

# Avigilon NVR5 Premium 2<sup>nd</sup> CPU Kit Installation Guide

Installation Guide

NVR5-PRM-2NDCPU

For

NVR5 PRM 192TB-224TB

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# Table of Contents

- Introduction ..... 4
  - Confirm Package Contents ..... 4
  - Recommended Tools ..... 4
- Installing the NVR5 2nd CPU Kit ..... 5
  - Opening the Cover ..... 6
  - Installing the CPU ..... 8
  - Installing Additional RAM ..... 11
  - Reattaching the Cover .....12
  - Confirming the Installation ..... 13
- For More Information .....14

# Introduction

Avigilon provides an optional 2<sup>nd</sup> CPU kit for the NVR5 Premium. These kits provide all the components needed to add CPU redundancy to an NVR.

Part Number	Description
NVR5-PRM-2NDCPU	NVR5 Premium 2 <sup>nd</sup> CPU Kit

## Confirm Package Contents

Confirm that the kit you are installing contain the following components:

- 2nd CPU Kit (NVR5-PRM-2NDCPU):
  - 1 × Intel Xeon Silver 4216
  - 1 × CPU heat sink
  - 1 × processor bracket
  - 6 × 8 GB - 3200 Mhz DDR4 RDIMMs
  - 4 × Server IOT 2019 LTSC 4-core license

## Recommended Tools

The following tools are not included in the kit package, but are needed to complete the installation:

- Phillips #2 screwdriver
- Torx #T30 screwdriver
- Wrist-grounding strap connected to the ground
- ESD Mat

**Important:** It is recommended that you always use an antistatic mat and antistatic strap while working on components inside the system.



# Installing the NVR5 2<sup>nd</sup> CPU Kit

**Note:** If the NVR5 is an operating part of your security system, be aware that it must be shut down to complete this procedure.

Before starting to install the kit:

1. Turn off the NVR5, including all attached peripherals. Press the power button on the front panel, and wait for the light to stop blinking to indicate shutdown is complete.



**WARNING** — Opening or removing the system cover while the system is powered on may expose you to a risk of electric shock.

2. Disconnect the NVR5 from the electrical outlet and disconnect the peripherals.
3. Remove all network, power and peripheral cables from the NVR5.
4. If applicable, remove the NVR5 from the rack.

**Important:** Whenever you need to lift the system, get others to assist you. To avoid injury, do not attempt to lift the system by yourself.

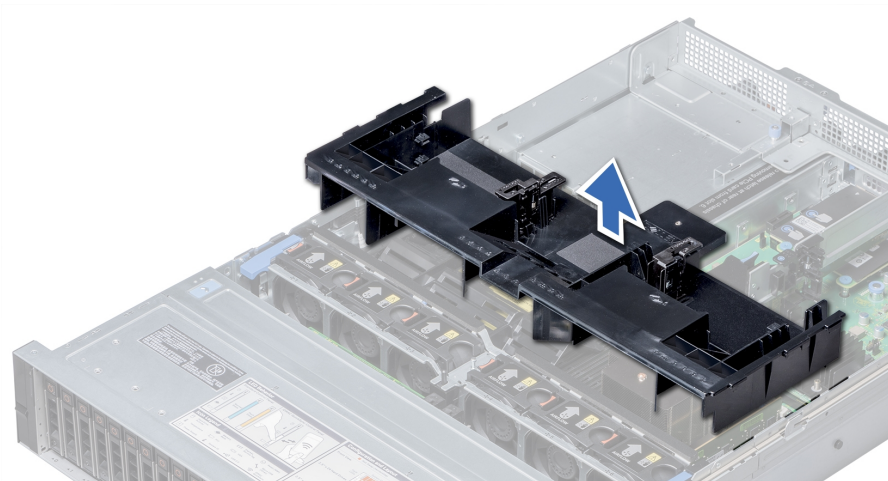
# Opening the Cover

1. At the top of the NVR5, unlock the latch release then lift and rotate the latch towards the back of the unit. The cover slides back and is released from the body.

