EMC® VNX™ Family
VNX5500™

Parts Location Guide

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Rev 01

June 26, 2012

This guide describes one of five models available in the VNX Series, the EMC® VNX5500™. This guide is a parts location guide and provides illustrations of the part number label locations of orderable parts for the EMC VNX5500 platform. Included in this parts location guide are also tables describing the individual VNX5500 parts or components and how these components are identified as either customer replaceable units (CRUs) or field replaceable units (FRUs).

This guide is available online at https://mydocs.emc.com/VNX/relatedDocs.jsp. From the **VNX Hardware Parts** heading, click on the desired guide. The guide will appear in your browser.

Topics include:

EMC²

IMPORTANT

The part numbers listed in this guide are for reference only. Part numbers can change over time, and this document does not keep pace with those changes. The EMC parts inventory system will automatically substitute for the latest part numbers as required.

Product software and hardware release revisions

As part of an effort to improve its product lines, EMC periodically releases revisions of its software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

Contact your EMC representative if a product does not function properly or does not function as described in this document.

Note: This document was accurate at publication time. New versions of this document might be released on the EMC online support website. Check the EMC online support website to ensure that you are using the latest version of this document.

Revision history

The following table presents the revision history of this document:

Revision	Date	Description
A01	June 26, 2012	First release of the *VNX5500 Parts Location Guide* with a document part number

Where to get help

EMC support, product, and licensing information can be obtained as follows:

Product information — For documentation, release notes, software updates, or information about EMC products, licensing, and service, go to the EMC online support website (registration required) at:

https://Support.EMC.com

Technical support — For technical support, go to EMC online support and select Support. On the Support page, you will see several options, including one to create a service request. Note that to open a service request, you must have a valid support agreement. Contact your EMC sales representative for details about obtaining a valid support agreement or with questions about your account.

How this document is organized

The major sections of this guide are listed in the following table.

Title	Description
"VNX5500 Block and File platform stackup" on page 4	Describes and shows the front and rear views of a typical VNX5500.
"VNX5500 components" on page 8	Provides a description of the components that comprise a VNX5500. Along with a description, illustrations of each component are also shown.
"Standby power supply (SPS)" on page 9	Describes and illustrates the part number label locations of the SPS.
"Disk processor enclosure (DPE)" on page 9	Describes and illustrates the part number label locations of the DPE and the components that comprise the DPE.
"Control Station" on page 16	Describes and illustrates the part number label locations of the CS.
"Data Mover enclosure" on page 17	Describes and illustrates the part number label locations of the DME and the management module.
"I/O modules" on page 22	Describes and illustrates the part number label locations of the I/O modules that comprise the DPE and the DME.
"Small form-factor pluggable (SFP)" on page 34	Describes and illustrates the part number label locations of the SFP transceiver modules used in the DME.
"DIMMs" on page 37	Describes and illustrates the part number label locations of the memory module or dual-inline memory modules (DIMMs) used in the DPE and the DME.
"Disk-array enclosure (DAE)" on page 41	Describes and illustrates the part number label locations of the three types of DAEs available for the VNX5500.

Related documentation

EMC provides the ability to create step-by-step planning, installation, and maintenance instructions tailored to your environment. To create VNX customized documentation, go to: https://mydocs.emc.com/VNX/.

To download a PDF copy of the desired publication, go to the following sections:

- For hardware-related books, go to the **About VNX** section, and then select **Learn about VNX**. Next, follow the steps in the wizard.
- For technical specifications, go to the **About VNX** section, and then select **View technical specifications**. Next, follow the steps in the wizard.
- For installation, adding, or replacing tasks, go to the **VNX tasks** section, and then select the appropriate heading. For example, to download a PDF copy of the *VNX5500 Block Installation Guide*, go to **Install VNX** and follow the steps in the wizard.

- For server-related tasks, go to the **Server tasks for the VNX5300, VNX5500, VNX5700, and VNX7500** section, and then select the appropriate heading. For example, to download a PDF copy of Adding or replacing hardware, go to **Add or replace hardware** and follow the steps in the wizard.

VNX5500 Block and File platform stackup

The Block and File VNX5500 platform comprises a 1U standby power supply (SPS), 3U disk processor enclosure (DPE), 1U Control Station and 2U Data Mover enclosures.

Note: Throughout this guide, figure references are placed in the **Part number label location** heading of tables because some of the tables have part number locations, as described in Table 4 on page 12 and some do not, as described in Table 1 on page 9, for example. This format is used throughout this guide.

Front view

On the front, viewing from top to bottom, a Block and File VNX5500 platform includes the following hardware:

- One to two 2U Data Mover enclosures with one, two, or three Data Movers
- One to two 1U Control Stations
- One 3U DPE chassis with either a:
  - 15 (3.5-inch) disk drives (hot-swappable)

  or,
  - 25 (2.5-inch) disk drives (hot-swappable)
- One dual 1U standby power supply (SPS)

Figure 1 on page 5 shows an example of the front of a Block and File VNX5500 with a 3U, 15 (3.5-inch) DPE.

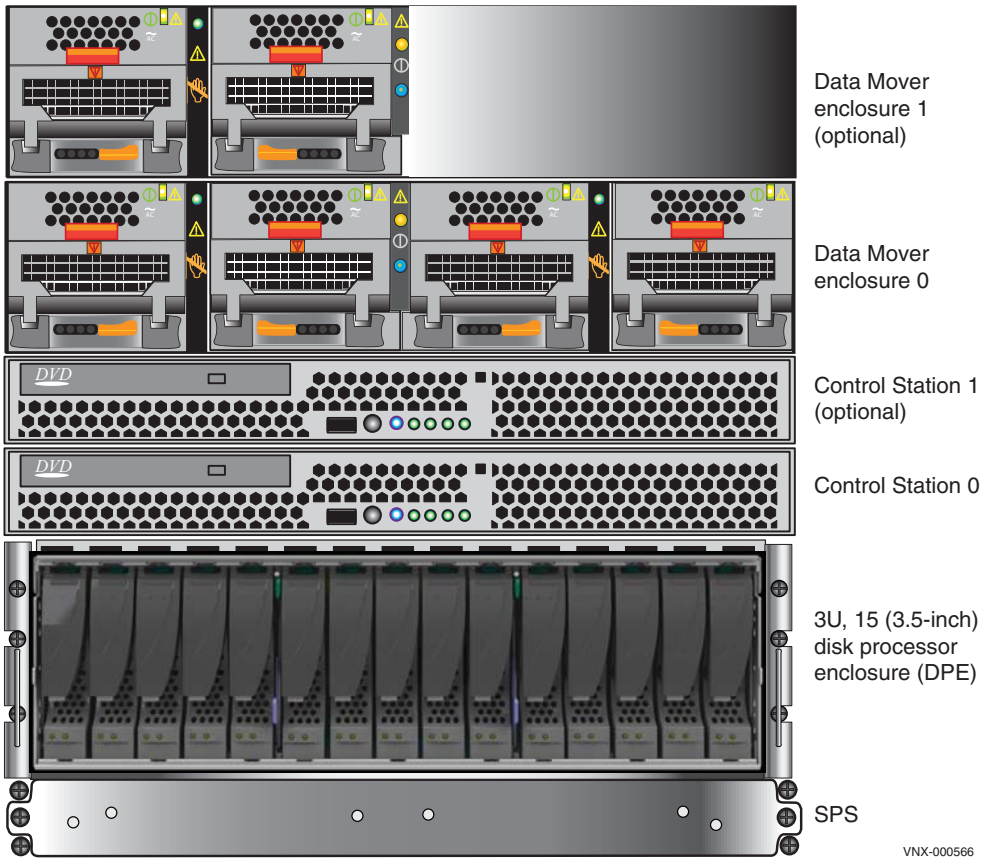

Figure 1 Example of the Block and File VNX5500 platform with a 3U, 15 (3.5-inch) DPE (front view)

Figure 2 shows an example of the front of a Block and File VNX5500 with a 3U, 25 (2.5-inch) DPE.

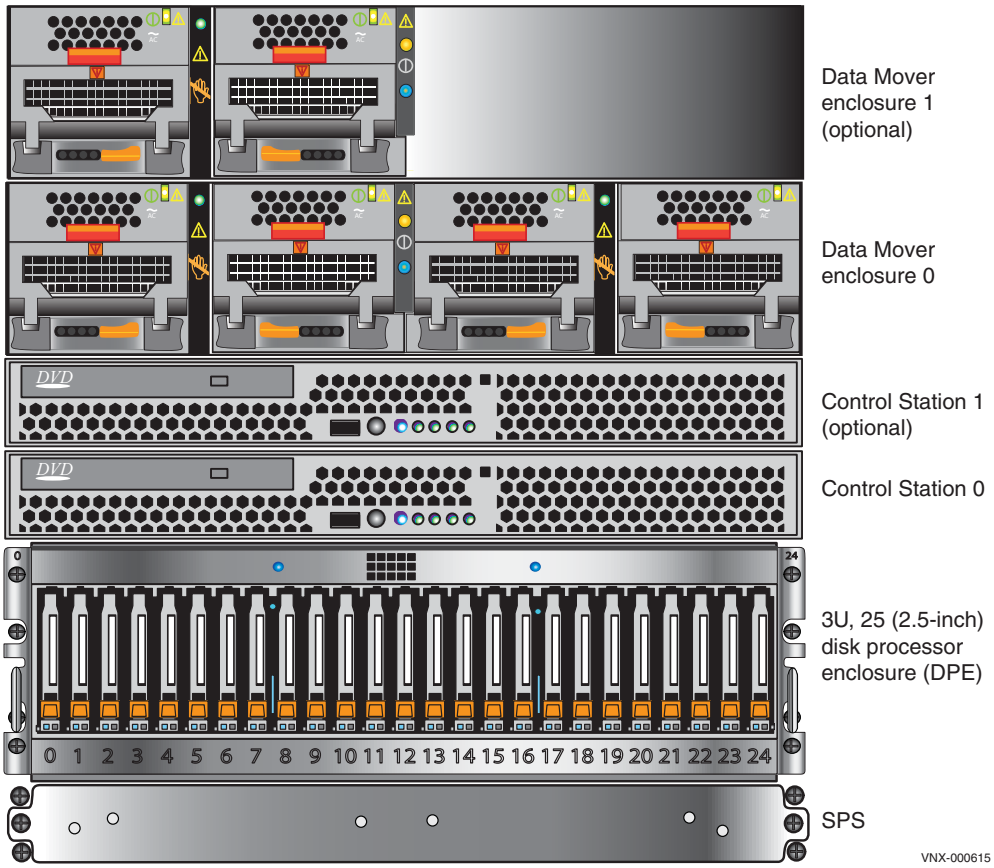

Figure 2 Example of the Block and File VNX5500 platform with a 3U, 25 (2.5-inch) DPE (front view)

Note: A basic Block and File VNX5500 platform has one to two 2U Data Mover enclosures, one to two 1U Control Stations, a 3U DPE, and a dual 1U SPS. In the following sections, the illustrations and corresponding tables describe these individual components. These descriptions are for illustrative purposes only.

Rear view

On the rear, viewing from top to bottom, a Block and File VNX5500 platform includes the following hardware components (Figure 3 on page 7):

- One to two 2U Data Mover enclosures with one, two, or three Data Movers
- One to two 1U Control Stations
- One 3U DPE with two storage processors (SP A and B); each SP has one CPU module and one power supply/cooling module
- One dual 1U SPS

Figure 3 shows an example of the rear of a Block and File VNX5500 platform with a dual SPS, a DPE, two Control Stations, two Data Mover enclosures with three Data Movers.

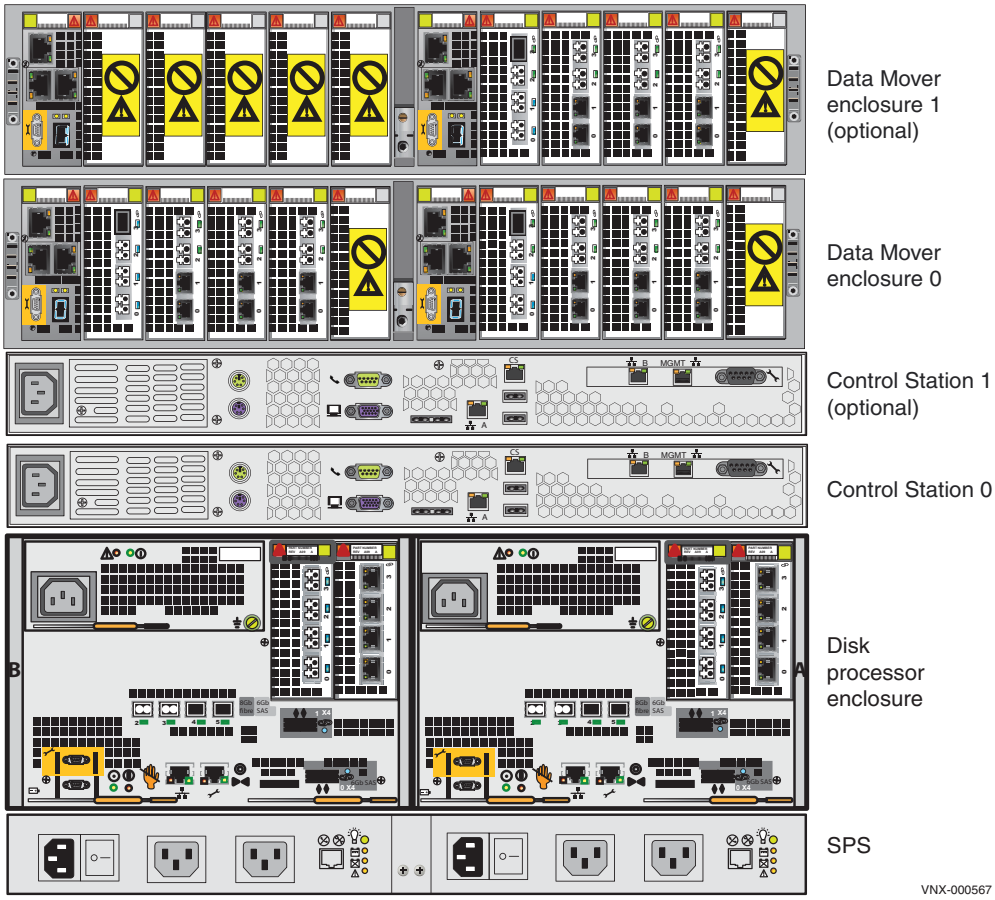

Figure 3 Example of Block and File VNX5500 platform (rear view)

VNX5500 components

Viewing from the bottom to the top, the Block and File VNX5500 platform includes several components. The following sections discuss each component in an illustration and table. The illustration will show or point out the location of the part number label on the component. The table will list the part number, describe the component or part, and tell you if it is a FRU or CRU or both.

