КЛИЕНТСКИЕ СИСТЕМЫ INTEL 2020

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NOTICES & DISCLAIMERS

All product plans and roadmaps are subject to change without notice.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors.
Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more complete information visit www.intel.com/benchmarks.

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. For testing details and system configurations, please contact your Intel representative or visit www.intel.com/Evo.

Intel's comprehensive laptop innovation program ensures designs are tested, measured and verified against a premium specification and key experience indicators. Testing as of August 2020 does not guarantee individual laptop performance. Actual performance will vary with use and system settings. For more complete information about performance and benchmark results, visit Intel.com/Evo.

Results that are based on pre-production systems and components as well as results that have been estimated or simulated using an Intel Reference Platform (an internal example new system), internal Intel analysis or architecture simulation or modeling are provided to you for informational purposes only.

Footnotes (For more complete information about performance and benchmark results, visit intel.com/Evo):

1. Measured average responsiveness of premium Windows OS-based designs while performing typical workflows in a realistic environment, compared to 2-year-old design equivalent. For more complete information about performance and benchmark results, visit intel.com/Evo.
2. Time taken to drain from 100% to critical battery level while performing typical workflows in a realistic environment. For more complete information about performance and benchmark results, visit intel.com/Evo.
3. Charge attained from OEM-default shutdown level. For more complete information about performance and benchmark results, visit intel.com/Evo.
4. Based on integrated Intel® Wi-Fi 6 (Gig+) and Thunderbolt™ 4 technology. For more complete information about performance and benchmark results, visit intel.com/Evo.
5. As measured by industry benchmark and Representative Usage Guides testing and unique features of 11th Gen Intel® Core™ i7 processors that power designs, which are co-engineered as part of Intel's comprehensive laptop innovation program Project Athena then tested, measured, and verified against a premium specification and key experience indicators to ensure unparalleled user experiences. For more complete information about performance and benchmark results, visit www.intel.com/Evo.

Responsiveness on Intel® Evo™ platform-based designs: Measured speed of premium Windows OS-based laptop while performing workflows in a realistic environment.

Comparative responsiveness on Intel® Evo™ platform-based designs: Measured speed of premium Windows OS-based laptop while performing workflows in a realistic environment compared to 2-year-old, similarly configured laptop.

No product or component can be absolutely secure.

Intel technologies may require enabled hardware, software or service activation.

Your costs and results may vary.

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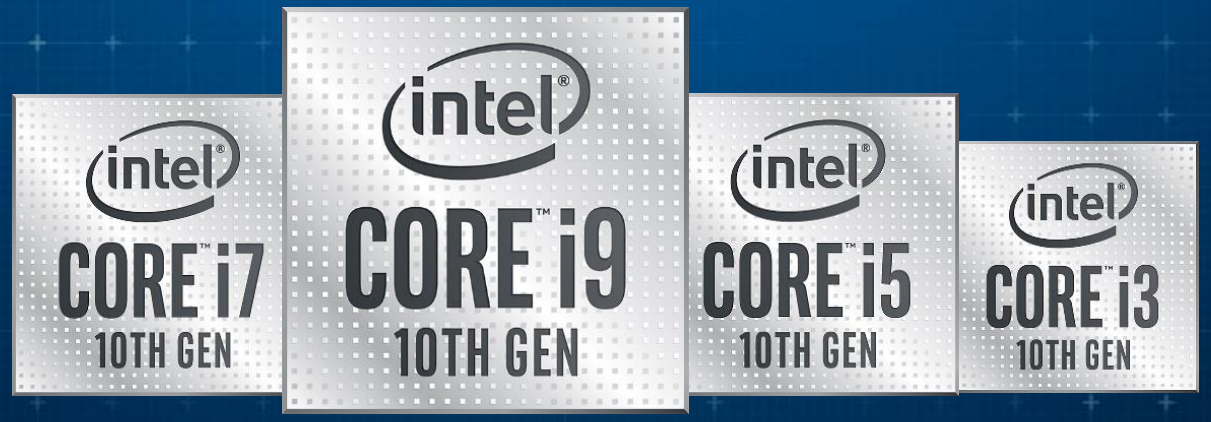
DESKTOP: 10TH GEN INTEL® CORE PROCESSORS

With an optimal balance of frequency, cores and threads, advanced tuning support, and blazing connectivity, 10th Gen Intel® Core™ processors supercharge desktops for a competitive edge.