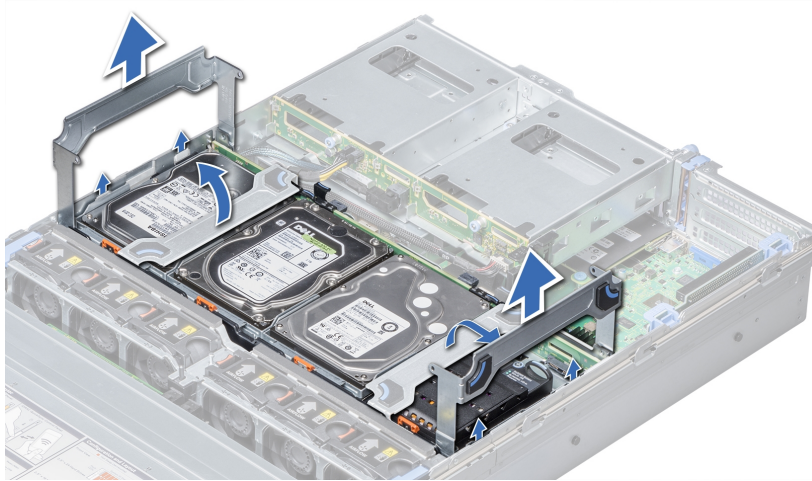
**Tip:** Use a Phillips #2 screwdriver to remove the shipping screws before unlatching the cover if you are removing the cover of an NVR5 for the first time.



2. Remove the air shroud by holding it at both ends and lifting it away from the system.



3. Remove the mid drive tray:
  - a. Lift the drive tray handles 90 degrees upward.
  - b. Hold the drive tray handles, and lift the drive tray out of the system.

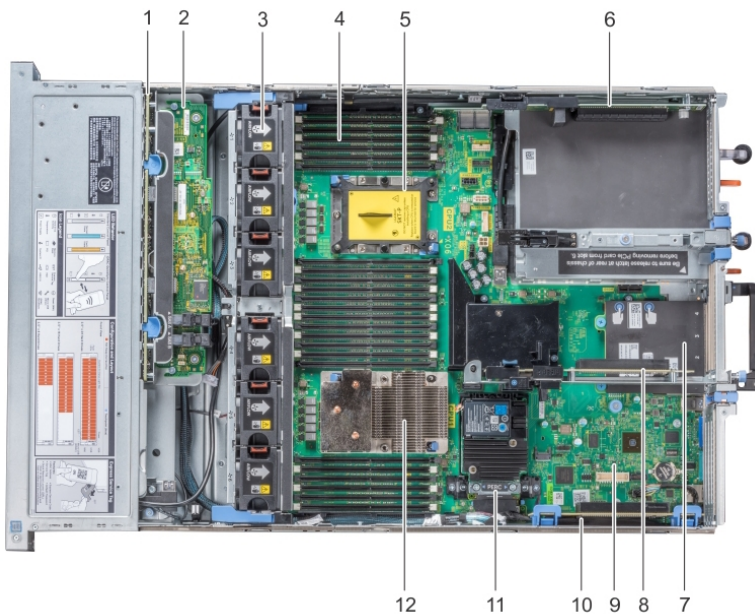


3. View the interior of the NVR5 and identify the locations where the components of the kit will be installed.

The view below shows the details of an NVR5 with all of the covers and cards removed, and important components labeled with numbers.

The components affected by the NVR5 Premium 2<sup>nd</sup> CPU Kit are:

- 4—Memory module  
The 6 DIMMs in the kit are installed here.
- 5—CPU2 processor and heat sink module socket (with dust cover)  
The second CPU in the kit is installed here.



**Note:** The other components pointed out in the diagram are not affected by installing the NVR5 Premium 2<sup>nd</sup> CPU Kit.

## Installing the CPU

You need the processor bracket, processor (CPU), and heatsink provided in the kit to complete this procedure.

With the NVR5 open and the protective cover removed:

1. Locate the 2<sup>nd</sup> processor socket and pull off the CPU dust cover with the yellow label over the socket.
2. Unpack the CPU.
3. Place the processor in the processor tray.