- Dual 1U Standby power supply (SPS)
- 3U Disk processor enclosure (DPE)
  - 3U, 15 (3.5-inch) disk drive
  - 3U, 25 (2.5-inch) disk drive
  - Storage processor (SP) power supply/cooling module
  - Storage processor
- 1U Control Station (CS)
- 2U Data Mover enclosure (DME)
  - DM power supply/cooling module
  - DM CPU module
  - Management module
- I/O modules
  - SP I/O modules
  - DM I/O modules
- Small form-factor pluggable (SFP) transceiver modules
- Dual in-line memory modules (DIMMs)
  - SP DIMMs
  - DM DIMMs
- Disk-array enclosures (DAEs)
  - 3U, 15 (3.5-inch) disk drive
  - 2U, 25 (2.5-inch) disk drive
  - 4U, 60 (2.5- or 3.5-inch) disk drive

Standby power supply (SPS)

The Block and File VNX5500 platform can support up to two 1U standby power supplies or dual (SPSs) to provide temporary emergency power to the Block and File VNX5500 platform. Part numbers for the SPS are only on the rear of the product.

Figure 4 shows the part number location of a dual 1U SPS.

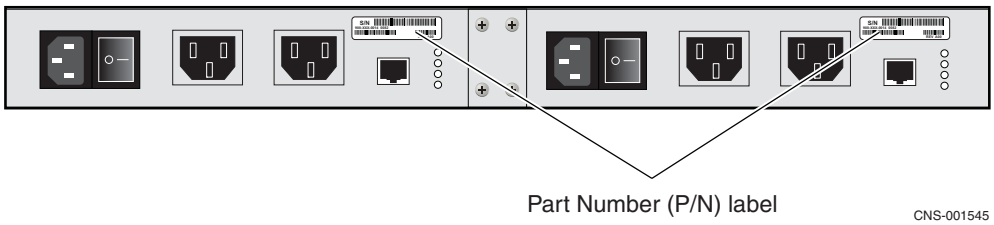

Figure 4 Example of a dual SPS

Table 1 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 1 SPS part number

Part number label location (Figure 4)	Part number	Description	FRU	CRU
	078-000-084 078-000-085	DC standby power supply (SPS) 1200W	✓	✓

Disk processor enclosure (DPE)

The 3U DPE has part numbers visible on both the front and rear.

Front view

The DPE has two types of disk drive carriers:

- 3U, 15 (3.5-inch) disk drives
- 3U, 25 (2.5-inch) disk drives

DPE 3U, 15 (3.5-inch) disk drive

Figure 5 on page 10 shows the front view of the DPE 3U, 15 (3.5-inch) disk drives.

Note: You can visually distinguish disk module kinds by their type, capacity, and speed labels, and by the design of the latch and handle on each disk module (Figure 5 on page 10).

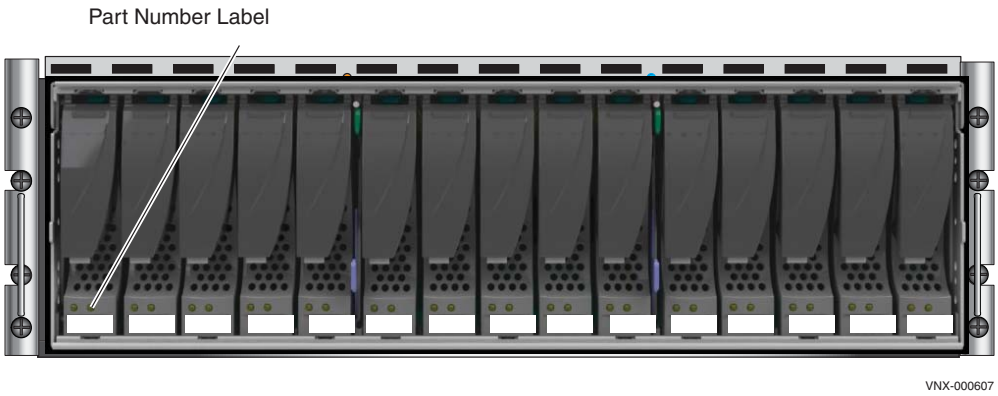

Figure 5 Example of the DPE 3U, 15 (3.5-inch) disk drive (front view)

Note: Figure 5 is for illustrative purposes only. The front of the disk modules may be a little different than the ones in your particular cabinet.

Table 2 is an example of the parts available for the 3U, 15 (3.5-inch) DPE and lists the part number label location, part number, description, and whether it is a FRU or CRU.

IMPORTANT

Due to the extensive variety of disk module types, Table 2 only lists two disk types. EMC recommends that you refer to the latest *EMC VNX5500, VNX5700, and VNX7500 Series Storage Systems Disk and OE Matrix Guide* to ensure that you have the correct part for your configuration.

Table 2 DPE 3U, 15 (3.5-inch) disk module part numbers

Part number label location (Figure 5)	Part number	Description (see note)	FRU	CRU
	005049175	300 GB, 6 Gb/s SAS, 10k rpm	✓	✓
	005049249	600 GB, 6 Gb/s SAS, 15k rpm	✓	✓
Note: The description field describes the disk module type, capacity, drive type, and spindle speed (rpm).				

DPE 3U, 25 (2.5-inch) disk drive

Figure 6 shows the front view of the DPE 3U, 25 (2.5-inch) disk drives.

Note: You can visually distinguish disk module kinds by their type, capacity, and speed labels, and by the design of the latch and handle on each disk module (Figure 6).

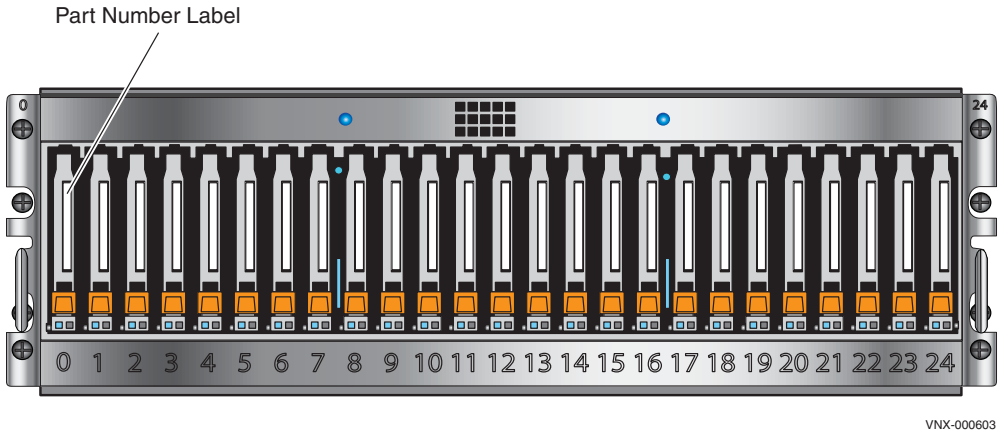

Figure 6 Example of the DPE 3U, 25 (2.5-inch) disk drive (front view)

Note: Figure 6 is for illustrative purposes only. The front of the disk modules may be a little different than the ones in your particular cabinet.

Table 3 is an example of the parts available for the 3U, 25 (2.5-inch) DPE and lists the part number label location, part number, description, and whether it is a FRU or CRU.

IMPORTANT

Due to the extensive variety of disk module types, Table 3 only lists two disk types. EMC recommends that you refer to the latest *EMC VNX5500, VNX5700, and VNX7500 Series Storage Systems Disk and OE Matrix Guide* to ensure that you have the correct part for your configuration.

Table 3 DPE 3U, 25 (2.5-inch) disk module part numbers

Part number label location (Figure 6)	Part number	Description (see note)	FRU	CRU
	005048946	300 GB, 6 Gb/s SAS, 10k rpm	✓	✓
	005049250	600 GB, 6 Gb/s SAS, 10k rpm	✓	✓
Note: The description field describes the disk module type, capacity, drive type, and spindle speed (rpm).				

Rear view

Figure 7 shows a 3U disk processor enclosure (DPE) with two storage processors (SP A and B).

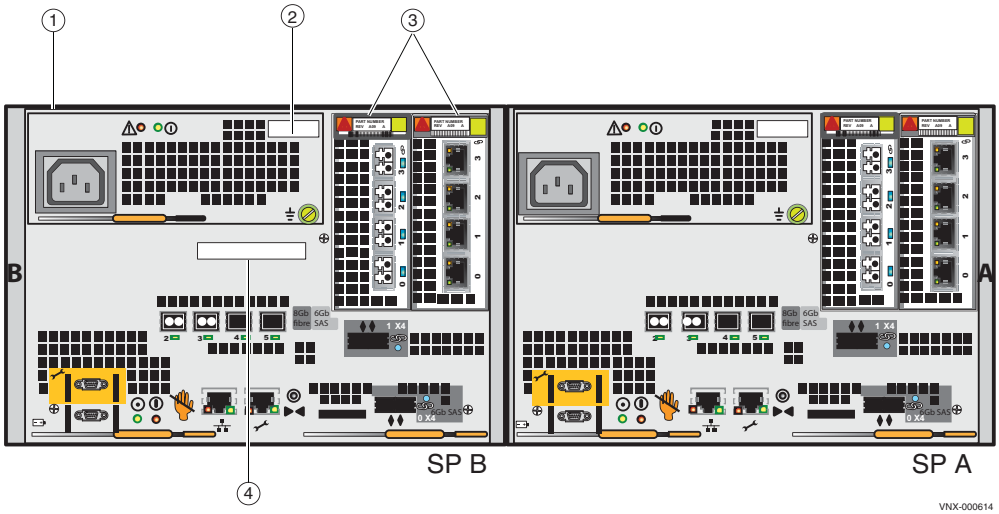

Figure 7 Example of a 3U DPE chassis with two SPs (A and B) and two I/O modules

Table 4 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 4 DPE chassis, SP, management module, and I/O module part numbers

Part number label location (Figure 7)	Part number	Description	FRU	CRU
1	100-562-503 100-563-138	3U, 15 disk drive chassis and midplane 3U, 25 disk drive chassis and midplane	✓ ✓	✓ ✓
2	071-000-529	1U AC/DC, 875W, dual power supply (for closer view, see Figure 8 on page 13)	✓	✓
3	303-092-102B	Four-port 8-Gb/s FC (2/4/8 Gb/s)	✓	✓
	303-141-100A[1]	Four-port 1-Gb/s copper iSCSI I/O module	✓	✓
	303-081-105B[2]	Two-port 10-Gb/s optical with iSCSI protocol I/O module	✓	✓
	303-142-100A[3]	Two-port 10-Gb/s FCoE I/O module	✓	✓
	303-164-104D-01[4]	Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP	✓	✓

Table 4 DPE chassis, SP, management module, and I/O module part numbers (continued)

Part number label location (Figure 7)	Part number	Description	FRU	CRU
	100-562-718	I/O module filler includes **Do Not Remove** label **Note:** This filler panel is only used when the SP I/O module slots are empty.		
4	110-140-402B	SP 2.0-GHz CPU, with 12 GB of memory (for a closer view, see Figure 9 on page 14)		
	110-140-420B	SP 2.0-GHz CPU, without memory (for a closer view, see Figure 9 on page 14)	✓	

1. This part is not shown in the example DPE illustration in Figure 7 on page 12. For a closer view, go to Figure 21 on page 25.
2. This part is not shown in the example DPE illustration in Figure 7 on page 12. For a closer view, go to Figure 22 on page 26.
3. This part is not shown in the example DPE illustration in Figure 7 on page 12. For a closer view, go to Figure 23 on page 27.
4. This part is not shown in the example DPE illustration in Figure 7 on page 12. For a closer view, go to Figure 28 on page 32.

SP power supply/cooling module

Figure 8 shows the part number label location on the power supply/cooling module used in the Block and File VNX5500 platform SPs (A and B).

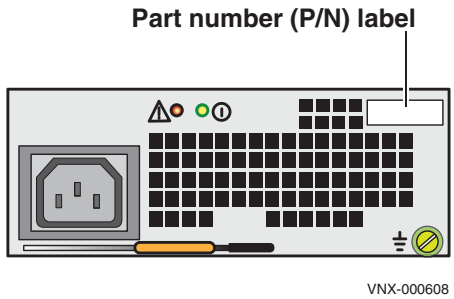

Figure 8 Example of a power supply module/cooling

Table 5 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 5 Power supply module/cooling fan part number

Part number label location (Figure 8)	Part number	Description	FRU	CRU
	071-000-529	1U AC/DC, 875W, dual power supply	✓	

SP

Figure 9 shows the part number label location on the SP.

