

Installing the NVR 2nd CPU Kits

Avigilon provides optional 2nd CPU kits for Premium and Standard network video recorders (NVR):

- NVR Premium 2nd CPU Kit (HD-NVR4-PRM-2NDCPU) provides all the components needed to add CPU redundancy to an NVR Premium.
- NVR Standard 2nd CPU Kit (HD-NVR4-STD-2NDCPU) provides all the components needed to add CPU redundancy to an NVR Standard.

NOTE: If the HD NVR is an operating part of your surveillance system, be aware that it must be shut down to complete this procedure.

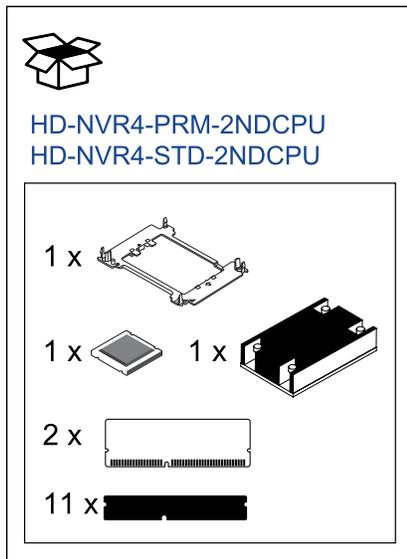
The installation procedure for both kits is very similar. Differences between the two procedures will be noted in the steps.

Install the kit components in the following order:

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Confirm Package Contents

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



- 2nd CPU Kit (HD-NVR4-***-2NDCPU):
 - CPU:
 - HD-NVR4-PRM-2NDCPU: 1 x Intel Xeon Silver 4110 2.1 Ghz (PRM)
 - HD-NVR4-STD-2NDCPU: 1 x Intel Xeon Bronze 3106 1.7 Ghz (STD)
 - 1 x heat sink
 - RAM:
 - HD-NVR4-PRM-2NDCPU: 2 x 16 GB (PRM) - (Rank2) DDR4 RDIMM
 - HD-NVR4-STD-2NDCPU: 2 x 8 GB (STD) - (Rank1) DDR4 RDIMM
 - 1 x processor bracket
 - 11 x RAM blanks

Required Tools

The following tool is not included in the kit package, but is required to complete the installation:

- Star-shaped screwdriver #T30
- Phillips #2 screwdriver (for NVR Standard only, removal of butterfly riser slot)

CAUTION — It is recommended that you use a static mat or static strap to ground yourself against static shock.

1. Removing the NVR Cover

1. Shut down the recorder.

You can skip this step if you are installing the kit on a new recorder.

- a. In the Avigilon Control Center (ACC) Admin Tool, click **Shut Down**.

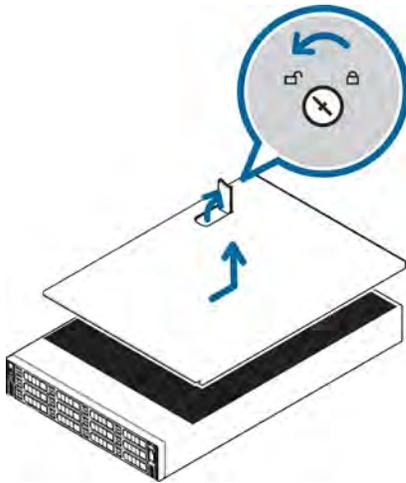
Wait for the application to display this message:

Control Center Server is Not Running

- b. Shut down Windows.

2. Remove all network, power and peripheral cables from the recorder.
3. At the top of the recorder, unlock the latch release then lift and rotate the latch towards the back of the recorder.

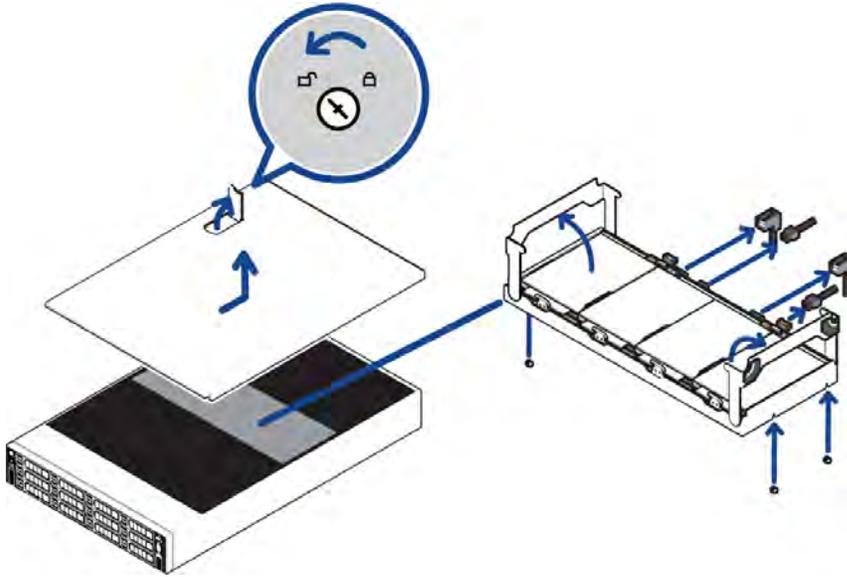
The cover slides back and is released from the recorder body.



