

intel  
nuc

Intel® NUC 11 Pro Mini PCs, Kits, & Boards

# A Leap Forward in Business Performance

With 11th Gen Intel® Core™ processors and Intel® Iris® X<sup>e</sup> graphics, businesses get breakthrough performance for the edge, collaboration, and productivity



intel  
CORE  
VPRO  
i7

intel  
CORE  
i7

intel  
CORE  
VPRO  
i5

intel  
CORE  
i5

intel  
CORE  
i3

# Start Small. Expand at Will.

Intel® NUC 11 Pro Mini PCs, kits, and boards are compact systems built to drive the future of business. There are more choices than ever before, from fully built mini PCs to customizable kits powered by the full range of 11th Gen Intel® Core™ processors. All are designed to deliver the performance businesses need for edge compute, office productivity, and collaboration.

Boundary-breaking performance is available with the latest 11th Gen Intel® Core™ i5 and i7 processors featuring Intel® Iris® X<sup>e</sup> graphics. Select SKUs also feature Intel vPro® technology for remote manageability, hardware-enhanced security features, and platform stability to help businesses cut IT costs and boost uptime.

Every Intel NUC 11 Pro system can support one 8K or four 4K displays for digital signage, video conferencing, and other deployments. Businesses can also get more work done anytime, anyplace, with the latest wired and wireless options, including Intel® Wi-Fi 6 AX201, the fastest generation of Wi-Fi, and two ultra-fast Thunderbolt™ ports on select SKUs.

Qualified for 24x7 operation and backed by a three-year warranty, Intel NUC 11 Pro Mini PCs, kits, and boards are small, powerful systems designed to meet today's needs—and keep businesses running for years.

**Intel® NUC 11 Pro: Engineered for Business**

## Features

- 11th Gen Intel® Core™ processors
- Select SKUs feature Intel vPro® technology
- Intel® Iris® X<sup>e</sup> graphics or Intel® UHD graphics
- Up to 64 GB of ultra-fast dual-channel DDR4-3200 memory
- Intel® i225-LM Ethernet for speeds up to 2.5 Gbps and best-in-class Intel® Wi-Fi 6 AX201<sup>1</sup>
- Up to quad extended displays via dual HDMI with built-in CEC per port, and dual DisplayPort via Thunderbolt™ ports on select SKUs
- M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD, PCIe x1 or USB 3.2 expandability
- Display emulation of HDMI ports for headless and remote virtual display, as well as persistent display emulation capability
- Tolerates 0-40° C external ambient operating temperature
- Tall SKU available with 2nd Ethernet port (Intel® i225-LM) and 2 additional USB 2.0 ports
- Intel 3-year limited warranty
- 3-year product availability

## Ideal for

### Productivity

business computing, home office, etc.

### Collaboration

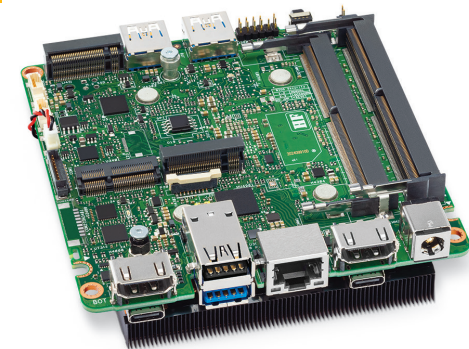
video conferencing, huddle rooms, etc.

### Edge compute

digital signage, digital kiosks, intelligent vending, edge appliances, etc.

