80	03.24.080.5.014
						CX3-40 CX3-40c CX3-40f	03.24.040.5.014
						CX3-20 CX3-20c CX3-20f	03.24.020.5.014
		005048823	CO	SATA	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.014
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.014
						CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.014
750 GB	CX-AT07-750	005048723	CO	SATA	7.2K rpm	CX3-80	03.24.080.5.006
						CX3-40 CX3-40c	03.24.040.5.007
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.24.020.5.007
						CX3-20f	03.24.020.5.006

[5] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number	Part number	RoHS[5]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
750 GB	CX-AT07-750	005048799	CO	SATA	7.2K rpm	CX3-80 CX3-40 CX3-40c CX3-40f	03.24.040.5.014
						CX3-20 CX3-20c CX3-20f	03.24.020.5.014
750 GB	CX-AT07-750	005048822	CO	SATA	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.510
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.006 03.22.040.5.510
						CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.006 03.22.020.5.510
500 GB	CX-AT07-500	005048574 005048697 (Both spares for CX-AT05-320)	NC CO	SATA	7.2K rpm	CX3-80	03.22.080.5.505
						CX3-40	03.22.040.5.505
						CX3-20	03.22.020.5.505
		005048716 (Spare for CX-AT05-320)	CO	SATA	7.2K rpm	CX3-80	03.24.080.5.006
						CX3-40 CX3-40c	03.24.040.5.007
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.24.020.5.007
						CX3-20f	03.24.020.5.006

Disk capacity	Model number	Part number	RoHS[5]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
500 GB	CX-AT07-500	005048798 (Spare for CX-AT05-320)	CO	SATA	7.2K rpm	CX3-80	03.24.080.5.014
						CX3-40 CX3-40c CX3-40f	03.24.040.5.014
						CX3-20 CX3-20c CX3-20f	03.24.020.5.014
320 GB	CX-AT05-320	005048012	NC	ATA	5.4K rpm	CX3-80	03.22.080.5.510
						CX3-40	03.22.040.5.510
						CX3-20	03.22.020.5.510
	Spare for CX-AT05-320	005048715	CO	SATA	7.2K rpm	CX3-80	03.22.080.5.510
						CX3-40	03.22.040.5.510
						CX3-20	03.22.020.5.510
250 GB	CX-AT05-250	005047939	NC	ATA	5.4K rpm	CX3-80	03.22.080.5.505
						CX3-40	03.22.040.5.505
						CX3-20	03.22.020.5.505
		005048427	NC	SATA	7.2K rpm	CX3-80	03.22.080.5.505
						CX3-40	03.22.040.5.505
						CX3-20	03.22.020.5.505
		005048821	CO	SATA	7.2K rpm	CX3-80	03.26.080.5.005 03.24.080.5.006 03.22.080.5.504
						CX3-40 CX3-40c CX3-40f	03.26.040.5.005 03.24.040.5.006 03.22.040.5.504

Disk capacity	Model number	Part number	RoHS[5]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
250 GB	CX-AT05-250	005048821	CO	SATA	7.2K rpm	CX3-20 CX3-20c CX3-20f	03.26.020.5.005 03.24.020.5.006 03.22.020.5.504
						CX3-10c	03.26.010.5.005 03.24.010.5.006 03.22.010.5.504
	Spare for CX-AT05-250 or CX-AT07-250	005048711	CO	SATA	7.2K rpm	CX3-80	03.22.080.5.510
						CX3-40	03.22.040.5.510
						CX3-20	03.22.020.5.510
146 GB	CX-2G15-146	005048534 005048584 005048588 005048602 005048618 005048627 005048844 005048855 005048839 005048834 005048846 005048968 005049440 005048730	NC CO NC NC NC CO CO CO CO CO CO CO CO CO	2 Gb FC	15K rpm	CX3-80	03.22.080.5.505
						CX3-40 CX3-40c	03.22.040.5.505
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.505
						CX3-20f	03.24.020.5.006
73 GB	CX-2G15-73	005048290 005048533 005048583 005048589 005048600 05048617 05048626	NC NC CO NC NC NC CO	2 Gb FC	15K rpm	CX3-80	03.22.080.5.505
						CX3-40 CX3-40c	03.22.040.5.505
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.505

Disk capacity	Model number	Part number	RoHS[5]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
73 GB	CX-2G15-73	05048843 05048854 05048833 05048845 05049015 005048700	CO CO CO CO CO CO	2 Gb FC	15K rpm	CX3-20f	03.24.020.5.006
36 GB	CX-2G15-36	005047879 005048293 005048539 005048610	NC NC NC NC	2 Gb FC	15K rpm	CX3-80	03.22.080.5.505
						CX3-40 CX3-40c	03.22.040.5.505
						CX3-40f	03.24.040.5.006
						CX3-20 CX3-20c	03.22.020.5.505
						CX3-20f	03.24.020.5.006

Table 3 Usable disk space

Listed capacity[6]	Usable space per disk[7]		
	Disk	**CX3-10c**	**CX3-20, CX3-20c, CX3-20f, CX3-40, CX3-40c, CX3-40f, CX3-80**
2 TB	Disk 0-4 (vault disk)	Not supported as vault disk	Not supported as vault disk
	Other disk	1823.5632 GB	1823.5632 GB
1 TB	Disk 0-4 (vault disk)	884.1824 GB	Not supported as vault disk
	Other disk	917.1492 GB	917.1492 GB
750 GB	Disk 0-4 (vault disk)	654.8893 GB	Not supported as vault disk
	Other disk	687.8560 GB	687.8560 GB
600 GB	Disk 0-4 (vault disk)	503.8083 GB	503.8083 GB
	Other disk	536.7751 GB	536.7751 GB
500 GB	Disk 0-4 (vault disk)	425.5962 GB	Not supported as vault disk
	Other disk	458.5629 GB	458.5629 GB
450 GB	Disk 0-4 (vault disk)	369.6062 GB	369.6062 GB
	Other disk	402.5730 GB	402.5730 GB
400 GB	Disk 0-4 (vault disk)	333.7978 GB	333.7978 GB
	Other disk	366.7646 GB	366.7646 GB

[6] The listed capacity is the disk capacity listed for the disks in

[7] 1 GB = 1,073,741,824 bytes (1024^3).