**Note:** Ensure that the pin 1 indicator on the processor tray is aligned with the pin 1 indicator on the processor.

4. Flex the outer edges of the processor bracket and ensure that the processor is locked into the clips on the bracket.

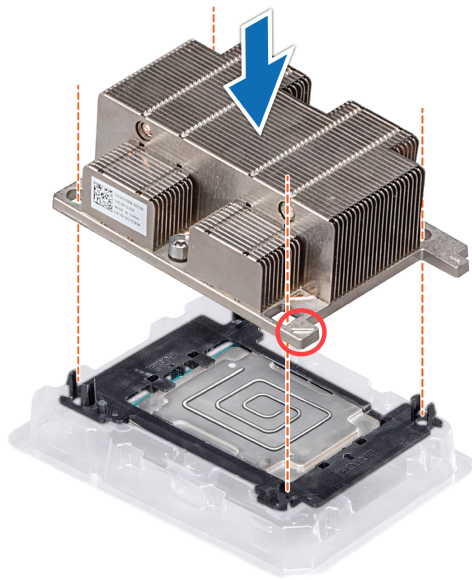
**Note:** Ensure that the pin 1 indicator on the bracket is aligned with the pin 1 indicator on the processor before placing the bracket.



5. Unpack the heatsink. Be careful not to touch the thermal paste that is pre-applied to the bottom of the heatsink.
6. Place the heat sink on the processor and push down on the base of the heat sink until the bracket locks onto the heat sink.

**Important:** To avoid damaging the fins on the heat sink, do not press down on the heat sink fins.

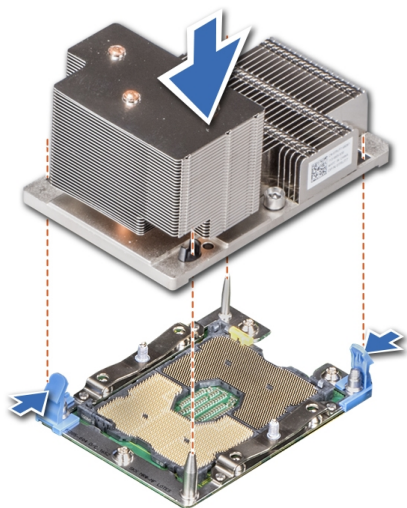
- Ensure that the 2 guide pin holes on the bracket match the guide holes on the heat sink.
- Ensure that the pin 1 indicator on the heat sink (circled red in the image below) is aligned with the pin 1 indicator on the bracket before placing the heat sink onto the processor and bracket.



7. Align the pin 1 indicator on the heat sink to the system board and then place the processor and heat sink module on the processor socket.

**Important:** Ensure that the processor and heat sink module is held parallel to the system board to prevent damaging the components.

8. Push the blue retention clips inward to allow the heat sink to drop into place.



**Important:** Do not force the processor into the socket. The processor should slide easily into the socket when aligned correctly.

9. Use the star-shaped screwdriver #T30 to tighten the screws on the heat sink in the following order:
  - a. Partially tighten the first screw (approximately 3 turns).
  - b. Tighten the second screw completely.
  - c. Return to the first screw and tighten it completely.

**Important:** Do not over-tighten or strip the screws.

If the processor and heat sink module slips off the blue retention clips when the screws are partially tightened, follow these steps to secure the module:

- a. Completely loosen both of the heat sink screws.
- b. Lower the processor and heat sink module on to the blue retention clips, following the procedure as described in [step 8](#) above.
- c. Secure the processor and heat sink module to the system board, following the instructions as described in [step 9](#) above.

