

NVR 2nd CPU Kit

Installation Guide

NVR4X-PRM-2NDCPU
HD-NVR4-PRM-2NDCPU
HD-NVR4-STD-2NDCPU

For

HD-NVR4X-PRM	HD-NVR4X-STD
HD-NVR4-PRM	HD-NVR4-STD

© 2020, Avigilon Corporation. All rights reserved. AVIGILON, the AVIGILON logo, AVIGILON are trademarks of Avigilon Corporation. Intel is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Other names or logos mentioned herein may be the trademarks of their respective owners. The absence of the symbols ™ and ® in proximity to each trademark in this document or at all is not a disclaimer of ownership of the related trademark. Avigilon Corporation protects its innovations with patents issued in the United States of America and other jurisdictions worldwide (see [avigilon.com/patents](https://www.avigilon.com/patents)). Unless stated explicitly and in writing, no license is granted with respect to any copyright, industrial design, trademark, patent or other intellectual property rights of Avigilon Corporation or its licensors.

This document has been compiled and published using product descriptions and specifications available at the time of publication. The contents of this document and the specifications of the products discussed herein are subject to change without notice. Avigilon Corporation reserves the right to make any such changes without notice. Neither Avigilon Corporation nor any of its affiliated companies: (1) guarantees the completeness or accuracy of the information contained in this document; or (2) is responsible for your use of, or reliance on, the information. Avigilon Corporation shall not be responsible for any losses or damages (including consequential damages) caused by reliance on the information presented herein.

Avigilon Corporation
avigilon.com

PDF-NVR4-2NDCPUKIT-B

Revision: 1 - EN

20200908

Table of Contents

Introduction	4
Confirm Package Contents	5
Required Tools	5
Installing the NVR 2nd CPU Kits	6
1. Removing the NVR Cover	7
2. Installing the CPU	7
3. Installing the Cooling Fan (NVR4 Standard Only)	13
4. Installing RAM	14
5. Restoring the NVR	15
For More Information	17

Introduction

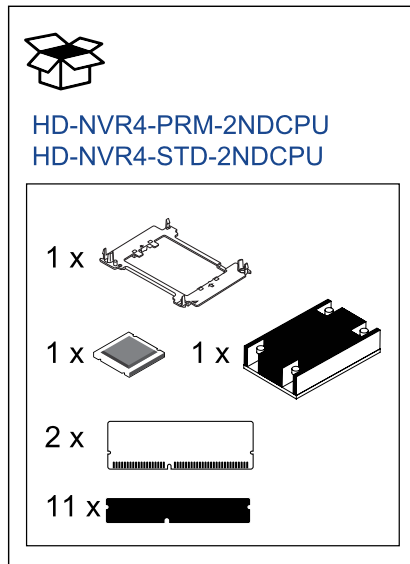
Avigilon provides optional 2nd CPU kits for Premium and Standard network video recorders (NVR). These kits provide all the components needed to add CPU redundancy to an NVR.

Part Number	Description
NVR4X-PRM-2NDCPU	NVR4X Premium 2 nd CPU Kit
HD-NVR4-PRM-2NDCPU	NVR4 Premium 2 nd CPU Kit
HD-NVR4-STD-2NDCPU	NVR4 Standard 2 nd CPU Kit

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

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
 - 1 x cooling fan (HD-NVR4-STD-2NDCPU only)

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.

Installing the NVR 2nd CPU Kits

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:

1. <i>Removing the NVR Cover</i>	7
2. <i>Installing the CPU</i>	7
3. <i>Installing the Cooling Fan (NVR4 Standard Only)</i>	13
4. <i>Installing RAM</i>	14
5. <i>Restoring the NVR</i>	15

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.

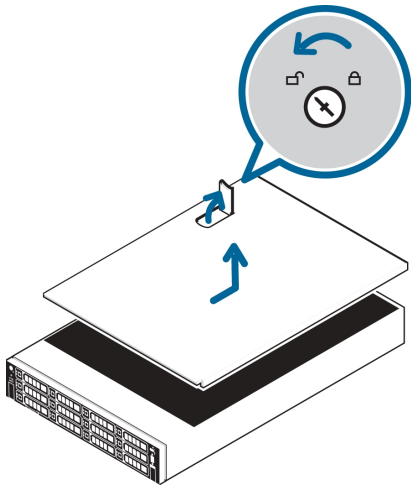
- a. In the Avigilon Control Center (ACC) Admin Tool, click **Shut Down**.