ELITE PERFORMANCE

ADVANCED TUNING SUPPORT

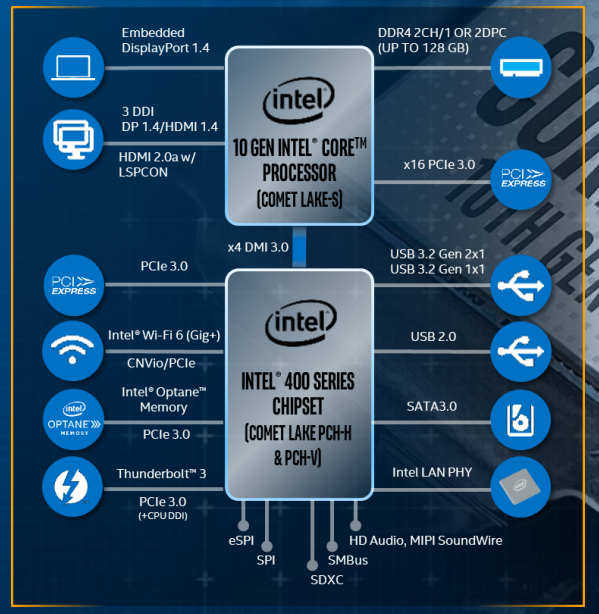
STUNNING ENTERTAINMENT & CONNECTIVITY

Author: John Bonini, Intel VP and GM of Client Computing Group Desktop, Workstations and Gaming
https://medium.com/intel-tech/intels-commitment-to-gaming-and-a-sneak-peek-at-intel-technology-to-come-83677833be7f
Author: Ryan Shrout, Chief Performance Strategist at Intel
https://medium.com/intel-tech/above-and-beyond-intels-leading-performance-in-microsoft-flight-simulator-2020-6977516d27f8

10 GEN: NEW AND FEATURED TECHNOLOGIES

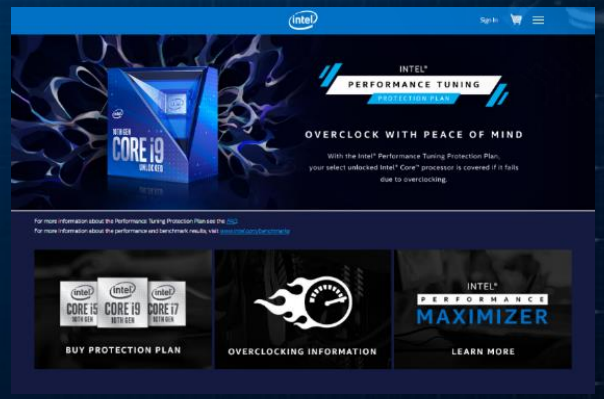
NEW

- **NEW** Up to 5.3 GHz with Intel® Thermal Velocity Boost[Φ,1]
- **NEW** Intel® Turbo Boost Max Technology 3.0
- **NEW** Intel® Hyperthreading Technology across 10th Gen Intel® Core™ i9 to i3 processors
- **NEW** Up to 10 cores with 20M Intel® Smart Cache
- **NEW** Up to DDR4-2933 support
- **NEW** Enhanced Core & Memory Overclocking[⊥, 2]
- **NEW** Intel® 400 Series Chipset
- **NEW** 2.5G[†] Intel® Ethernet Connection I225 (Foxville) support
- **NEW** Integrated Intel® Wi-Fi 6 AX201 (Gig+) support using CNVi[‡]



FEATURED

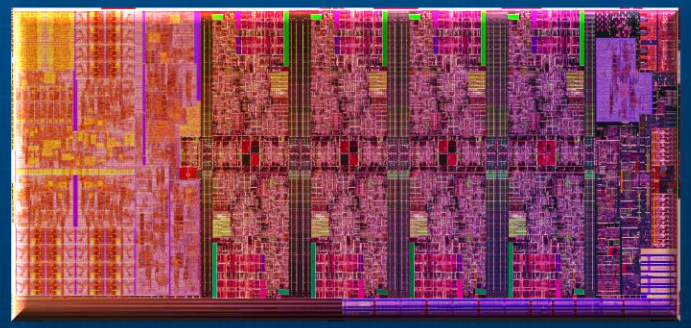
- Intel® performance tuning support (Intel® Performance Maximizer, Intel® eXtreme Tuning Utility)[⊥]
- Up to 40 platform PCIe lanes
- Thunderbolt™ 3 support
- Intel® Optane™ technology support[◊]