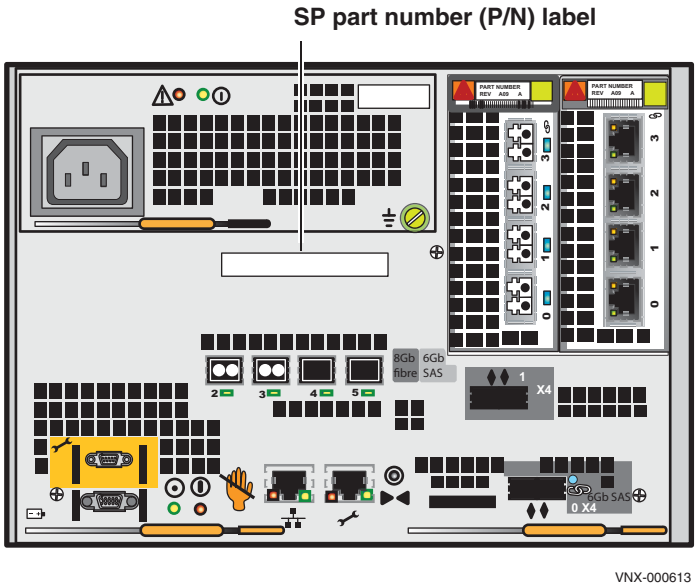

Figure 9 Example of the SP

Table 6 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 6 SP CPU part number

Part number label location (Figure 9)	Part number	Description	FRU	CRU
	110-140-402B	SP 2.0-GHz CPU with 12 GB of memory		
	110-140-420B	SP 2.0 GHz CPU without memory	✓	

To access the SP CPU, you must first remove the SP from the 3U DPE (Figure 10 on page 15). Then, you must remove the power supply/cooling fan modules (Figure 11 on page 15).

Figure 10 shows the SP CPU module partially removed from the front of the DPE.

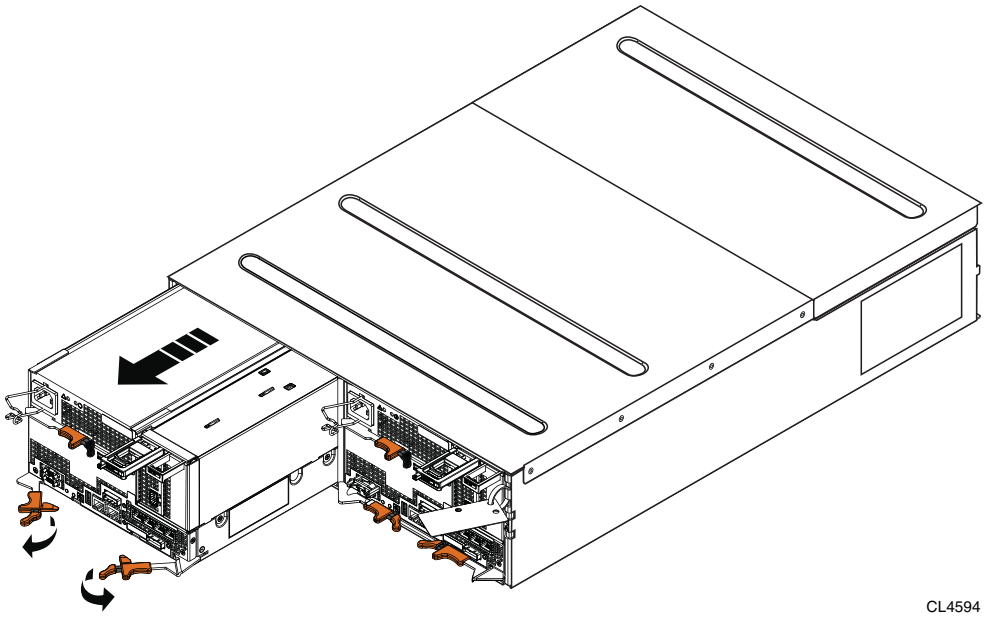

Figure 10 Example of removing the SP from the 3U DPE

Figure 11 shows the power supply/cooling module being removed from the SP.

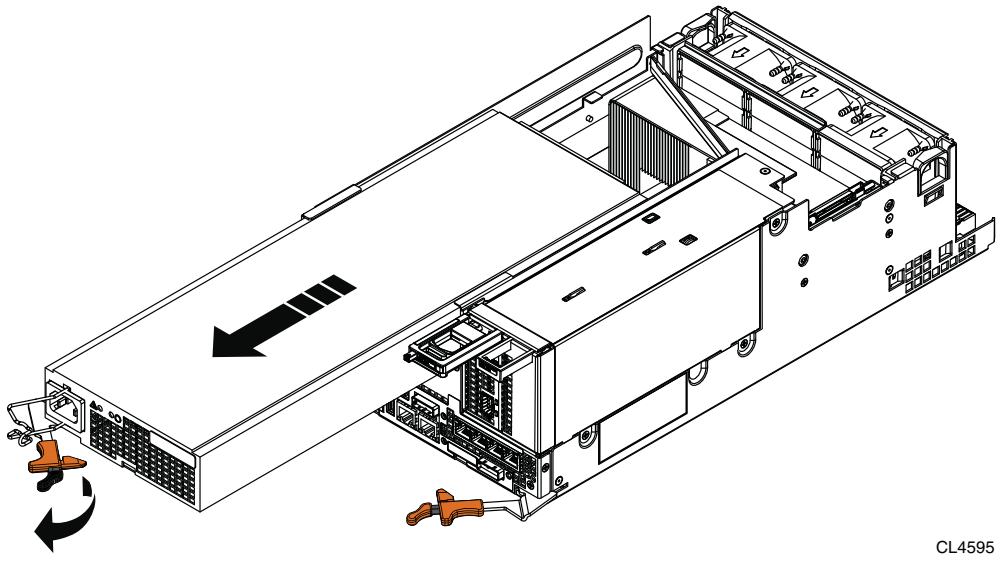

Figure 11 Example of removing the SP power supply/cooling module from the SP

The part number labels for the SP and the SP CPU module in Figure 12 are listed in Table 6 on page 14.

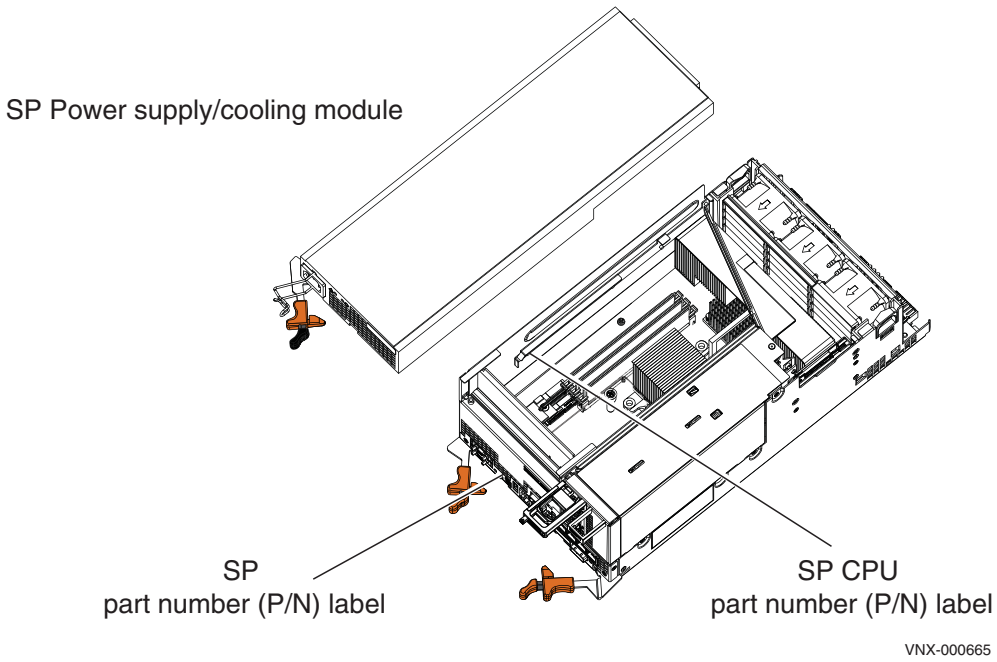

Figure 12 Example of the SP CPU with power supply/cooling module set aside

The SP CPU part number label is located on the motherboard of the SP CPU (Figure 12).

Control Station

Figure 13 shows the front view of the 1U Control Station.

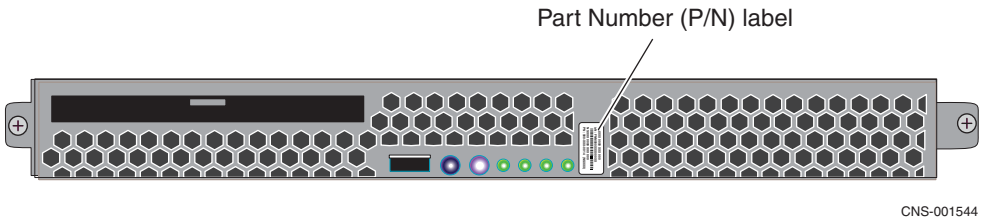

Figure 13 Example of the Control Station (front view)

Table 7 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 7 Control Station front view part number

Part number label location (Figure 13)	Part number	Description	FRU	CRU
	100-520-665	Control Station (CS) 1U	✓	

Data Mover enclosure

Figure 14 shows the front view of the 2U Data Mover enclosure.

Front view

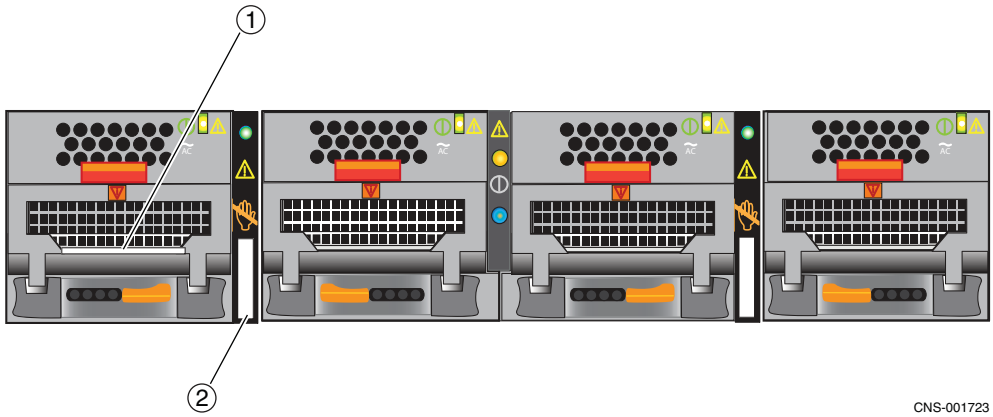

Figure 14 Data Mover enclosure (front view)

Table 8 provides the part number label location, part number, description, and whether it is a FRU or CRU.

Table 8 Data Mover enclosure front view part numbers

Part number label location (Figure 14)	Part number	Description	FRU	CRU
1	071-000-543[1]	Data Mover enclosure 400 W, 2U, single 12 V output power supply/cooling fan module (for a closer view, see Figure 15 on page 18)	✓	✓
2	110-113-103B	Data Mover 2.13-GHz CPU module with 12 GB of memory (for a closer view, see Figure 17 on page 19)		
	303-113-101B	Data Mover 2.13-GHz CPU module without memory (for a closer view, see Figure 17 on page 19)	✓	

1. The part number label on the power supply/cooling fan module is located on the lower half of the pull handle.

Data Mover power supply/cooling fan module

Figure 15 shows the front view of two power supply/cooling fan modules used in the 2U Data Mover enclosure.

Note: The part number label is located on the lower half of the pull handle.

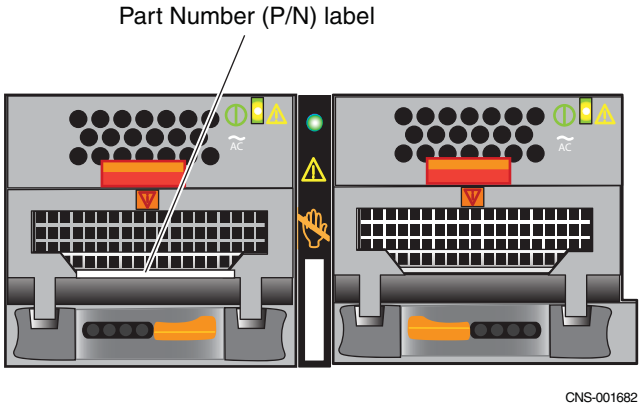

Figure 15 Example of a power supply module/cooling fan (front view)

Table 9 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 9 Power supply module/cooling fan part number

Part number label location (Figure 15)	Part number	Description	FRU	CRU
	071-000-543	Data Mover 400 W, 2U, single 12 V output power supply/cooling fan module	✓	✓

Data Mover CPU module

To access the Data Mover CPU, you must first remove the power supply/cooling fan modules, as shown in Figure 16.

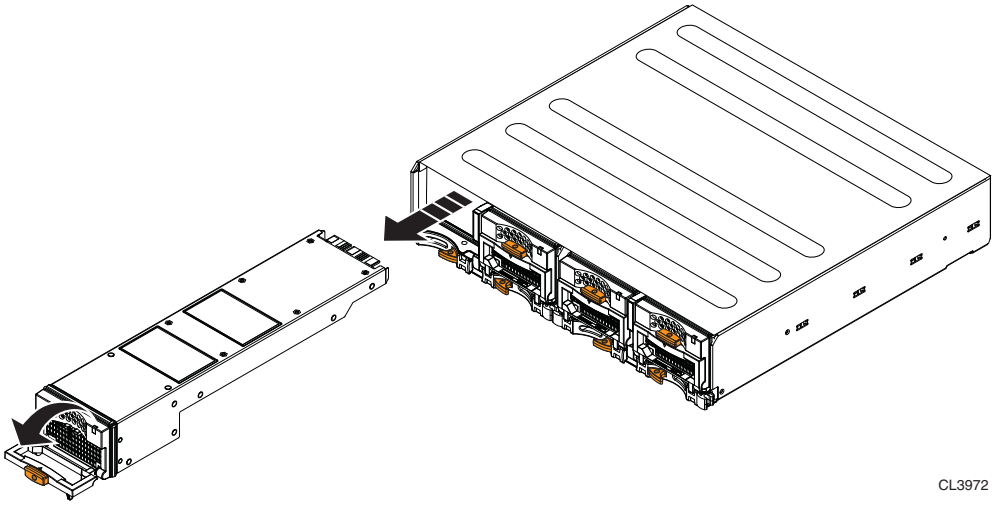

Figure 16 Example of removing the Data Mover power supply/cooling fan module from the Data Mover enclosure

Figure 17 shows the Data Mover power supply/cooling (fan) module removed from the front of the 2U Data Mover enclosure.

