

10TH GEN INTEL® CORE™ VPRO® PROCESSORS SALES CARD



Changing the game in computing innovation, productivity, and security

The Intel vPro® platform with 10th Gen Intel® Core™ vPro® processor is built for business—delivering uncompromised productivity, hardware-based security features, and a foundation for computing innovation. With significant performance gains on compute-intensive applications and multi-tasking, users have the power they need on applications they use. New 10th Gen Intel Core vPro processors come with integrated Wi-Fi 6, the best Wi-Fi technology for video conferencing.¹ IT can count on the built-in, hardware-based security features of Intel® Hardware Shield for increased platform protection with minimal impact to user productivity. Intel® Active Management Technology helps minimize disruptions and service calls, increasing employee satisfaction and productivity, whether employees are at home or in the office.

ADVANCED CAPABILITIES TO ENABLE IT *Reshape the computing experience for the modern workplace – whether at home or in the office*



10th Gen Intel® Core™ vPro® processors

U-Series: Mainstream commercial mobile PC platform

- Latest in mobility, connectivity, and style
- Built-in, hardware-based security features
- Advanced wireless connectivity
- Long mobile battery life
- Project Athena innovation program-based designs
- Business productivity applications and workloads
- Data visualization
- Collaboration
- Manage large data sets



10th Gen Intel® Core™ vPro® processors

H-Series: Mobile workstations and commercial performance notebooks

- Premium mobile performance
- Built-in, hardware-based security features
- Advanced wireless connectivity
- Business productivity applications and workloads
- 3D modeling
- Product design
- Media editing
- Data visualization
- Manipulation of high-density files
- Compute-intensive business applications



10th Gen Intel® Core™ vPro® processors

S-Series: Commercial desktop PC platform

- Elite desktop performance
- Built-in, hardware-based security features
- Advanced wireless connectivity
- Business productivity applications and workloads
- 3D modeling
- Product design
- Media editing
- Data visualization
- Manipulation of high-density files
- Compute-intensive business applications

BUSINESS-CLASS ACCELERATION

10th Gen Intel® Core™ vPro® processors (U-Series)

Up to
40%
better overall application
performance
vs. a three-year-old laptop³

Up to
36%
better office productivity
vs. a three-year-old laptop⁴

10th Gen Intel® Core™ vPro® processors (H-Series)

Up to
36%
better overall application
performance
vs. a three-year-old laptop⁵

Up to
30%
faster office multitasking
vs. a three-year-old laptop⁶

10th Gen Intel® Core™ vPro® processors (S-Series)

Up to
46%
better overall application
performance
vs. a 5-year-old desktop⁷

Up to
44%
faster analyzing and
visualizing data
vs. a 5-year-old desktop⁸

10th Gen Intel® Core™ vPro® platforms are built for business, and are now available with **integrated Wi-Fi 6 connectivity**, which is the best Wi-Fi technology for video conferencing¹

INNOVATIVE TECHNOLOGIES TO BENEFIT IT

**Performance**

Intel® Wi-Fi 6 (Gig+)
Intel® Optane™ memory

**Security**

Intel® Hardware Shield

**Manageability**

Intel® Active Management
Technology (Intel® AMT)
Intel® Endpoint Management
Assistant (Intel® EMA)

**Stability**

Intel® Stable IT Platform Program
(Intel® SIPP)

NEW

Expanded below-the-OS protection and advanced threat detection features with Intel® Hardware Shield.

NEW

Intel® SIPP now offers even broader Windows® 10 Enterprise version support (versions 1809 to 20H2) for smoother transitions to the latest hardware platform.