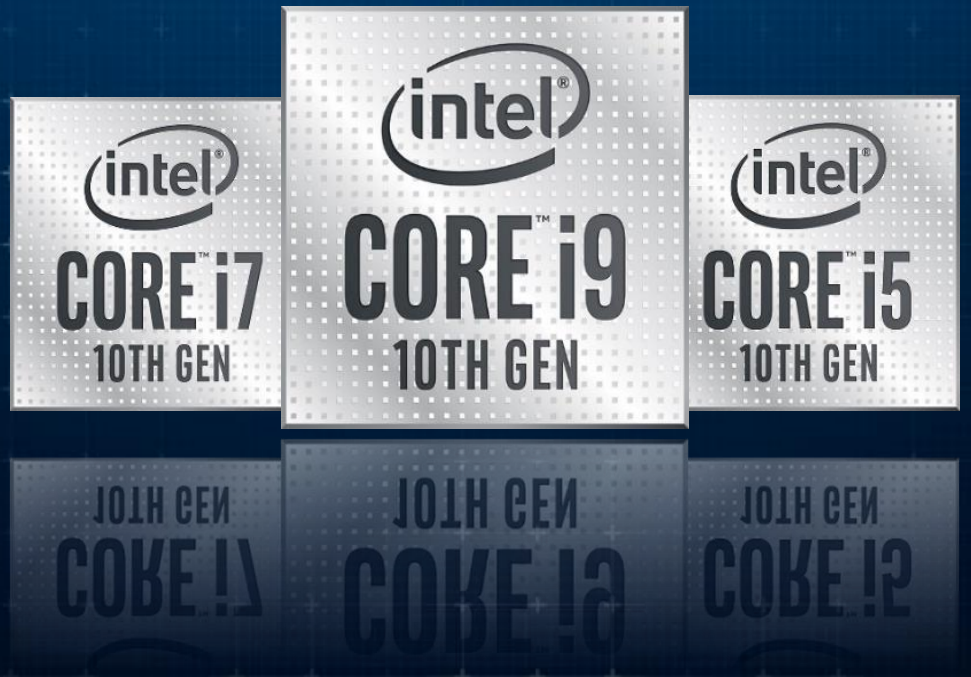


[1,2]See configuration disclosure. Providing by request.
[Φ]Up to 5.3 GHz with Intel® Thermal Velocity Boost available only on Intel® Core™ i9-10900K and i9-10900KF processors.
[‡]Intel® WiFi 6 AX201 support using Intel® Integrated Connectivity (CNVi) requires specific hardware configurations. Discrete Intel® Wi-Fi 6 AX200 available for chipsets not supporting connectivity integration.
[⊥]Unlocked features are present with select chipsets and processor combinations.
[◊]Intel® Optane™ memory requires specific hardware and software configuration. Visit www.intel.com/OptaneMemory for configuration requirements.
[†]I225 v1 (B1 stepping) reaches 2.5GbE on select switches/routers. Check out www.intel.com/i225v1 for a list of validated switches/routers. I225 v2 (B2 stepping) is now in production and works at 2.5GbE on all compliant 2.5GbE Link partners.

For more complete information about performance and benchmark results, visit intel.com/benchmarks.

MOBILE: 10TH GEN INTEL® CORE PROCESSORS

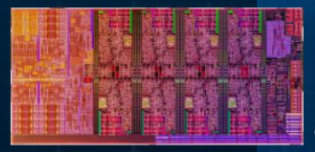




MOBILE: 10 GEN NEW AND FEATURED TECHNOLOGIES

NEW

- **NEW** Intel® Core™ i9 mobile processor with up to 5.3GHz[1] & 8C/16T
- **NEW** Intel® Core™ i7 mobile processor with up to 5.1GHz[1] & 8C/16T
- **NEW** Intel® Core i5 mobile processor with up to 4.6GHz & 4C/8T
- **NEW** Intel® Turbo Boost Max Technology 3.0
- **NEW** Memory support up to DDR4-2933
- **NEW** Intel® Speed Optimizer[2]
- **NEW** Integrated Intel® Wi-Fi 6 AX201 (Gig+) support*