Listed capacity[6]	Usable space per disk[7]		
	Disk	**CX3-10c**	**CX3-20, CX3-20c, CX3-20f, CX3-40, CX3-40c, CX3-40f, CX3-80**
300 GB	Disk 0-4 (vault disk)	235.4042 GB	235.4042 GB
	Other disk	268.3709 GB	268.3709 GB
146 GB	Disk 0-4 (vault disk)	100.6808 GB	100.6808 GB
	Other disk	133.6473 GB	133.6473 GB
73 GB	Disk 0-4 (vault disk)	33.6387 GB	33.6387 GB
	Other disk	66.6055 GB	66.6055 GB

Table 4 Supported disk-array enclosures (DAEs)

DAE type	Storage systems supported			
	CX200, CX400, CX600	CX300, CX500, CX700	CX3 series[8]	CX4 series[9]
DAE2	Yes	Yes	Yes	Yes[10]
DAE2-ATA	Yes	Yes	Yes	Yes[14]
DAE2P	No	Yes	Yes	Yes[14]
DAE3P (DAE4P)	No	No	Yes	Yes

Table 5 Disk models supported for disk-array enclosures (DAEs)

DAE type	Storage systems supported				
	CX-SA	CX-2G[11]	CX-4G[15]	CX-AT[12]	CX-FC (EFDs)
DAE2	No	Yes	Yes	No	No
DAE2-ATA	No	No	No	Yes	No
DAE2P	No	Yes	Some[13]	No	No
DAE3P (DAE4P)	Yes[14]	Yes	Yes[15]	No	Yes[16]

[8] The CX3 series models are CX3-10c, CX3-20, CX3-20c, CX3-20f, CX3-40, CX3-40c, CX3-40f, and CX3-80.

[9] The CX4 series models are CX4-120, CX4-240, CX4-480, and CX4-960.

[10] The DAE2, DAE2-ATA, and DAE2P are supported in CX4 series storage systems. If you repurpose any of these DAEs (that is, reuse them from an older storage system) in a CX4 series storage system, you may have to run "Refresh Management Server State" from the Navisphere Manager Setup page for the drives to come online, and, if that does not work, you will need to reboot the SPs. Knowledgebase solution emc200651 provides more information.

[11] You can mix CX-2G and CX-4G model disks in the same DAE, but the maximum speed will be 2 Gb/s for the buses connected to the DAE with both these model disks.

[12] CX-AT model disks cannot co-exist with other disk models in the same DAE.

[13] The specific CX-4G model disks supported for a DAE2P depend on the storage system with the DAE2P. This document lists the supported CX-4G model disks for CX4 series storage systems. The *EMC CX Series Storage Systems Disk and FLARE OE Matrix* and the *EMC CX3 UltraScale Series Storage Systems Disk and FLARE OE Matrix* list the supported CX-4G model disks for the CX series storage systems and the CX3 series storage systems, respectively.

[14] CX-SA model disks cannot co-exist with other disk models in the same DAE.

[15] This document lists the specific CX-4G model disks supported for the DAE3P in a CX4 series storage system.

[16] This document lists the specific CX-FC (EFDs) model disks supported for the DAE3P in a CX4 series storage system.

EMC²

EMC CX Series Storage Systems

Disk and FLARE OE Matrix

P/N 014003111
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For CX3 UltraScale™ series storage systems, refer to the *EMC CX3 UltraScale Series Storage Systems Disk and FLARE OE Matrix* (P/N 300-009-312).

To function properly, disks in an EMC® CLARiiON® system require that each storage processor run minimum revisions of the EMC FLARE® Operating Environment (FLARE OE). This document lists the disk part numbers supported for CX series storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the disk carrier.

CAUTION

Verify that the proper version of FLARE OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper FLARE OE version is installed.

CX series systems

Before installing a new disk in a storage system, use EMC Navisphere® Manager to determine the FLARE OE revision running on the storage system. In Navisphere Manager the FLARE OE revision appears on the

Software tab of the **Storage System Properties** dialog box for the storage system. If this revision is lower than the minimum revision required for the disk, as listed in the tables that follow, you must upgrade FLARE OE on the storage system before installing the disk. We recommend that you upgrade FLARE OE with the Software Assistant in the Navisphere Service Taskbar (NST), though you can use the Navisphere Secure CLI.

Table 1 lists the Fibre Channel interface disk modules supported by CX series systems, and the minimum FLARE OE required for each one.

Table 2 lists the ATA interface disk modules supported by CX series systems, and the minimum FLARE OE required for each one.

Changes and additions in the tables since the last revision of this document are noted in **bold blue** type.

Supported disk array enclosures

Table 3 lists the disk-array enclosures (DAEs) supported for CLARiiON storage systems, and Table 4 lists the disk models supported for these DAEs.

Table 1 Fibre Channel interface disk modules - Minimum FLARE OE revisions required

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
500 GB	CX-2G72-500	PN005048696 PN005048809	CO CO	2 Gb FC	7.2K rpm	CX700	02.24.700.5.007 02.19.700.5.007
						CX500	02.24.500.5.007 02.19.500.5.007

[1] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

[2] Where x is 1 when Access Logix is installed and 0 when it is not.

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
						CX300	02.24.300.5.007 02.19.300.5.007
450 GB	CX-4G15-450	PN005048849 PN005048927 PN005048951 PN005049032 **PN005049120** **PN005049158** **PN005048970**	CO CO CO CO **CO** **CO** **CO**	4 Gb FC	15K rpm	CX700	02.26.700.5.014
						CX500	02.26.500.5.014
						CX300	02.26.300.5.014

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
300 GB	CX-4G15-300	PN005048731 PN005048741 PN005048848 **PN005048856** **PN005049156** **PN005048969** PN005048926 PN005048950 PN005049031 **PN005049119**	CO CO CO **CO** **CO** **CO** CO CO CO **CO**	4 Gb FC	15K rpm	CX700	02.26.700.5.005 02.24.700.5.006 02.19.700.5.007 02.16.700.5.004 02.07.700.5.003
						CX600	02.19.600.5.007 02.16.600.5.004 02.07.600.5.003
						CX500	02.26.500.5.005 02.24.500.5.006 02.19.500.5.007 02.16.500.5.004 02.07.500.5.003
						CX400	02.19.400.5.007 02.16.400.5.004 02.07.400.5.003
						CX300	02.26.300.5.005 02.24.300.5.006 02.19.300.5.007 02.16.300.5.004 02.07.300.5.003
						CX200	02.19.200.5.007 02.16.200.5.004 02.07.200.5.003