NEW

Integrated Wi-Fi 6 (Gig+) provides up to 3X faster speeds, scalable and reliable networks, and more stable connections, even in dense environments.²

FIND THE RIGHT PROCESSOR FOR CUSTOMER REQUIREMENTS

	10th Gen Intel® Core™ vPro® processors (U-Series)	10th Gen Intel® Core™ vPro® processors (H-Series)	10th Gen Intel® Core™ vPro® processors (S-Series)
Platform	Mainstream commercial mobile PC platform	Mobile workstations and commercial performance notebooks	Desktop platform
Form factors	Thin and light notebooks, detachable and convertible systems	High-end mobile systems	Small form factor desktops, traditional towers, and modern all-in-one touchscreen systems
Processor cores	Intel® Core™ vPro® i5 processor: 4 cores, 8 threads, and 8 MB cache Intel® Core™ vPro® i7 processor: 6 cores, 12 threads, and 12 MB cache	Intel® Core™ vPro® i5 processor: 4 cores, 8 threads, and 8 MB cache Intel® Core™ vPro® i9 processor: 10 cores, 16 threads, and 16 MB cache Intel® Xeon® processor: 8 cores, 16 threads, and 16 MB cache	Intel Core vPro i5 processor: 6 single-threaded cores and 9 MB cache Intel Core vPro i7 processor: 8 single-threaded cores and 12 MB cache Intel Core vPro i9 processor: 8 cores, 16 threads, and 16 MB cache Intel® Xeon® processor up to 10 cores, 20 threads, and 20 MB cache
Graphics	Gen 9 Intel® UHD Graphics	Gen 9 Intel® UHD Graphics	Gen 9 Intel UHD Graphics
Memory controller	Two-channel DDR4 memory controller	Two-channel DDR4 memory controller	Two-channel DDR4 memory controller
Platform controller	Integrated PCH	Intel® 400 Series Platform Hub (PCH)	Intel® 400 Series Platform Hub (PCH)
Connectivity	Integrated Intel® Wi-Fi 6 AX200 Integrated Intel® Wireless-AC supports 802.11ac Wi-Fi and Bluetooth 5.0 when paired with the Intel® Wireless-AC 9560 external RF transceiver chip Some mobile systems may alternatively feature the next generation Intel® Wi-Fi 6 AX200 Validated with the Intel® XMM™ 7360 M.2 module: Power-efficient RF architecture supporting world coverage and up to LTE Advanced Cat. 10 speeds	Integrated Intel® Wireless-AC supports 802.11ac Wi-Fi and Bluetooth® 5.0 when paired with the Intel® Wireless-AC 9560 external RF transceiver chip Wi-Fi 6 and 4G LTE via discrete components	Integrated Wi-Fi 6 802.11ax wireless Integrated Intel Wireless-AC supports 802.11ac Wi-Fi and Bluetooth 5.0 when paired with the Intel Wireless-AC 9560 external RF transceiver chip
Power	Built-in thermal management features	45-watt thermal design power (TDP) Intel® Thermal Velocity Boost (Intel® TVB) (increases clock frequency under specific operating conditions) ⁹	TDP options of 35, 65, and 125 watts
Cabling	Thunderbolt 3 technology: Single-cable docking solutions to integrate the mobile PC into a peripheral-rich, stationary computing environment	Thunderbolt 3 technology: Single-cable docking solutions to connect notebooks to peripheral-rich, stationary computing environments	Thunderbolt 3 technology: Single-cable docking solutions to connect notebooks to peripheral-rich, stationary computing environments

Learn more at intel.com/vpro.



1. Best Wi-Fi disclaimer: As measured by OTA (Over the Air) Wi-Fi 6 (802.11ax) vs. Wi-Fi 5 (802.11ac) NB client Skype video conferencing test data, obtained in standard corporate IT 20 MHz and 40 MHz network deployment scenarios.

Wi-Fi networks consist of 8 NB clients with 7 clients generating 10-20 Mbps Wi-Fi traffic (using iChariot traffic simulator) while 1 client conducts a 5 min Skype video conference session with a 9th client connected via 10/100/1000 Ethernet to a local server. Skype data obtained via Skype reporting application.

