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Intel NUC-11-Performance Core i5 Fully Loaded Desktop Mini PC User Guide

Contents

Intel NUC-11-Performance Core i5 Fully Loaded Desktop Mini PC

Specifications

- Product Name: Frost Canyon
- Dimensions: 4.4 in x 4.6 in x 2.0 in (112 mm x 117 mm x 51 mm)
- Available SKUs: Mini PC

Product Information

Unleash your inner creator with Frost Canyon, the new size of powerful. This mini PC offers better overall performance and 3x faster wireless speeds compared to standard models.
It also provides 8x more bandwidth with Thunderbolt 3 for enhanced data transfer rates.

Features

- **Processor:** [Processor]
- **Graphics:** [Graphics]
- **Memory:** [Memory]
- **Storage:** [Storage]
- **Other Features & Technology:** [Other Features & Technology]
- **Geo-Specific Power Cord:** US, EU, AU, IN, CN, or No Cord Option
- **Operating System:** [Operating System]

What's Needed

To use the Frost Canyon mini PC, you will need the following:

- Dual-channel DDR4 SODIMM slots
- M.2 22×42/80 slot, 2.5 7mm SATA drive bay
- Power supply: 90W, with geo-specific AC cords
- Memory, Storage, Operating System (not included)

Additional Technical Specifications

- Processors: [Processors]
- Memory: DDR4-2666 SODIMMs, 1.2V, 64 GB max

- Graphics: via HDMI or Thunderbolt 3
- Power Supply: 90W power supply, with geo-specific AC cords
- Nearly 3x Wireless Speeds: 802.11ax 2×2 160MHz enables 2402Mbps maximum theoretical data rates, ~3X (2.8X) faster than standard 802.11ac 2×2 80MHz (867Mbps)
- 8X more bandwidth with Thunderbolt 3TM than USB 3.0: Data transfer rates depend on system configuration.
- USB-C to dual mini DisplayPort splitter required for certain functionalities.

Product Usage Instructions

Step 1: Installation

1. Choose a suitable location for the Frost Canyon mini PC.
2. Connect the power supply to the mini PC and plug it into a power outlet.
3. Connect your display device (monitor or TV) to the mini PC using an HDMI cable or Thunderbolt 3 cable.
4. If using Thunderbolt 3, ensure that you have a USB-C to dual mini DisplayPort splitter if necessary.
5. Connect a keyboard and mouse to the mini PC using USB ports.

Step 2: Setup

1. Turn on the display device and select the appropriate input source.
2. Press the power button on the mini PC to turn it on.
3. Follow the on-screen instructions to set up the operating system.
4. Configure your wireless network settings if needed.
5. Install any additional software or drivers as required.

Step 3: Usage

Once the setup is complete, you can start using the Frost Canyon mini PC for various tasks. Here are a few examples:

- Create documents, spreadsheets, and presentations using productivity software.
- Stream videos, movies, and music from online platforms.
- Edit photos and videos with compatible software.
- Play games that meet the system requirements.
- Connect external storage devices to transfer or backup files.

FAQ

Q: What is the maximum memory capacity of the Frost Canyon mini PC?

- **A:** The Frost Canyon mini PC supports a maximum of 64 GB DDR4 memory.

Q: Can I use a different power supply with the mini PC?

- **A:** It is recommended to use the provided 90W power supply to ensure proper functionality. Using a different power supply may result in compatibility issues.

Q: Does the mini PC come with an operating system?

- **A:** No, the operating system is not included with the mini PC.
- You will need to install your preferred operating system separately.

Q: What type of wireless network speeds does the Frost Canyon mini PC support?

- **A:** The mini PC supports nearly 3x faster wireless speeds with 802.11ax 2×2 160MHz, enabling a maximum theoretical data rate of 2402Mbps.