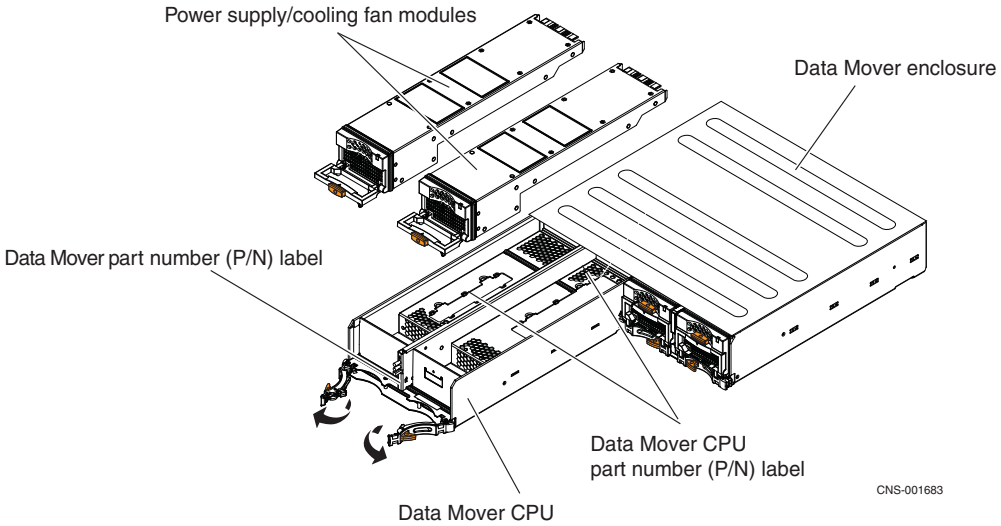

Figure 17 Example of the Data Mover CPU being removed from a Data Mover enclosure

Figure 17 shows the Data Mover CPU partially removed with the two power supply/cooling (fan) modules set aside. The part number label for the Data Mover and the CPU module in Figure 17 are listed in Table 10 on page 20.

Note: The DM CPU part numbers are located on the DM CPU sheet metal. You must remove the DM from the DM enclosure (Figure 17 on page 19). You can also find the DM CPU part number label located inside the DM CPU by looking through the blue plastic DIMM cover. The part number label is located on the motherboard.

Table 10 Data Mover CPU part number

Part number label location	Part number	Description	FRU	CRU
Figure 14 on page 17	110-113-103B	Data Mover 2.13-GHz CPU module with 12 GB of memory		
Figure 17 on page 19	303-113-101B	Data Mover 2.13-GHz CPU without memory	✓	

Rear view

Figure 18 shows the rear view of a 2U Data Mover enclosure.

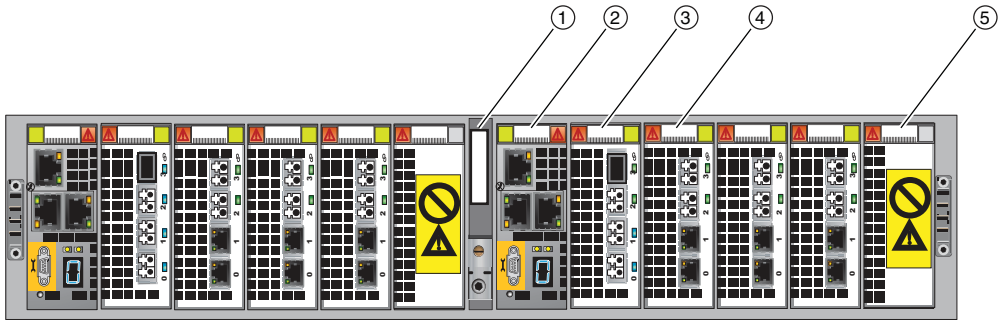

Figure 18 Data Mover enclosure rear view

Table 11 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 11 Data Mover enclosure part numbers rear view

Part number label location (Figure 18)	Part number	Description	FRU	CRU
1	100-562-178	Data Mover enclosure (empty)	✓	
2	110-130-100B	Management module (for a closer view, see Figure 19 on page 22)	✓	✓
3	303-092-102B	Four-port 8-Gb/s Fibre Channel (FC) I/O module (for a closer view, see Figure 20 on page 24)	✓	✓

Table 11 Data Mover enclosure part numbers rear view (continued)

Part number label location (Figure 18)	Part number	Description	FRU	CRU
4	303-122-100A	Two-port 1-Gb/s copper plus two-port 1G/bs optical I/O module (for a closer view, see Figure 24 on page 28)	✓	✓
5	100-562-718 100-563-228	I/O module filler includes **Do Not Remove** label **Note:** This filler panel is only used when the Data Mover I/O module slots are empty.	✓	✓
	303-121-100A[1]	Four-port 10/100/1000 Base-T copper I/O module (for a closer view, see Figure 21 on page 25)	✓	✓
	303-081-103B[2]	Two-port 10-Gb/s Ethernet Optical I/O module (for a closer view, see Figure 25 on page 29)	✓	✓
	303-195-100B[3]	Two-port 10-Gb/s Ethernet optical or Twinax I/O module (for a closer view, see Figure 29 on page 33)	✓	✓
	303-164-104D-01[4]	Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP (for a closer view, see Figure 28 on page 32)	✓	✓

1. This part is not shown in the example Data Mover enclosure illustration in Figure 18 on page 20. For a closer view, go to Figure 21 on page 25.
2. This part is not shown in the example Data Mover enclosure illustration in Figure 18 on page 20. For a closer view, go to Figure 22 on page 26.
3. This part is not shown in the example Data Mover enclosure illustration in Figure 18 on page 20. For a closer view, go to Figure 29 on page 33.
4. This part is not shown in the example Data Mover enclosure illustration in Figure 18 on page 20. For a closer view, go to Figure 28 on page 32.

Management module

Figure 19 shows the part number label location on the rear view of the management module used in the 2U Data Mover enclosure.

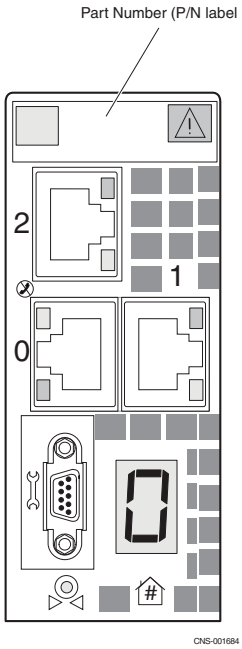

Figure 19 Example of the Data Mover enclosure management module

Table 12 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 12 Data Mover enclosure management module part number

Part number label location (Figure 19 on page 22)	Part number	Description	FRU	CRU
	110-130-100B	Management module	✓	✓

I/O modules

In the Block and File VNX5500 platform, I/O modules are used in the disk processor enclosure (DPE) storage processors (SP A and B) and in the Data Movers of the Data Mover enclosure.

Each I/O module is identified by a part number, type of ports (copper or optical), latch handle label, and color label on top of the latch handle. For ease of identification, Table 13 on page 23 describes each I/O module type in the VNX5500.

Table 13 I/O module types for VNX5500

I/O module	Part number	Ports	Latch handle label	Latch handle label color
Four-port 8-Gb/s FC	303-092-102B	Optical	8 Gb Fibre	Silver
Four-port 1-Gb/s	303-141-100A	Copper	1 GbE iSCSI/TOE	Orange
Two-port 10-Gb/s (w/iSCSI)	303-081-105B	Optical	10 GbE	Orange
Two-port 10-Gb/s FCoE	303-142-100A	Optical	10 GbE/FCoE	Green
Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP	303-164-104D-01	Copper	10 GbE Base-T	Orange
Two-port 1-Gb/s copper plus two-port 1-Gb/s optical	303-122-100A or B	Copper plus optical	1 GbE	Brown
Two-port 10-Gb/s	303-081-103B or C	Optical	10 GbE iSCSI or 10 GbE v2	Orange
Two-port 10-Gb/s	303-195-100C-01	Optical	10 GbE v3	Orange
Four-port 10/100/1000 Ethernet	303-121-100A	Copper	1 GbE	Brown
Four-port 6-Gb/s SAS	303-163-100C-01	SAS	6 Gb SAS v1	Black

SP

Six types of I/O modules are supported in the SP:

- "Four-port 8-Gb/s Fibre Channel (FC) I/O module" on page 24
- "Four-port 1-Gb/s copper iSCSI I/O module" on page 25
- "Two-port 10-Gb/s optical (w/iSCSI protocol) I/O module" on page 26
- "Two-port 10-Gb/s Fibre Channel over Ethernet (FCoE) I/O module" on page 27
- "Four-port 6-Gb SAS I/O module" on page 31
- "Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module" on page 32

Data Mover

Seven types of I/O modules are supported in the Data Mover:

- "Four-port 8-Gb/s Fibre Channel (FC) I/O module" on page 24
- "Two-port 10-Gb/s Fibre Channel over Ethernet (FCoE) I/O module" on page 27
- "Two-port 1-Gb/s copper plus two-port 1-Gb/s optical I/O module" on page 28
- "Two-port 10-GbE optical I/O module" on page 29
- "Four-port 1-Gb/s copper I/O module" on page 30
- "Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module" on page 32
- "Two-port 10-Gb/s optical I/O module" on page 33

The following sections describe these I/O modules and the part numbers. Refer to these when determining which part number you need for either the SP or Data Mover that the I/O module goes in.

Four-port 8-Gb/s Fibre Channel (FC) I/O module

Figure 20 shows the part number label location on the four-port 8-Gb/s Fibre Channel (FC) I/O module (labeled **8 Gb Fibre** on the latch handle).

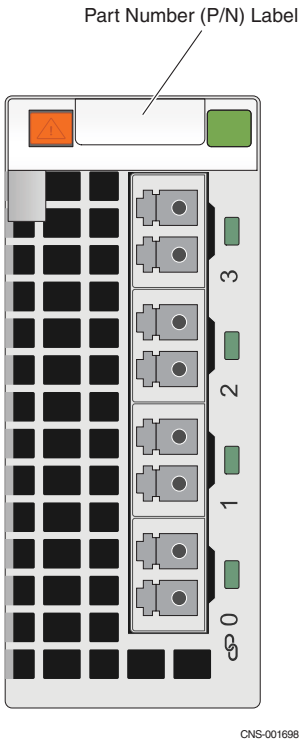

Figure 20 Example of the four-port 8-Gb/s FC I/O module

Table 14 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 14 Four-port 8-Gb/s FC I/O module part numbers

Part number label location (Figure 20)	Part number	Description	FRU	CRU
	303-092-102B	Four-port 8-Gb/s FC (2/4/8 Gb/s)	✓	✓

Four-port 1-Gb/s copper iSCSI I/O module

Figure 21 shows the part number label location on the four-port 1-Gb/s copper iSCSI I/O module (labeled **1 GbE iSCSI/TOE** on the latch handle).

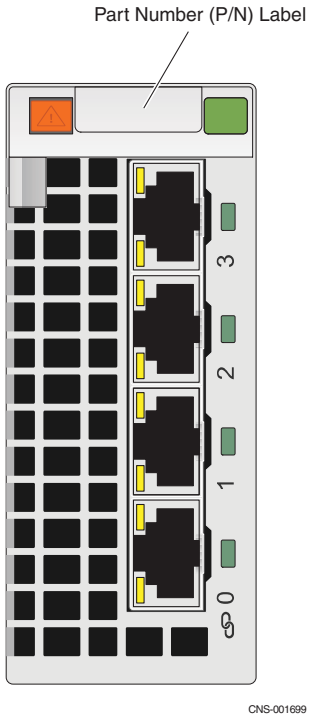

Figure 21 Example of the four-port copper iSCSI I/O module

Table 15 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 15 Four-port copper I/O module part number

Part number label location (Figure 21)	Part number	Description	FRU	CRU
	303-141-100A	Four 1-Gb/s copper iSCSI ports	✓	✓

Two-port 10-Gb/s optical (w/iSCSI protocol) I/O module

Figure 22 shows the part number label location on the two-port 10-Gb/s optical (w/iSCSI protocol) I/O module (labeled **10 GbE** on the latch handle).

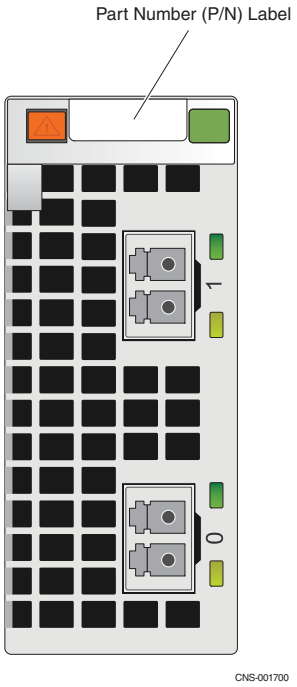

Figure 22 Example of the two-port 10-Gb/s optical (w/iSCSI protocol) I/O module

Table 16 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 16 Two-port 10-Gb-s optical (w/iSCSI protocol) I/O module part number

Part number label location (Figure 22)	Part number	Description	FRU	CRU
	303-081-105B	Two-port 10-Gb/s optical (w/iSCSI protocol) I/O module	✓	✓

Two-port 10-Gb/s Fibre Channel over Ethernet (FCoE) I/O module

Figure 23 shows the part number label location on the two-port 10-Gb/s Fibre Channel over Ethernet (FCoE) I/O module (labeled **10 GbE/FCoE** on the latch handle).

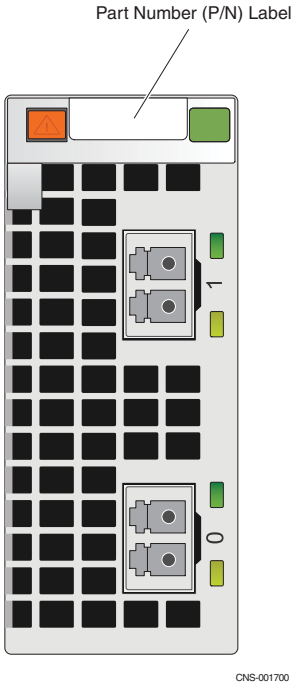

Figure 23 Example of the two-port 10-Gb/s FCoE I/O module with SFPs[1]

Note: The 10-Gb/s FCoE I/O module requires VNX OE for File version 7.0.35.3 or later.