Wait for the application to display this message:

The ACC 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.

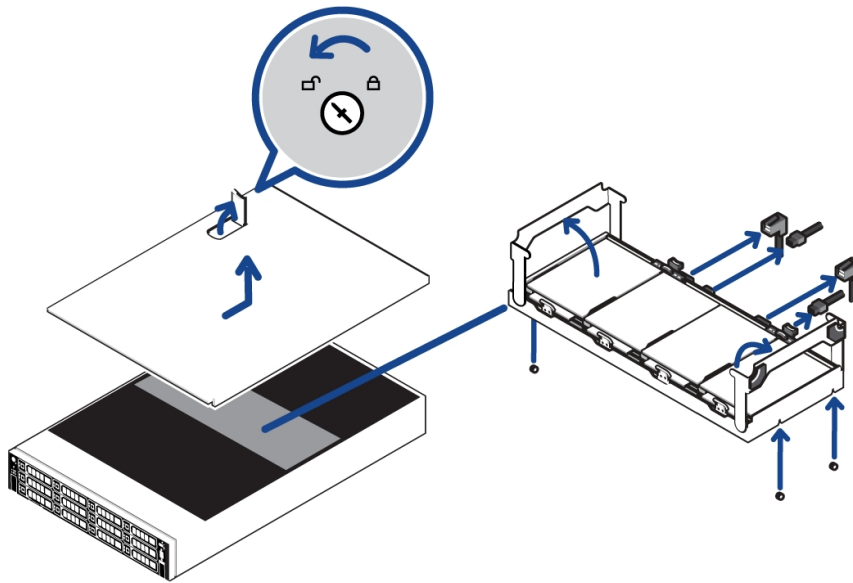
The cover slides back and is released from the recorder body.



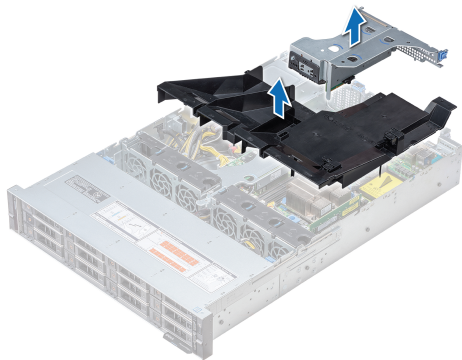
2. Installing the CPU

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. Use a phillips #2 screwdriver to loosen the screw that is securing the butterfly riser slot.
 - b. Lift the butterfly riser slot out and set it aside.
 - c. Hold the cooling shroud by the two tabs marked in blue.
 - d. Lift the cooling shroud out of the recorder 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.

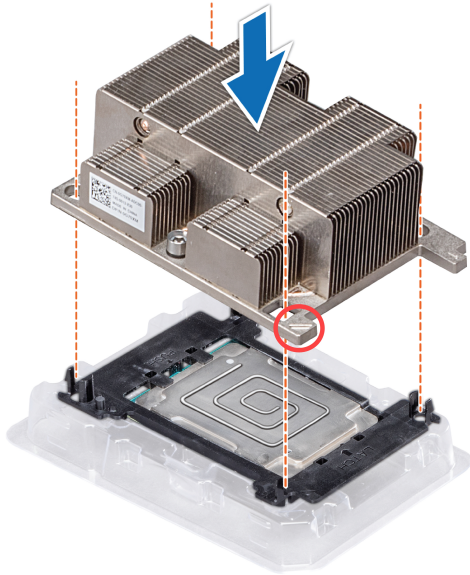
Note: Ensure that the pin 1 indicator on the bracket is aligned with the pin 1 indicator on the processor before placing the bracket.



7. 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.

