

Intel® NUC 12 Pro Kit NUC12WSHi3

Intel® NUC 12 Pro Kit NUC12WSHi30L

Intel® NUC 12 Pro Kit NUC12WSHi30Z

Intel® NUC 12 Pro Kit NUC12WSHi5

Intel® NUC 12 Pro Kit NUC12WSHi50Z

Intel® NUC 12 Pro Kit NUC12WSHv5

Intel® NUC 12 Pro Kit NUC12WSHv50L

Intel® NUC 12 Pro Kit NUC12WSHv50Z

Intel® NUC 12 Pro Kit NUC12WSHi7

Intel® NUC 12 Pro Kit NUC12WSHi70Z

Intel® NUC 12 Pro Kit NUC12WSHv7

Intel® NUC 12 Pro Kit NUC12WSHv70L

Intel® NUC 12 Pro Kit NUC12WSHv70Z

[User Guide](#)

August 2022



You may not use or facilitate the use of this document in connection with any infringement or other legal analysis concerning Intel products described herein. You agree to grant Intel a non-exclusive, royalty-free license to any patent claim thereafter drafted which includes subject matter disclosed herein.

No license (express or implied, by estoppel or otherwise) to any intellectual property rights is granted by this document.

All information provided here is subject to change without notice. Contact your Intel representative to obtain the latest Intel product specifications and roadmaps.

The products described may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Copies of documents which have an order number and are referenced in this document may be obtained by calling 1-800-548-4725 or by visiting: <http://www.intel.com/design/literature.htm>.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure.

Intel and the Intel logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries.

*Other names and brands may be claimed as the property of others.

Copyright © 2022, Intel Corporation. All rights reserved.

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
August 2022	1.0	Initial release.

1.0 Introduction

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

- Intel® NUC 12 Pro Kit NUC12WSHi3
- Intel® NUC 12 Pro Kit NUC12WSHi30L
- Intel® NUC 12 Pro Kit NUC12WSHi30Z
- Intel® NUC 12 Pro Kit NUC12WSHi5
- Intel® NUC 12 Pro Kit NUC12WSHi50Z
- Intel® NUC 12 Pro Kit NUC12WSHv5
- Intel® NUC 12 Pro Kit NUC12WSHv50L
- Intel® NUC 12 Pro Kit NUC12WSHv50Z
- Intel® NUC 12 Pro Kit NUC12WSHi7
- Intel® NUC 12 Pro Kit NUC12WSHi70Z
- Intel® NUC 12 Pro Kit NUC12WSHv7
- Intel® NUC 12 Pro Kit NUC12WSHv70L
- Intel® NUC 12 Pro Kit NUC12WSHv70Z

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

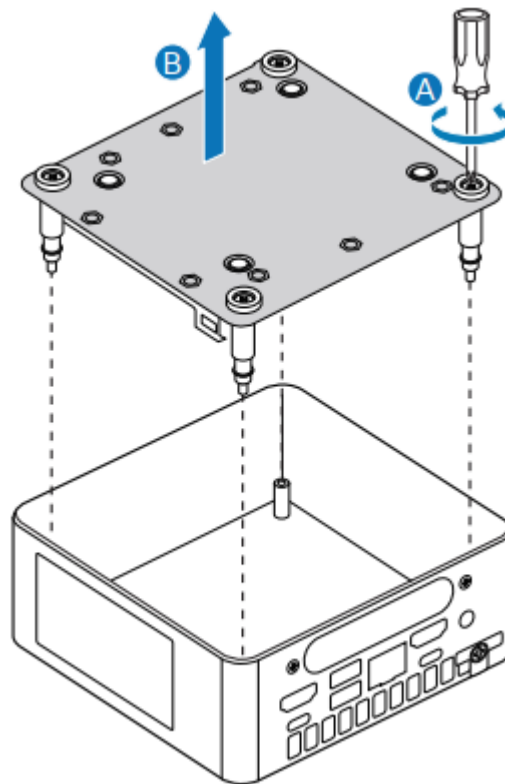
Observe all warnings and cautions that instruct you to refer computer servicing to qualified technical personnel.