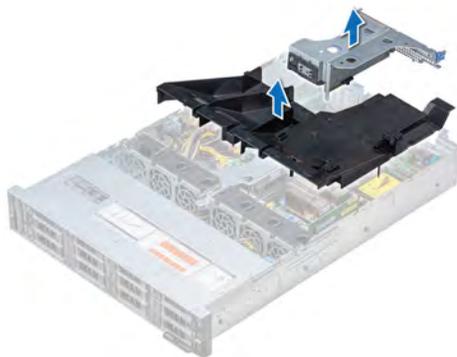
2. Installing the CPU

While the recorder is open, install the CPU from the kit.

1. **NVR4 Premium:** If you are installing the CPU on a Premium recorder, remove the mid-plane hard disk tray.



- a. Disconnect the SAS and power cables (PRM only) connected to the mid-plane hard disk tray.
 - b. Fold the hard drive tray handles up.
 - c. Use the handles to lift the tray out of the recorder.
 - d. Remove the black plastic cover that covers the RAM and second CPU slots. Open the RAM ejectors that are holding the plastic cover and lift it out.
2. **NVR4 Standard:** If you are installing the CPU on a Standard recorder, remove the black cooling shroud in the middle of the recorder and the butterfly riser slot that is positioned over the second CPU slot.
 - a. Hold the cooling shroud by the two tabs marked in blue.
 - b. Lift the cooling shroud out of the recorder and set it aside.



- c. Use a phillips #2 screwdriver to loosen the screw that is securing the butterfly riser slot.
- d. Lift the butterfly riser slot out and set it aside.

3. Remove the CPU cap immediately over the second CPU slot. Press the 2 blue clips to remove the cap.
4. Unpack the CPU from the kit and peel off the protective layer of plastic on the bottom.

Be careful not to touch the thermal paste that is pre-applied to the bottom of the CPU.

5. 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.

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

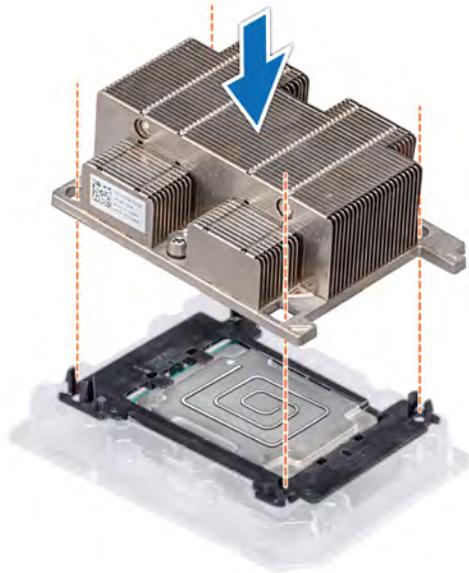
NOTE: Ensure that the pin 1 indicator on the bracket is aligned with the pin 1 indicator on the processor before placing the bracket.



- 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.

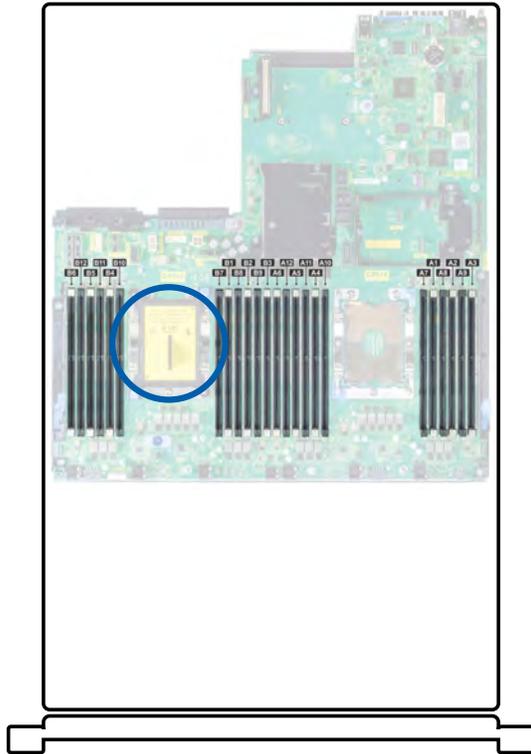
NOTE:

- Do not press 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 is aligned with the pin 1 indicator on the bracket before placing the heat sink onto the processor and bracket.

