Intel® NUC Kit NUC5i3RYH

Intel® NUC Kit NUC5i3RYHS

Intel® NUC Kit NUC5i3RYHSN

Intel® NUC Kit NUC5i5RYH

Intel® NUC Kit NUC5i5RYHS

User Guide

February 2020

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Contents

1.0 Introduction 5

1.1 Before You Begin 5

1.2 Installation Precautions 6

1.3 Observe Safety and Regulatory Requirements 6

2.0 Open the Chassis 7

3.0 Install and Remove System Memory 8

3.1 Install SO-DIMMs 8

3.2 Remove SO-DIMMs 9

4.0 Install an M.2 SSD 10

5.0 Install a 2.5-inch SSD or Hard Drive 12

6.0 Close the Chassis 14

7.0 Use the VESA Bracket (Optional) 15

8.0 Connect Power 17

9.0 Install an Operating System 19

10.0 Install the Latest Device Drivers and Software 20

Revision History

Date	Revision	Description
February 2020	06	Updated Intel® Product Compatibility Tool URLs; Added NUC5i3RYHSN and NUC5i5RYHS
August 2018	05	Added Intel NUC Kit NUC5i3RYHS
August 2018	04	Added link to IDSA
May 2015	03	
May 2015	02	
February 2015	01	Initial release.

1.0 Introduction

This User Guide provides step-by-step installation instructions for these products:

- Intel® NUC Kit NUC5i3RYH
- Intel® NUC Kit NUC5i3RYHS
- Intel® NUC Kit NUC5i3RYHSN
- Intel® NUC Kit NUC5i5RYH
- Intel® NUC Kit NUC5i5RYHS

1.1 Before You Begin

CAUTIONS

The steps in this guide assume you're familiar with computer terminology and with the safety practices and regulatory compliance required for using and modifying computer equipment.

Disconnect the computer from its power source and from any network before performing any of the steps described in this guide.

Failure to disconnect power, telecommunications links, or networks before you open the computer or perform any procedures can result in personal injury or equipment damage. Some circuitry on the board can continue to operate even though the front panel power button is off.

Follow these guidelines before you begin:

- Always follow the steps in each procedure in the correct order.
- Create a log to record information about your computer, such as model, serial numbers, installed options, and configuration information.
- Electrostatic discharge (ESD) can damage components. Perform the procedures described in this chapter only at an ESD workstation using an antistatic wrist strap and a conductive foam pad. If such a station isn't available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

1.2 Installation Precautions

When you install and test the Intel NUC, observe all warnings and cautions in the installation instructions.

To avoid injury, be careful of:

- Sharp pins on connectors
- Sharp pins on circuit boards
- Rough edges and sharp corners on the chassis
- Hot components (such as SSDs, processors, voltage regulators, and heat sinks)
- Damage to wires that could cause a short circuit

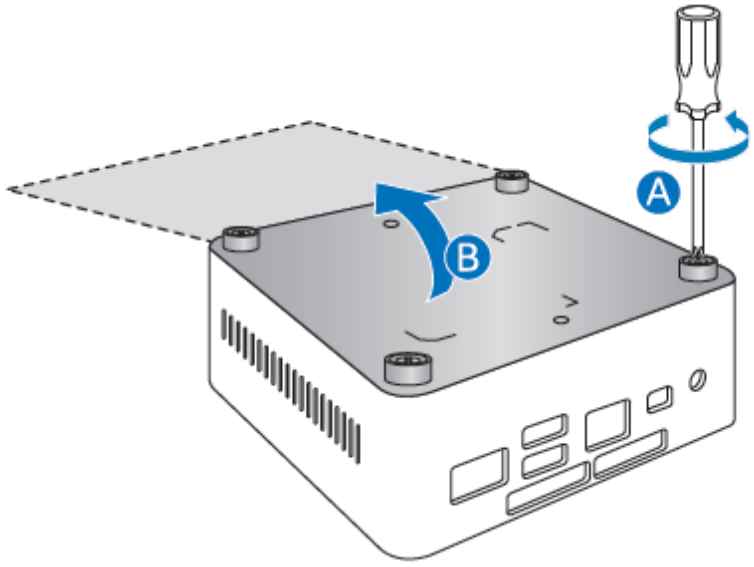
Observe all warnings and cautions that instruct you to refer computer servicing to qualified technical personnel.