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
300 GB	CX-4G10-300	PN005048953	CO	4 Gb FC	10K rpm	CX700	02.07.700.5.003
		PN005049117	**CO**			CX600	02.07.600.5.003
		PN005048972	**CO**			CX500	02.07.500.5.003
		PN005048841	**CO**			CX400	02.07.400.5.003
		PN005048751	**CO**			CX300	02.07.300.5.003
		PN005048842	**CO**			CX200	02.07.200.5.003
		PN005048836	**CO**				
		PN005049162	**CO**				
	CX-2G10-300	PN005048532	NC	2 Gb FC	10K rpm	CX700	02.07.700.5.005
		PN005048582	CO			CX600	02.07.600.5.005
		PN005048597	NC			CX500	02.07.500.5.005
		PN005048633	NC			CX400	02.07.400.5.005
		PN005048564	NC			CX300	02.07.300.5.003
		PN005048616	NC			CX200	02.07.200.5.003
		PN005048625	NC				
		PN005048699	CO				
		PN005048703	NC				
		PN005048751	**CO**				
		PN005048808	CO				
		PN005048836	CO				
		PN005048953	CO				
		PN005048972	**CO**				
		PN005049162	**CO**				
		PN005048841	**CO**				
		PN005048842	**CO**				
		PN005049117	**CO**				
146 GB	CX-4G15-146 CX-2G15-146	PN005048730	CO	4/2 Gb FC	15K rpm	CX700	02.06.700.5.003
		PN005048847	CO			CX600	02.02.x.60.5.003
		PN005048855	**CO**			CX500	02.06.500.5.003
		PN005048847	**CO**			CX400	02.02.x.40.5.004
		PN005048740	**CO**			CX300	02.06.300.5.003
		PN005048844	**CO**			CX200	02.03.x.20.5.001

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
						CX200LC	02.04.x.20.5.002

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
146 GB	CX-2G15-146	PN005048534	NC	2 Gb FC	15K rpm	CX700	02.06.700.5.003
		PN005048584	CO			CX600	02.02.x.60.5.003
		PN005048602	NC			CX500	02.06.500.5.003
		PN005048618	NC			CX400	02.02.x.40.5.004
		PN005048627	CO			CX300	02.06.300.5.003
		PN005048847	**CO**			CX200	02.03.x.20.5.001
		PN005049440	**CO**			CX200LC	02.04.x.20.5.002
		PN005048730	**CO**				
		PN005048844	**CO**				
		PN005048968	**CO**				
		PN005048846	**CO**				
		PN005048834	**CO**				
		PN005048855	**CO**				
		PN005048588	NC	2 Gb FC	15K rpm	CX700	02.06.700.5.001
						CX600	02.06.600.5.001
						CX500	02.06.500.5.001
						CX400	02.06.400.5.001
						CX300	02.06.300.5.001
						CX200 CX200LC	02.06.200.5.001
	CX-2G10-146	PN005048128	CO	2 Gb FC	10K rpm	CX700	02.06.700.5.003
		PN005048255	NC			CX600	02.02.x.60.5.003
		PN005048491	NC			CX500	02.06.500.5.003
		PN005048495	CO			CX400	02.02.x.40.5.004
		PN005048531	NC			CX300	02.06.300.5.003
		PN005048563	NC			CX200	02.03.x.20.5.001
		PN005048581	CO				
		PN005048615	NC				

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
		PN005048624 PN005048632 PN005048698 PN005048702 PN005048807 **PN005048971**	CO NC CO CO CO **CO**			CX200LC	02.04.x.20.5.002

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
146 GB	CX-2G10-146	PN005048031 PN005048442 PN005048598 PN005048604	NC NC CO NC	2 Gb FC	10K rpm	CX700	02.06.700.5.003
						CX600	02.06.600.5.005
						CX500	02.06.500.5.003
						CX400	02.06.400.5.004
						CX300	02.06.300.5.003
						CX200 CX200LC	02.06.200.5.004
73 GB	CX-2G15-73	PN005048290 PN005048583 PN005048600 PN005048617 PN005048626 **PN005048833** **PN005048845** **PN005049015**	NC CO NC NC CO **CO** **CO** **CO**	2 Gb FC	15K rpm	CX700	02.06.700.5.003
						CX600	02.01.x.60.5.006
						CX500	02.06.500.5.003
						CX400	02.02.x.40.5.004
						CX300	02.06.300.5.003
						CX200	02.03.x.20.5.001
						CX200LC	02.04.x.20.5.002
		PN005048533 PN005048589	NC NC	2 Gb FC	15K rpm	CX700	02.06.700.5.001
						CX600	02.06.600.5.001
						CX500	02.06.500.5.001
						CX400	02.06.400.5.001
						CX300	02.06.300.5.001
						CX200 CX200LC	02.06.200.5.001

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
73 GB	CX-2G10-73	PN005048129 PN005048257 PN005048443 PN005048492 PN005048496 PN005048516 PN005048519 PN005048530 PN005048538 PN005048580 PN005048562 PN005048614 PN005048631 PN005048806 PN005048812	NC NC NC NC CO NC NC NC CO CO NC NC NC CO CO	2 Gb FC	10K rpm	CX700	02.06.700.5.003
						CX600	02.01.x.60.5.006
						CX500	02.06.500.5.003
						CX400	02.02.x.40.5.004
						CX300	02.06.300.5.003
						CX200	02.03.x.20.5.001
						CX200LC	02.04.x.20.5.002
	CX-4G15-73 CX-2G15-73	PN005048729	CO	4/2 Gb FC	15K rpm	CX700	02.06.700.5.003
						CX600	02.01.x.60.5.006
						CX500	02.06.500.5.003
						CX400	02.02.x.40.5.004
						CX300	02.06.300.5.003
						CX200	02.03.x.20.5.001
						CX200LC	02.04.x.20.5.002

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[2]
36 GB	CX-2G15-36	PN005047879 PN005048293 PN005048539 PN005048610 PN005048611	NC NC NC NC CO	2 Gb FC	15K rpm	CX700	02.06.700.5.003
						CX600	02.01.x.60.5.006
						CX500	02.06.500.5.003
						CX400	02.02.x.40.5.004
						CX300	02.06.300.5.003
						CX200	02.03.x.20.5.001
						CX200LC	02.04.x.20.5.002
	CX-2G10-36	PN005047874 PN005048357 PN005048360 PN005048498 PN005048556 PN005048566 PN005048636	NC CO NC NC NC NC NC	2 Gb FC	10K rpm	CX700	02.06.700.5.003
						CX600	02.01.x.60.5.006
						CX500	02.06.500.5.003
						CX400	02.02.x.40.5.004
						CX300	02.06.300.5.003
						CX200	02.03.x.20.5.001
						CX200LC	02.04.x.20.5.002

