



INTEL® NUC 9 EXTREME

BUILD YOUR DREAM RIG

Game like never before with the highest-performing
Intel® NUC for consumers



LEVEL UP. WAY UP.

Imagine your dream gaming rig. Then build it with the Intel® NUC 9 Extreme Kit, the highest-performing Intel® NUC available for consumers today. Ultra-powerful and modular, it's also upgradable with an Intel® NUC 9 Extreme Compute Element.

The Intel NUC 9 Extreme Kit supports up to an eight-inch discrete graphics card, giving enthusiast gamers the flexibility they need to build a monster rig for gaming and streaming simultaneously. All this in a 5-liter chassis—making this one of the smallest-footprint gaming systems available that supports desktop discrete graphics.

The kit comes in a range of top-end 9th Gen Intel® Core™ processors (H-series), including for the first time an unlocked Intel® Core™ i9 processor—the highest-performing H-series processor available today. With a 500W internal power supply and integrated cooling, these compact systems run cool and quiet while delivering desktop-level graphics performance on the latest AAA games.

The Intel NUC 9 Extreme Kit is the high-powered, portable, and customizable system enthusiast gamers have been dreaming of.

Intel NUC 9 Extreme: Take Gaming to the Extreme

1ST INTEL NUC TO SUPPORT DESKTOP DISCRETE GRAPHICS WITH AN INTEL® CORE™ i9 PROCESSOR WITH INTEL NUC 9 EXTREME COMPUTE ELEMENT FOR PROCESSOR UPGRADES

500W
INTERNAL POWER
SUPPLY IN A SMALL
FOOTPRINT

FEATURES

- Unlocked 9th gen Intel® Core™ i9 processor
- PCIe* x16 slot for desktop graphics support, up to 8" card length, dual-slot capable
- Supports three 4K displays (*additional displays supported with a discrete graphics card*)
- Two Thunderbolt™ 3 ports
- Intel® Wi-Fi 6
- Bluetooth* 5
- Two Intel® Gigabit LAN ports
- HDMI* 2.0a port
- 3-year limited warranty

IDEAL FOR

- Enthusiast Gaming
- AAA Gaming & More
- Content Creation

AVAILABLE SKUs

- Intel® NUC Kit
- Intel® NUC Compute Element



INTEL® NUC 9 EXTREME KIT & COMPUTE ELEMENT

Built with 9th generation Intel® Core™ i9 processors



	Kit	Compute Element (H-Series)
	NUC9i9QNX	NUC9i9QNB
Processor	Intel® Core™ i9-9980HK processor 2.40 GHz – 5.00 GHz Turbo, ¹ 8 core, 16 thread, 16 MB Cache, 45W	
Graphics	Intel® UHD Graphics 630, 350 MHz – 1.25 GHz Double-wide PCIe* x16 slot, supports discrete graphics, up to 8" card length, dual-slot capable	Intel® UHD Graphics 630, 350 MHz – 1.25 GHz
Memory	Dual-channel SODIMM slots DDR4-2666+ 32 GB max or DDR4-2400 64 GB max	
Storage	Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA, RAID-0/1 capable, One M.2 slot: 42/80/110 NVMe, Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready	Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA, RAID-0/1 capable, Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready
Other Features & Technology	Two Thunderbolt™ 3 ports, Intel® WiFi-6 and Bluetooth* 5 with dual antennas built-in, Two Intel® Gigabit LAN ports, HDMI* 2.0a port, SDXC card slot with UHS-II support, Four USB 3.1 Gen2 ports, 500W internal power supply, 3-Year limited warranty	Two Thunderbolt™ 3 ports, Intel® WiFi-6 and Bluetooth* 5, Two Intel® Gigabit LAN ports, HDMI* 2.0a port, Four USB 3.1 Gen2 ports, 3-Year limited warranty
Geo-Specific Power Cord	US, EU, UK, AU, CN, or no cord option	—
Operating System	Not included	Not included
What's Needed	Memory, storage, operating system	Chassis, power supply, memory, storage, operating system

INTEL® NUC 9 EXTREME KIT & COMPUTE ELEMENT

Built with 9th generation Intel® Core™ i7 processors



	Kit	Compute Element (H-Series)
	NUC9i7QNX	NUC9i7QNB
Processor	Intel® Core™ i7-9750H processor 2.60 GHz – 4.50 GHz Turbo, ¹ 6 core, 12 thread, 12 MB Cache, 45W	
Graphics	Intel® UHD Graphics 630, 350 MHz – 1.15 GHz Double-wide PCIe* x16 slot, supports discrete graphics, up to 8" card length, dual-slot capable	Intel® UHD Graphics 630, 350 MHz – 1.15 GHz
Memory	Dual-channel SODIMM slots DDR4-2666+ 32 GB max or DDR4-2400 64 GB max	
Storage	Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA, RAID-0/1 capable, One M.2 slot: 42/80/110 NVMe, Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready	Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA, RAID-0/1 capable, Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready
Other Features & Technology	Two Thunderbolt™ 3 ports, Intel® WiFi-6 and Bluetooth* 5 with dual antennas built-in, Two Intel® Gigabit LAN ports, HDMI* 2.0a port, SDXC card slot with UHS-II support, Four USB 3.1 Gen2 ports, 500W internal power supply, 3-Year limited warranty	Two Thunderbolt™ 3 ports, Intel® WiFi-6 and Bluetooth* 5, Two Intel® Gigabit LAN ports, HDMI* 2.0a port, Four USB 3.1 Gen2 ports, 3-Year limited warranty
Geo-Specific Power Cord	US, EU, UK, AU, CN, or no cord option	—
Operating System	Not included	Not included
What's Needed	Memory, storage, operating system	Chassis, power supply, memory, storage, operating system