1.3 Observe Safety and Regulatory Requirements

If you don't follow these instructions, you increase your safety risk and the possibility of noncompliance with regional laws and regulations.

2.0 Open the Chassis

Unscrew the four corner screws on the bottom of the chassis and lift the cover.



3.0 Install and Remove System Memory

Intel NUC Kits NUC5i3RYH, NUC5i3RYHS, and NUC5i5RYH have two 260-pin DDR4 SO-DIMM memory slots

Memory requirements:

- 1.35V low voltage memory
- 1333 MHz or 1600 MHz SO-DIMMs
- Non-ECC

Find compatible system memory modules at the Intel® Product Compatibility Tool:

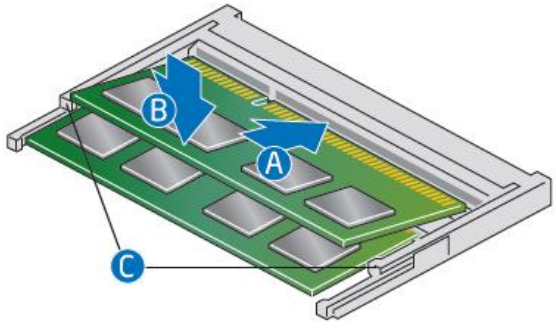
- NUC5i3RYH
- NUC5i3RYHS
- NUC5i3RYHSN
- NUC5i5RYH
- NUC5i5RYHS

3.1 Install SO-DIMMs

If you plan to install just one SO-DIMM, install it in the lower memory socket.

To install the SO-DIMMs, follow these steps:

1. Observe the precautions in "Before You Begin" in Section 1.1.
2. Turn off all peripheral devices connected to the computer. Turn off the computer and disconnect the AC power cord.



3. Align the small notch at the bottom edge of the SO-DIMM with the key in the socket.
4. Insert the bottom edge of the SO-DIMM into the socket.
5. When the SO-DIMM is inserted, push down on the outer edge of the

SO-DIMM until the retaining clips snap into place. Make sure the clips are firmly in place.

3.2 Remove SO-DIMMs

To remove a SO-DIMM, follow these steps:

1. Observe the precautions in "Before You Begin" in Section 1.1.
2. Turn off all peripheral devices connected to the computer. Turn off the computer.
3. Remove the AC power cord from the computer.
4. Remove the computer's cover.
5. Gently spread the retaining clips at each end of the SO-DIMM socket. The SO-DIMM pops out of the socket.
6. Hold the SO-DIMM by the edges, lift it away from the socket, and store it in an anti-static package.
7. Reinstall and reconnect any parts you removed or disconnected to reach the SO-DIMM sockets.
8. Replace the computer's cover and reconnect the AC power cord.