Table 2 ATA interface disk modules - Minimum FLARE OE revisions required

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
1 TB	CX-AT07-010	PN005048800	CO	SATA	7.2K rpm	CX700	02.24.700.5.014
						CX500 CX500i	02.24.500.5.014
						CX300	02.24.300.5.014
						CX300i	02.24.301.5.014
		PN005048823	CO	SATA	7.2K rpm	CX700	02.26.700.5.005 02.24.700.5.014
						CX500	02.26.500.5.005 02.24.500.5.014
						CX300	02.26.300.5.005 02.24.300.5.014
750 GB	CX-AT07-750	PN005048723 PN005048799	CO CO	SATA	7.2K rpm	CX700	02.24.700.5.006 02.19.700.5.040
						CX600	02.19.600.5.040
						CX500	02.24.500.5.006 02.19.500.5.040
						CX500i	02.24.500.5.006
						CX400	02.19.400.5.040
						CX300	02.24.300.5.006 02.19.300.5.040

[3] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

[4] Where x is 1 when Access Logix is installed and 0 when it is not.

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
						CX300i	02.24.301.5.006
						CX200	02.19.200.5.040

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
750 GB	CX-AT07-750	PN005048822	CO	SATA	7.2K rpm	CX700	02.26.700.5.005 02.24.700.5.006 02.22.700.5.504 02.19.700.5.040
						CX600	02.19.600.5.040
						CX500	02.26.500.5.005 02.24.500.5.006 02.22.500.5.504 02.19.500.5.040
						CX400	02.19.400.5.040
						CX300	02.26.300.5.005 02.24.300.5.006 02.22.300.5.504 02.19.300.5.040
						CX200	02.19.200.5.040
500 GB	CX-AT07-500	PN005048798 **(spare for CX-AT05-320)**	CO	SATA	7.2K rpm	CX700	02.24.700.5.006 02.19.700.5.019
						CX600	02.19.600.5.040
						CX500 CX500i	02.24.500.5.006 02.19.500.5.019
						CX400	02.19.400.5.040
						CX300	02.24.300.5.006 02.19.300.5.019
						CX300i	02.24.301.5.006 02.19.301.5.019
						CX200	02.19.200.5.040

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
500 GB	CX-AT07-500	PN005048716 (spare for CX-AT05-320)	CO	SATA	7.2K rpm	CX700	02.19.700.5.040
						CX600	02.19.600.5.040
						CX500	02.19.500.5.040
						CX500i	02.24.500.5.006
						CX400	02.19.400.5.040
						CX300	02.19.300.5.040
						CX300i	02.24.301.5.006
						CX200	02.19.200.5.040
		PN005048574 (spare for CX-AT05-320) PN005048697 (spare for CX-AT05-320)	NC CO	SATA	7.2K rpm	CX700	02.19.700.5.019
						CX600	02.19.600.5.019
						CX500 CX500i	02.19.500.5.019
						CX400	02.19.400.5.019
						CX300	02.19.300.5.019
						CX300i	02.19.301.5.019
						CX200	02.19.200.5.019
320 GB	CX-AT05-320	PN005048012	NC	ATA	5.4K rpm	CX700	02.06.700.5.003
						CX600	02.04.x.60.5.002
						CX500	02.06.500.5.003
						CX400	02.04.x.40.5.002
						CX300	02.06.300.5.003
						CX200	02.04.x.20.5.002

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
320 GB	Spare for CX-AT05-320	PN005048715	CO	SATA	7.2K rpm	CX700	02.19.700.5.040 02.07.700.5.016[5]
						CX600	02.19.600.5.040 02.07.600.5.016[5]
						CX500	02.19.500.5.040 02.07.500.5.016[5]
						CX400	02.19.400.5.040 02.07.400.5.016[5]
						CX300	02.19.300.5.040 02.07.300.5.016[5]
						CX200	02.19.200.5.040 02.07.200.5.016[5]
250 GB	CX-AT05-250	PN005047939	NC	ATA	5.4K rpm	CX700	02.06.700.5.003
						CX600	02.04.x.60.5.002
						CX500	02.06.500.5.003
						CX400	02.04.x.40.5.002
						CX300	02.06.300.5.003
						CX200	02.04.x.20.5.002
		PN005048427	NC	SATA	7.2K rpm	CX700	02.07.700.5.016
						CX600	02.07.600.5.016
						CX500	02.07.500.5.016
						CX400	02.07.400.5.016
						CX300	02.07.300.5.016
						CX200	02.07.200.5.016

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
250 GB	CX-AT07-250	PN005048821	CO	SATA	7.2K rpm	CX700	02.26.700.5.005 02.24.700.5.006 02.19.700.5.007 02.16.700.5.003 02.07.700.5.005
						CX600	02.19.600.5.007 02.16.600.5.004 02.07.600.5.005
						CX500	02.26.500.5.005 02.24.500.5.006 02.19.500.5.007 02.16.500.5.003 02.07.500.5.005
						CX400	02.19.400.5.007 02.16.400.5.004 02.07.400.5.005
						CX300	02.26.300.5.005 02.24.300.5.006 02.19.300.5.007 02.16.300.5.003 02.07.300.5.003
						CX200	02.19.200.5.007 02.16.200.5.004 02.07.200.5.003

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision[4]
250 GB	Spare for CX-AT05-250 or CX-AT07-250	PN005048711	CO	SATA	7.2K rpm	CX700	02.19.700.5.040 02.07.700.5.016[5]
						CX600	02.19.600.5.040 02.07.600.5.016[5]
						CX500	02.19.500.5.040 02.07.500.5.016[5]
						CX400	02.19.400.5.040 02.07.400.5.016[5]
						CX300	02.19.300.5.040 02.07.300.5.016[5]
						CX200	02.19.200.5.040 02.07.200.5.016[5]

[5] Only if FRUMON 1.93 or later is loaded with rebootless NDU.