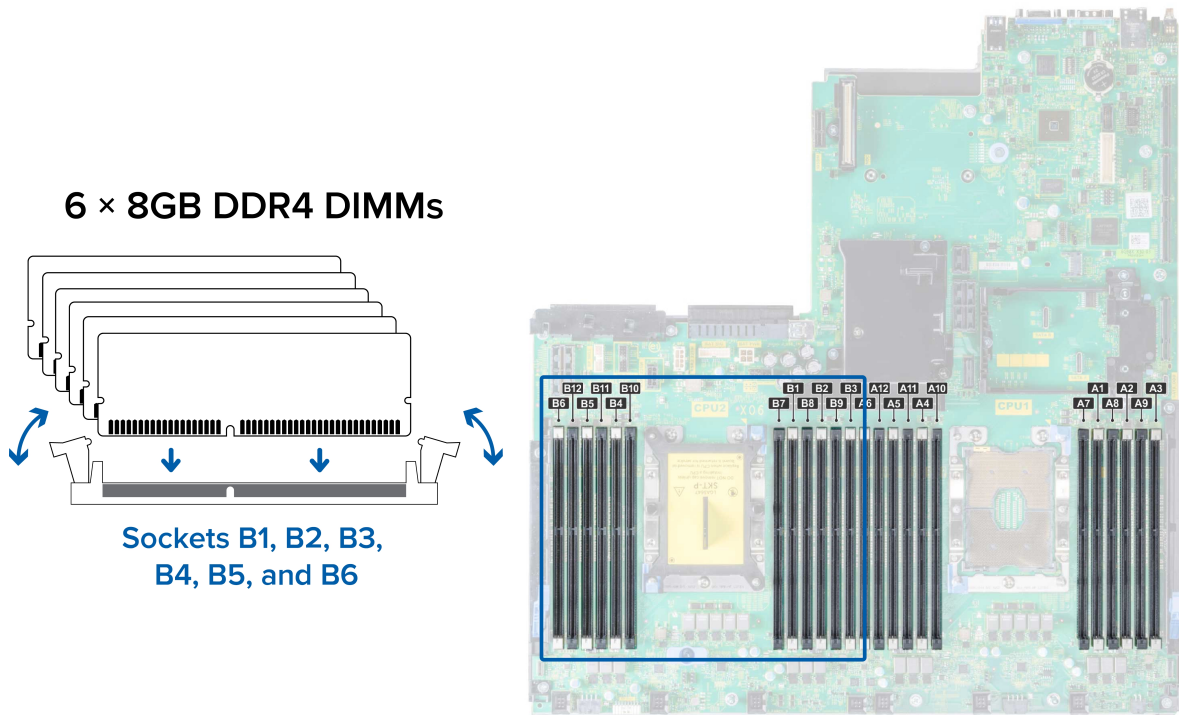


# Installing Additional RAM

**Important:** To prevent damage to the DIMM or memory module socket during installation:

- Do not bend or flex the DIMM.
- Handle each DIMM only by the edges to ensure that you don't touch the middle of the memory module or the metallic contacts.
- When installing a DIMM, apply pressure to both ends of the memory module evenly. Do not apply pressure to the middle.

1. In the row of empty memory sockets near to the newly installed CPU, locate sockets B1, B2, B3, B4, B5, and B6.

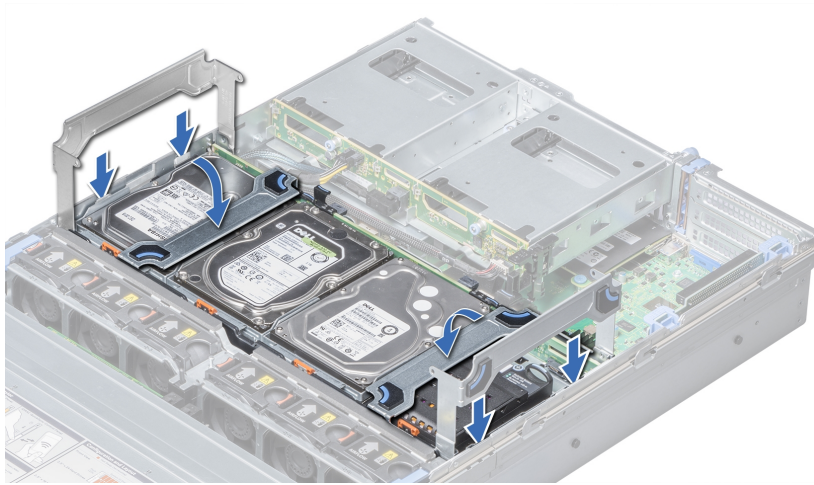


2. Open the white ejector clips on each side of the empty memory module sockets outward to allow the DIMMs to be inserted into the sockets.
3. Align the edge connector of the DIMMs with the alignment key of the sockets and press the DIMMs into the sockets until the socket levers click into place.