4.0 Install an M.2 SSD

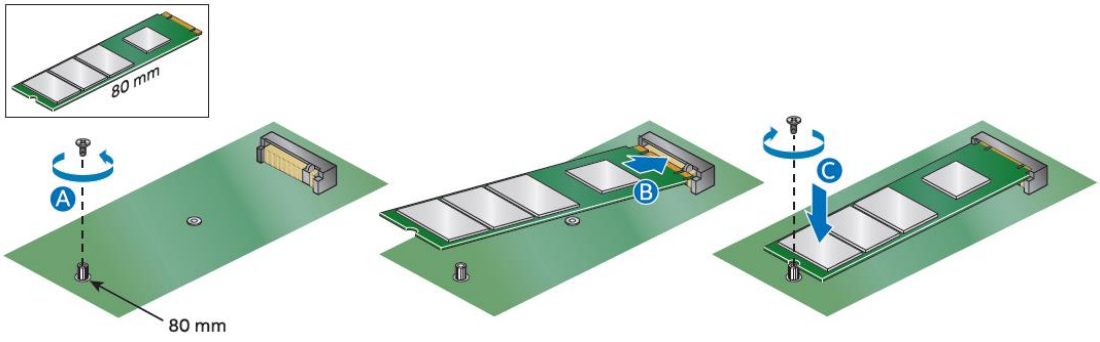
Intel NUC Kits NUC5i3RYH, NUC5i3RYHS, and NUC5i5RYH support 80mm, 60mm, and 42mm SSDs.

Find compatible M.2 SSDs at the Intel® Product Compatibility Tool:

- NUC5i3RYH
- NUC5i3RYHS
- NUC5i3RYHSN
- NUC5i5RYH
- NUC5i5RYHS

If you're installing an 80mm M.2 SSD:

1. Remove the small silver screw from the 80mm metal standoff on the motherboard (A).
2. Align the small notch at the bottom edge of the M.2 card with the key in the connector.
3. Insert the bottom edge of the M.2 card into the connector (B).
4. Secure the card to the standoff with the small silver screw (C).



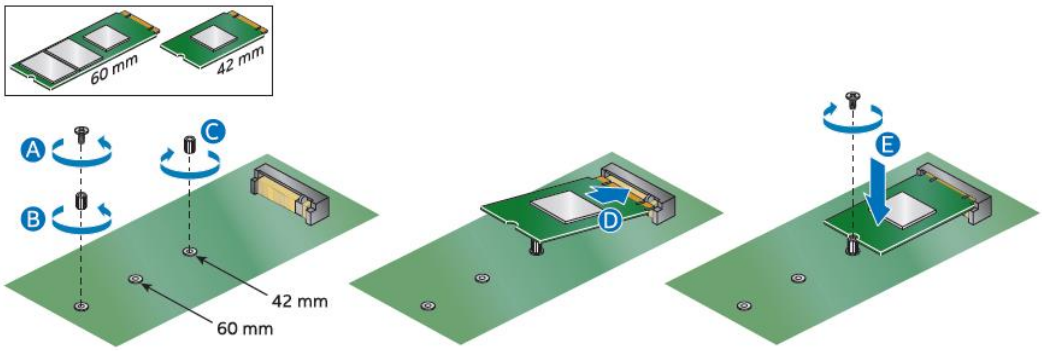
If you're installing a 60mm or 42mm M.2 SSD:

1. Remove the small silver screw from the metal standoff on the motherboard (A).
2. Move the standoff (B) from the 80mm position to either the 60mm or 42mm position (C).