INTEL® NUC 9 EXTREME KIT & COMPUTE ELEMENT

Built with 9th generation Intel® Core™ i5 processors



	Kit	Compute Element (H-Series)
	NUC9i5QNX	NUC9i5QNB
Processor	Intel® Core™ i5-9300H processor 2.40 GHz – 4.10 GHz Turbo, ¹ 4 core, 8 thread, 8 MB Cache, 45W	
Graphics	Intel® UHD Graphics 630, 350 MHz – 1.05 MHz Double-wide PCIe* x16 slot, supports discrete graphics, up to 8" card length, dual-slot capable	Intel® UHD Graphics 630, 350 MHz – 1.05 MHz
Memory	Dual-channel SODIMM slots DDR4-2666 32 GB max or DDR4-2400 64 GB max	
Storage	Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA, RAID-0/1 capable, One M.2 slot: 42/80/110 NVMe, Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready	Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA, RAID-0/1 capable, Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready
Other Features & Technology	Two Thunderbolt™ 3 ports, Intel® WiFi-6 and Bluetooth* 5 with dual antennas built-in, Two Intel® Gigabit LAN ports, HDMI* 2.0a port, SDXC card slot with UHS-II support, Four USB 3.1 Gen2 ports, 500W internal power supply, 3-Year limited warranty	Two Thunderbolt™ 3 ports, Intel® WiFi-6 and Bluetooth* 5, Two Intel® Gigabit LAN ports, HDMI* 2.0a port, Four USB 3.1 Gen2 ports, 3-Year limited warranty
Geo-Specific Power Cord	US, EU, UK, AU, CN, or no cord option	—
Operating System	Not included	Not included
What's Needed	Memory, storage, operating system	Chassis, power supply, memory, storage, operating system

INTEL® NUC 9 EXTREME KITS AND COMPUTE ELEMENTS

Technical Specifications

INTEL® NUC 9 EXTREME COMPUTE ELEMENT

Processors and Graphics

NUC9i9QNB

- Intel® Core™ i9-9980HK processor (2.40 GHz – 5.00 GHz Turbo, 8 core, 16 thread, 16 MB Cache, 45W)
- Intel® UHD Graphics 630, 350 MHz – 1.25 GHz

NUC9i7QNB

- Intel® Core™ i7-9750H processor (2.60 GHz – 4.50 GHz Turbo, 6 core, 12 thread, 12 MB Cache, 45W)
- Intel® UHD Graphics 630, 350 MHz – 1.15 GHz

NUC9i5QNB

- Intel® Core™ i5-9300H processor (2.40 GHz – 4.10 GHz Turbo, 4 core, 8 thread, 8 MB Cache, 45W)
- Intel® UHD Graphics 630, 350 MHz – 1.15 GHz

Storage Capabilities

- Two M.2 slots: 42/80 + 42/80/110 NVMe or SATA3 SSD, RAID 0/1 capable
- Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD ready

System Memory

NUC9i9QNB & NUC9i7QNB

- Two DDR4 SODIMM sockets (Dual channel DDR4-2666+ SODIMMs, 1.2V, max 64 GB @ 2400 MHz or 32 GB @ 2666 MHz)

NUC9i5QNB

- Two DDR4 SODIMM sockets (Dual channel DDR4-2666 SODIMMs, 1.2V, max 64 GB @ 2400 MHz or 32 GB @ 2666 MHz)

Connectivity

- Two Thunderbolt™ 3 ports
- Intel® Wi-Fi 6 AX200
- Bluetooth® v5
- Two Intel® 10/100/1000 Mbps (i219-LM and i210-AT) Ethernet ports
- HDMI* 2.0a port
- Four USB 3.1 Gen2 Type-A ports
- Up to 7.1 multichannel digital audio via HDMI or Thunderbolt 3
- 3.5 mm rear speaker/TOSLINK combo jack
- SDXC slot with UHS-II support
- Internal Front Panel Audio, CEC, 2x USB 3.1 Gen2 Type-C, 2x USB 2.0, and SATA3 headers

Operating System Compatibility

- Windows® 10
- Various Linux* distros

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

- CPU vapor chamber and firmware-controlled 80 mm fan
- Voltage and temperature sensing
- ACPI-compliant power management control

Power Requirements

- 12-19Vdc 180W via EPS 12V connector

Thermal Management

- Dual 80 mm firmware-controlled exhaust fans

INTEL® NUC 9 EXTREME CHASSIS

Storage Capabilities

- One CPU-attached M.2 slot: 42/80/110 NVMe-only

Expansion Capabilities

- PCIe X16 slot up to 8" card length dual-slot capable
- PCIe X4 slot up to 8" card length, shared with X16 slot

Front Panel Connectivity

- Two USB 3.1 Gen2 Type-A ports
- 3.5 mm front stereo headset jack
- SDXC slot with UHS-II support

Chassis Size

- 9.37" x 8.50" x 3.78"
- 238 mm x 216 mm x 96 mm

Power Requirements

- 500W internal power with geo-specific AC cords
- Internal EPS 12V connector for Intel 9 Extreme Compute Element
- Internal 6+2 pin and 6-pin PCIe GPU power connectors, supplying up to 225W

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 Max turbo frequency is the maximum single core frequency at which the processor is capable of operating using Intel® Turbo Boost Technology and, if present, Intel® Thermal Velocity Boost. Frequency is measured in gigahertz (GHz), or billion cycles per second.

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