Table 17 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 17 Two-port 10-Gb/s FCoE I/O Module part numbers

Part number label location (Figure 23)	Part number	Description	FRU	CRU
	303-142-100A	Two-port 10-Gb/s FCoE	✓	✓

1. The FCoE I/O module can also use twinaxial (Twinax) cables. Twinax is a type of cable similar to coax, but with two inner conductors instead of one. These cables will be supplied in lieu of SFPs when so ordered.

Two-port 1-Gb/s copper plus two-port 1-Gb/s optical I/O module

Figure 24 shows the part number label location on the two-port 1-Gb/s copper plus two-port 1-Gb/s optical I/O module (labeled **1 GbE** on the latch handle).

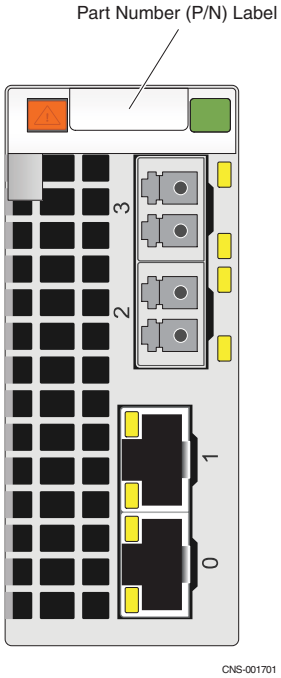

Figure 24 Example of the two-port 1-Gb/s copper plus two-port 1-Gb/s optical I/O module

Table 18 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 18 Two-port 1-Gb/s copper plus two-port 1-Gb/s optical I/O module part number

Part number label location (Figure 24)	Part number	Description	FRU	CRU
	303-122-100A	Two-port 1-Gb/s copper plus two-port 1-Gb/s optical	✓	✓

Two-port 10-GbE optical I/O module

Figure 25 shows the part number label location on the two-port 10-Gb/s optical I/O module (labeled **10 GbE iSCSI** or **10 GbE v2** on the latch handle).

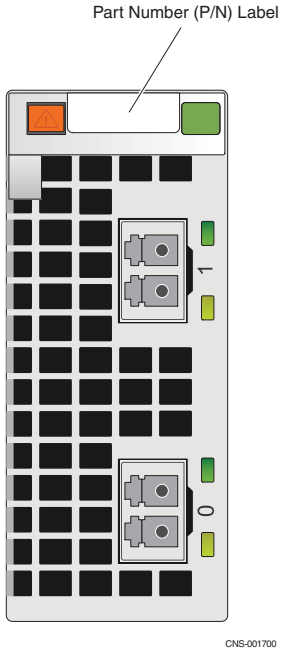

Figure 25 Example of the two-port optical I/O module

Table 19 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 19 Two-port optical I/O module part number

Part number label location (Figure 25)	Part number	Description	FRU	CRU
	303-081-103B or C	Two-port 10-Gb/s optical I/O module	✓	✓

Four-port 1-Gb/s copper I/O module

Figure 26 shows the part number label location on the four-port 1-Gb/s copper I/O module (labeled **1 GbE** on the latch handle).

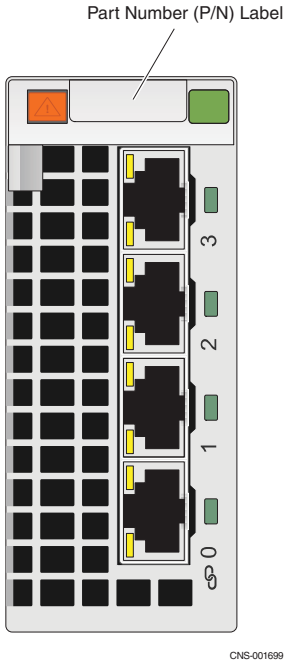

Figure 26 Example of the four-port 1-Gb/s copper I/O module

Table 20 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 20 Four-port 1-Gb/s copper I/O module part number

Part number label location (Figure 26)	Part number	Description	FRU	CRU
	303-121-100A	Four 1-Gb/s copper ports	✓	✓

Four-port 6-Gb SAS I/O module

Figure 27 shows the part number label location on the four-port 6-Gb/s SAS I/O module (labeled **6 Gb SAS v1** on the latch handle).

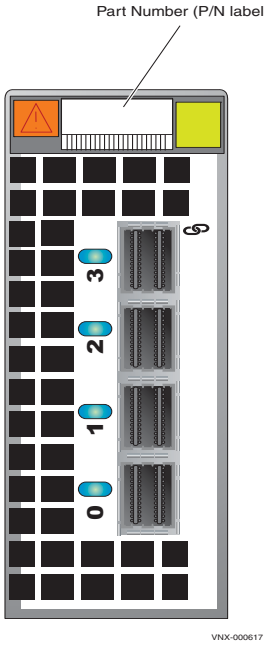

Figure 27 Example of the four-port 6-Gb/s SAS I/O module

Table 21 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 21 Four-port 6-Gb/s SAS I/O Module part numbers

Part number label location (Figure 27)	Part number	Description	FRU	CRU
	303-163-100B	Four-port 6-Gb/s SAS	✓	✓

Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module

Figure 25 shows the part number label location on the two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module (labeled **10 GbE BASE-T** on the latch handle).

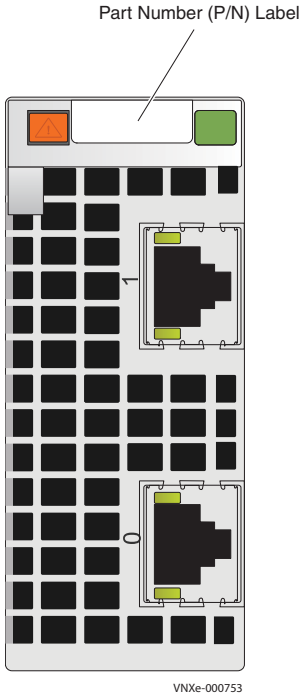

Figure 28 Example of the two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module

Note: The two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module requires VNX OE for File 7.1 or later.

Table 19 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 22 Two-port 10-Gb/s RJ-45 Base-T iSCSI IP I/O module part number

Part number label location (Figure 25)	Part number	Description	FRU	CRU
	303-164-104D-01	Two-port 10-Gb/s RJ-45 Base-T iSCSI/IP I/O module	✓	✓

Two-port 10-Gb/s optical I/O module

Figure 25 shows the part number label location on the two-port 10-Gb/s optical or active Twinax I/O module (labeled **10 GbE v3** on the latch handle).

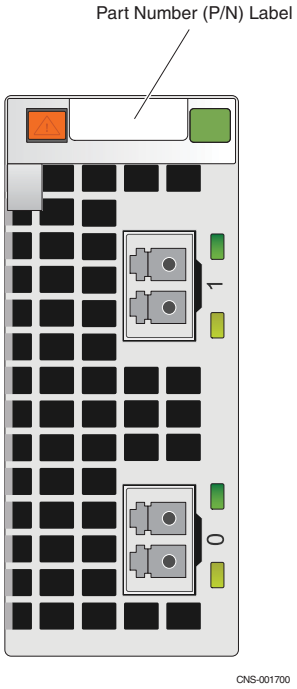

Figure 29 Example of the two-port 10-Gb/s optical I/O module

Note: This two-port 10-Gb/s optical I/O module requires VNX OE for File version 7.1 or later.

Table 19 shows the part number label location, part number, description, and whether it is a FRU or CRU.

Table 23 Two-port 10-Gb/s optical I/O module part number

Part number label location (Figure 25)	Part number	Description	FRU	CRU
	303-195-100C-01	Two-port 10-Gb/s Optical I/O module	✓	✓

Small form-factor pluggable (SFP)

Small form-factor (SFP) modules are compact, hot-pluggable transceivers inserted into the SFP or SFP+ slot of an I/O module in a Block and File VNX5500 platform. This transceiver module provides uplink optical interfaces, laser send or transmit (TX) and laser receive (RX). An SFP or SFP+ transceiver module is hot-swappable. You can replace an SFP or SFP+ from the rear of the SP or Data Mover while the platform is powered up.

Note: The SFP or SFP+ part number is visible only when the SFP or SFP+ is removed from an I/O module port.

Laser safety guidelines

Before you install SFP or SFP+ modules in a Block and File VNX5500 platform or attempt to operate or service a Block and File VNX5500 platform equipped with SFP modules, you must read and observe the important safety information in this section of the document.

The Block and File VNX5500 platform SFP or SFP+ modules are equipped with a Class 1 Laser, which emits invisible radiation. Do not stare into open optical ports. The following warnings apply to the all SFP and SFP+ modules.

⚠WARNING

Class 1 laser product.

Because invisible laser radiation can be emitted from the aperture of the port when no fiber is connected, avoid exposure to laser radiation and do not stare into open apertures.

Laser radiation is present when the system is open and interlocks bypassed.

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Guidelines for handling SFP and SFP+ modules

Use these guidelines when you work with SFP and SFP+ modules:

- SFP and SFP+ modules are static sensitive. Wear an ESD-preventive wrist strap that is connected to the rack in order to prevent ESD damage.
- SFP and SFP+ modules are dust sensitive. Always store the devices with dust plugs installed in the optical bores.
- Do not remove and insert an SFP or SFP+ module more often than is necessary. Repeated removals and insertions of an SFP or SFP+ module can shorten its useful life.

Types of SFP and SFP+ module latches

SFP transceiver modules can have three types of latching devices to secure the SFP or SFP+ transceiver in a port socket.

- SFP or SFP+ transceiver with a Mylar tab latch.
- SFP or SFP+ transceiver with an actuator button latch.
- SFP or SFP + transceiver that has a bale-clasp latch.

I/O modules using SFP or SFP+ transceiver modules

In the VNX5500 platform, the SFP or SFP+ transceiver modules are located in the ports of the following I/O modules:

- Four-port 8-Gb/s Fibre Channel (FC) for 2, 4, and 8 Gb/s speed
- Two-port 1-Gb/s copper plus two-port 1-Gb/s optical
- Two-port 10-Gb/s optical (labeled **10 GbE iSCSI** or **10 GbE v2**)
- Two-port 10-Gb/s optical[2] (labeled **10 GbE v3**)
- Two-port 10-Gb/s Fibre Channel over Ethernet (FCoE)[3]

Types of SFP and SFP+ modules

Three types of SFP or SFP+ modules are used in the I/O modules of the Block and File VNX5500 platform. Figure 30 on page 36 shows an example of an SFP or SFP+ with a part number label.

IMPORTANT

Ensure that you correctly match the SFP or SFP+ module type with the I/O module type.

2. The 10 Gb/s module (labeled **10 GbE v3**) can also use active twinaxial (Twinax) cables. Twinax is a type of cable similar to coax, but with two inner conductors instead of one. These cables will be supplied in lieu of SFPs when so ordered.
3. The FCoE I/O module can also use active twinaxial (Twinax) cables. Twinax is a type of cable similar to coax, but with two inner conductors instead of one. These cables will be supplied in lieu of SFPs when so ordered.

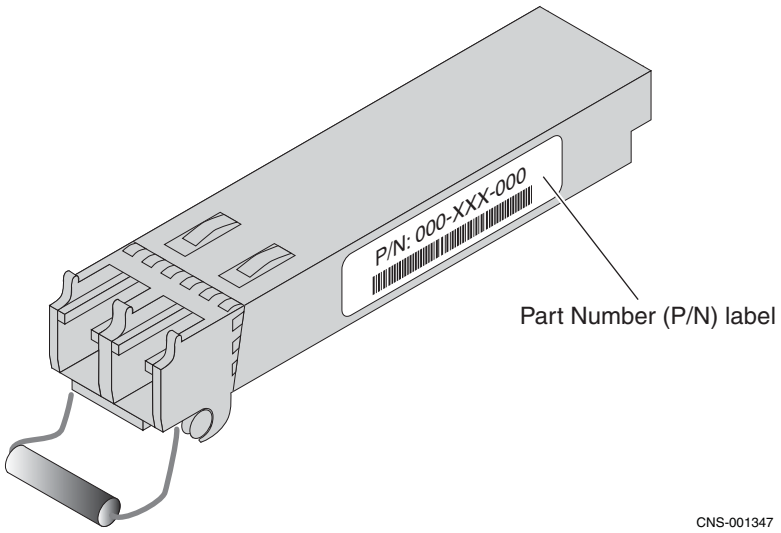

Figure 30 Example of an SFP

Table 24 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 24 SFP and SFP+ module part numbers

Part number label location (Figure 30)	Part number	Description	FRU	CRU
	019-078-032 (SFP)	Used in the two-port 1-Gb/s copper plus two-port 1-Gb/s Optical I/O module (see note)	✓	✓
	019-078-041 (SFP+)	Used in the two-port 10-Gb/s FCoE I/O module	✓	✓
		Used in the two-port 10-Gb/s optical I/O module (latch label **10 GbE iSCSI** or **v2**)	✓	✓
		Used in the two-port 10-Gb/s optical I/O module (latch label **10-GbE v3**)	✓	✓
	019-078-042 (SFP+)	Used in the four-port 8-Gb/s Fibre Channel (FC) I/O module	✓	✓
Note: Only the two optical ports (physically labeled on this I/O module as 2 and 3, but logically fge-*x*-2 and fge-*x*-3) use this type of SFP.				

DIMMs

The Storage Processor (SP) requires 12 GB per SP or 24 GB per array and the Data Mover requires 12 GB per Data Mover.

SP DIMMs

The SP CPU uses SDRAM DIMMs[4]. Each SP uses three 4-GB unbuffered Double-Data-Rate 3 (DDR3) type memory for a total of 12 GB per SP or 24 GB per DPE or array. Figure 31 shows an example of the SP DIMM slot location.