8 NB Wi-Fi network client specifications: Dell XPS 13 (10th Gen), Killer AX1650, Driver 21.90.0.9; OS: Win 10 19H1 64-bit, 9th NB Callee (wired) = Dell G7 15 7588, Killer E2400, Driver: 9.0.0.42, OS: Win 10 19H1 64-bit; Enterprise APs: (AC) Wi-Fi 5: Cisco 3800, FW: 8.10.128.91; (AX) Wi-Fi 6: Cisco 9130, FW: 8.10.128.91

Wi-Fi 6 performance benefits require use of similarly configured Wi-Fi 6 networking infrastructure (routers & APs) based on the IEEE 802.11ax wireless standard specification.

Test data represents best case results through a controlled local network to show relative Wi-Fi 6 vs. Wi-Fi 5 technology differences. Actual real-world corporate results may vary and are expected to be higher due to 1) greater number of diverse clients, 2) higher network traffic levels, and 3) greater physical client distance from Skype server.

2. Theoretical performance compared to standard 802.11ac. Nearly 3X Faster: 802.11ax 2x2 160 MHz enables 2402 Mbps maximum theoretical data rates, ~3X (2.8X) faster than standard 802.11ac 2x2 80 MHz (867 Mbps) as documented in IEEE 802.11 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers. For more information about the data presented, visit www.intel.com/wifi6disclaimers.
3. As measured by SYSmark 2018 Overall Score on pre-production 10th Gen Intel® Core™ i7-10810U vs. 8/15/19 testing of 7th Gen Intel® Core™ i7-7600U
4. As measured by SYSmark 2018 Productivity Subtest Score on pre-production 10th Gen Intel® Core™ i7-10810U vs. 8/15/19 testing of 7th Gen Intel® Core™ i7-7600U
5. As measured by SYSmark 2018 Overall Score on pre-production 10th Gen Intel® Core™ i7-10875H vs. 7th Gen Intel® Core™ i7-7920HQ.
6. As measured by Office 365 Multi-threaded Workload on pre-production 10th Gen Intel® Core™ i7-10875H vs. 7th Gen Intel® Core™ i7-7920HQ.
7. As measured by SYSmark 2018 Overall Score on pre-production 10th Gen Intel® Core™ i7-10700 vs. 6th Gen Intel® Core™ i7-6700.
8. As measured by MS PowerBI Workload on pre-production 10th Gen Intel® Core™ i7-10700 vs. 6th Gen Intel® Core™ i7-6700.
9. Includes the effect of Intel Thermal Velocity Boost, 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.

U-Series claims measured on platforms with:

Intel Preproduction Processor: Intel® Core™ i7 -10810U (CML-U 6+2) PL1=15W, 6C12T, Turbo up to 4.9GHz, Memory: 2x16GB DDR4-2667 2Rx8, Storage: Intel® 760p M.2 PCIe NVMe SSD, Display Resolution: 1920x1080, OS: Windows® 10 19H2-18363.ent.rx64.691-Appx68. Power policy set to AC/Balanced mode for all benchmarks except SYSmark 2018 which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: 2020-02-11-ci-master-4102-revenue-pr-1007926-whql, Temperature: Tc=70c for all performance measurements. Tc=50c for MobileMark 2018.

vs

FOR SYSMARK 2018 SCORES USE 8/15/19 TESTING - Processor: Intel® Core™ i7 -7600U (KBL-U 2+2) PL1=15W, 2C4T, Turbo up to 3.9GHz, Memory: 2 X 4GB DDR4, Storage: Intel® 660p M.2 PCIe NVMe SSD, Display Resolution: 1920x1080, OS: Windows 10 Pro 10.0.18362.175. Power policy set to AC/Balanced mode for all benchmarks except SYSmark 2018 which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: n/a, Bios version: n/a, Temperature: Tc=70c for all performance measurements. Tc=50c for MobileMark 2018.