Connect up to  
**one 8K or four  
4K displays**

Qualified for  
**24/7 operation**



# Built with Intel® Core™ i7 vPro® processors

Intel® NUC 11 Pro Mini PC, Kits, and Board



	Mini PC	Kits			Board
	NUC11TNKv7	NUC11TNHv7	NUC11TNHv70L (Dual LAN)	NUC11TNKv7	NUC11TNBv7
Processor	11th Generation Intel® Core™ i7-1185G7 processor with Intel vPro® Technology 3.0 GHz@28W, up to 4.8 GHz Turbo, 4 Cores, 8 Threads, 12 MB L3 Cache				
Graphics	Intel® Iris® X® Graphics, Up to 96 EUs				
Memory	16 GB DDR4	Dual-channel DDR4 SODIMM slots			
Storage	500 GB Gen 4 NVMe SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD, M.2 22x42 B-key slot for SATA SSD, and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD
Expansion Bay	—	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	2nd Intel® i225-LM Ethernet and two additional USB 2.0 ports on pre-installed expansion module	—	—
Wi-Fi	Intel® Wi-Fi 6 AX201 (vPro capable)				—
Other Features & Technology	Two HDMI 2.0b ports   Two Thunderbolt™ ports (incl. DP 1.4a and USB 4.0) on select SKUs   Intel® i225-LM Ethernet port Three USB 3.2 Gen 2 type A ports   One USB 2.0 type A port   Discrete TPM 2.0   Qualified for 24x7 operation   Display emulation via HDMI Quad display support   Delayed AC start; Auto CMOS reset; DC input voltage protection   3-Year Limited Warranty				
Geo-Specific Power Cord	US, EU, or No Cord Option	US, EU, CN, or No Cord Option	Not Included	US, EU, or No Cord Option	—
Operating System	FREE upgrade to Windows 11 (when available) <sup>1</sup> Windows® 10 Pro	Not Included			—
What's Needed	—	Memory, Storage, Operating System			—

<sup>1</sup>Device comes with Windows 10 and a free Windows 11 upgrade or may be preloaded with Windows 11. The Windows 11 upgrade will be delivered to qualifying devices late 2021 into 2022. Timing will vary by device. Certain features require specific hardware (see aka.ms/windows11-spec).



# Built with Intel® Core™ i7 processors

Intel® NUC 11 Pro Kits and Board



	Kits				Board
	NUC11TNHi70Q (Integrated)	NUC11TNHi7 NUC11TNHi70Z	NUC11TNHi70L (Dual LAN)	NUC11TNKi7 NUC11TNKi70Z	NUC11TNBi7 NUC11TNBi70Z
Processor	11th Generation Intel® Core™ i7-1165G7 processor 2.8 GHz@28W, up to 4.7 GHz Turbo, 4 Cores, 8 Threads, 12 MB L3 Cache				
Graphics	Intel® Iris® X <sup>e</sup> Graphics, Up to 96 EUs				
Memory	16 GB DDR4	Dual-channel DDR4 SODIMM slots			
Storage	500 GB Gen 4 NVMe SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD, M.2 22x42 B-key slot for SATA SSD, and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD
Expansion Bay	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	2nd Intel® i225-LM Ethernet and two additional USB 2.0 ports on pre-installed expansion module	—	—
Wi-Fi	Intel® Wi-Fi 6 AX201				—
Other Features & Technology	Two HDMI 2.0b ports   Two Thunderbolt™ ports (incl. DP 1.4a and USB 4.0) on select SKUs   Intel® i225-LM Ethernet port Three USB 3.2 Gen 2 type A ports   One USB 2.0 type A port   Qualified for 24x7 operation   Display emulation via HDMI Quad display support   Delayed AC start; Auto CMOS reset; DC input voltage protection   3-Year Limited Warranty				
Geo-Specific Power Cord	CN	US, EU, IN, or No Cord Option	Not Included	US, EU, or No Cord Option	—
Operating System	Not Included				—
What's Needed	Operating System	Memory, Storage, Operating System			—