Figure 32 on page 38 shows an example of the SP DIMM with a part number label. Table 25 on page 39 lists the part number, description, and whether it is a FRU or CRU.

IMPORTANT

The DIMM part numbers are visible only when you remove the DIMM from the DIMM slot. You must first take the SP out of service, disconnect any SP cables, remove the SP from the DPE, then remove the SP power supply/cooling module from the SP (see Figure 10 on page 15, Figure 11 on page 15, and Figure 12 on page 16). With the SP CPU laying on an antistatic mat, lift the DIMM cover up in the SP CPU, and then remove the DIMM from the DIMM slot. Ensure that you remove only those DIMMs that you intend to replace. For more information about removing and installing the DIMM or memory module, refer to the *Replacing a memory module* procedure available from the VNX Procedure Generator program.

⚠CAUTION

Note the orientation of the VNX5500 Block and File (Unified) platform SP DIMMs (see locations DIMM 0, DIMM 1, and DIMM 2 in Figure 31 on page 38). A label on the DIMM cover also identifies the DIMM slots as DIMM 0, DIMM 1, and DIMM 2. In the VNX5500 Block and File (Unified) platform, the DIMMs are placed in slots 0, 1, and 2.

4. The term DIMM is used throughout this guide. The term DIMM is also referred to as a memory module. These terms are interchangeable and basically mean the same thing.

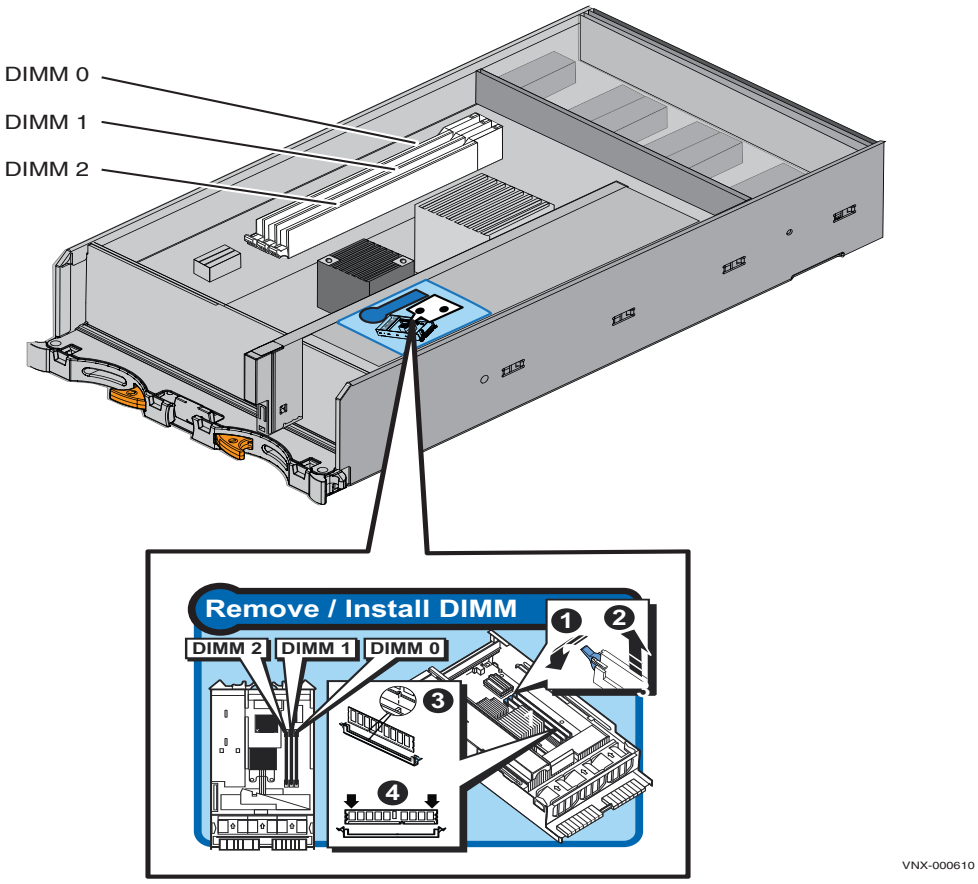

Figure 31 Example of the Block and File VNX5500 platform SP DIMM slot location

Figure 32 shows an example of the SP DIMM with a part number label.

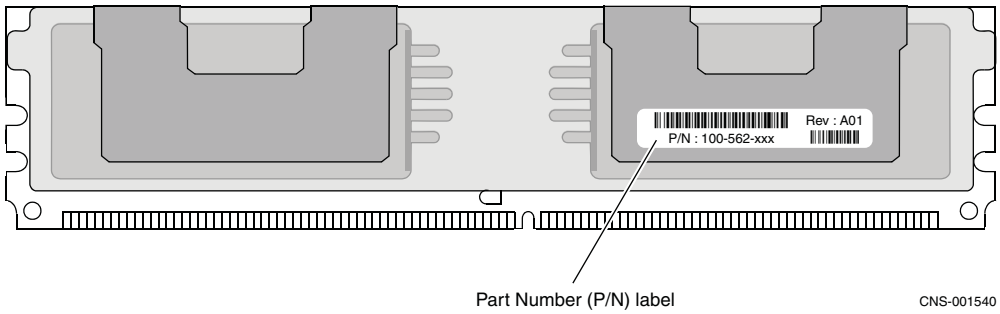

Figure 32 Example of the Block and File VNX5500 platform SP DIMM part number location

Table 25 lists the SP DIMM part number location, description, and whether it is a FRU or CRU.

Table 25 VNX5500 platform SP CPU DIMM part numbers

Part number label location (Figure 32 on page 38)	Part number	Description	FRU	CRU
	100-562-325	Three 4-GB DDR3 DIMMs per CPU module on one SP	✓	

Data Mover DIMMs

Data Mover DIMMs are 2-GB SDRAM type memory for a total of 12 GB per Data Mover or 24 GB per DME. Figure 33 on page 40 shows an example of the Data Mover DIMM with a part number label. Figure 34 on page 40 shows the part number label location.

IMPORTANT

The DIMM part numbers are visible only when you remove the DIMM from the DIMM slot. You must first take the Data Mover out of service, disconnect any Data Mover cables, remove the Data Mover from the DME, then remove the Data Mover power supply/cooling module from the Data Mover (see Figure 16 on page 19 and Figure 17 on page 19). With the Data Mover CPU laying on an antistatic mat, lift the DIMM cover up in the Data Mover CPU, and then remove the DIMM from the DIMM slot. Ensure that you remove only those DIMMs that you intend to replace. For more information about removing and installing the DIMM or memory module, refer to the *Replacing a memory module* procedure available from the VNX Procedure Generator program.

⚠CAUTION

The DIMM memory is *not* hot-swappable. Before removing or replacing any DIMMs, you must follow the removing and installing the DIMM or memory module procedure described in the *Replacing a memory module* procedure available from the VNX Procedure Generator program.

⚠CAUTION

Note the orientation of the VNX5500 Block and File platform Data Mover DIMMs (see locations DIMM 0, DIMM 1, DIMM 2, DIMM 3, DIMM 4, and DIMM 5 in Figure 33 on page 40). A label on the DIMM cover also identifies the DIMM slots as DIMM 0, DIMM 1, DIMM 2, DIMM 3, DIMM 4, and DIMM 5. In the VNX5300 Block and File platform, the Data Mover DIMMs are placed in slots 0, 1, 2, 3, 4, and 5.

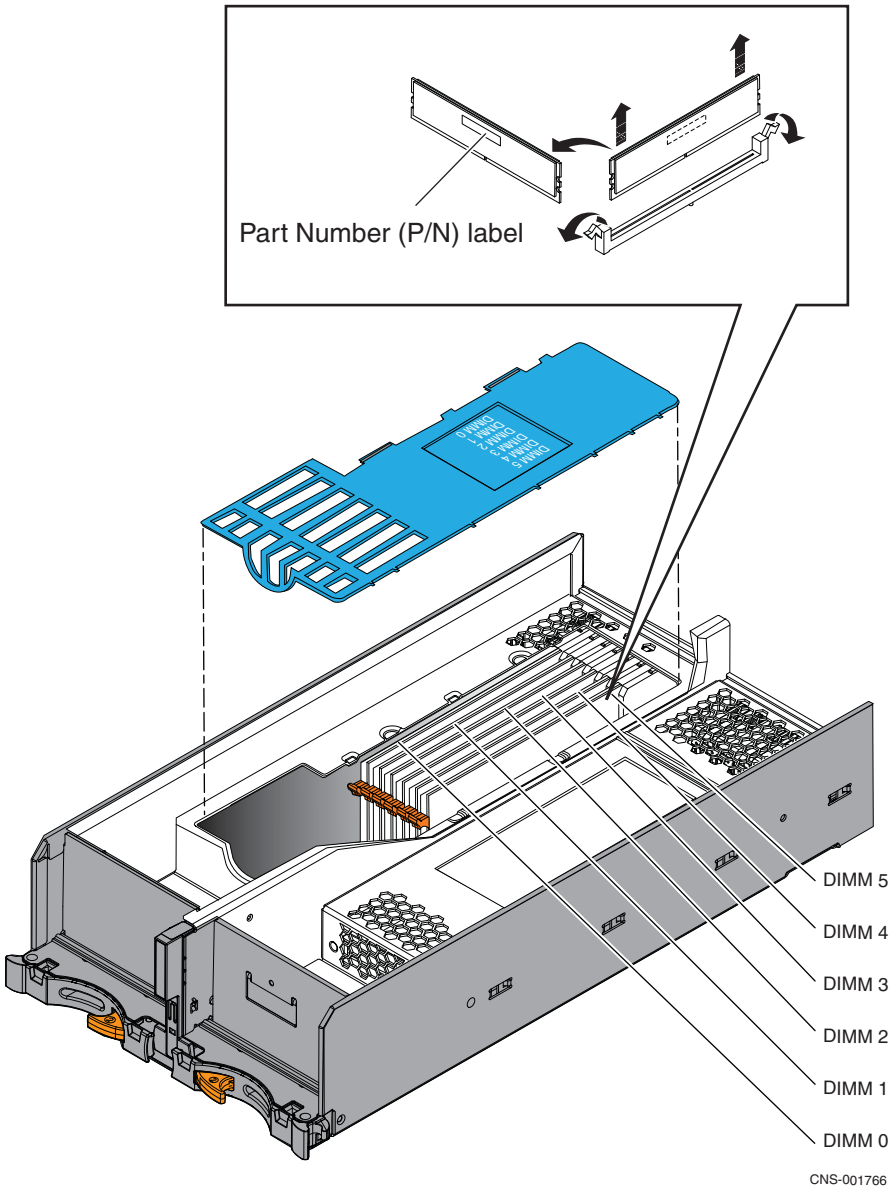

Figure 33 Example of the Block and File VNX5500 platform Data Mover DIMM slot location

Figure 34 shows the Data Mover DIMM part number label location.

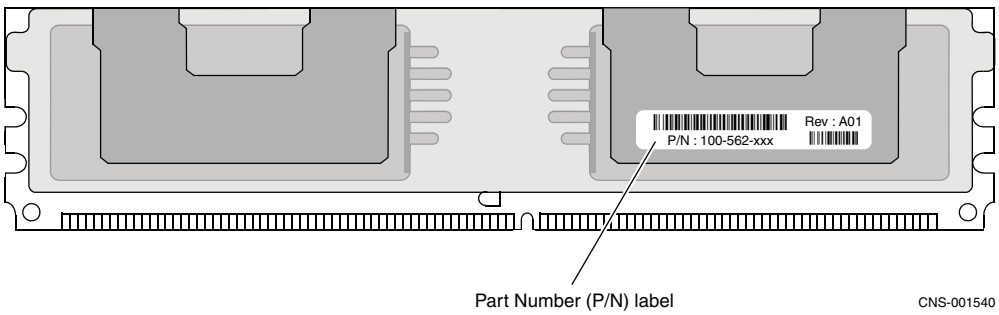

Figure 34 Example of the Block and File VNX5500 platform Data Mover DIMM part number location

Table 26 lists the Data Mover DIMM part number label location, part number, description, and whether it is a FRU or CRU.

Table 26 VNX5500 platform Data Mover CPU DIMM part numbers

Part number label location (Figure 34 on page 40)	Part number	Description	FRU	CRU
	100-562-863	Six 2-GB Unbuffered DDR3 DIMMs per CPU module on one Data Mover	✓	

Disk-array enclosure (DAE)

The expansion disk-array enclosures (DAEs) have part numbers visible on both the front and rear.

Front view

The DAE has three types of disk drive carriers:

- 3U, 15 (3.5-inch) disk drive carrier
- 2U, 25 (2.5-inch) disk drive carrier
- 4U, 60 (2.5- or 3.5-inch) disk drive carrier

3U, 15 (3.5-inch) DAE disk drive

Figure 35 shows the front view of the 3U, 15 (3.5-inch) disk drive DAE.

Note: You can visually distinguish disk module kinds by their type, capacity, and speed labels, and by the design of the latch and handle on each disk module (Figure 35).

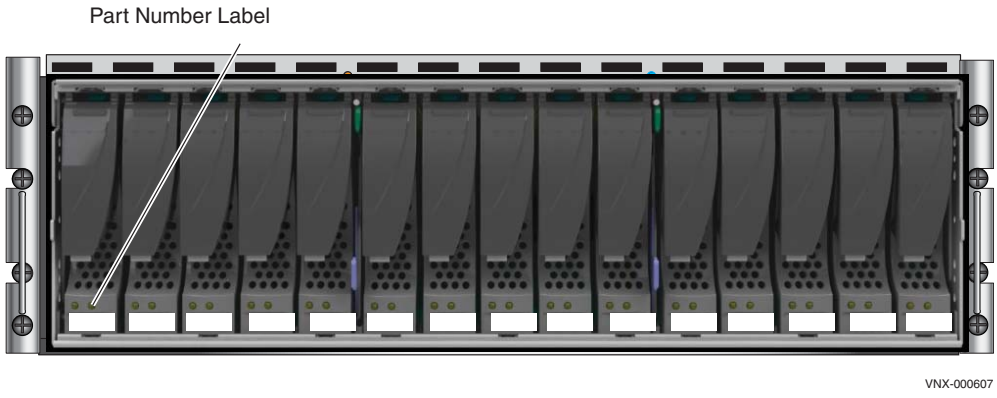

Figure 35 Example of the 3U, 15 (3.5-inch) disk drive DAE (front view)

Note: Figure 35 is for illustrative purposes only. The front of the disk modules may be a little different than the ones in your particular cabinet.

