

Product Brief

INTEL[®] NUC KITS NUC7i7DNKE & NUC7i7DNHE

INTEL[®] NUC BOARD NUC7i7DNBE



- Intel[®] Optane™ Memory Ready^{1,2}
- Intel[®] vPro™ Technology
- Intel[®] UHD Graphics 620



The Shape that Fits the Future.



INTEL® NUC: BIG PERFORMANCE IN A SMALL FOOTPRINT

Equipped with an 8th generation quad-core Intel® Core™ i7 vPro™ processor complete with Intel® Turbo Boost Technology 2.0, the Intel® NUC7i7DNKE and NUC7i7DNHE kits have the power and responsiveness your clients need for digital signage, customer analytics for targeted marketing campaigns, interactive digital kiosks, or powerful surveillance systems. With up to 69% better performance^{3,4} than 7th generation processors, the kits have the performance and innovation for small space and embedded solutions.

The Intel NUC7i7DNHE is Intel® Optane™ memory ready and has room for up to a 2 TB 2.5" HDD. By pairing Intel Optane memory with high capacity HDD storage media, performance for large media files increases 4x faster than just a hard disk drive alone.^{4,5} The result is higher performance and responsiveness without compromising storage capacity, perfect for data-intensive analytics programs or surveillance systems.

Both SKUs have Intel® Wireless 8265 and the option to run Windows* 10 or Linux* or another OS, and each kit has an M.2 slot available for a lightning fast SSD. The slimmer Intel NUC7i7DNKE is perfect for mounting in tight locations—on a wall behind a digital sign or on the display itself. Both kits can take up to 32 GB of dual-channel DDR4.

Keeping data, passwords, and security keys safe

With the Intel® vPro™ platform you can help your customers get ahead of security threats. The built-in hardware-enhanced security means you can keep client data and credentials secure, and remote manageability is perfect for installations such as unattended digital kiosks and intelligent vending. Also built into the hardware is Intel® Trusted Platform Module (TPM) which addresses the growing concern over boot process integrity and offers better data protection. There is a discrete TPM module available, enabling sales in all countries, excluding China.

Visuals that amaze for solutions that wow clients and customers

Both the Intel NUC7i7DNKE and NUC7i7DNHE come with USB 3.0 on the internal header in addition to 4 USB 3.0 ports on the chassis. The NUC kits also come with two full-sized HDMI* 2.0a ports to power brilliant 4K displays. This gives your clients' digital kiosks and intelligent vending machines images that really pop and amaze. The power button is located on the front panel for easy on/off no matter where you situate the Intel NUC.

From kiosks to intelligent vending: Build embedded solutions with the Intel® NUC7i7DNBE board

The Intel® NUC7i7DNBE board enables infinite flexibility and expandability depending on your customers' needs and can run Windows 10*, Windows* 10 IoT Enterprise, and various Linux distros. The board includes a 4-lane eDP connector that allows you to create interactive touch systems perfect for digital signage, casino gaming, or intelligent vending. The NUC7i7DNBE board also has an internal power connector with a 12-24 volt input range so your systems stay up and running no matter the fluctuation in power. The board ships without a wireless card so you can choose what's best for the solution you're building.

INTEL® NUC: Tiny. Solid. Reliable.