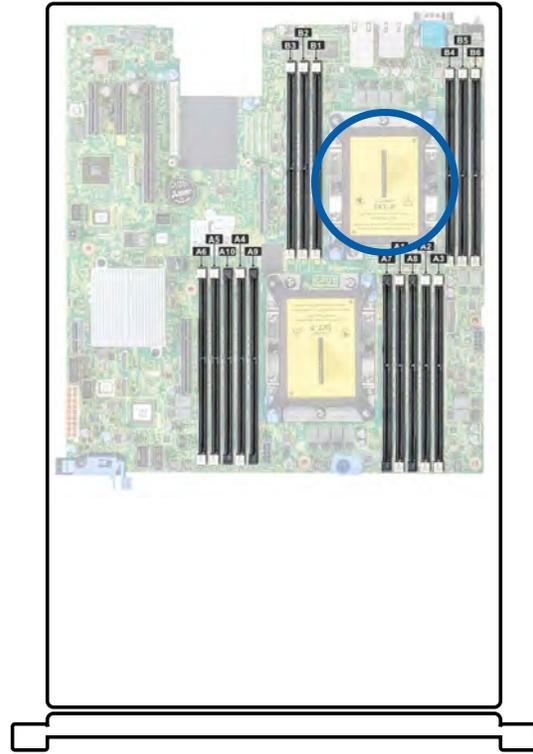


8. Locate the 2nd processor socket.

NVR Premium (HD-NVR4-PRM-2NDCPU)



NVR Standard (HD-NVR4-STD-2NDCPU)

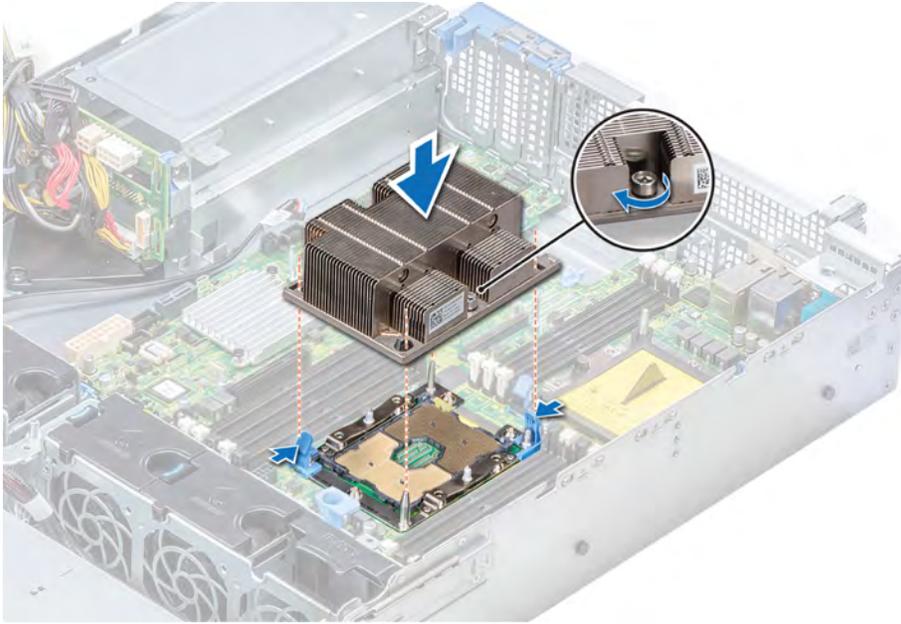


9. Align the pin 1 indicator on the heat sink to the system board and then place the processor and heat sink module on the processor socket.

CAUTION — To avoid damaging the fins on the heat sink, do not press down on the heat sink fins.

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

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



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

11. 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.

NOTE: Do not over-tighten or strip the screws.