10th Generation Intel® Core™ i5-10210U

- 1.6 GHz – 4.2 GHz Turbo, 4 core, 8 thread, 6MB Cache,
    - **25W Intel® UHD Graphics,** 300 MHz – 1.1 GHz

Frost Canyon

- Dual channel DDR4-2666 SODIMMs, 1.2V, 64GB maximum
- M.2 22×42/80 key M slot for PCIe x4 Gen3 NVMe or SATA3 SSD
- Intel® Optane™ Memory M10 and H10 ready
- HDMI 2.0a port and DisplayPort 1.2 via Thunderbolt™ 3 / USB-C™ port
- Supports 3 x 4K displays
- Intel® i219-V 10/100/1000 Mbps Ethernet
- Intel® Wi-Fi 6 AX201 2×2 160MHz channels + Bluetooth v5.1, internal antennas
- Front USB 3.1 Gen2 Type-C™ (5V/9V fast phone charging profiles) and type-A ports
- 2 x rear USB 3.1 Gen2, and 2 x internal USB 2.0 via header

- Front Consumer Infrared port
- SDXC slot with UHS-II support
- Up to 7.1 multichannel digital audio via HDMI or DisplayPort signals
- Plastic with metal inner frame, replaceable lid, Kensington lock with base security
- Tall" H chassis: 117 x 112 x 51 mm, w/ 2.5" 7mm SATA3 bay and port
- 19VDC input, 90W power supply with geo-specific C5 AC cords
- Front Panel, CEC, RGB LED, 2 x USB2.0 headers
- Front panel status RGB LED
- Microsoft Windows* 10 logo'd, compatible with various Linux distros
- VESA mounting plate included in kit SKUs only
- Individual retail packaging
- Three-year Warranty

CREATE CONSUME REPEAT

- Featuring the power of 10th generation Intel® Core™ processors, the Intel® NUC 10 Performance has the power to create content as well as consume it.
- Record and mix music, add animation effects to your video edits, or over-binge your favorite shows in stunning ultra high-def 4K. Whatever it is, this Intel NUC brings full-size PC performance at a size small enough to fit in the palm of your hand.
- Available with a choice of hard drive configurations to meet your speed and storage needs, the NUC 10 Performance has the ports to connect every last peripheral and keep your data moving at top speed.
- And with triple display support, you can multitask across multiple screens and give your brilliance room to spread out.

Intel® NUC 10 Performance: A Workhorse for a Range of Needs

FEATURES

- 10th generation Intel® Core™ processors
- HDMI 2.0
- Thunderbolt™ 3
- Support for three 4K displays4
- Four USB 3.1 ports
- Intel® WiFi 6
- Bluetooth
- Intel® Gigabit LAN
- SDXC slot with UHS-II support
- 3-year limited warranty

USAGES

- Home theater
- Home office productivity

- Casual gaming

AVAILABLE SKUs

- Intel® NUC Kit

INTEL® NUC 10 PERFORMANCE KITS

Built with 10th generation Intel® Core™ processors

			Intel® Core™ i5 Processor		
			NUC10i5FNHN		
Processo r			10th Generation Intel® Core™ i 5-10210U Processor 1.6 GHz – 4.2 GHz Turbo, 4 cor e, 8 thread, 6 MB Cache, 25W		
Graphics			Intel® UHD Graphics, 300 MHz – 1.1 GHz		
Memory	Dual-channel DDR4 SODIMM slots				
Storage			M.2 22×42/80 slot, 2.5" 7mm S ATA drive bay		
Other Fe atures & Technolo gy	HDMI 2.0a, Thunderbolt™ 3, Front USB 3.1 Gen2 Type-C Port (fast charging), 2 USB 3.1 Gen2 Por ts, Intel® WiFi 6 and Bluetooth v5, Intel® Gigabit LAN, SDXC Card Slot, Consumer Infrared Sensor, K ensington Lock Ready, 3-Year Limited Warranty				
Geo-Spe cific Pow er Cord			US, EU, AU, IN, CN, or No Cord Option		
Operatin g System	Not Included				
What's N eeded	Memory, Storage, Operating System See page 4 for details				

Additional Technical Specifications

Processors

- NUC10i5FN
- Intel® Core™ i5-10210U (1.6 GHz – 4.2 GHz Turbo, 4 core, 8 thread, 6 MB Cache, 25W) NUC10i3FN
- Intel® Core™ i3-10110U (2.1 GHz – 4.1 GHz Turbo, 2 core, 4 thread, 4 MB Cache, 25W) NUC10i5FNHN
- M.2 22×42/80 key M slot for PCIe x4 Gen3 NVMe/AHCI or SATA3 SSD
- SATA3 SSD, 2.5″ 7mm SATA3 bay and port
- Full-size SDXC UHS-II slot