Table 27 is an example of the parts available for the 3U, 15 (3.5-inch) DAE and lists the part number label location, part number, description, and whether it is a FRU or CRU.

IMPORTANT

Due to the extensive variety of disk module types, Table 27 only lists two disk types. EMC recommends that you refer to the latest *EMC VNX5500, VNX5700, and VNX7500 Series Storage Systems Disk and OE Matrix Guide* to ensure that you have the correct part for your configuration.

Table 27 3U, 15 (3.5-inch) DAE disk module part numbers

Part number label location (Figure 35 on page 41)	Part number	Description (see note)	FRU	CRU
	005049175	300 GB, 6 Gb/s SAS, 10k rpm	✓	✓
	005049249	600 GB, 6 Gb/s SAS, 15k rpm	✓	✓
Note: The description field describes the disk module type, capacity, drive type, and spindle speed (rpm).				

2U, 25 (2.5-inch) DAE disk drive

Figure 36 shows the front view of the 2U, 25 (2.5-inch) disk drive DAE.

Note: You can visually distinguish disk module kinds by their type, capacity, and speed labels, and by the design of the latch and handle on each disk module (Figure 36).

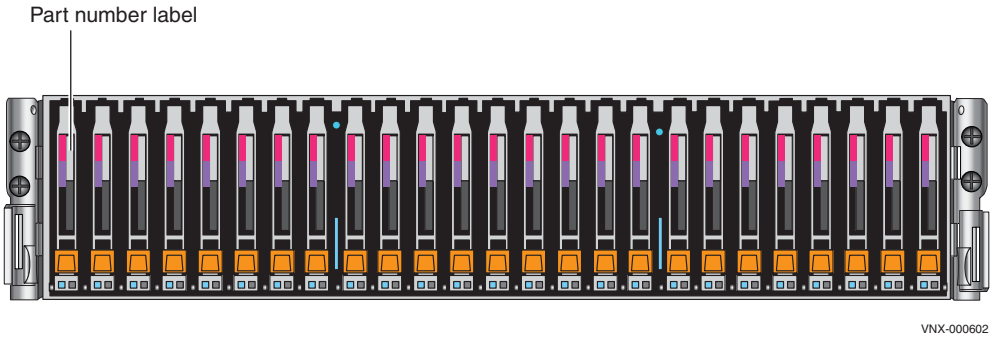

Figure 36 Example of the 2U, 25 (2.5-inch) disk drive DAE (front view)

Note: Figure 36 is for illustrative purposes only. The front of the disk modules may be a little different than the ones in your particular cabinet.

Table 28 on page 43 is an example of the parts available for the 2U, 25 (2.5-inch) DAE and lists the part number label location, part number, description, and whether it is a FRU or CRU.

IMPORTANT

Due to the extensive variety of disk module types, Table 28 only lists two disk types. EMC recommends that you refer to the latest *EMC VNX5500, VNX5700, and VNX7500 Series Storage Systems Disk and OE Matrix Guide* to ensure that you have the correct part for your configuration.

Table 28 2U, 25 (2.5-inch) DAE disk module part numbers

Part number label location (Figure 36 on page 42)	Part number	Description (see note)	FRU	CRU
	005048946	300 GB, 6 Gb/s SAS, 10k rpm	✓	✓
	005049250	600 GB, 6 Gb/s SAS, 10k rpm	✓	✓
Note: The description field describes the disk module type, capacity, drive type, and spindle speed (rpm).				

4U, 60 (2.5- or 3.5-inch) DAE

IMPORTANT

The 4U, 60 (2.5- or 3.5-inch) DAE is assembled and configured at the factory before shipping. If replacing or adding a 4U, 60 (2.5- or 3.5-inch) DAE becomes necessary. Refer to the **CAUTION** on page 45 that discusses the mounting and servicing of the 4U, 60, (2.5- or 3.5-inch) DAE in a 40U Dense rack. Additionally, refer to the *Replacing* or *Adding a DAE* for the 4U, 60, (2.5- or 3.5-inch) DAE documents.

⚠CAUTION

Access to internal components in a 4U, 60 DAE mounted 31U (4.5 feet or 1.38 meters) or more above the floor requires special equipment and is restricted to authorized service personnel only. Attempts to service disks, fans, or LCCs mounted 31U or higher without appropriate tools and personnel might result in serious personal injury.

The 4U, 60 (2.5- or 3.5-inch) DAE includes up to 60, 2.5- or 3.5-inch disk drives. Supporting 6-Gb/s data transfer speeds, this DAE has the following hardware components: three fan (or cooling modules), 60 disks (30 per side), two Link Control Cards (LCCs), two Inter Connect Modules (ICMs), and two power supplies.

To replace or add any of these components, refer to their respective Customer Replaceable Unit (CRU) procedure for the 4U, 60 DAE. For example, to replace a disk drive, refer to the *Replacing a disk in a 60-disk enclosure* document.

IMPORTANT

To accommodate the 4U, 60 DAE, a 40U Dense rack is required. The Dense rack is 44 inches (111.76 cm) deep. Because each DAE weighs 57.8 lb (26.28 kg) empty and 213 lb (96.62 kg) fully loaded, a DAE interlock mechanism is provided in the Dense rack to prevent the extension of no more than one DAE at a time.

Figure 37 shows the part number label location on the front of the 4U, 60 DAE chassis.

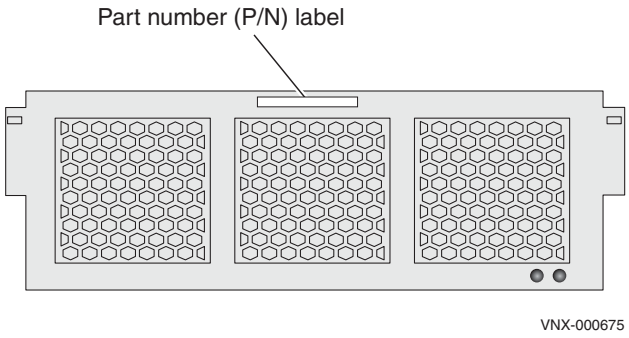

Figure 37 Example of the 4U, 60 DAE chassis (front view)

Table 29 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 29 DAE 4U, 60 DAE chassis part numbers

Part number label location (Figure 37)	Part number	Description (see note)	FRU	CRU
	100-564-101	4U, 60 DAE chassis	✓	

Access to disk drives, LCCs, and fan control modules

Unlike the 2U and 3U DAEs, the 4U, 60 DAE is a drawer-type of DAE that slides in and out of a 40U Dense rack. The DAE is not fixed to the rack. To view the part numbers for the disk drives, fan control modules, and LCCs, which are located inside the DAE, you slide the DAE out of the rack. Then, you slide the top cover on the DAE toward the rear of the rack to view the components.

⚠CAUTION

When sliding the 4U, 60 DAE out of or into the rack, be careful not to bind the power and SAS cabling attached to the cable management arms on the back of the DAE.

To gain access to the DAE, you must first, release the cable management arms and move them to either side on the back of the DAE (see the Opening the cable management arms task in the procedure). Then, pull up on the Dense rack vertical slide bar interlock mechanism. Next, to unlock the DAE from the rails, pull on the orange loops on each side of the DAE (location 1 in Figure 38 on page 45). Finally, pull the orange tabs on each side of the DAE to slide the DAE out of the rack on its rails until it locks into the secure service position (location 2 in Figure 38 on page 45).

Note: If the 4U, 60 DAE does not slide out of the rack, verify that all the other DAEs are completely seated in the rack by pushing firmly on them.

⚠CAUTION

To prevent bodily injury when mounting or servicing the 4U, 60 DAE in a Dense rack, you must take special precautions to ensure that the DAE remains stable. The following guidelines are provided to ensure your safety:

When lifting this DAE, always use two people and a lifting device.

For service personnel, when accessing this unit in a rack above 31U, always use an EMC authorized step ladder.

When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at or close to the bottom of the rack.

If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the DAE in the rack. The *Replacing a DAE* document for the DAE provides more information.

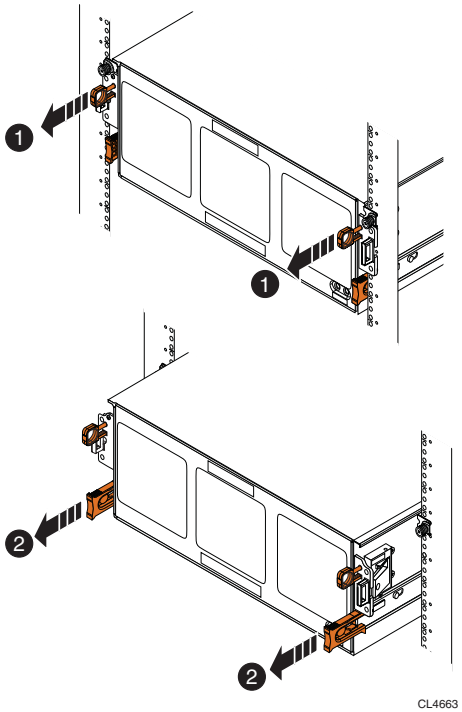

Figure 38 4U, 60 DAE (unlocking top, front ring pull latch mechanism and bottom slide extension release levers)

Figure 39 shows an example of a 4U, 60 DAE with the top cover closed.

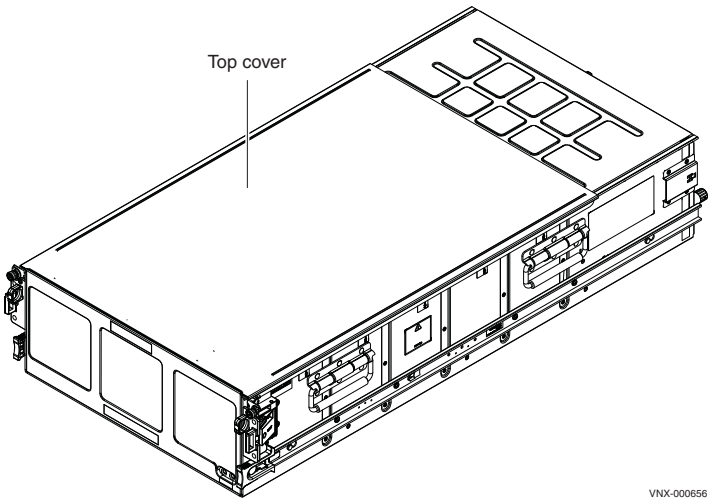

Figure 39 4U, 60 DAE (with top cover closed)

To gain access to the disk drives, LCCs, and fan control modules (after sliding the DAE out of the rack), you slide the top cover toward the rear of the DAE.

Figure 40 shows an example of a 4U, 60 DAE with the top cover open showing the disk drives, LCCs, and the fan control modules (or fans).

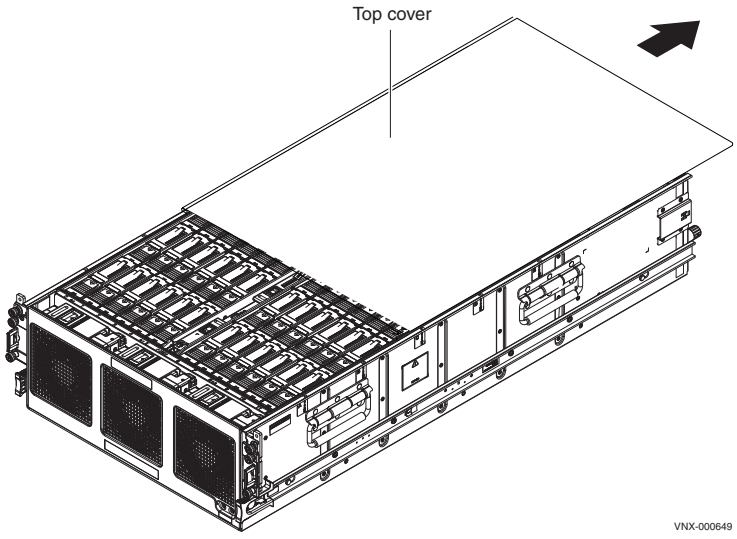

Figure 40 4U, 60 DAE (with top cover open)

Figure 41 shows an example of the full interior view of a 4U, 60 DAE.

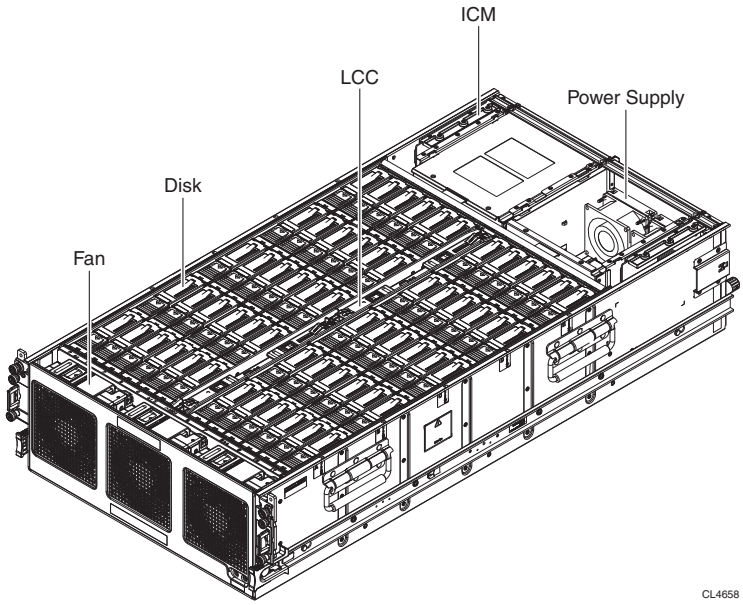

Figure 41 4U, 60 DAE (interior view)

The ICMs and power supplies shown in Figure 41 are accessed from the rear of the 4U, 60 DAE. "4U, 60 (2.5- or 3.5-inch) DAE ICM and power supply" on page 51 provides more information.