3. Align the small notch at the bottom edge of the M.2 card with the key in the connector.

4. Insert the bottom edge of the M.2 card into the connector (D).

5. Secure the card to the standoff with the small silver screw (E).



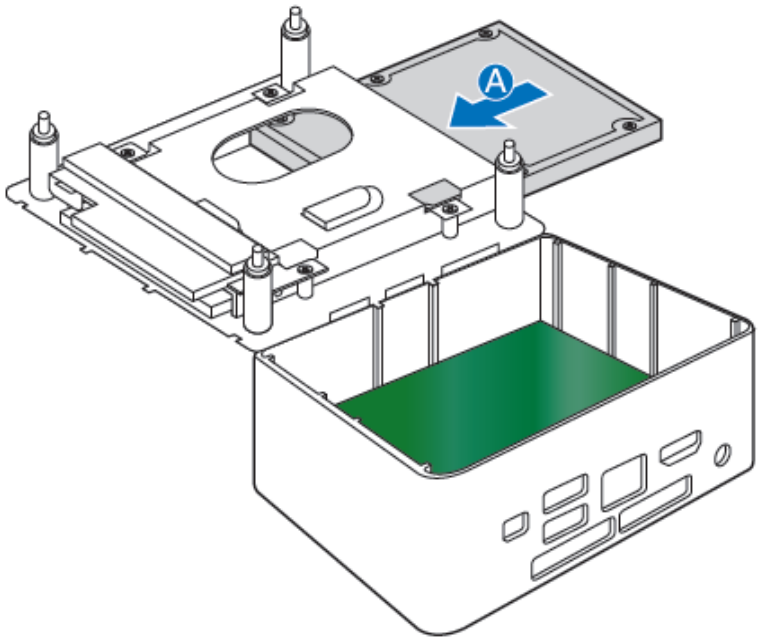
5.0 Install a 2.5-inch SSD or Hard Drive

Intel NUC Kits NUC5i3RYH, NUC5i3RYHS, and NUC5i5RYH support an additional 2.5” Solid State Drive (SSD) or Hard Disk Drive (HDD).

Find compatible M.2 SSDs at the Intel® Product Compatibility Tool:

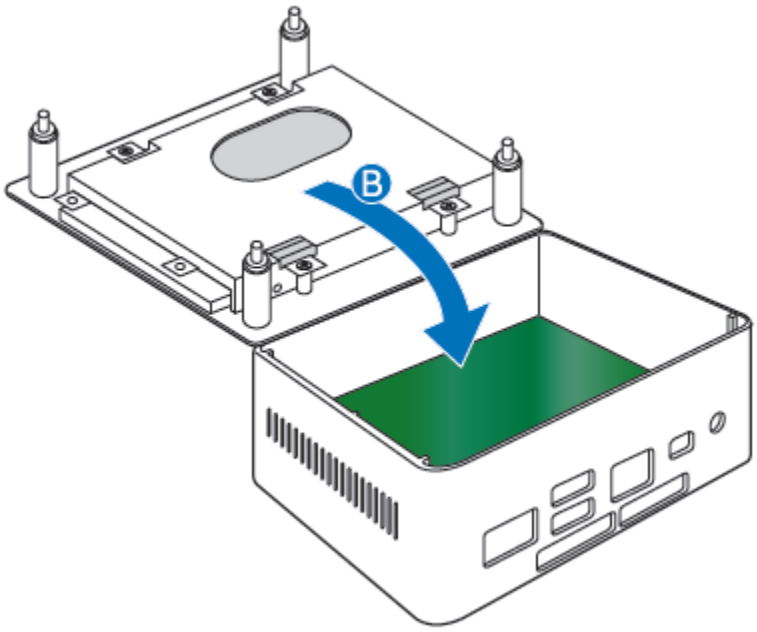
- NUC5i3RYH
- NUC5i3RYHS
- NUC5i3RYHSN
- NUC5i5RYH
- NUC5i5RYHS

1. Slide the new 2.5” drive into the drive bay, ensuring the SATA connectors are fully seated into the connectors of the SATA daughter card (A).



2. Secure the drive into the drive bay with the two small silver screws that were included in the box.

3. Set the drive bay bracket down inside the chassis (B).



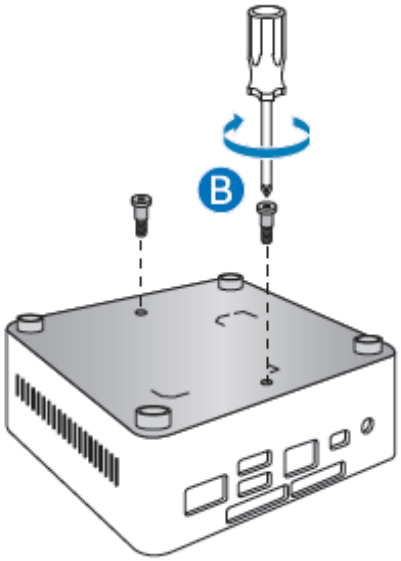
6.0 Close the Chassis

After all components have been installed, close the Intel NUC chassis. Intel recommends this be done by hand with a screwdriver to avoid over-tightening and possibly damaging the screws.