# Built with Intel® Core™ i5 vPro® processors

Intel® NUC 11 Pro Mini PC, Kits, and Board



	Mini PC	Kits			Board
	NUC11TNKv5	NUC11TNHv5	NUC11TNHv50L (Dual LAN)	NUC11TNKv5 NUC11TNKv50Z	NUC11TNBv5
Processor	11th Generation Intel® Core™ i5-1145G7 processor with Intel vPro® Technology 2.6 GHz@28W, up to 4.4 GHz Turbo, 4 Cores, 8 Threads, 8 MB L3 Cache				
Graphics	Intel® Iris® X <sup>e</sup> Graphics, Up to 80 EUs				
Memory	8 GB DDR4	Dual-channel DDR4 SODIMM slots			
Storage	500 GB Gen 4 NVMe SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD, M.2 22x42 B-key slot for SATA SSD, and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD
Expansion Bay	—	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	2nd Intel® i225-LM Ethernet and two additional USB 2.0 ports on pre-installed expansion module	—	—
Wi-Fi	Intel® Wi-Fi 6 AX201 (vPro capable)				—
Other Features & Technology	Two HDMI 2.0b ports   Two Thunderbolt™ ports (incl. DP 1.4a and USB 4.0) on select SKUs   Intel® i225-LM Ethernet port Three USB 3.2 Gen 2 type A ports   One USB 2.0 type A port   Discrete TPM 2.0   Qualified for 24x7 operation   Display emulation via HDMI Quad display support   Delayed AC start; Auto CMOS reset; DC input voltage protection   3-Year Limited Warranty				
Geo-Specific Power Cord	US, EU, or No Cord Option	US, EU, CN, or No Cord Option	Not Included	US, EU, or No Cord Option	—
Operating System	FREE upgrade to Windows 11 (when available) <sup>1</sup> Windows® 10 Pro	Not Included			—
What's Needed	—	Memory, Storage, Operating System			—

<sup>1</sup>Device comes with Windows 10 and a free Windows 11 upgrade or may be preloaded with Windows 11. The Windows 11 upgrade will be delivered to qualifying devices late 2021 into 2022. Timing will vary by device. Certain features require specific hardware (see aka.ms/windows11-spec).



# Built with Intel® Core™ i5 processors

Intel® NUC 11 Pro Kits and Board



	Kits				Board
	NUC11TNHi50W (Integrated)	NUC11TNHi5 NUC11TNHi50Z	NUC11TNHi50L (Dual LAN)	NUC11TNKi5 NUC11TNKi50Z	NUC11TNBi5 NUC11TNBi50Z
Processor	11th Generation Intel® Core™ i5-1135G7 processor 2.4 GHz@28W, up to 4.2 GHz Turbo, 4 Cores, 8 Threads, 8 MB L3 Cache				
Graphics	Intel® Iris® Xe Graphics, Up to 80 EUs				
Memory	8 GB DDR4	Dual-channel DDR4 SODIMM slots			
Storage	500 GB Gen 4 NVMe SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD, M.2 22x42 B-key slot for SATA SSD, and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD
Expansion Bay	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	2nd Intel® i225-LM Ethernet and two additional USB 2.0 ports on pre-installed expansion module	—	—
Wi-Fi	Intel® Wi-Fi 6 AX201				—
Other Features & Technology	Two HDMI 2.0b ports   Two Thunderbolt™ ports (incl. DP 1.4a and USB 4.0) on select SKUs   Intel® i225-LM Ethernet port Three USB 3.2 Gen 2 type A ports   One USB 2.0 type A port   Qualified for 24x7 operation   Display emulation via HDMI Quad display support   Delayed AC start; Auto CMOS reset; DC input voltage protection   3-Year Limited Warranty				
Geo-Specific Power Cord	CN	US, EU, IN, or No Cord Option	Not Included	US, EU, or No Cord Option	—
Operating System	Not Included				—
What's Needed	Operating System	Memory, Storage, Operating System			—