FEATURED

- Intel® Adaptix™ Dynamic Tuning Technology and Intel® Extreme Tuning Utility for great CPU performance in all form factors
- Support for up to 128GB DDR4 memory capacity
- Up to 40 platform PCIe lanes
- Thunderbolt™ 3 support
- Intel® Optane™ memory support**
- Optimized for the latest discrete graphics performance

THUNDERBOLT™

Wi Fi 6™ CERTIFIED

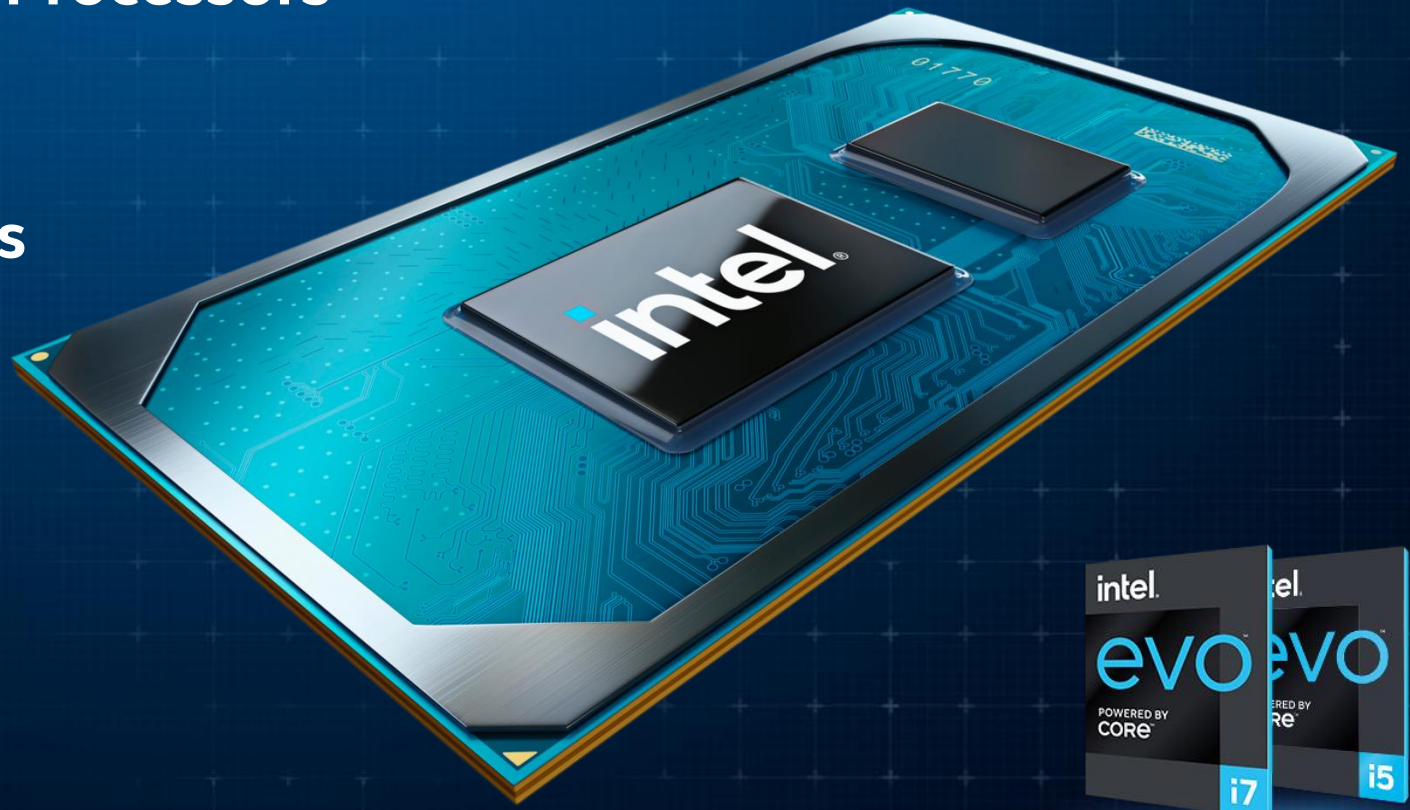
*Intel® WiFi 6 AX201 requires specific hardware configurations.

**Intel® Optane™ memory requires specific hardware and software configuration. Visit www.intel.com/OptaneMemory for configuration requirements.

[1,2]See configuration disclosure. Providing by request.

