

Product Brief

11th Gen Intel® Core™
Processors with Intel®
Iris® X^e Graphics

11th Gen Intel® Core™ i7-1185G7 with Intel® Iris® X^e graphics, part of the new 11th Gen Intel® Core™ processor family, is the world's best processor for thin and light laptops¹. This processor surpasses everything in its class — with major advances in every area that matters to you. 11th Gen Intel® Core™ processors bring together industry-leading CPU performance, immersive graphics, amazing AI acceleration, and best-in-class wired and wireless connectivity² to help you focus, create, and engage at new levels.

Breaking the Boundaries of Performance

New 11th Gen Intel® Core™ Processors
with Intel® Iris® X^e Graphics

intel®

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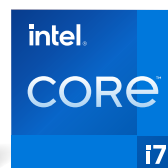
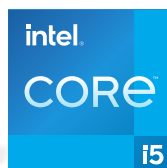
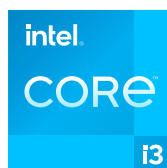
Immerse,
Create,
Collaborate

Make Your Best Contribution Anywhere

11th Gen Intel® Core™ processors allow you to produce, create, connect, and collaborate from anywhere like never before. This latest generation of processors, powered by Intel's new SuperFin transistors, combine new industry-first and best-in-class technologies², like Wi-Fi 6 (Gig+), Thunderbolt™ 4, AV1 media decode, CPU-attached PCIe Gen 4 interface, and hardware-hardened security features. Achieve greater productivity with a processor supporting up to 4.8Ghz Turbo clock speeds, Intel® Optane™ H10 with Solid State Storage, the fastest SSD, and the first processor to integrate Thunderbolt™ 4, the truly universal single-cable connection, supporting up to 4 simultaneous 4K HDR displays.

Leading the AI Revolution³

Intel is changing the game with AI on the PC. 11th Gen Intel® Core™ processors offer the highest performing AI acceleration ever built for thin & light laptops. This is uniquely designed to dramatically accelerate the latest AI-enhanced applications and modern workflows. AI powers more immersive collaboration, with neural noise suppression and even video super-resolution for professional videocalls in any environment using the latest low-bandwidth encode and the best Wi-Fi technology for video conferencing. It revolutionizes creative workflows, enabling amazing new photo and video editing capabilities at incredible speeds. Now everyone can collaborate and create like a professional.



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Power
Your
Imagination



Introducing Intel® Iris® Xe Graphics—Game On!

New Intel® Iris® Xe graphics offer discrete-level graphics performance in sleeker, thinner, and lighter laptops. 11th Gen Intel® Core™ processors with Intel® Iris® Xe graphics enable more top games at great, playable frame rates in full-HD than the competition. Intel® Iris® Xe graphics also deliver brilliant visuals with support for billions of colors, HDR10, Dolby Atmos sound, and long playback of Dolby Vision-enabled content with hardware acceleration, an industry first. Not only can you play top games in up to 1080p at 30 fps or more and enjoy an amazingly immersive entertainment experience, but 11th Gen Intel® Core™ processors with Intel® Iris® Xe graphics also enable you to complete creative projects with blazing speed powered by unique hardware-accelerated AI, all in a sleek, thin & light laptop with leading performance—whether plugged-in or unplugged.



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Intel® Evo™ Platform — A New Class of Laptops⁴

Laptops designed on the Intel® Evo™ platform are built for getting things done anywhere, and powered exclusively by 11th Gen Intel® Core™ processors with Intel® Iris® X^e graphics. Each of these laptop designs is tuned, tested, and verified to bring the experiences that matter most to those who dream big — incredible responsiveness, real-world battery life, fast charging, and instant wake — all in premium, thin, light styles. The Intel® Evo™ badge signifies the perfect combination of features and technologies, tested under everyday conditions for an exceptional experience that lives up to its expectations. Coming from the Project Athena innovation program, designs featuring the Intel® Evo™ platform will transform your expectations for your laptop.



Product Brief

11TH GEN INTEL® CORE™ U-SERIES PROCESSOR PERFORMANCE FEATURES

FEATURES ^{5,6}	UP3	UP4
CPU/Memory/Graphics Overclocking	No	No
Intel® Extreme Tuning Utility (XTU)	No	No
Intel® Hyper-Threading Technology	Yes	Yes
Intel® Smart Cache Technology with Last Level Cache (LLC) sharing between Processor and Graphics	Yes	Yes
Intel® Smart Sound Technology	Yes	Yes
Intel® Gaussian Neural Accelerator 2.0 (GNA 2.0)	Yes	Yes
Intel® Turbo Boost Technology 2.0	Yes	Yes
Intel® Turbo Boost Max Technology	No	No
Intel® Speedshift™ Technology	Yes	Yes
Per-core P-states	Yes	Yes
Last Level Cache (LLC)	Up to 12M	Up to 12M

