



Product Brief: Intel® NUC Mini PCs

INTEL® NUC 8 HOME

NUC8i7BEHGA & NUC8i5BEHFA



The Shape that Fits the Future.



INTEL® NUC: OPEN THE BOX, UNLEASH THE POWER

Performance hits the next level with Intel® NUC Mini PCs built with the 8th gen Intel® Core™ i5+/ i7+ platforms that feature Intel® Optane™ memory. The fully built Intel NUC Mini PCs are optimized to work the way your clients do—and are designed with the latest technology from Intel and Windows® 10. Call it impatience or modern life, clients expect things instantly. That's why the fully built Intel NUC Mini PCs with 8th gen Intel® Core™ i+ platforms with Intel Optane technology are designed to help computers keep pace with the digital world without running out of storage.

The platform that gives you the power for amazing experiences

The Intel® NUC8i7BEHGA and Intel® NUC8i5BEHFA Mini PCs come equipped with either an 8th gen Intel Core i7+ or 8th gen Intel Core i5+ platform featuring Intel Optane memory. Whether used to play games, create video content, or mega task, both systems give great visual immersion with Iris® Plus graphics 655 and the user optimized performance of 8th gen Intel Core i5+/i7+ platforms.

Intel® Optane™ memory: next-level performance and personalization

The NUC8i7BEHGA comes with 32 GB of Intel Optane memory as part of the 8th gen Intel Core i7+ platform along with a 2 TB HDD. The NUC8i5BEHFA is built with 16 GB of Intel Optane memory and a 1 TB HDD. By coupling an HDD and Intel Optane memory, performance improves dramatically with up to 1.4x^{1,4} faster media loading, opening large media files 3x^{2,4} faster, and completing daily tasks up to 2x^{3,4} faster. A PC powered by Intel's 8th gen Core i5+/i7+ platforms featuring Intel Optane memory learns, adapts, and accelerates tasks your clients do most often in order to keep creativity flowing.

With Thunderbolt™ 3 plus USB 3.1 for fast data transfer

The NUC8i7BEHGA and NUC8i5BEHFA Mini PCs have chassis that are connectivity powerhouses. Both Mini PCs come with Thunderbolt™ 3 which supports up to 40 Gbps of data transfer and four USB 3.1 ports to bolster productivity and to move big media files around, as well as room enough for peripherals and then some. The Mini PCs support triple displays all in 4K Ultra HD—with an HDMI* 2.0a port and DisplayPort* 1.2 via USB-C—so images or work can show across three screens without losing fidelity.

Think you know what small can do? Think again.

In a footprint that's almost zero—especially when compared with a tower—these Intel NUC Mini PCs have the performance and features of a desktop computer in a device that fits in the palm of your hand. The small size means the Intel® NUCs can be positioned anywhere—from behind a display to tucked discretely in an entertainment center. And with improved cooling, fan noise is minimal—so it doesn't sound like there's a PC in the living room if the Intel® NUC system is used for gaming or home entertainment.

The Intel® NUC: who says small isn't powerful?

POWER, CAPABILITIES, AND PERFORMANCE IN A NEAR-ZERO FOOTPRINT

NUC8i7BEHGA & NUC8i5BEHFA Highlighted Features

- Windows® 10 Home
- Iris® Plus graphics 655
- Intel® Dual Band Wireless-AC 9560 and Bluetooth* 5.0
- Back panel DC power connector (12–19V)
- HDMI* 2.0a display port supporting 8 channel audio (7.1 surround sound)
- Intel® Gigabit LAN
- Two USB 3.1 ports on the back panel
- Thunderbolt™ 3 USB Type-C port providing DisplayPort* 1.2 or USB 3.1 Gen 2
- Kensington lock support
- Support for user-replaceable third-party lids
- Micro SD card slot
- Consumer infrared sensor
- Two USB 3.1 ports (including one charging port) on the front panel
- Front panel headphone/microphone jack
- Front panel power button
- Dual-array front microphones

NUC8i7BEHGA Unique Features

- 8th gen Intel® Core™ i7-8559U processor
- 8 GB DDR4 SO-DIMM
- 2 TB SATA3 2.5" HDD
- 32 GB Intel® Optane™ memory

NUC8i5BEHFA Unique Features

- 8th gen Intel® Core™ i5-8259U processor
- 4 GB DDR4 SO-DIMM
- 1 TB SATA3 2.5" HDD
- 16 GB Intel Optane memory