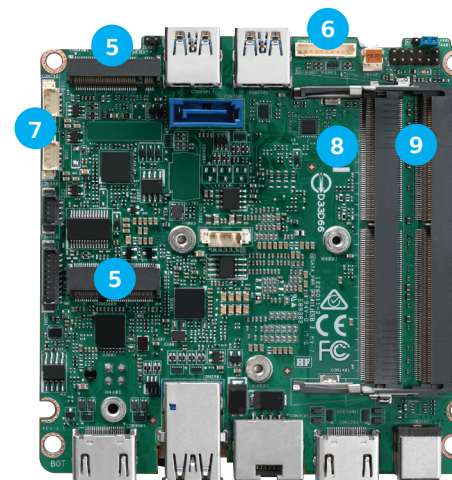
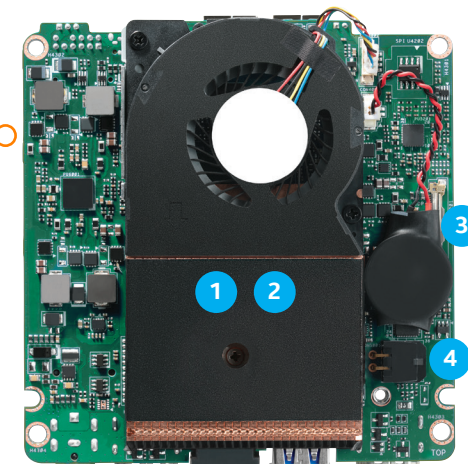
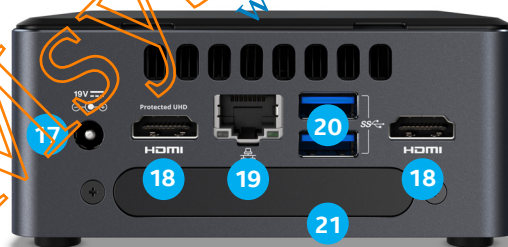
POWER, CAPABILITIES, AND PERFORMANCE IN FOUR INCHES SQUARE

Highlighted Features

- 1 8th generation Intel® Core™ i7-8650U processor with Intel® vPro™ technology
- 2 Intel® UHD Graphics 620
- 3 4-lane eDP 1.4 connector (NUC7i7DNBE only)
- 4 Internal 2x2 power connector, 12-24V
- 5 Two M.2 connectors (22x80 and 22x30)
- 6 One USB 3.0 internal header
- 7 Two USB 2.0 internal headers
- 8 Intel® Trusted Platform Module (TPM)
- 9 Two DDR4 SO-DIMM sockets (up to 32 GB, 2400 MHz)
- 10 Intel® Optane™ memory ready² (NUC7i7DNHE only)
- 11 Intel® Wireless-AC 8265 and Bluetooth* 4.2 (installed in the 22x30 M.2 slot)
- 12 1x SATA3 port for connection to 2.5" HDD or SSD (NUC7i7DNHE only)
- 13 Kensington lock support
- 14 Support for user-replaceable third-party lids
- 15 Two USB 3.0 ports
- 16 Front panel power button
- 17 Back panel DC power connector (12-19V)
- 18 Two full-size HDMI* 2.0a display ports supporting 8 channel audio (7.1 surround sound)
- 19 Intel® Gigabit LAN
- 20 Two USB 3.0 ports on the back panel
- 21 Backpanel opening with D9 bracket



NUC7i7DNHE



NUC7i7DNBE



NUC7i7DNKE



INTEL® NUC KITS NUC7i7DNKE, NUC7i7DNHE INTEL® NUC BOARD NUC7i7DNBE

Technical Specifications

Processor

- Intel® Core™ i7-8650U processor (1.9 GHz to 4.20 GHz Turbo, Quad-Core 8 MB cache, 15W TDP)

Graphics

- Intel® UHD Graphics 620
- Two HDMI* 2.0a ports supporting 4K at 60 Hz

System Memory

- Two DDR4 SO-DIMM sockets (up to 32 GB, 2400 MHz), 1.2V

Storage Capabilities

- One M.2 connector supporting 22x80 M.2 SSD
- One M.2 connector supporting 22x30 M.2 card (NUC7i7DNBE Only)
- One SATA3 port for connection to 2.5" HDD or SSD (up to 9.5 mm thickness) (NUC7i7DNHE Only)