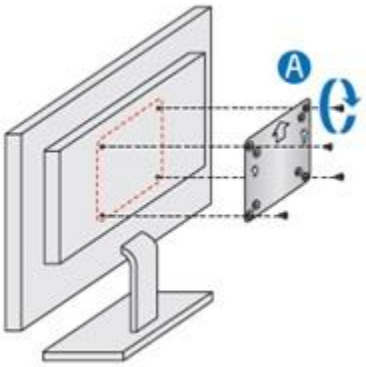
7.0 Use the VESA Bracket (Optional)

Follow these instructions to attach and use the VESA mount bracket:

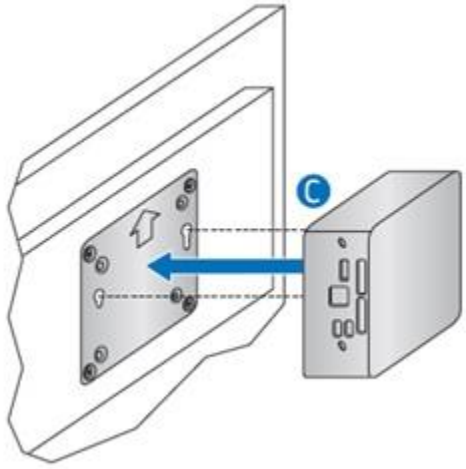
1. Using the four small black screws that were included in the box, attach the VESA bracket to the back of the monitor or TV.



2. Attach the two slightly larger black screws to the bottom chassis cover of the Intel NUC.



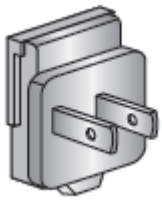
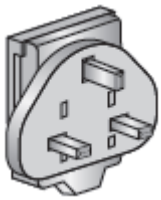
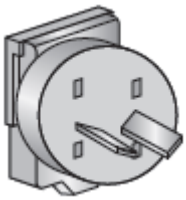
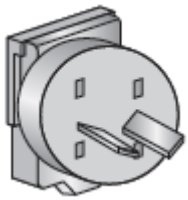
3. Slide the Intel NUC onto the VESA mount bracket.

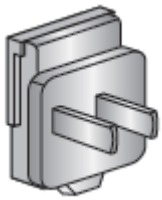
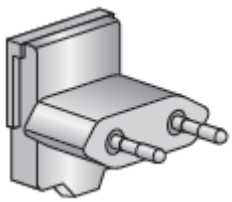
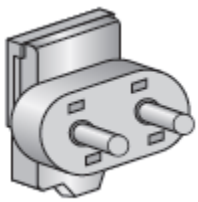
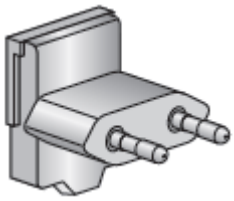


8.0 Connect Power

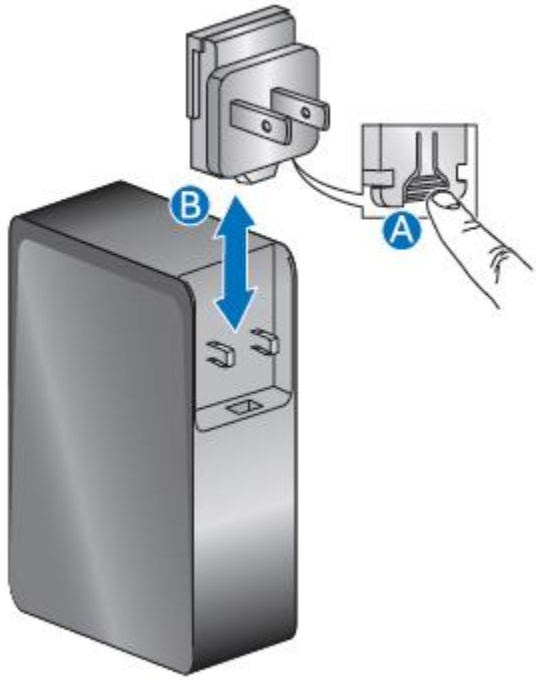
Country-specific power plug attachments are included in the box.