Disk drives, LCC, and fan control module locations

Figure 42 shows a top-down cut-away interior view of the 4U, 60 DAE. Notice the location of the disk drives, fans (fan control modules), and LCC A.

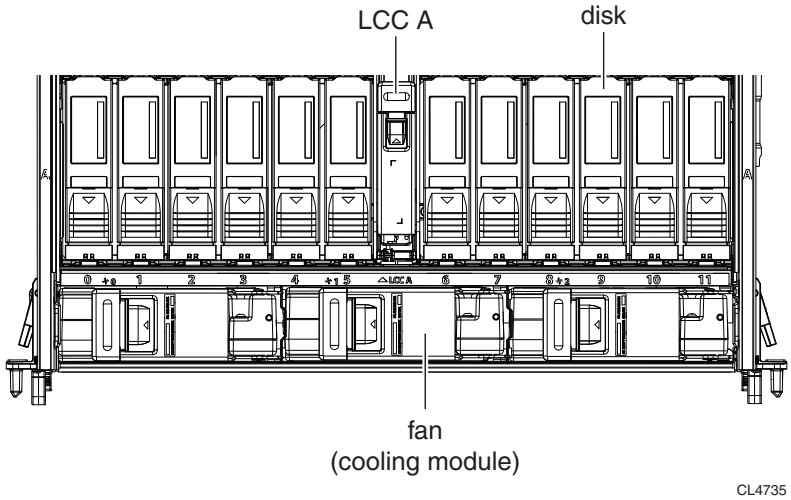

Figure 42 4U, 60 DAE top-down cut-away of the disk drives, fans (fan control modules), and LCC A (interior view)

Disk drive

To access the disk drives, first slide out the 40U, 60 DAE from the rack. Then, push the top cover towards the rear of the chassis. The disk drives are located on either sides of the LCCs in the DAE (Figure 41 on page 47).

Figure 43 shows the location of the 4U, 60 DAE disk drive part number label.

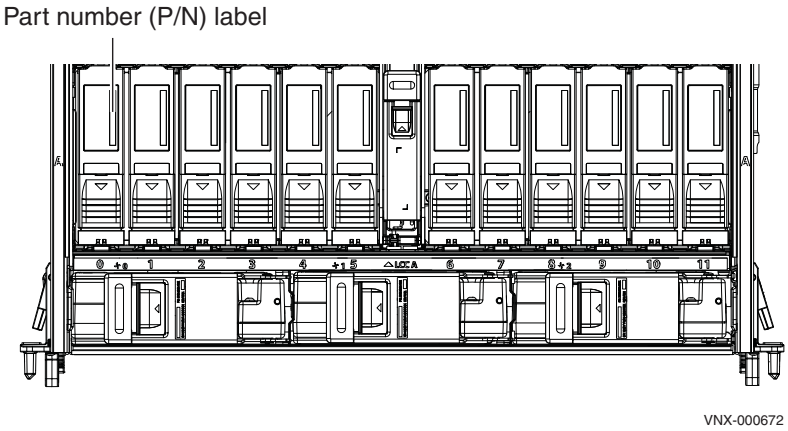

Figure 43 Example of the 4U, 60 DAE disk drive part number label location

Table 30 lists the part number label location, part number, description, and whether it is a FRU or CRU.

IMPORTANT

Due to the extensive variety of disk module types, Table 30 only lists two disk types. EMC recommends that you refer to the latest *EMC VNX5100 and VNX5300 Series Storage Systems Disk and OE Matrix Guide* to ensure that you have the correct part for your configuration.

Table 30 DAE 4U, 60 disk module part numbers

Part number label location (Figure 43)	Part number	Description (see note)	FRU	CRU
	005049284	600 GB, 6 Gb/s SAS, 10k rpm	✓	✓
	005049207	900 GB, 6 Gb/s SAS, 10K rpm	✓	✓
Note: The description field describes the disk module type, capacity, drive type, and spindle speed (rpm).				

Fan control module

To access the fan control modules, first slide out the 40U, 60 DAE from the rack. Then, push the top cover towards the rear of the chassis. The fan control modules are located in the front of the DAE (Figure 41 on page 47).

Figure 44 shows the location of the 4U, 60 DAE fan control module part number label.

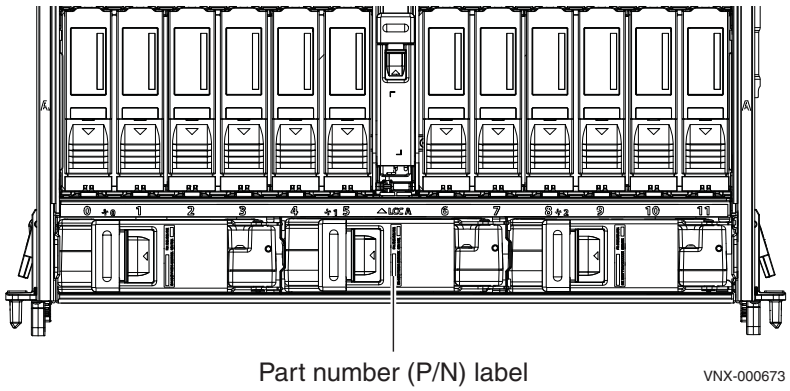

Figure 44 Example of the 4U, 60 DAE fan control module part number label location

Table 31 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 31 DAE 4U, 60 fan control module part numbers

Part number label location (Figure 44)	Part number	Description (see note)	FRU	CRU
	303-173-000B	Fan control module	✓	✓

LCC

To access the LCC, first slide out the 40U, 60 DAE from the rack. Then, push the top cover towards the rear of the chassis. The LCCs are located in the middle of the DAE between the disk drives (Figure 41 on page 47).

Figure 45 shows the location of the 4U, 60 DAE LCC part number label.

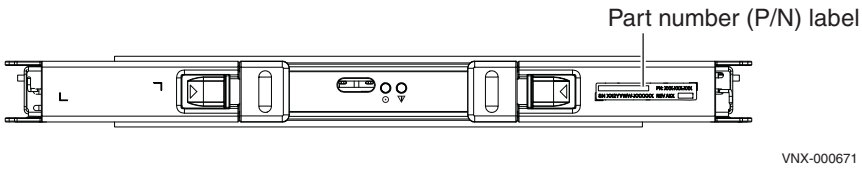

Figure 45 Example of the 4U, 60 DAE LCC part number label location

Table 31 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 32 DAE 4U, 60 LCC part numbers

Part number label location (Figure 45)	Part number	Description (see note)	FRU	CRU
	303-171-000B	Link Control Card	✓	✓

Rear view

The components located on the rear of the DAE are:

- 3U, 15 DAE LCC and power supply
- 2U, 25 DAE LCC and power supply
- 4U, 60 DAE ICM and power supply

3U, 15 (3.5-inch) DAE LCC and power supply

Figure 46 shows the part number label location on the rear of the 3U, 15 (3.5-inch) DAE for the LCC and power supply.

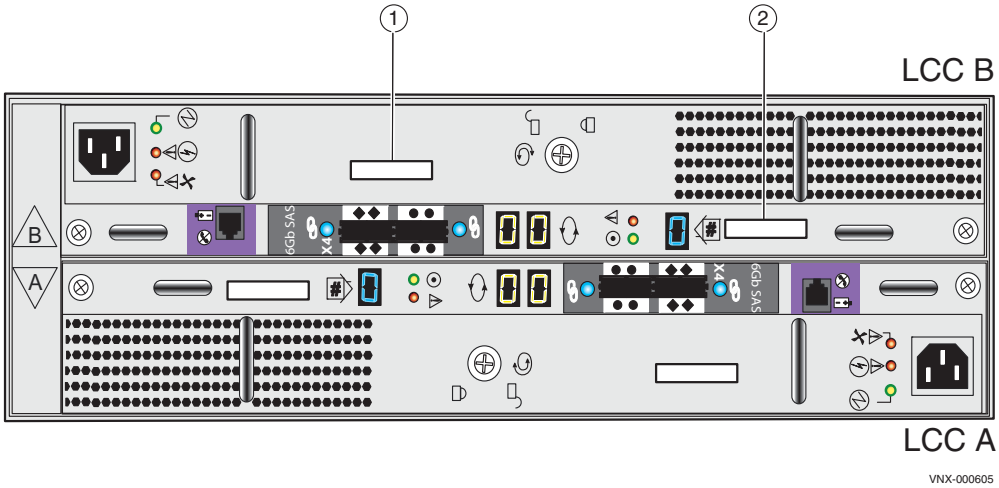

Figure 46 Example of 3U, 15 (3.5-inch) LCC and power supply

Table 33 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 33 3U, 15 (3.5-inch) LCC and power supply part numbers

Part number label location (Figure 46)	Part number	Description	FRU	CRU
1	071-000-518	LCC B 400 W dual 12 V power supply[1]	✓	
2	303-108-000E	LCC B	✓	

1. The rear of the 3U, 15 (3.5-inch) DAE has the LCC power supply and LCC inverted or on top of each other. In other words, LCC B power supply is located on the top of LCC B. While LCC A is located on the bottom of the DAE with LCC A on top of the LCC A power supply (Figure 46).

2U, 25 (2.5-inch) DAE LCC and power supply

Figure 47 shows the part number label location on the rear of the 2U, 25 (2.5-inch) disk drive DAE LCC and power supply.

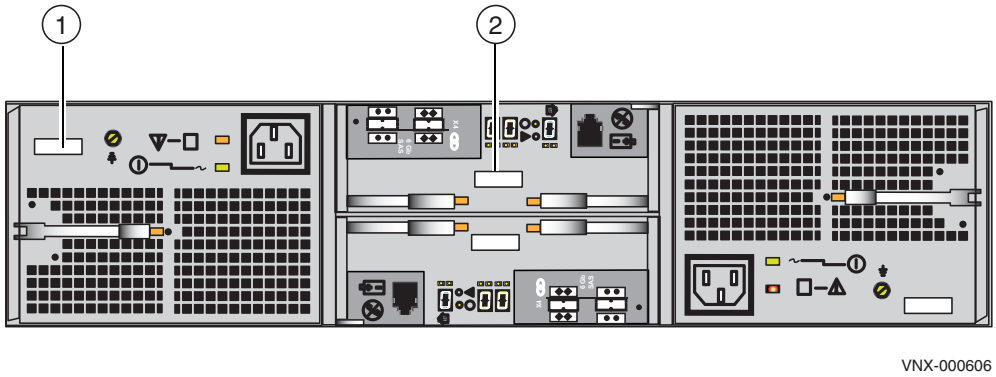

Figure 47 Example of 2U, 25 (2.5-inch) DAE LCC and power supply

Table 34 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 34 2U, 25 (2.5-inch) DAE LCC and power supply part numbers

Part number label location (Figure 47)	Part number	Description	FRU	CRU
1	071-000-541	LCC B power 400 W 12 V supply[1]	✓	
2	303-104-001E	LCC B[2]	✓	

1. The rear of the 2U, 25 (2.5-inch) DAE has the LCC power supplies inverted or on opposite sides. In other words, LCC B power supply is located on the left of the DAE and LCC A power supply is located on the right (Figure 47).
2. The rear of the 2U, 25 (2.5-inch) DAE has the LCCs inverted or on top of each other. In other words, LCC B is located on the top and LCC A is located on the bottom (Figure 47).

4U, 60 (2.5- or 3.5-inch) DAE ICM and power supply

Figure 48 shows the part number label location on the rear of the 4U, 60 (2.5- or 3.5-inch) DAE for the ICM and the power supply.

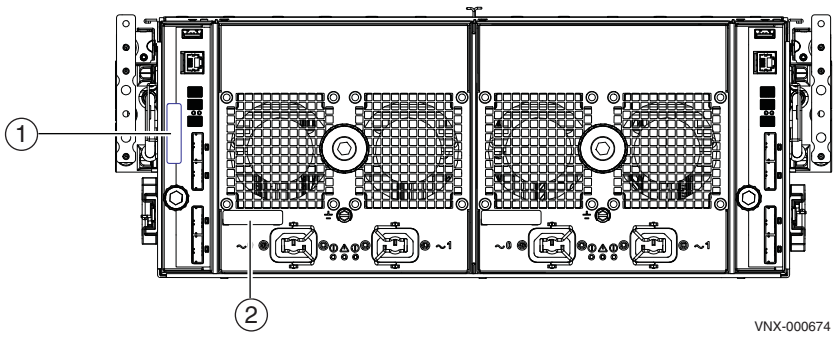

Figure 48 Example of 4U, 60 (2.5- or 3.5-inch) DAE ICM and power supply

Table 35 lists the part number label location, part number, description, and whether it is a FRU or CRU.

Table 35 4U, 60 (2.5- or 3.5-inch) DAE ICM and power supply part numbers

Part number label location (Figure 48 on page 51)	Part number	Description	FRU	CRU
1	303-172-000C	ICM B[1]	✓	✓
2	071-000-545	Power supply B[2], dual AC input, 1300 W, +12 V	✓	✓
Note: If the 4U, 60 (2.5- or 3.5-inch) DAE is located higher than 31U in the Dense rack, then both the ICM and power supply are FRUs.				

1. The rear of the 4U, 60 (2.5- or 3.5-inch) DAE has the ICM on opposite sides of the DAE. In other words, ICM A is located on the left of the DAE and ICM B is located on the right (Figure 48 on page 51).
2. The rear of the 2U, 60 (2.5- or 3.5-inch) DAE has the DAE power supplies between ICM A and B. In other words, power supply A is located on the left of the DAE and power supply B is located on the right (Figure 48 on page 51).

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