Peripheral Connectivity

- Intel® Gigabit LAN
- Four USB 3.0 ports (two back panel ports and two front ports)
- One additional USB 3.0 port via internal header
- Intel® Dual Band Wireless-AC 8265 with Dual Mode Bluetooth* 4.2 pre-installed in the 22x30 M.2 slot (NUC7i7DNHE and NUC7i7DNKE only)

System Bios

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

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

- One Internal USB 3.0 ports
- Two Internal USB 2.0 ports
- RS232
- HDMI CEC header

Audio

- Up to 7.1 surround audio via HDMI

Front Panel Header

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

Mechanical Chassis Size

NUC7i7DNHE

- 4.55" x 4.57" x 2.01"
- 115 mm x 111 mm x 52 mm

Spectre and *Meltdown*. Implementation of these updates may make these results inapplicable to your device or system.

⁵ Media Project Load Workload – Time elapsed to load a 500 MB video project file in Adobe Premiere Pro® (CS6). Measurements made on a computer with an Intel Core™ i5 processor and a 1 TB hard disk drive; measurements made with and without a 16 GB Intel® Optane™ memory module.

Intel products are not intended for use in medical, life-saving, or life-sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

All products, dates, and figures specified are preliminary based on current expectations, and are subject to change without notice. Availability in different channels may vary. Actual Intel® NUC kit may differ from the image shown.

NUC7i7DNKE

- 4.55" x 4.57" x 1.58"
- 115 mm x 111 mm x 36 mm

Mechanical Board Size

NUC7i7DNBE

- 4" x 4"
- 102 mm x 102 mm

Baseboard Power Requirements

- 19V, 65W wall-mount AC-DC power adapter
- Internal 2x2 power connector, 12-24V (NUC7i7DNBE)

Environment Operating Temperature

- 0° C to +40° C
- 0° C to +50° C (NUC7i7DNBE)

Storage Temperature

- 20° C to +60° C

Product Safety Regulations and Standards

- IEC 60950-1
- UL 60950-1
- EN 60950-1
- CAN/CSA-C22.2 No. 60950-1

EMC/RF Regulations and Standards (Class B)

- CISPR 52
- FCC CFR Title 47, Chapter I, Part 15, Subparts B, C, E
- ICES-005
- EN 55052
- EN 55024
- ETSI EN 500 528
- ETSI EN 501 489-1
- ETSI EN 501 489-17
- ETSI EN 501 895
- EN 62511
- AS/NZS 2772.2
- AS/NZS 4268
- VCCI V-2, V-5, V-4
- KN-52
- KN-24
- CNS 15458

Environmental Regulations

- RoHS Directive 2011/65/EU
- WEEE Directive 2012/19/EU
- China RoHS - Management Methods for Restricted Use of Hazardous Substances in Electrical and Electronic Products

Look for Intel® NUC with Intel Inside® at
www.intel.com/NUC

¹ Available on the Intel® NUC Kit NUC7i7DNHE only.

² Intel technologies may require enabled hardware, specific software, or services activation. Performance varies depending on system configuration. Check with your system manufacturer or retailer to learn more at intel.com/optanememory

³ As measured by VRMark® Orange Room Test Score. (Tested with NVIDIA GTX 1080* dGfx). System Configurations Intel® Core™ i3-7100 processor, PL1=51W TDP, 2C4T, up to 3.9 GHz, Motherboard: ASUS® Z270, Graphics: NVIDIA® GTX 1080, Memory: 2x8 GB LPDDR4-2400, Storage: Intel® SSD, OS: Windows® 10 Build 1607. Intel® Core™ i7-7700K processor, PL1=91W TDP, 4C8T, Turbo up to 4.5 GHz, Motherboard: ASUS® Z270, Graphics: NVIDIA® GTX 1080, Memory: 2x8 GB LPDDR4-2400, Storage: Intel® SSD, OS: Windows® 10 Build 1607.

⁴ Benchmark results were obtained prior to implementation of recent software patches and firmware updates intended to address exploits referred to as