Table 3 Supported disk-array enclosures (DAEs)

DAE type	Storage systems supported			
	CX200, CX400, CX600	CX300, CX500, CX700	CX3 series[6]	CX4 series[7]
DAE2	Yes	Yes	Yes	Yes[8]
DAE2-ATA	Yes	Yes	Yes	Yes[8]
DAE2P	No	Yes	Yes	Yes[8]
DAE3P (DAE4P)	No	No	Yes	Yes

Table 4 Disk models supported for disk-array enclosures (DAEs)

DAE type	Storage systems supported				
	CX-SA	CX-2G[9]	CX-4G[11]	CX-AT[10]	CX-FC (EFDs)
DAE2	No	Yes	Yes	No	No
DAE2-ATA	No	No	No	Yes	No
DAE2P	No	Yes	Some[11]	No	No
DAE3P (DAE4P)	Yes[12]	Yes	Yes[13]	No	Yes[13]

[6] The CX3 series models are CX3-10c, CX3-20, CX3-20c, CX3-20f, CX3-40, CX3-40c, CX3-40f, and CX3-80.

[7] The CX4 series models are CX4-120, CX4-240, CX4-480, and CX4-960.

[8] The DAE2, DAE2-ATA, and DAE2P are supported. However, if you repurpose any of these DAEs (that is, reuse them from an older storage system) in a CX4 series storage system, you may have to run "Refresh Management Server State" from the Navisphere Manager Setup page for the drives to come online, and, if that does not work, you will need to reboot the SPs. Knowledgebase solution emc200651 provides more information.

[9] You can mix CX-2G and CX-4G model disks in the same DAE, but the maximum speed will be 2 Gb/s for the buses connected to the DAE with both these model disks.

[10] CX-AT model disks cannot co-exist with other disk models in the same DAE.

[11] The specific CX-4G model disks supported for a DAE2P depend on the storage system with the DAE2P. This document lists the supported CX-4G model disks for CX series storage systems. The *EMC CX3 UltraScale Series Storage Systems Disk and FLARE OE Matrix* and the *EMC CX4 Series Storage Systems Disk and FLARE OE Matrix* list the supported CX-4G model disks for the CX3 series storage systems and the CX4 series storage systems, respectively.

[12] CX-SA model disks cannot co-exist with other disk models in the same DAE.

[13] The *EMC CX3 UltraScale Series Storage Systems Disk* and *FLARE OE Matrix* and the *EMC CX4 Series Storage Systems Disk and FLARE OE Matrix* list the specific CX-4G model disks supported for the DAE3P in CX3 series storage systems and CX4 series storage systems, respectively.

EMC²

EMC AX4-5 Series Storage Systems

Disk and FLARE OE Matrix

PN 300-006-162

To function properly, serial advanced technology attachment (SATA) or serial attached SCSI (SAS) disks in an EMC® AX4-5 series storage system require that each storage processor run minimum versions of the EMC FLARE® Operating Environment (FLARE OE). This document lists the disk part numbers supported by EMC AX4-5 series storage systems and the minimum software versions required for each disk model.

> The AX4-5SC, AX4-5SCF4, AX4-5, AX4-5F8, AX4-5SCi, and AX4-5i are also called the AX4-5FSC, AX4-5FSCX, AX4-5F, AX4-5FX, AX4-5ISC, and AX4-5I, respectively.

The disk part number (PN) appears on a label on the front of the disk carrier.

CAUTION

Verify that the proper version of FLARE OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper FLARE OE version is installed.

Use the EMC Navisphere® Express software to view the AX4-5 series FLARE OE version. Open Navisphere Express for the AX4-5 storage system and select **Software** from the **System** menu to open the System Software page. If the FLARE OE does not meet the minimum version required for your disks as shown in Table 1, then upgrade FLARE OE on the storage systems before installing the disk. See the Upgrade section under **Service & support**, on the AX4-5 support website. For information on accessing the AX4-5 support website, refer to the support information that shipped with your storage system.

[N] Denotes that the disk part number shown has been certified for use in a NEBS environment

Changes and additions in the tables since the last revision of this document are noted in red type.

Usable disk space

Table 2 gives the usable space for the disks listed in Table 1.

Table 1 Minimum FLARE OE revisions required for AX4-5 series disks

Disk capacity	Model number	Part number	RoHS[1]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
2 TB[2]	AX-SS07-020	005049059 005049025 005050064 005050668	CO CO CO CO	SATA II	7.2K rpm	AX4-5F8 AX4-5SCF4 AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.707
1TB	AX-SS07-010	005048805 005048831 005049024 005050063 005050669	CO CO CO CO CO	SATA II	7.2K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.505
750 GB	AX-SS07-750	005048777 [N] 005048830 005050670	CO CO CO	SATA II	7.2K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.004

[1] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

[2] 2 TB vault support (model V-AX452TB72K) requires minimum FLARE revision 02.23.050.3.709 and Utility Partition revision 02.23.050.5.709.

Disk capacity	Model number	Part number	RoHS[3]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
600 GB	AX-SS10-600	005048960 005050108	CO	3 Gb SAS	10K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.703
	AXSS15-600	005048958 [N] 005049036 005050914	CO CO CO	3 Gb SAS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.703
450 GB	AX-SS15-450	005048877 [N] 005048957 [N] 005049035 005048965 005050913	CO CO CO CO CO	3 Gb SAS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.505
	NB-SS15-450	005048917 [N] 005048957 [N]	CO CO	3 Gb SAS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5 AX4-5SC AX4-5i AX4-5SCi	02.23.050.5.505
400 GB	AX-SS10-400	005048811 005048960 005050107	CO CO CO	3 Gb SAS	10K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703

[3] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number	Part number	RoHS[4]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
300 GB	AX-2SS10-300	005049084 [N] 005050106	CO CO	3 Gb SAS	10K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703
	AX-SS15-300	005048786 [N] 005048875 [N] 005048956 [N] 005049034 005050912	CO CO CO CO CO	3 Gb SAS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703
	NB-SS15-300	005048786 [N] 005048852 [N]	CO	3 Gb SAS NEBS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703
146 GB	AX-2SS10-146	005049083 [N] 005050105	CO CO	3 Gb SAS	10K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703

[4] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

Disk capacity	Model number	Part number	RoHS[5]	Drive type	Spindle speed	Platform	Minimum FLARE OE software revision
146 GB	AX-SS15-146	005048785 [N] 005048873 [N] 005048851 [N] 005048963 [N]	CO CO CO CO	3 Gb SAS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703
	NB-SS15-146	005048785 [N] 005048851 [N] 005048963 [Y]	CO CO CO	3 Gb SAS NEBS	15K rpm	AX4-5F8 AX4-5SCF4	02.23.050.5.707
						AX4-5	02.23.050.5.004
						AX4-5SC	02.23.050.5.703
						AX4-5i	02.23.050.5.004
						AX4-5SCi	02.23.050.5.703

Table 2 Usable disk space

Listed capacity[6]	Disk	Usable space per disk[7]
2 TB	Disk 0-3 (vault disk)	1,806.1707 GB
	Other disk	1,823.2878 GB
1 TB	Disk 0-3 (vault disk)	899.7566 GB
	Other disk	916.8738 GB
750 GB	Disk 0-3 (vault disk)	670.4635 GB
	Other disk	687.5807 GB

[5] In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

[6] The listed capacity is the disk capacity listed for the disks in Table 1.