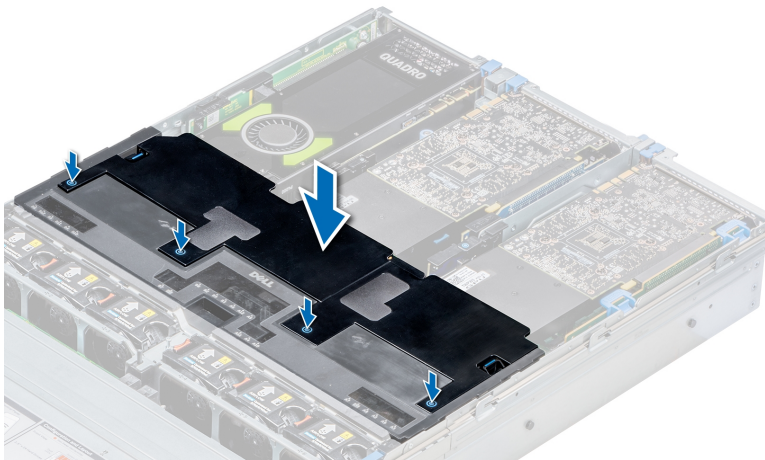
# Reattaching the Cover

When all the components of the kit have been installed:

1. Ensure all expansion card latches are closed and there are filler covers for all empty slots.
2. Reinstall the mid drive tray:
  - a. Lift the drive tray handles to 90 degrees upward.
  - b. Hold the drive tray handles, and align the slots on the drive tray with the guide pins on the system.
  - c. Lower the drive tray into the system.
  - d. Lower the drive tray handles to lock the drive tray in place.



3. Reinstall the top of the cooling shroud.



4. Close and lock the NVR5 cover.
5. Attach the Server IoT 2019 LTSC 4-core license stickers to the empty space in the bottom-left corner of the server cover above the existing Microsoft Certificate of Authentication label.
6. If the NVR5 was rack mounted and removed to install the kit, remount it into the rack.








7. Reconnect all the peripherals and cables.

**Important:** Ensure that both of the power supplies are connected to main power. The upgraded NVR5 requires both power supplies to properly function.

8. Power on the NVR5.

## Confirming the Installation

Verify the upgrade is successful:

1. Log in to the ACC Client on a workstation on the same network as the NVR5.
2. In the System Explorer, click **Site Setup**, and click  Site to expand the site containing the upgraded NVR5.
3. Click  to select the upgraded NVR5.
4. Verify that the NVR5 has 2 CPUs and 96 GB of memory installed.
  - a. In the System Explorer, select the upgraded NVR5 server.
  - b. In the New Task menu , click **Site Health**.
  - c. Under the General Information heading, the sum of Memory usage and System Available Memory should be approximately 96 GB (~96,000 MB).
  - d. Under the Temperature Probes heading, you should see readings for CPU1 and CPU2.
5. Verify that the analytics load capacity has increased:
  - a. In the System Explorer, select the upgraded NVR5.
  - b. In the New Task menu , click **Server Analytics** . For more information, see the *Enabling Analytics* topic in the ACC Client Help.
  - c. The number of connected cameras should be the same as before the NVR5 was upgraded, and the analytics load should be about half of what it was prior to the upgrade.

## Limited Warranty

Avigilon warranty terms for this product are provided at [avigilon.com/warranty](https://www.avigilon.com/warranty).

## For More Information

For additional product documentation and software and firmware upgrades, visit [support.avigilon.com](https://support.avigilon.com).

## Technical Support

Contact Avigilon Technical Support at [support.avigilon.com/s/contactsupport](https://support.avigilon.com/s/contactsupport).