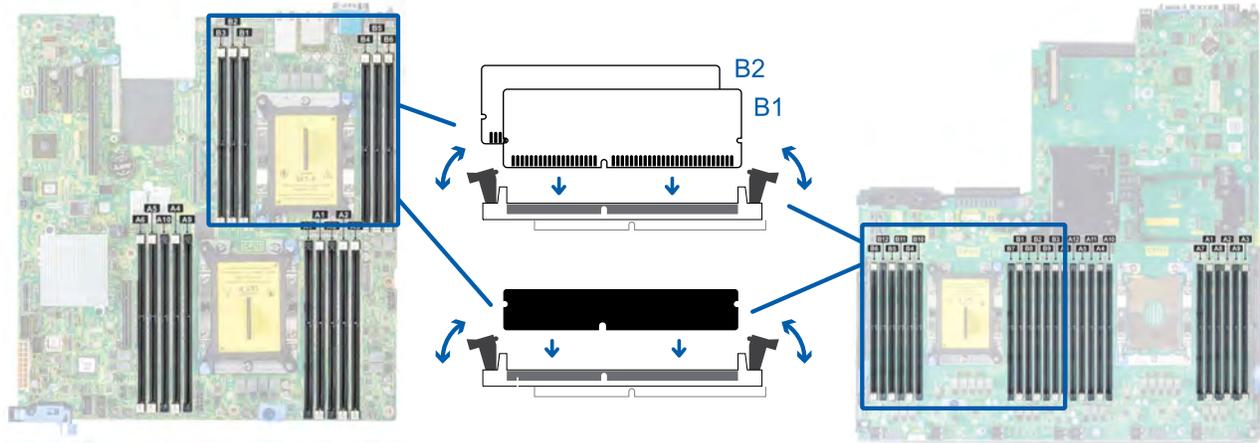
If the processor and heat sink module slips off the blue retention clips when the screws are partially tightened, follow these steps to secure the module:

- 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 10](#) above.
- c. Secure the processor and heat sink module to the system board, following the instructions as described in [step 11](#) above.

3. Installing RAM

After the CPU has been installed, insert the RAM included in the kit into memory sockets B1 and B2.

CAUTION — Handle each memory module only by the edges to ensure that you don't touch the middle of the memory module or the metallic contacts.



NVR Standard (HD-NVR4-STD-2NDCPU)

NVR Premium (HD-NVR4-PRM-2NDCPU)

CAUTION — To prevent damage to the memory module or memory module socket during installation, do not bend or flex the memory module. You must insert both ends of the memory module simultaneously.

1. In the row of empty memory sockets near to the newly installed CPU, locate sockets B1 and B2.
2. Open the ejectors on the memory module sockets outward to allow the memory modules to be inserted into the sockets.
3. Align the edge connector of the memory modules with the alignment key of the sockets and press the memory modules into sockets until the socket levers click into place.

CAUTION — Do not apply pressure at the center of the memory module. Apply pressure to both ends of the memory module evenly.

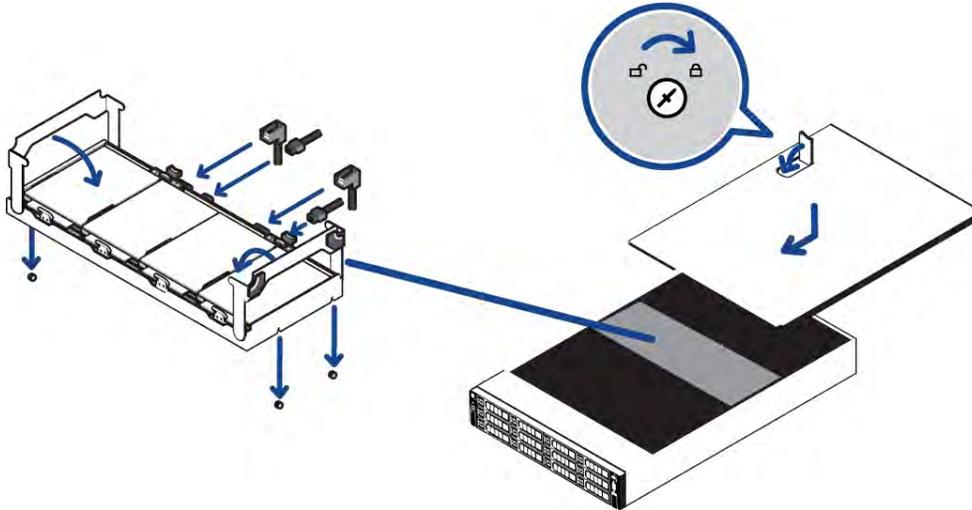
4. Fill the remaining empty memory sockets with the RAM blanks.

NOTE: More RAM blanks are supplied than may be necessary for the installation.

4. Restoring the NVR

When all the components have been installed, restore the removed components and close the cover.

1. Reinstall the components that were immediately over the CPU.



- (Premium recorder) Reinstall the mid-plane hard disk tray. Make sure the SAS and power cables are all reconnected.
 - (Standard recorder) Restore the cooling shroud and butterfly riser slot.
2. Close and lock the recorder cover.
 3. Reconnect all the cables to the recorder.
 4. Power the recorder and log in to confirm the system is running properly.

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