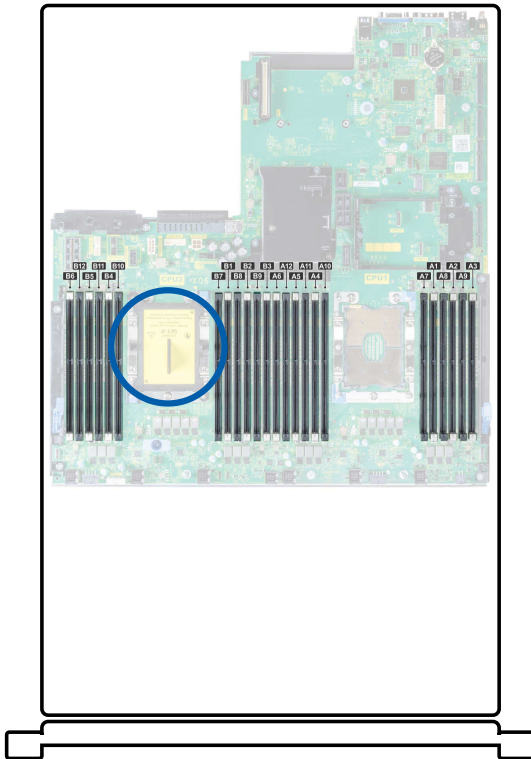
NOTE:

- 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 (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.

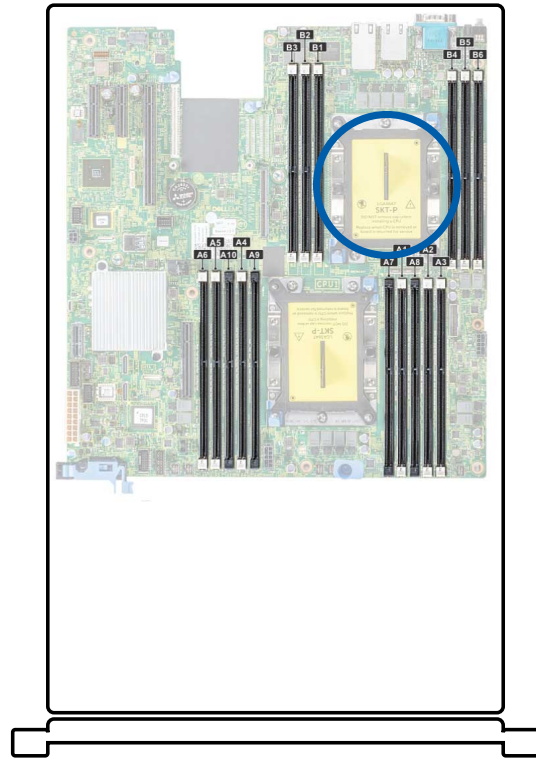


8. Locate the 2nd processor socket.

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



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

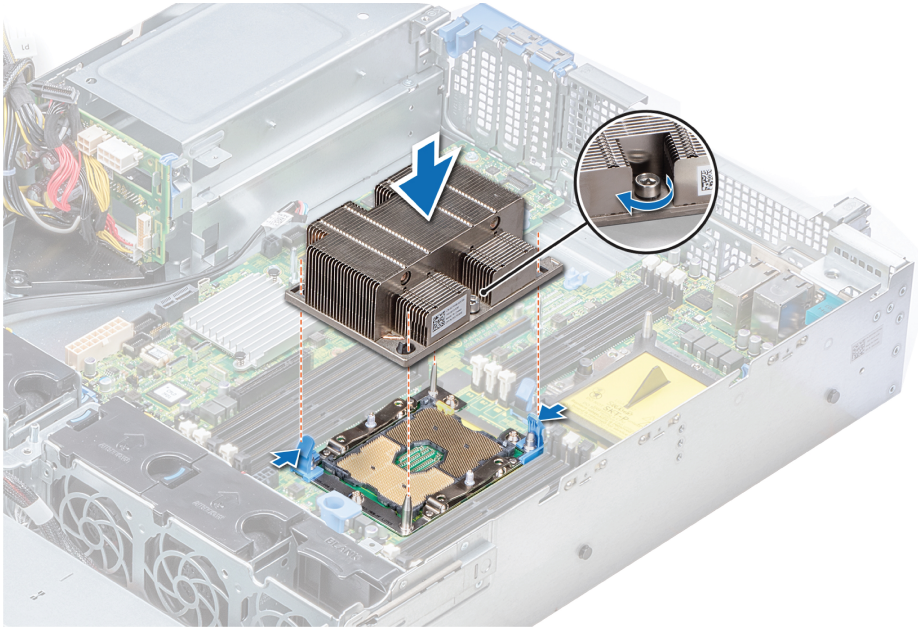


9. Align the pin 1 indicator on the heat sink to the system board and then place the processor and heat sink module on the processor socket.