[7] 1 GB = 1,073,741,824 bytes (1024^3).

Listed capacity[8]	Disk	Usable space per disk[9]
600 GB	Disk 0-3 (vault disk)	519.3825 GB
	Other disk	536.4997 GB
450 GB	Disk 0-3 (vault disk)	385.1804 GB
	Other disk	402.2976 GB
400 GB	Disk 0-3 (vault disk)[10]	349.3720 GB
	Other disk	366.4892 GB
300 GB	Disk 0-3 (vault disk)[10]	250.9783 GB
	Other disk	268.0955 GB
146 GB	Disk 0-3 (vault disk)[10]	116.2548 GB
	Other disk	133.3719 GB

[8] The listed capacity is the disk capacity listed for the disks in Table 1.

[9] 1 GB = 1,073,741,824 bytes (1024^3).

[10] 146 GB, 300 GB, and 400 GB disks are SAS disks so they cannot be used as vault disks (disks 0-3) in a base system running FLARE OE 02.23.050.5.5xx or lower.

EMC²

EMC® AX Series Storage Systems

Disk and FLARE® OE Matrix

P/N 300-002-276
REV A10

April 15, 2009

To function properly, Serial Advanced Technology Attachment (SATA) disks in an EMC® AX series storage system require that each storage processor run minimum revisions of the FLARE® Operating Environment (FLARE OE). This document lists the disk part numbers supported by EMC AX series (page 2) storage systems and the minimum software revisions required for each disk model.

The disk part number (PN) appears on a label on the front of the plastic carrier.

CAUTION

Verify that the proper version of FLARE OE is running on the storage system before installing any disk drives. Results ranging from non-recognition of the drives to data loss may occur if an improper FLARE OE version is installed.

AX series systems

Use EMC Navisphere® Express or EMC Navisphere Manager software to view the AX series FLARE OE revision.

Using Navisphere Express

Select **Software** under the System menu to open the System Software page. If the FLARE OE does not meet the minimum revision required for your disks as shown in Table 1, then upgrade the storage-system software before installing the disk. For an AX100 series storage system, see the **Upgrade** section of the AX100 support website; for an AX150 series storage system, see the **Upgrade** section under **Service & support**, on the AX150 support website. For information on accessing the AX100 or AX150 support website, refer to the support information that shipped with your storage system.

Using Navisphere Manager

Select the **General** tab from the **Storage System Properties** dialog box for the storage system. If the FLARE OE does not meet the minimum revision required for your disks as shown in Table 1, then upgrade the software as explained in the Navisphere Manager help before installing the disk.

Table 1 lists the disks supported by AX series systems, and the minimum FLARE OE required to use each one.

Note: Changes and additions in the tables since the last revision of this document are noted in **bold blue** type.

Table 1 Disk minimum FLARE OE revisions required in an AX series system

Disk capacity	Model number	Part number	RoHS[a]	Drive type[b]	Spindle speed	Platform	Minimum FLARE OE software revision
750GB	AX-S207-750	PN005048826	CO	3 Gb SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.022
		PN005048803	CO	3 Gb SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.026
		PN005048724	CO	3 Gb SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.024
500 GB	AX-S207-500	PN005048802	CO	3 Gb SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.026
		PN005048718 PN005048607	CO CO	3 Gb SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.016
	AX-SA-500	PN005048820	CO	SATA	7.2K	AX100 AX100SC AX100i AX100SCi	02.19.100.5.046
		PN005048606	CO	SATA	7.2K	AX100 AX100SC AX100i AX100SCi	02.19.100.5.014

Table 1 Disk minimum FLARE OE revisions required in an AX series system (*continued*)

Disk capacity	Model number	Part number	RoHS[a]	Drive type[b]	Spindle speed	Platform	Minimum FLARE OE software revision
250 GB	AX-S207-250	PN005048825	CO	3 Gb SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.019
		PN005048713	CO	SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.4.005
		PN005048578	CO	SATA	7.2K	AX150 AX150SC AX150i AX150SCi	02.20.150.5.017
250 GB	AX-SA07-250	PN005048824	CO	3 Gb SATA	7.2K	AX100 AX100SC AX100i AX100SCi	02.19.100.5.050
		PN005048712	NC	SATA	7.2K	AX100 AX100SC AX100i AX100SCi	02.19.100.5.041
		PN005048379	NC	SATA	7.2K	AX100 AX100SC	02.08.100.5.011
						AX100i AX100SCi	02.17.100.5.006
160 GB	AX-SA07-160	PN005048378	NC	SATA	7.2K	AX100 AX100SC	02.08.100.5.011
						AX100i AX100SCi	02.17.100.5.006

a. In the RoHS column, CO = RoHS compliant; NC = not RoHS compliant.

b. A 3 Gb SATA drive type in an AX100 series storage system will exhibit performance similar to a SATA drive type.

EMC²

EMC Storage Systems FC-Series and IP4700

Disk and FLARE OE Matrix

P/N 014002833
REV A22

June 6, 2005

To function properly, Fibre Channel disks require that each storage processor run minimum revisions of the following software:

- FLARE™ Operating Environment (FLARE OE) in an EMC® FC4700-2 or FC4700 storage system
- System software in an EMC IP4700 system
- FLARE OE and PROM code in any other model of an EMC FC-Series storage system (non-4700 storage systems)

This document lists the disk part numbers supported for the following systems and the minimum software revisions required for each disk model:

Changes and additions since the last revision of this document are noted in **bold blue** type.

The disk part number (PN) appears on a label on the front or side of the plastic carrier, as shown below.