FOR WEBXPRT3 AND OFFICE 365 WORKLOAD MEASUREMENTS USE 5/4/20 TESTING - Processor: Intel® Core™ i7 -7600U (KBL-U 2+2) PL1=15W, 2C4T, Turbo up to 3.9GHz, Memory: 8117 MB (DDR4 SDRAM), Storage: Intel® 660p M.2 PCIe NVMe SSD, Display Resolution: 1920x1080, OS: 10.0.18363.657 (Win10 19H2 [1909] November 2019 Update). Power policy set to AC/Balanced mode for all benchmarks except SYSmark 2018 which is measured in AC/BAPCo mode for Performance. Power

policy set to DC/Balanced mode for power. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: 25.20.100.6374, Bios version: KBLSE2R1.R00.X146.P02.1812100910, Temperature: Tc=70c for all performance measurements. Tc=50c for MobileMark 2018.

H-Series Claims measured on platforms with:

Processor: Intel® Core™ i7 -10875H (CML-H 8+2) PL1=45W, 8C16T, Turbo up to 5.1GHz, Memory: DDR4-2933 2x16GB 2R, Storage: Intel® 760p M.2 PCIe NVMe SSD, Display Resolution: 1920 x 1080, OS: Win10 18363.535. Power policy set to AC/Balanced mode for all benchmarks except SYSmark 2018 which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: prod-hi-releases_ci-master-3672-revenue-pr-1007642-cml-h-pv-whql-v2, Bios version: CML_Release_2051_00_32, Temperature: Tc=70c for all performance measurements. Tc=50c for MobileMark 2018.

vs

Processor: Intel® Core™ i7 -7920HQ (KBL-H 4+2) PL1=45W, 4C8T, Turbo up to 4.1GHz, Memory: 2X 16 GB DDR4-2666 DDR4 SDRAM, Storage: Intel® 760p M.2 PCIe NVMe SSD, Display Resolution: 1920 x 1080, OS: 10.0.18363.657 (Win10 19H2 [1909] November 2019 Update). Power policy set to AC/Balanced mode for all benchmarks except SYSmark 2018 which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics driver: 26.20.100.7985, Bios version: KBLSE2R1.R00.X120.P04.1802121043, Temperature: Tc=70c for all performance measurements. Tc=50c for MobileMark 2018.

S-Series claims measured on platforms with:

Processor: 10th Gen Intel® Core™ i7-10700 processor (CML-S) PL1=65W TDP, 8C16T Turbo up to 4.8GHz, Motherboard: Pre Production Asus ROG Maximus XII Formula, Memory: 32 GB DDR4-2933 DDR4 SDRAM, Storage: Intel SSD 905P 960GB, Display Resolution: 1920x1080, OS: Microsoft Windows 10 Pro 1909 V720 19H2(RS6). Power policy set to AC / HighPerf for all benchmarks except SYSmark 2014 which is measured in AC / BAPCo mode. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics card: NVIDIA RTX 2080Ti, Graphics driver: 442.59, Bios version 403, Temperature: Air Cooled Heat Sink for all performance measurements.

vs

Processor: 6th Gen Intel® Core™ i7-6700 processor (SKL-S) PL1=65W TDP, 4C8T Turbo up to 4.0GHz, Motherboard: Production Asus Prime Z170M-Plus, Memory: 32 GB DDR4-2133 DDR4 SDRAM, Storage: Intel SSD 905P 960GB, Display Resolution: 1920x1080, OS: Microsoft Windows 10 Pro 1909 V720 19H2(RS6). Power policy set to AC / HighPerf for all benchmarks except SYSmark 2014 which is measured in AC / BAPCo mode. All benchmarks run in Admin mode & Tamper Protection Disabled / Defender Disabled, Graphics card: NVIDIA RTX 2080Ti, Graphics driver: 442.59, Bios version 3805, Temperature: Air Cooled Heat Sink for all performance measurement

Notices & Disclaimers

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. See backup for configuration details. No product or component can be absolutely secure.

Your costs and results may vary. Intel contributes to the development of benchmarks by participating in, sponsoring, and/or contributing technical support to various benchmarking groups, including the BenchmarkXPRT Development Community administered by Principled Technologies.

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

© Intel Corporation. Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.