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 the Cooling Fan (NVR4 Standard Only)

Note: Fan installation is only required for NVR4 Standard recorders. If you are installing the 2nd CPU into an NVR4 Premium, proceed to step 4. *Installing RAM* on the next page.

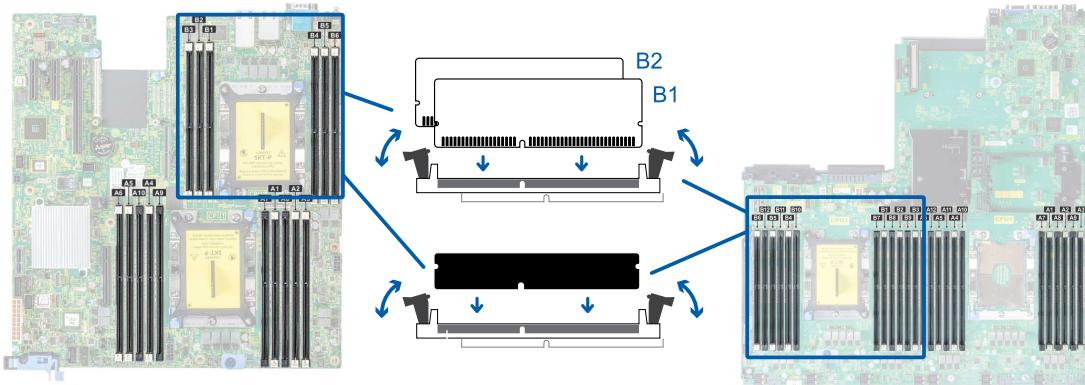
While the recorder is open, install the cooling fan from the kit.

1. Locate the empty slot in the cooling fan cage and remove the fan blank.
2. Holding the release tab blue touch point on the fan, lower the cooling fan into the open slot in the cooling fan cage.
3. Move the cables out of the way to access the cooling fan cable connector on the system board that is near to the installed fan.
4. Route the cooling fan cable and connect it to the connector on the system board.

4. 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.

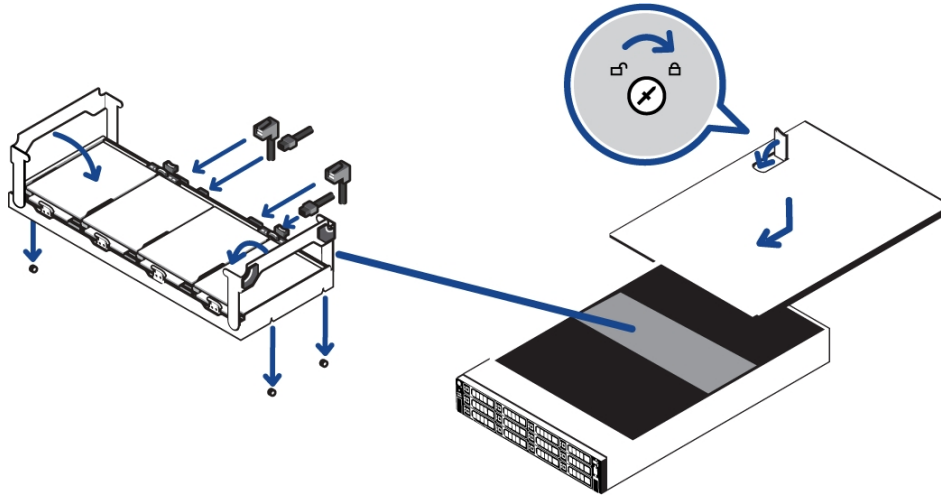
1. In the row of empty memory sockets near to the newly installed CPU, locate sockets B1 and B2.
2. Open the ejectors on the memory module sockets outward to allow the memory modules to be inserted into the sockets.
3. Align the edge connector of the memory modules with the alignment key of the sockets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

5. 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.



- Reinstall the mid-plane hard disk tray. Make sure the SAS and power cables are all reconnected.
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.

Limited Warranty and Technical Support

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

Warranty service and technical support can be obtained by contacting Avigilon Technical Support:
[avigilon.com/contact](https://www.avigilon.com/contact).

For More Information

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

Technical Support

Contact Avigilon Technical Support at [avigilon.com/contact](https://www.avigilon.com/contact).