1. Choose the attachment for your region.

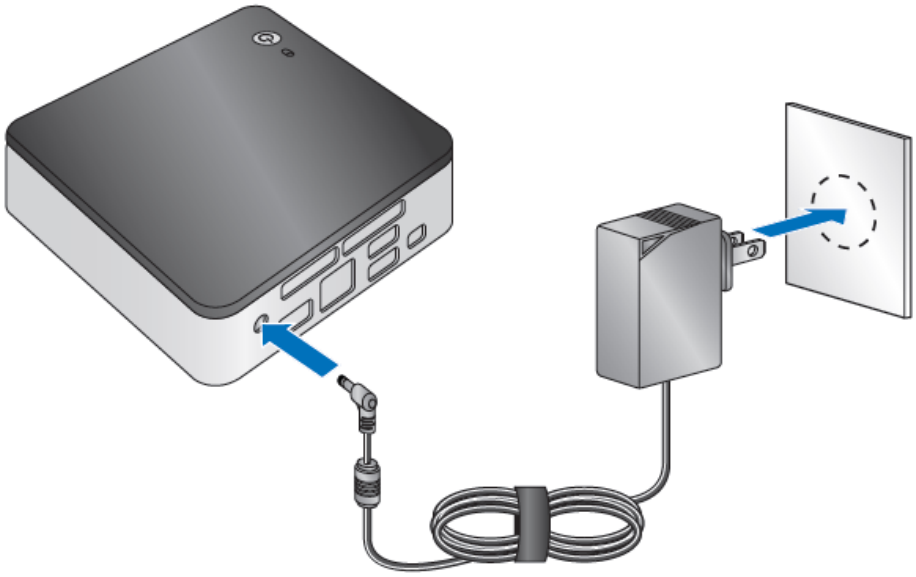
Plug				
Code	US	UK	ARG	AUS
Country	United States	United Kingdom	Argentina	Australia

Plug				
Code	CHN	EU	IND	KOR
Country	China	European Union	India	South Korea

2. Slide the attachment (B) onto the power plug, locking it into place (A).



3. Connect AC power.



9.0 Install an Operating System

See Supported Operating Systems for a list of Intel-validated Windows* operating systems.

The Intel Product Compatibility Tool lists versions of Linux* that have been reported as compatible by Intel NUC owners. If you need assistance with Linux on your Intel NUC, check the distribution's website and forums for peer assistance.

Refer to Operating System Installation for system requirements and installation steps.

10.0 Install the Latest Device Drivers and Software

Here are the options for keeping device drivers current:

- Allow the Intel® Driver & Support Assistant (Intel® DSA) to detect out-of-date drivers
- Manually download drivers, BIOS, and software from Download Center:
  - NUC5i3RYH
  - NUC5i3RYHS
  - NUC5i3RYHSN
  - NUC5i5RYH
  - NUC5i5RYHS

The following device drivers and software are available.

- Intel® Chipset Device Software
- Intel® HD Graphics
- Intel® Management Engine
- Intel® Gigabit Ethernet
- Intel® Wireless
- Intel® Bluetooth
- Intel® USB 3.0 (needed for Windows 7* only)
- Intel® Serial IO
- Realtek* High Definition Audio
- ITE Tech* Consumer Infrared
- Intel® Rapid Storage Technology
- Intel® Software Guard Extensions