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 12 Pro Kit NUC12WSH has two 260-pin DDR4 SO-DIMM memory slots

Memory requirements:

- 1.2V low voltage memory
- 2133/2400/3200 MHz SO-DIMMs
- Non-ECC

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

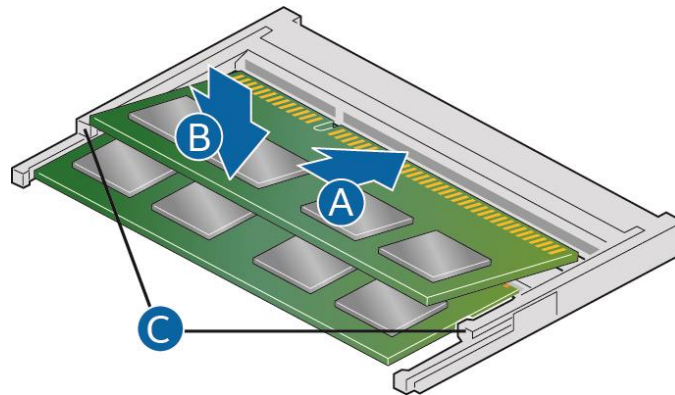
- [Intel® NUC 12 Pro Kit NUC12WSHi3](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi30L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi30Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi5](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi50Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv5](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv50L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv50Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi7](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi70Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv7](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv70L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv70Z](#)

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

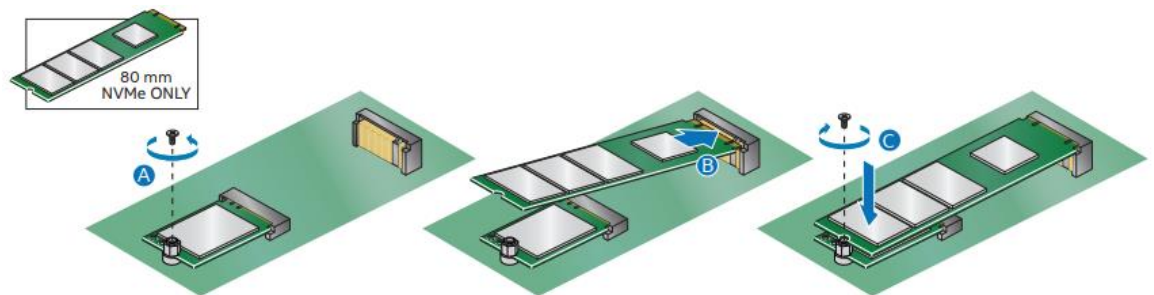
Intel® NUC 12 Pro Kit NUC12WSH supports 80mm and 42mm SSDs.

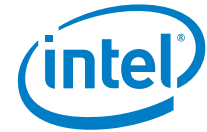
Find compatible M.2 SSDs at the Intel® Product Compatibility Tool:

- [Intel® NUC 12 Pro Kit NUC12WSHi3](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi30L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi30Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi5](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi50Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv5](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv50L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv50Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi7](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi70Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv7](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv70L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv70Z](#)

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

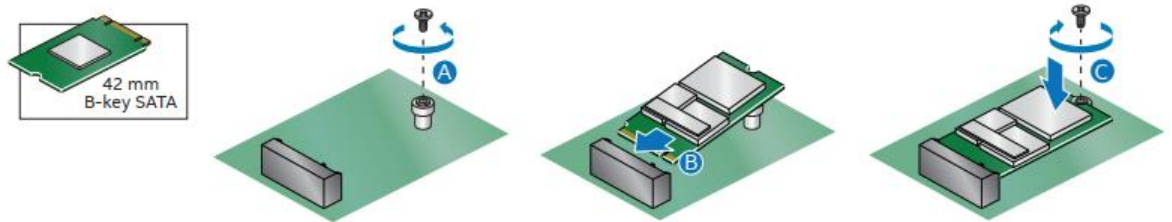
1. Remove the small silver screw from the 80mm metal standoff on the motherboard (A).
2. Align the small notch at the bottom edge of the M.2 card with the key in the connector.
3. Insert the bottom edge of the M.2 card into the connector (B).
4. Secure the card to the standoff with the small silver screw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





If you're installing a 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 the 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).



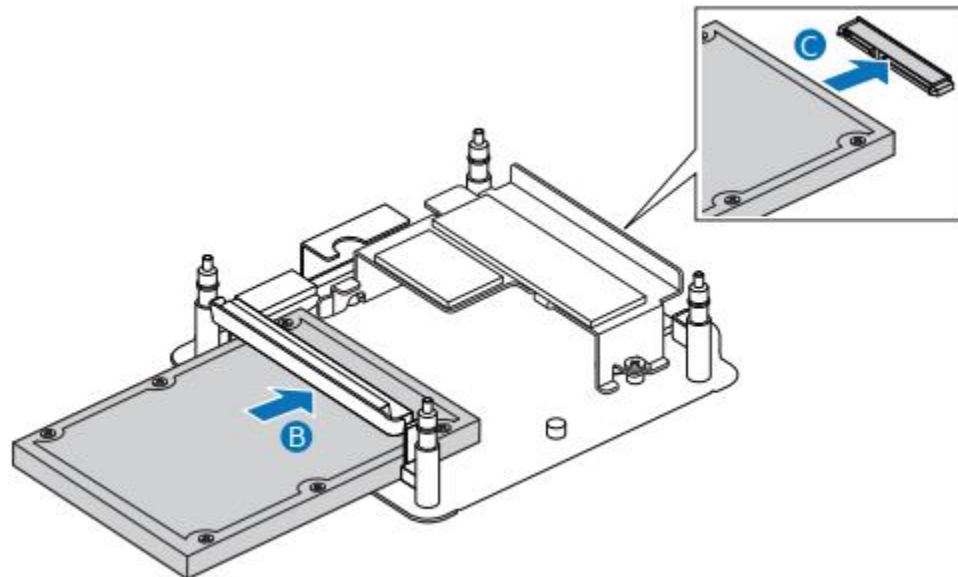
5.0 *Install a 2.5-inch SSD or Hard Drive*