# Built with Intel® Core™ i3 processors

Intel® NUC 11 Pro Kits and Board



	Kits				Board
	NUC11TNHi30P (Integrated)	NUC11TNHi3 NUC11TNHi3OZ	NUC11TNHi30L (Dual LAN)	NUC11TNKi3 NUC11TNHi3OZ	NUC11TNBi3 NUC11TNBi3OZ
Processor	11th Generation Intel® Core™ i3-1115G4 processor ~1.9 GHz@15W, up to 4.1 GHz Turbo, 2 Cores, 4 Threads, 6 MB L3 Cache				
Graphics	Intel® UHD Graphics, Up to 48 EUs				
Memory	8 GB DDR4	Dual-channel DDR4 SODIMM slots			
Storage	256 GB Gen 3 NVMe SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD, M.2 22x42 B-key slot for SATA SSD, and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and 2.5" drive bay (7mm)	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD	M.2 22x80 M-key slot for up to Gen 4 NVMe SSD and M.2 22x42 B-key slot for SATA SSD
Expansion Bay	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	Pre-punched bracket for adding 1 DB9 port, or other I/O ports	2nd Intel® i225-LM Ethernet and two additional USB 2.0 ports on pre-installed expansion module	—	—
Wi-Fi	Intel® Wi-Fi 6 AX201				—
Other Features & Technology	Two HDMI 2.0b ports   Two Thunderbolt™ ports (incl. DP 1.4a and USB 4.0) on select SKUs   Intel® i225-LM Ethernet port Three USB 3.2 Gen 2 type A ports   One USB 2.0 type A port   Qualified for 24x7 operation   Display emulation via HDMI Quad display support   Delayed AC start; Auto CMOS reset; DC input voltage protection   3-Year Limited Warranty				
Geo-Specific Power Cord	CN	US, EU, CN, IN or No Cord Option	Not Included	US, EU, or No Cord Option	—
Operating System	Not Included				—
What's Needed	Operating System	Memory, Storage, Operating System			—



# Intel® NUC 11 Pro Mini PCs, Kits, and Boards

The Power of Small  
[www.intel.com/NUC](http://www.intel.com/NUC)

## Additional Technical Specifications

### Processors

#### NUC11TNHv7, NUC11TNKv7 & NUC11TNBv7

- Intel® Core™ i7-1185G7 processor with Intel vPro® Technology (3.0 GHz@28W, up to 4.8 GHz Turbo, 4 Cores, 8 Threads, 12 MB L3 Cache)

#### NUC11TNHi7, NUC11TNKi7, NUC11TNBi7, NUC11TNHi70Z, NUC11TNKi70Z, & NUC11TNBi70Z

- Intel® Core™ i7-1165G7 processor (2.8 GHz@28W, up to 4.7 GHz Turbo, 4 Cores, 8 Threads, 12 MB L3 Cache)

#### NUC11TNHv5, NUC11TNKv5, NUC11TNBv5, & NUC11TNKv50Z

- Intel® Core™ i5-1145G7 processor with Intel vPro® Technology (2.6 GHz@28W, up to 4.4 GHz Turbo, 4 Cores, 8 Threads, 8 MB L3 Cache)

#### NUC11TNHi5, NUC11TNKi5, NUC11TNBi5, NUC11TNHi50Z, NUC11TNKi50Z, & NUC11TNBi50Z

- Intel® Core™ i5-1135G7 (2.4 GHz@28W, up to 4.2 GHz Turbo, 4 Cores, 8 Threads, 8 MB L3 Cache)

#### NUC11TNHi3, NUC11TNKi3, NUC11TNBi3, NUC11TNHi30Z, NUC11TNKi30Z, & NUC11TNBi30Z

- Intel® Core™ i3-1115G4 processor (~1.9 GHz@15W, up to 4.1 GHz Turbo, 2 Cores, 4 Threads, 6 MB L3 Cache)

### Storage Capabilities

- M.2 22x80 M-key slot for up to Gen 4 NVMe SSD
- M.2 22x42 B-key slot for SATA SSD, PCIe x1 or USB 3.2 expandability

