

GAME-CHANGING 9TH-GEN INTEL® CORE™ MOBILE H-SERIES PROCESSORS

Desktop-caliber performance on-the-go.

9th Gen Intel® Core™ processors power the ultimate laptops for gamers and creators with up to 5GHz⁴ Turbo, 8 cores, 16 MB of smart cache, and great battery life. Intel® Dynamic Tuning continuously optimizes performance for all types of laptops.



UP TO **33%** BETTER OVERALL
SYSTEM PERFORMANCE
vs. 3 year old system¹

UP TO **65%** MORE FPS WHILE
MEGATASKING
On Call of Duty Black Ops 4
vs. 3 year old system²

UP TO **54%** FASTER 4K VIDEO EDITING
vs. 3 year old system³

Product Brief

Campaign

1. As measured by SYSmark* 2018 comparing 9th Gen Intel® Core™ i7-9750H Processor vs. 6th Gen Intel® Core™ i7-6700HQ Processor
2. As measured by Mega-tasking Gaming Scenario on Black Ops 4 comparing 9th Gen Intel® Core™ i7-9750H vs. 6th Gen Intel® Core™ i7-6700HQ
3. As measured by Adobe Premiere Pro Video Editing Workload comparing 9th Gen Intel® Core™ i9-9750H vs. 6th Gen Intel® Core™ i7-6700HQ Processor
4. Includes the effect of Intel® Thermal Velocity Boost (Intel® TVB), a feature that opportunistically and automatically increases clock frequency above single-core and multi-core Intel® Turbo Boost Technology frequencies based on how much the processor is operating below its maximum temperature and whether turbo power budget is available. The frequency gain and duration is dependent on the workload, capabilities of the processor and the processor cooling solution.

Performance results are based on testing as of April 16, 2019 and may not reflect all publicly available security updates. See configuration disclosure for details. No product can be absolutely secure. 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 about performance and benchmark results, visit <http://www.intel.com/benchmarks>.



9TH-GEN INTEL® CORE™ MOBILE H-SERIES PROCESSORS

Desktop-caliber performance on-the-go.



INTEL® CORE™ i5-9400H PROCESSOR

Amazing mobile performance

4 Cores / 8 Threads
2.4 GHz base (Turbo up to 4.1 GHz)



INTEL® CORE™ i7-9750H PROCESSOR

No compromise gaming and creating

6 Cores / 12 Threads
2.6 GHz base (Turbo up to 4.6 GHz)

Up to **1.63X Faster loading, editing, and rendering** of your digital library using Intel® Optane™ Memory¹

Up to **56% more FPS** On Total War: WARHAMMER II vs. 3 year old system²



INTEL® CORE™ i9-9980HK PROCESSOR

Gaming and creating unleashed

8 Cores / 16 Threads / Unlocked
2.4 GHz base (Turbo up to 5.0 GHz)

Up to **28% Faster 4K video editing** vs. previous gen³

Game/Stream/Record with up to **2.1X more FPS** on Call of Duty Black Ops 4 vs. previous gen⁴

8 CORES. 16 THREADS. UNLOCKED.

1. As measured by Media Project Load Workload comparing 9th Gen Intel® Core™ i7-9750H Processor with 1TB Intel® Optane™ memory H10 with Solid State Storage drive vs. 6th Gen Intel® Core™ i7-6700HQ Processor with Intel® SSD 760P TLC SSD drive
2. As measured by Total War: WARHAMMER II (Skaven Lab Mode) FPS Workload comparing 9th Gen Intel® Core™ i7-9750H vs. 6th Gen Intel® Core™ i7-6700HQ
3. As measured by Adobe Premiere Pro Video Editing Workload comparing 9th Gen Intel® Core™ i9-9980HK vs. 8th Gen Intel® Core™ i9-8950HK
4. As measured by Mega-tasking Gaming Scenario on Black Ops 4 comparing 9th Gen Intel® Core™ i9-9980HK vs. 8th Gen Intel® Core™ i9-8950HK

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CREATION UNBOUND

UP TO **54%** FASTER 4K VIDEO EDITING
vs. 3 year old system¹

UP TO **63%** FASTER MEDIA PROJECT
LOADING
vs. 3 year old system²



9TH-GEN INTEL® CORE™ H-SERIES PROCESSORS

Less waiting, more creating

- Intel® Wi-Fi 6 (Gig+) let's you share your 10GB multimedia files in <1 min⁵
- Intel® Optane™ memory accelerates your most used applications.
- Intel® Quick Sync Video provides hardware acceleration for the latest video codecs.