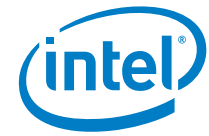
Intel® NUC 12 Pro Kit NUC12WSH supports an additional 2.5" Solid State Drive (SSD) or Hard Disk Drive (HDD).

Find compatible 2.5-inch SSDs at the Intel® Product Compatibility Tool:

- [Intel® NUC 12 Pro Kit NUC12WSHi3](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi30L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi30Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi5](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi50Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv5](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv50L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv50Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi7](#)
- [Intel® NUC 12 Pro Kit NUC12WSHi70Z](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv7](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv70L](#)
- [Intel® NUC 12 Pro Kit NUC12WSHv70Z](#)

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

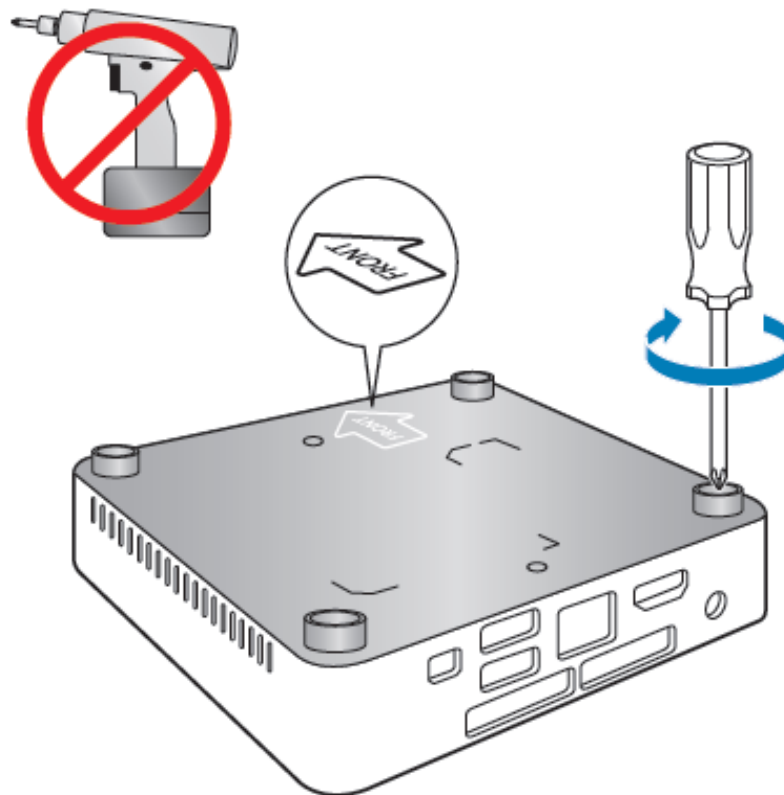




2. Secure the drive into the drive bay with the two small silver screws that were included in the box. Set the drive bay bracket down inside the chassis.

6.0 Close the Chassis

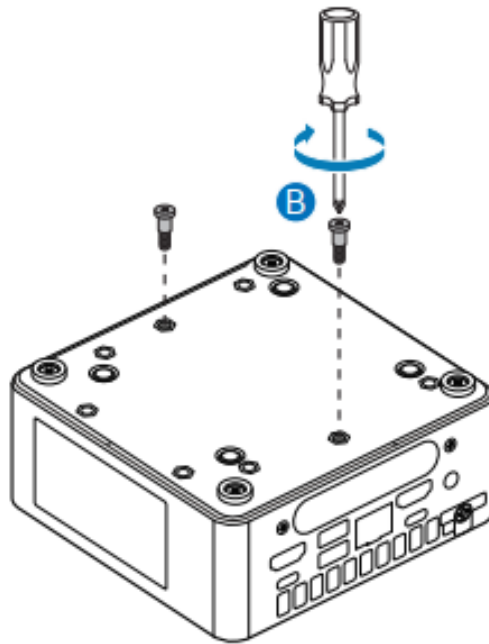
After all components have been installed, close the Intel NUC chassis. Intel recommends this be done by hand with a screwdriver to avoid over-tightening and possibly damaging the screws.