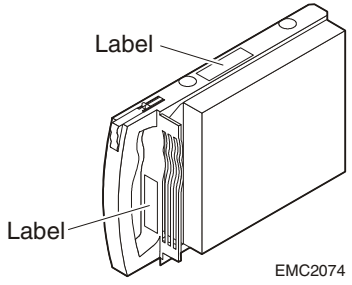

Figure 1 Location of Disk Part Number Label

FC4700-2, FC4700, and IP4700 Systems

CAUTION

If you use a disk with an incorrect revision of system software or FLARE OE running in the SP, data loss will result due to incorrectly sized drives. Similarly, using an unsupported disk with any revision of system software or FLARE OE may result in data loss.

The FC4700-2 and FC4700 FLARE OE revision is displayed by EMC Navisphere® Manager in the **General** tab of the **Storage System Properties** dialog box for the storage system. If the FLARE OE does not meet the minimum revision, then before installing a disk, upgrade the software as explained in the *EMC Navisphere Manager Administrator's Guide*.

The IP4700 system software revision is displayed by the Administrative Interface as the System Version on the IP4700 home page. If the system software does not meet the minimum revision, then before installing a disk, upgrade the software as explained in the *IP4700 Administrator's Guide*.

Table 1 lists the disks supported by FC4700-2 and FC4700 systems, and the minimum system software or FLARE OE required to use each one.

Table 2 lists the disks supported by IP4700 system, and the minimum system software required to use each one.

Table 1 Minimum FLARE OE Revisions Required for Disks in an FC4700-2 or FC4700 System

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE Revision	
				with Access Logix	without Access Logix
181 Gbytes	PN005047551[a]	7.2K	FC4700-2	8.44.51	8.44.01
			FC4700		
146 Gbytes	PN005048172 PN005048444 PN005048565	10K	FC4700-2	8.47.52	8.47.02
			FC4700		

Table 1 Minimum FLARE OE Revisions Required for Disks in an FC4700-2 or FC4700 System (continued)

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE Revision	
				with Access Logix	without Access Logix
73 Gbytes	PN005046734 PN005047169 PN005048173 PN005048445 PN005048517 PN005048567	10K	FC4700-2	8.42.58	8.41.04
			FC4700		
	PN005048176[a]	15K	FC4700-2	8.42.58	8.41.04
			FC4700		
36 Gbytes	PN005045719	7.2K	FC4700-2	8.42.58	8.41.04
			FC4700		
	PN005045936 PN005046732 PN005047171	10K	FC4700-2		
			FC4700		
	PN005047314[a] PN005048177[a]	15K	FC4700-2	8.44.51	8.44.01
			FC4700		
18 Gbytes	PN005045268	7.2K	FC4700-2	8.42.58	8.41.04
			FC4700		
	PN005045272 PN005045713 PN005045932 PN005046730	10K	FC4700-2		
			FC4700		
	PN005046630[b] PN005047331	15K	FC4700-2		
			FC4700		
9 Gbytes	PN005045266	7.2K	FC4700-2	8.42.58	8.41.04
			FC4700		
	PN005045270 PN005045715 PN005045934	10K	FC4700-2		
			FC4700		

a.RAID configurations only; not supported in JBOD systems.

b.Only supported in DAEs using power supplies with part number revisions at or above 005042633-21 or 005045508-04.

Table 2 Minimum System Software Revisions Required for Disks in an IP4700 System

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum System Software Revision
73 Gbytes	PN005046734	10K	IP4700	R1.1
	PN005047169			R2.0
	PN005048173 PN005048445 PN005048517 PN005048567			R2.1 p46
	PN005048176[a]	15K		
36 Gbytes	PN005045719	7.2K	IP4700	R1.0
	PN005045936	10K		
	PN005046732			
	PN005047171			R2.0 p21
	PN005047314[a]	15K		R2.0 p24
	PN005048177[a]			R2.1 p46
18 Gbytes	PN005045272 PN005045713 PN005045932 PN005046730	10K	IP4700	R1.0
	PN005046630[b]	15K		R1.1
	PN005047331			R2.0 p24

a.RAID configurations only; not supported in JBOD systems.
b.Only supported in DAEs using power supplies with part number revisions at or above 005042633-21 or 005045508-04.

Non-4700 FC-Series Storage Systems

CAUTION

If you use a disk with an incorrect revision of FLARE OE or PROM code running in the SP, data loss will result due to incorrectly sized drives. Similarly, using an unsupported disk with any revision of FLARE OE and PROM code may result in data loss.

EMC Navisphere Manager or Supervisor displays the FLARE OE and PROM code revisions in the **General** tab of the **SP Properties** dialog box for the storage system. If the FLARE OE or PROM code running in the SPs does not meet the minimum revision, then before installing a disk, upgrade the FLARE OE or PROM code as explained in the EMC Navisphere Manager or Supervisor manual.

Table 3 lists the disks supported by the FC4500 and the FC5300 storage systems and the minimum FLARE OE and PROM code required to use each one. The FC4500 and FC5300 are the only storage systems that support the Access Logix™ software.

Table 4 lists the disks supported by the FC5600, FC5700, FC5603, and the FC5703 storage systems and the minimum FLARE OE and PROM code required to use each one.

Table 5 lists the disks supported by the FC5500, FC5400, FC5200, FC5210, and the FC5310 storage systems and the minimum FLARE OE and PROM code required to use each one.

Table 3 Minimum FLARE OE and PROM Code Revisions Required for an FC4500 or FC5300 Storage System

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions	
				With Access Logix	Without Access Logix
181 Gbytes	PN005047551[a]	7.2K	FC4500	6.32.14 2.09	5.32.14 2.09
			FC5300[b]	Not supported	Not supported
146 Gbytes	PN005048172 PN005048444 **PN005048565**	10K	FC4500	6.32.18 2.10	5.32.18 2.10
			FC5300	6.24.08 2.09	5.24.08 2.09
73 Gbytes	PN005046734 PN005047169 PN005048173 PN005048445 PN005048517 **PN005048567**	10K	FC4500	6.32.01 2.08	5.32.01 2.08
			FC5300	6.24.05 2.09	5.22.08 2.04
	PN005048176[a]	15K	FC4500	6.32.01 2.08	5.32.01 2.08
			FC5300	6.24.05 2.09	5.22.08 2.04
36 Gbytes	PN005045719	7.2K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09
	PN005045936 PN005046732 PN005047171	10K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09
	PN005047314[a] PN005048177[a]	15K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09

Table 3 Minimum FLARE OE and PROM Code Revisions Required for an FC4500 or FC5300 Storage System (continued)

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions	
				With Access Logix	Without Access Logix
18 Gbytes	PN005045268	7.2K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.01
	PN005045272 PN005045713 PN005045932 PN005046730	10K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09
	PN005046630[c] PN005047331	15K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09
9 Gbytes	PN005045266	7.2K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09
	PN005045270	10K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.01
	PN005045715 PN005045934	10K	FC4500	6.31.02 1.05	5.31.00 1.05
			FC5300	6.24.05 2.09	5.21.03 1.09

a.RAID configurations only; not supported in JBOD systems.

b.Access Logix for FC5300 is available from selected channels.

c.Only supported in iDAEs using power supplies with part number revisions at or above 005045508-04, and in DAEs using power supplies with part number revisions at or above 005042633-21 or 005045508-04.