INTEL® NUC KIT NUC8i7BEHGA & NUC8i5BEHFA

Technical Specifications

Processor

NUC8i7BEHGA

- Intel® Core™ i7-8559U processor (2.7-4.5 GHz, quad core, 8 MB cache, 28W TDP)

NUC8i5BEHFA

- Intel® Core™ i5-8259U processor (2.3-3.8 GHz, quad core, 6 MB cache, 28W TDP)

Operating System

- Windows® 10 Home

Graphics

- Iris® Plus Graphics 655
- HDMI* 2.0a port with 4K at 60 Hz
- USB Type-C port with DisplayPort* 1.2

System Memory

NUC8i7BEHGA

- 8 GB DDR4-2400 SO-DIMM (expandable to 32 GB), 1.2V

NUC8i5BEHFA

- 4 GB DDR4-2400 SO-DIMM (expandable to 32 GB), 1.2V

Intel® Optane™ Memory

NUC8i7BEHGA

- 32 GB in an M.2 slot

NUC8i5BEHFA

- 16 GB in an M.2 slot

Storage Capabilities

- Micro SDXC slot with UHS-I support on the side
- One M.2 connector supporting 22x42 or 22x80 SSD (pre-populated with Intel Optane Memory module)

NUC8i7BEHGA

- 2 TB SATA3 HDD

NUC8i5BEHFA

- 1 TB SATA3 HDD

Peripheral Connectivity

- Intel® Gigabit LAN port
- Thunderbolt™ 3 port
- Four USB 3.1 ports (two back panel ports and two front ports including one charging port)
- Intel® Dual Band Wireless-AC 9560 (802.11ac), 2x2, up to 1.73 Gbps
- Dual Mode Bluetooth* 5.0

System Bios

- 64 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V3.0b, SMBIOS2.5
- Intel® Visual BIOS

Hardware Management Features

- Processor fan speed control
- Voltage and temperature sensing
- Fan sensor inputs used to monitor fan activity
- ACPI-compliant power management control

Expansion Capabilities

- Two Internal USB 2.0 ports via two 1x4 headers (for replaceable lid support)
- One Consumer Electronics Control header

Audio

- Up to 7.1 surround audio via HDMI*
- Headphone/microphone jack on the front panel
- Dual-array microphones on the front panel

Front Panel Header

- Reset, HDD LED, power LEDs, power on/off

Mechanical Chassis Size

- 4.60" x 4.40" x 2.01"
- 117 mm x 112 mm x 51 mm

Baseboard Power Requirements

- 19V, 90W power brick

Environment Operating Temperature

- 0° C to +35° C

Storage Temperature

- 20° C to +40° C

Safety Regulations and Standards

- IEC/EN/UL 60950-1
- IEC/EN/UL 62368-1

EMC/RF Regulations and Standards

- FCC Part 15B/15C/15E

- CISPR/EN 55032/55024
- ICES-003
- VCCI 32
- BSMI CNS 13438
- KN 32/35
- AS/NZS CISPR 32
- EN 300 328
- EN 301 893
- EN 300 440
- EN 301 489-1/3/17
- EN 62311
- AS/NZS 4268
- AS/NZS 2772.2
- ARPANSA

Environmental Regulations

- EU RoHS
- China RoHS
- Taiwan BSMI RoHS
- REACH

¹ As measured by Media Project Load Workload comparing 8th Gen Intel® Core™ i7-8750H processor (32 GB Intel® Optane™ memory module) + 256 GB PCIe SSD + 1 TB HDD vs. 8th Gen Intel Core i7-8750H processor + 256 GB PCIe SSD + 1 TB HDD.

² As measured by Media Project Load Workload comparing Intel® Core™ i7-8750H processor + 1 TB HDD + 32 GB Intel® Optane™ memory vs. Intel Core i7-8750H processor + 1 TB HDD.

³ As measured by SYSmark™ 2014 SE Responsiveness comparing Intel® Core™ i7-8750H processor + 1 TB HDD + 32 GB Intel® Optane™ memory vs. Intel Core i7-8750H processor + 1 TB HDD.

⁴ Benchmark results were obtained prior to implementation of recent software patches and firmware updates intended to address exploits referred to as "Spectre" and "Meltdown". Implementation of these updates may make these results inapplicable to your device or system.

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Actual Intel® NUC kit may differ from the image shown.

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