### System Memory

- Two DDR4 SODIMM sockets (Dual channel DDR4-3200 SODIMMs, 1.2V, 64 GB max)

### Graphics

#### i7 vPro, i7, i5 vPro, & i5 SKUs

- Intel® Iris® Xe Graphics

#### i3 SKUs

- Intel® UHD Graphics

### Connectivity

- Dual HDMI 2.0b (4K@60 Hz), with built-in CEC per port
- One Thunderbolt™ 4 port (incl. DP 1.4a and USB 4.0) and one Thunderbolt™ 3 port (incl. DP 1.4a and USB 4.0) on select SKUs
- Three USB 3.2 Gen2 type A ports
- One USB 2.0 type A port
- Intel® Wi-Fi 6 AX201 vPro (i7 vPro and i5 vPro kits), non-vPro (other kits) on M.2 22x30 E-key slot
- Intel® i225-LM 10/100/1000/2500 Mbps RJ45 Ethernet
- Dual LAN tall SKU: 2nd Intel® i225-LM Ethernet and two additional USB 2.0 ports on expansion module

### System BIOS

- 256 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V5.0b, SMBIOS 2.5
- Intel® BIOS
- Intel® Express BIOS update support

### Hardware Management Features

- Discrete TPM 2.0 (worldwide and China options; i7 vPro and i5 vPro SKUs only)
- Voltage and temperature sensing
- ACPI-compliant power management control

### Expansion Capabilities

- Two internal USB 2.0 headers (all USB ports with individual USB power control)
- One RS232 serial port header

- Front panel header with Vcc5/1A, 5Vsby2A, 3.3Vsby1A
- Expansion bay with pre-punched bracket for adding 1 DB9 port, or other I/O ports, on tall chassis

### Audio

- Up to 7.1 multichannel (or 8-channel) digital audio on HDMI and DP type C ports

### Advanced Features

- Qualified for 24x7 operation
- Delayed AC start; Auto CMOS reset; DC input voltage protection
- Display emulation (headless display, virtual display, persistent displays) via HDMI

### Operating System Compatibility

- FREE Upgrade to Windows 11 (when available)<sup>1</sup>
- Windows 10
- Windows 10 IOT Enterprise
- Various Linux distros

### Chassis & Board Size

- Tall "H" Chassis
  - 4.60" x 4.40" x 2.12"
  - 117 mm x 112 mm x 54 mm
- Slim "K" Chassis
  - 4.60" x 4.40" x 1.46"
  - 117 mm x 112 mm x 37 mm
- Board
  - 4.09" x 4.01"
  - 104 mm x 102 mm

### Power Requirements

- 12 – 20VDC ±5% input on rear jack, internal 2x2 power connector, with OVP/UVP
- 19VDC power supply adapter with geo-specific AC cords (IEC C5 connector)

### Environment Operating Temperature

- 0° ~40° 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

### Energy Efficiency Regulations for Mini PCs

- US Energy Star and CEC
- EU ErP Directive
- China CEL
- South Korea E-standby
- Australia GEMS
- Israel MEPS
- Japan Energy Saving Act
- 2022年度基準: 15区分, 36.0kWh/年

<sup>1</sup> Device comes with Windows 10 and a free Windows 11 upgrade or may be preloaded with Windows 11. The Windows 11 upgrade will be delivered to qualifying devices late 2021 into 2022. Timing will vary by device. Certain features require specific hardware (see aka.ms/windows11-spec). Intel® Wi-Fi 6 (Gig+) products support optional 160 MHz channels, enabling the fastest possible theoretical maximum speeds (2402 Mbps) for typical 2x2 802.11ax PC Wi-Fi products.

Premium Intel® Wi-Fi 6 (Gig+) products enable 2-4X faster maximum theoretical speeds compared standard 2x2 (1201 Mbps) or 1x1 (600 Mbps) 802.11ax PC Wi-Fi products, which only support the mandatory requirement of 80 MHz channels.

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.

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