MOBILE: 11 GEN

- 11TH Gen Intel® Core™ Processors
- Intel® Iris® Xe Graphics
- Intel® Wi-Fi 6 (Gig+)
- Thunderbolt™ 4



https://newsroom.intel.com/press-kits/11th-gen-launch/

INTRODUCING 11TH GEN INTEL® CORE™ PROCESSOR

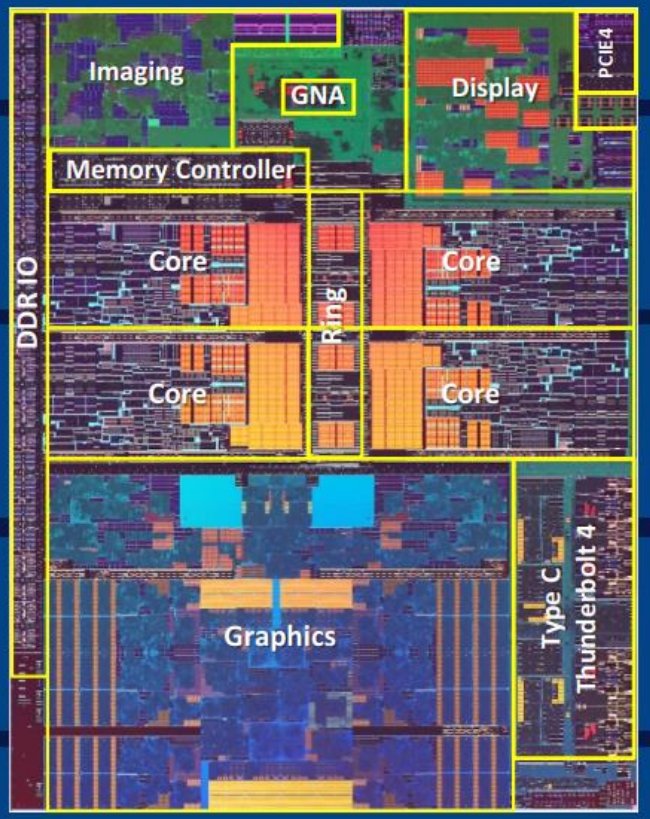
New Willow Cove Cores
Up to 4 Cores / 8 Threads
Up to 4.8GHz

New Converged Chassis Fabric
High Bandwidth / Low Latency
IP and Core Scalable

New Memory Controller
LP4/x-4266 4x32b up to 32GB
DDR4-3200 2x64b up to 64GB

1st Integrated Thunderbolt™ 4
Full 4x DP/USB/PCIe mux on-die
Up to 40Gbps bi-directional per port

1st Integrated PCIe Gen 4 (CPU)
Low Latency, High Bandwidth
SSD or Discrete Graphics Direct CPU Attach



New Iris® Xe Graphics
Up to 96EU – Up to 2x Higher Performance
Intel® Deep learning Boost: DP4A for AI

New 2x MEDIA Encoders
Up to 4K60 10b 4:4:4
Up to 8K30 10b 4:2:0

New 4 x Display Pipes
Up to 1 x 8K60 or 4 x 4K60
DP1.4 HBR3, BT.2020

New Image Processing Unit (IPU6)
Video up to 4K90 resolutions (initially 4K30)
Still image up to 42 megapixels (initially 27MP)

New GNA 2.0

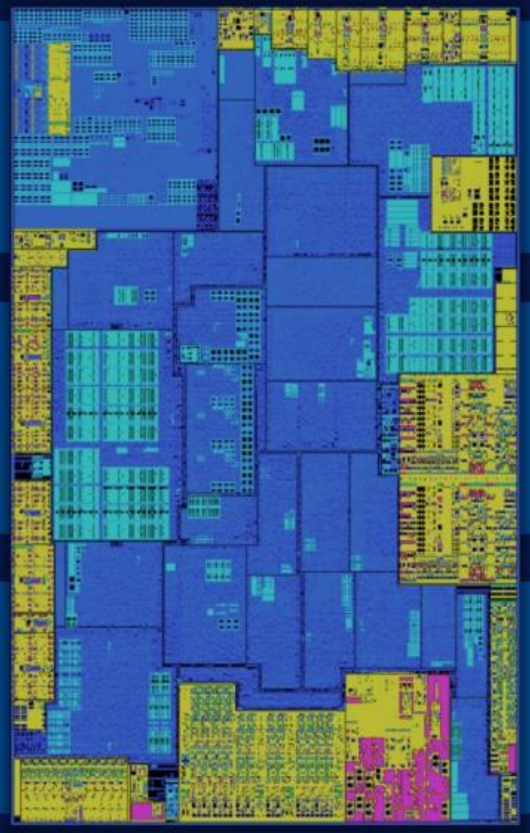
Enhanced Power Management
Autonomous DVFS