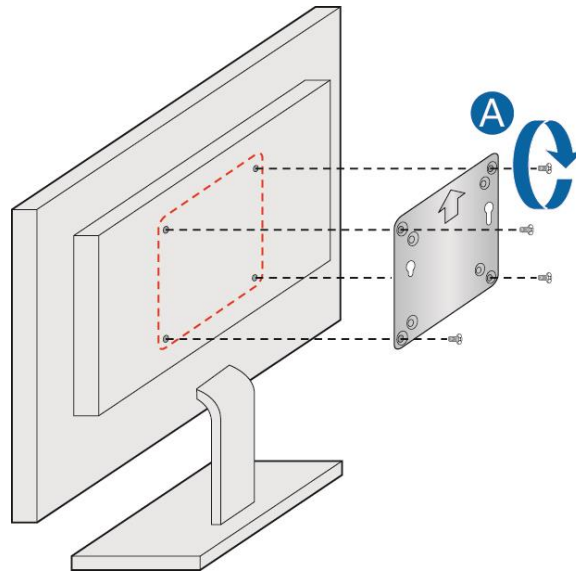
7.0 Use the VESA Bracket (Optional)

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

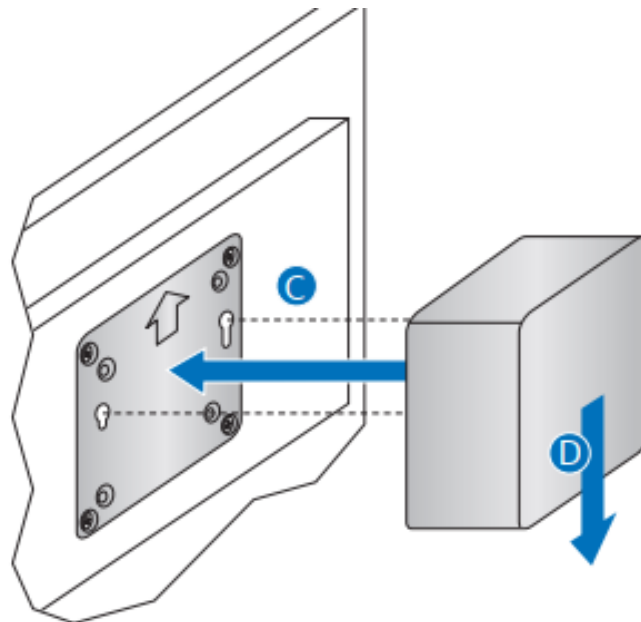
1. Using the four small black screws that were included in the box, attach the VESA bracket to the back of the monitor or TV.



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



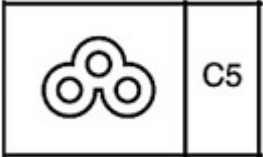
3. Slide the Intel NUC onto the VESA mount bracket.

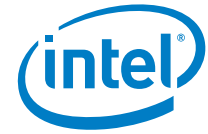




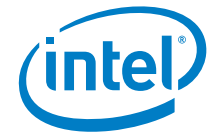
8.0 Connect Power

Each Intel NUC model includes either a region-specific AC power cord or no AC power cord (only the power adapter).

Product codes	Power cord type
RNUC12WSHi30000 RNUC12WSHi30L00 RNUC12WSHi30Z00 RNUC12WSHi50000 RNUC12WSHi50Z00 RNUC12WSHv50000 RNUC12WSHv50L00 RNUC12WSHv50Z00 RNUC12WSHi70000 RNUC12WSHi70Z00 RNUC12WSHv70000 RNUC12WSHv70L00 RNUC12WSHv70Z00	No power cord included. An AC power cord needs to be purchased separately. Power cords are available at many Internet sites for use in multiple countries. The connector on the power adapter is a C5 type connector. 
RNUC12WSHi30Z01 RNUC12WSHi50001 RNUC12WSHi50Z01 RNUC12WSHv50001 RNUC12WSHi70001 RNUC12WSHi70Z01 RNUC12WSHv70001	US power cord included.
RNUC12WSHi30Z02 RNUC12WSHi50002 RNUC12WSHi50Z02 RNUC12WSHv50002 RNUC12WSHi70002 RNUC12WSHi70Z02 RNUC12WSHv70002	EU power cord included.
RNUC12WSHi30Z06 RNUC12WSHi50006 RNUC12WSHi50Z06 RNUC12WSHv50006	China power cord included.



RNUC12WSHi70006 RNUC12WSHi70Z06	
------------------------------------	--



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:
 - [Intel® NUC 12 Pro Kit NUC12WSHi3](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHi30L](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHi30Z](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHi5](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHi50Z](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHv5](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHv50L](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHv50Z](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHi7](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHi70Z](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHv7](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHv70L](#)
 - [Intel® NUC 12 Pro Kit NUC12WSHv70Z](#)