Table 4 Minimum FLARE OE and PROM Code Revisions Required for the FC5600, FC5700, FC5603, and the FC5703 Storage System

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions	
				Partitioned	Non-Partitioned
73 Gbytes	PN005046734 PN005047169 PN005048173 PN005048517 PN005048567	10K	FC5703	5.11.59 3.23	Not supported
			FC5603		
			FC5700	5.11.09 3.23	Not supported
			FC5600		
	PN005048176[a]	15K	FC5703	5.11.59 3.23	Not supported
			FC5603		
			FC5700	5.11.09 3.23	Not supported
			FC5600		
36 Gbytes	PN005045719	7.2K	FC5703	5.11.52 3.18	4.12.62 2.14
			FC5603		
			FC5700	5.11.02 3.18	4.12.11 2.14
			FC5600		
	PN005045936 PN005046732 PN005047171	10K	FC5703	5.11.52 3.18	4.12.62 2.14
			FC5603		
			FC5700	5.11.02 3.18	4.12.11 2.14
			FC5600		
	PN005047314 PN005048177[a]	15K	FC5703	5.11.52 3.18	4.12.62 2.14
			FC5603		
			FC5700	5.11.02 3.18	4.12.11 2.14
			FC5600		

Table 4 **Minimum FLARE OE and PROM Code Revisions Required for the FC5600, FC5700, FC5603, and the FC5703 Storage System (continued)**

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions	
				Partitioned	Non-Partitioned
18 Gbytes	PN005045268	7.2K	FC5703	5.11.52 3.18	4.11.50 1.01
			FC5603		
			FC5700	5.11.02 3.18	4.11.00 1.01
			FC5600		
	PN005045272	10K	FC5703	5.11.52 3.18	4.11.50 1.01
			FC5603		
			FC5700	5.11.02 3.18	4.11.00 1.01
			FC5600		
	PN005045713 PN005045932 PN005046730	10K	FC5703	5.11.52 3.18	4.12.62 2.14
			FC5603		
			FC5700	5.11.02 3.18	4.12.11 2.14
			FC5600		
	PN005047331	15K	FC5703	5.11.52 3.18	4.12.62 2.14
			FC5603		
			FC5700	5.11.02 3.18	4.12.11 2.14
			FC5600		

Table 4 Minimum FLARE OE and PROM Code Revisions Required for the FC5600, FC5700, FC5603, and the FC5703 Storage System (continued)

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions	
				Partitioned	Non-Partitioned
9 Gbytes	PN005045266	7.2K	FC5703	5.11.52 3.18	4.11.50 1.01
			FC5603		
			FC5700	5.11.02 3.18	4.11.00 1.01
			FC5600		
	PN005045270	10K	FC5703	5.11.52 3.18	4.11.50 1.01
			FC5603		
			FC5700	5.11.02 3.18	4.11.00 1.01
			FC5600		
	PN005045715 PN005045934	10K	FC5703	5.11.52 3.18	4.12.62 2.14
			FC5603		
			FC5700	5.11.02 3.18	4.12.11 2.14
			FC5600		

a.RAID configurations only; not supported in JBOD systems.

Table 5 **Minimum FLARE OE and PROM Code Revisions Required for the FC5500, FC5400, FC5200, FC5210, and the FC5310 Storage System**

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions
73 Gbytes	PN005046734 PN005047169 PN005048173 PN005048517 PN005048567	10K	FC5500	2.04.40 4.26
			FC5400	
			FC5310	5.22.08 2.04
			FC5210	
			FC5200	
	PN005048176[a]	15K	FC5500	2.04.40 4.26
			FC5400	
			FC5310	5.22.08 2.04
			FC5210	
			FC5200	

Table 5 Minimum FLARE OE and PROM Code Revisions Required for the FC5500, FC5400, FC5200, FC5210, and the FC5310 Storage System (continued)

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions
36 Gbytes	PN005045719	7.2K	FC5500	2.04.25 4.26
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	
	PN005045936 PN005046732 PN005047171	10K	FC5500	2.04.25 4.26
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	
	PN005047314 PN005048177	15K	FC5500	2.04.25 4.26
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	

Table 5 **Minimum FLARE OE and PROM Code Revisions Required for the FC5500, FC5400, FC5200, FC5210, and the FC5310 Storage System (continued)**

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions
18 Gbytes	PN005045268	7.2K	FC5500	2.03.23 4.23
			FC5400	
			FC5310	5.21.03 1.01
			FC5210	
			FC5200	
	PN005045272	10K	FC5500	2.03.23 4.23
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	
	PN005045713 PN005045932 PN005046730	10K	FC5500	2.04.25 4.26
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	
	PN005047331	15K	FC5500	2.04.25 4.26
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	
	PN005046630[b]	15K	FC5500	Not supported
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	

Table 5 Minimum FLARE OE and PROM Code Revisions Required for the FC5500, FC5400, FC5200, FC5210, and the FC5310 Storage System (continued)

Disk Capacity	Part Number	Spindle Speed	Platform	Minimum FLARE OE and PROM Revisions
9 Gbytes	PN005045266	7.2K	FC5500	2.03.23 4.23
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	
	PN005045270	10K	FC5500	2.03.23 4.23
			FC5400	
			FC5310	5.21.03 1.01
			FC5210	
			FC5200	
	PN005045715 PN005045934	10K	FC5500	2.04.25 4.26
			FC5400	
			FC5310	5.21.03 1.09
			FC5210	
			FC5200	

a.RAID configurations only; not supported in JBOD systems.
b.Only supported in DAEs using power supplies with part number revisions at or above 005042633-21 or 005045508-04.