System Memory

- Two DDR4 SODIMM sockets (Dual channel DDR4-2666 SODIMMs, 1.2V, 64 GB max)

Connectivity

- HDMI 2.0a port

- Thunderbolt™ 3 port
- Intel® WiFi 6 AX200 2×2
- Bluetooth v5
- **Front:** USB 3.1 Gen2 Type-C port with 5V/9V fast phone charging profile
- **Front:** USB 3.1 Gen2 Type-A port
- **Back:** Two USB 3.1 Gen2 ports
- Intel® i219-V 10/100/1000 Mbps Ethernet

System BIOS

- 256 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V5.0b, SMBIOS2.5
- Intel® BIOS
- Intel® Express BIOS update support

Hardware Management Features

- Voltage and temperature sensing
- ACPI-compliant power management control

Expansion Capabilities

- 2x internal USB 2.0 headers

Audio

- Up to 7.1 multichannel digital audio via HDMI or Thunderbolt 3

Chassis Size

- Tall "H" Chassis
- 4.60″ x 4.40″ x 2.00″
- 117 mm x 112 mm x 51 mm
- Slim "K" Chassis
- 4.60" x 4.40" x 1.50"
- 117 mm x 112 mm x 38 mm

Power Requirements

- 19VDC 120W (NUC10i7FN models only), or 90W power supply, with geo-specific AC cords

Environment Operating Temperature

- 0° C to +35 C

Storage Temperature

- -20° C to +40° C

1. Over 2X Better Performance Vs. 5yo Laptop as measured by SYSmark* 2018 Overall Score. Intel Preproduction Processor: Intel® Core™ i7 -10710U processor (CML-U 6+2) PL1=25W, 6C12T, Turbo up to 4.7GHz, Memory: 2x16GB DDR4-2667 2Rx8, Storage: Intel® 760p M.2 PCIe* NVMe* SSD with AHCI Microsoft driver*, Display Resolution: 3840×2160 eDP Panel 12.5", OS: Windows* 10 19H1-18362.ent.rx64-Appx59. Power policy set to AC/Balanced mode for all benchmarks except SYSmark* 2014 SE which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: PROD-HC-RELEASES-GFX-DRIVER-CI-MASTER-2334-REVENUE-PR-1006952-WHQl.vs Processor: Intel® Core™ i7-5550U processor CPU @ 2.00GHz PL1=15W, Memory: 2 x 8 GB DDR3-1600, Storage: INTEL 545s 512GB SSDSC2KW512G8, Display Resolution: 1920 x 1080, OS: Microsoft Windows* 10 Enterprise 44.18362.1.0. Power policy set to AC/Balanced mode for all benchmarks except SYSmark* 2014 SE which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power with UX Slider set to Better Performance. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: 20.19.15.5058.
2. Nearly 3x Wireless Speeds: 802.11ax 2×2 160MHz enables 2402Mbps maximum theoretical data rates, ~3X (2.8X) faster than standard 802.11ac 2×2 80MHz (867Mbps) as documented in IEEE 802.11 wireless standard specifications and require the use of similarly configured 802.11ax wireless network routers.
3. 8X more bandwidth with Thunderbolt 3™ than USB 3.0: Data transfer rates, different from total available bandwidth for data and display traffic, depending on system configuration.
   8X improvement over USB 3.0 refers to total available bandwidth for data and display, not data transfer rates. Data transfer rates depend on system configuration.
4. USB-C to dual mini DisplayPort splitter required.

Documents / Resources

	Intel NUC-11-Performance Core i5 Fully Loaded Desktop Mini PC [pdf] User Guide NUC-11-Performance Core i5 Fully Loaded Desktop Mini PC, NUC-11-Performance, Core i5 Fully Loaded Desktop Mini PC, Fully Loaded Desktop Mini PC, Loaded Desktop Mini PC, Desktop Mini PC, Mini PC, PC

References

- **User Manual**