GAMING UNLEASHED

UP TO **56%** MORE FPS
On Total War: War Hammer II
Vs. 3 year old system³

UP TO **65%** MORE FPS WHILE
MEGATASKING
On Call of Duty Black Ops 4
vs. 3 year old system⁴

Play at high settings in any setting

- Intel® Turbo Boost 2.0 Technology up to 5.0 GHz⁶ provides peak performance when you need it the most.
- Intel® Optane™ memory accelerates loading and launching the games you play most.

1. As measured by Adobe Premiere Pro Video Editing Workload comparing 9th Gen Intel® Core™ i9-9750H vs. 6th Gen Intel® Core™ i7-6700HQ Processor
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3. As measured by Total War: WARHAMMER II (Skaven Lab Mode) FPS Workload comparing 9th Gen Intel® Core™ i7-9750H vs. 6th Gen Intel® Core™ i7-6700HQ
4. As measured by Mega-tasking Gaming Scenario on Black Ops 4 comparing 9th Gen Intel® Core™ i7-9750H vs. 6th Gen Intel® Core™ i7-6700HQ
5. Throughput Estimates for actual Wi-Fi throughput performance are calculations based upon real-world, single client, best-case throughput speed assumptions of approximately 70% of IEEE 802.11 specification theoretical maximum data rates to account for networking overhead. Actual performance may vary based on system design, network configuration, and wireless environment. 802.11ax 160 MHz 2402Mbps Theoretical Maximum data rate yields an expected Maximum Throughput of 1681Mbps.
6. Includes the effect of Intel® Thermal Velocity Boost (Intel® TVB), a feature that opportunistically and automatically increases clock frequency above single-core and multi-core Intel® Turbo Boost Technology frequencies based on how much the processor is operating below its maximum temperature and whether turbo power budget is available. The frequency gain and duration is dependent on the workload, capabilities of the processor and the processor cooling solution.

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CONNECTING: WI-FI THAT SMASHES THROUGH THE GIGABIT BARRIER

Intel® WI-FI 6 AX200 (GIG+) 160 MHZ

Experience faster Wi-Fi with Intel® Wi-Fi 6 AX200 160 MHz inside your devices. Enjoy smoother gaming and 4K UHD video streaming, fast file transfers and backups, and low latency responsiveness for seamless gaming & real-time collaboration.

NEARLY **3X** FASTER than standard 2x2 802.11AC 80 MHz¹

INTEL® WI-FI 6 AX200 (GIG+) 160 MHZ IMPROVES...



STREAMING



CONFERENCING



GAMING

~75% LOWER LATENCY² for responsive gameplay



1. Wi-Fi 6 (Gig+) vs. 2x2 AC: 802.11ax 2x2 160MHz enables 2402Mbps maximum theoretical data rates, almost 3X faster than standard 802.11ac 2x2 80MHz (867Mbps) and nearly 6x faster than baseline 1x1ac (433Mbps) Wi-Fi as documented in IEEE 802.11 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers.
2. 75% Latency reduction: Is based on Intel simulation data (79%) of 802.11ax with and without OFDMA using 9 clients. Average latency without OFDMA is 36ms, with OFDMA average latency is reduced to 7.6ms. Latency improvement requires that the 802.11ax (Wi-Fi 6) router and all clients support OFDMA.

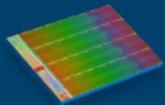
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INTEL® OPTANE™ MEMORY H10 WITH SOLID STATE STORAGE

High speed + Affordable Capacity in one Smart SSD

intel® OPTANE™
MEMORY



Intel® QLC 3D NAND
TECHNOLOGY



The two physical devices
are paired into a single
volume



INTEL® OPTANE™ MEMORY H10
WITH SOLID STATE STORAGE



16GB Intel® Optane™ Memory +
256GB QLC 3D NAND

32GB Intel® Optane™ Memory +
512GB QLC 3D NAND

32GB Intel® Optane™ Memory +
1TB QLC 3D NAND

IN A SINGLE M.2 2280 FORM FACTOR



PCIe* Gen 3.0x4
Single-sided



Files needed for important
tasks are quickly
recognized and accelerated



As you use your PC,
frequently used files and
applications are identified
and accelerated as well



Supported on 8th Gen and 9th Gen Intel® Core™ Desktop and Mobile Platforms