11TH GEN INTEL® CORE™ PCH PROCESSOR

Integrated Wi-Fi 6 (Gig+)
Integrated 802.11ax MAC (CNVi 2)
Discrete RF (Intel® AX201)

Integrated Power Delivery
Fully Integrated Voltage Regulators
CPU and PCH

4th Gen CSME
Improved Crypto, Side Channel Resiliency
Power and EM monitoring



Audio DSP
Programmable Quad Core DSP
Low Power Wake-on-Voice
USB and BT Audio Offload

I/O
x4 USB3 (x10 USB2)
x12 Gen3 PCIe
x2 SATA 6 Gbps
OPIO x8 Gen3.0

Touch Host Controller (THC)
Lower Power, More Responsive
Simultaneous Pen + Touch

PROJECT ATHENA

- Ready Before You Are
- Performance and Responsiveness
- Artificial Intelligence
- Worry Free Day of Battery Life
- Always Fast Reliable Connectivity
- Formfactor & Interaction

INTEL®EVO™ PLATFORM
BEST THIN AND LIGHT LAPTOP

Powered by the
11th Gen Intel® Core™ with Intel® Iris® Xᵉ Graphics

Each design verified for:

- **Responsiveness from Anywhere**
- **Longer battery life** (>9 hrs on FHD)
- **Instant wake** (<1 sec)
- **Fast charging** (4hrs usage ≤30 min on FHD)
- **Best-in-class connectivity with Intel® Wi-Fi 6 (Gig+) & Thunderbolt™ 4**

As measured by industry benchmark and Representative Usage Guides testing and unique features of 11th Gen Intel® Core™ processors. Intel's comprehensive laptop innovation program, Project Athena, ensures designs are tested,
measured and verified against a premium specification and key experience indicators. For more complete information about performance and benchmark results, visit www.intel.com/Evo.

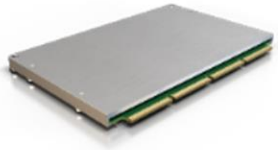
NUC EXTREME

- **NEW Upgradeable NUC Compute Element**
- **NEW Unlocked 9th Gen Intel® Core™ i9 Processor**
- **NEW PCIe* x16 slot** with 6+2-pin & 8-pin PCIe* power connectors, up to 225W, up to 8" card, dual-slot capable
- **NEW Intel® Wi-Fi 6 Technology**
- **NEW PCIe* x4 slot**[1]
- **NEW UHS-II SD card slot**
- **NEW 238 x 216 x 96 mm (5.0 L)**
- **NEW 500W internal power supply** with geo-specific AC cords
- **Also available in 9th Gen Intel® Core™ i7 and i5 Processor SKUs, up to 8 cores**
- **Dual-Channel DDR4-2666**[1]**/DDR4-2666+ SO-DIMMs, up to 32GB memory**
- **Dual-Channel DDR4-2400 SO-DIMMs, up to 64GB memory**
- **3x M.2 slots** (Compute Element: 1 22x42/80 NVMe or SATA3, 1 22x42/80/110 NVMe or SATA3, RAID-0 and RAID-1 capable; Chassis: 1 22x42/80/110 NVMe[2])
- **Intel® Optane™ Memory M10, H10, and Intel® Optane™ SSD Support**
- **Supports 3x 4K displays** (Intel® UHD Graphics)
- **2x Thunderbolt™ 3** ports
- **HDMI* 2.0a** port
- **2x Gigabit LAN ports**
- **6x USB 3.1 ports**

https://www.intel.com/content/www/us/en/products/docs/boards-kits/nuc/nuc9-extreme.html

NUC ELEMENTS





Intel NUC 8 Pro

Intel NUC 8 Board

Intel NUC 8 Board and Assembly

Intel NUC Rugged Chassis (Three options: Expandable, Dual LAN, Multi-HDMI)

Intel NUC Rugged Board (Three options: Expandable, Dual LAN, Multi-HDMI)

Intel NUC Pro Chassis (Two options: Base, Video Capture & Audio)

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