11TH GEN INTEL® CORE™ U-SERIES PROCESSOR POWER SPECIFICATIONS

	CTDP DOWN	CTDP UP
UP3	12W	28W
UP4	7W	15W

PREMIUM PCH-LP

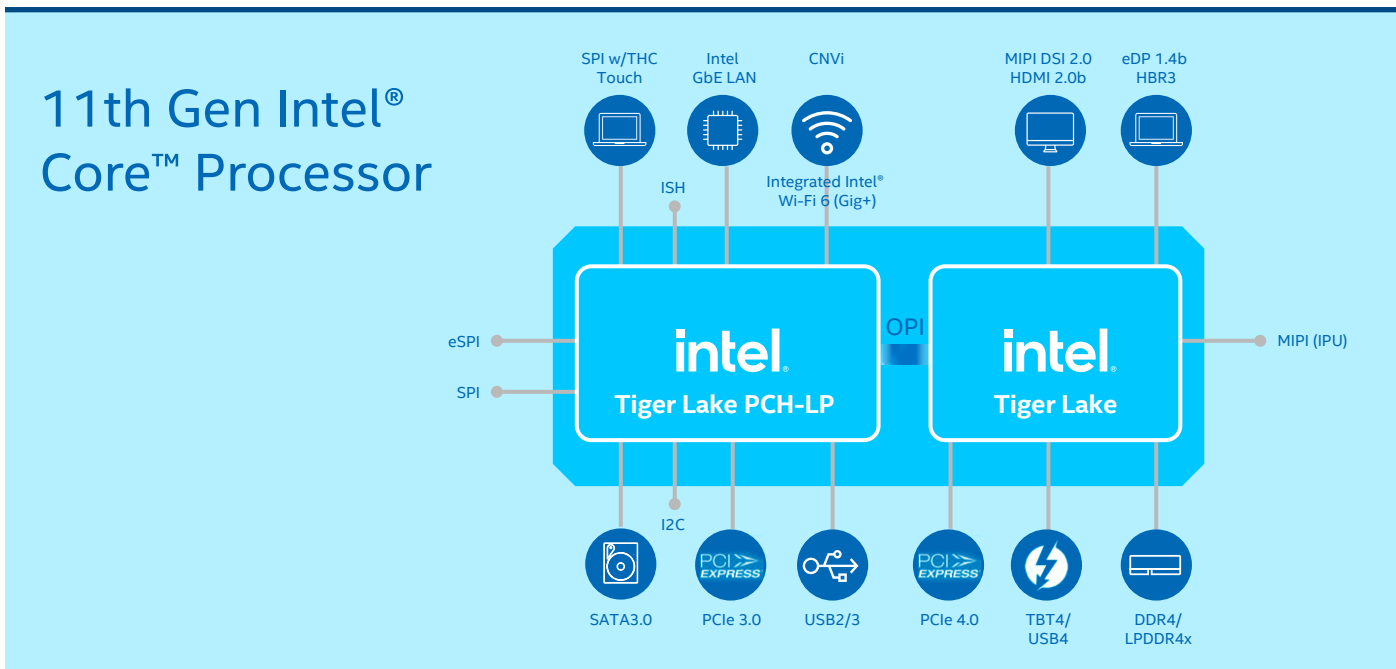
2 ⁷ x SATA 6Gb/s	AHCI, RAID, RST 18 (AHCI and RAID), Intel® RST for PCIe Storage
Up to 7 PCIe Gen 3 Devices across 12 lanes	Boot Guard, Integrated Wi-Fi 6 (Wi-Fi/BT)
10 x USB 2 ⁸	6 I2C, 3 UART, SSIC, ISH 5.4
Intel® Smart Sound Technology w/I2S OR HAD Solution, Soundwire Interface	

⁷Enabled with I/O Port Flexibility

⁸The Total USB2 port availability will also take into account the USB2 port requirement for Integrated Bluetooth* functionality

⁵NOT ALL FEATURES INDICATED ARE SUPPORTED ON ALL SKUs

⁶Level of support may vary by SKU



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11TH GEN INTEL® CORE™ U-SERIES PROCESSOR FEATURE/BENEFITS

FEATURES	BENEFITS
CPU	10nm SuperFin technology CPU up to 3MB LLC/Core / 14nm PCH
Graphics	Intel® Xe-LP graphics engine, Up to 96EU
Memory	DDR4 up to 3200, LPDDR4/x up to 4266
Imaging	<ul style="list-style-type: none"> Enhanced IPU6: 27Mp WF / 13 Mp UF 4K@60fps HDR video TNR and HDR (SVE only) 6/4 concurrent cameras (UP4/UP3)
Media, Display, Audio	<ul style="list-style-type: none"> 2 VD Boxes: Up to 8K60 decode & 8K30 encode, AV1 decode & SCC 4 Simultaneous displays (adding 2nd eDP support and MIPI DSI 2.0) 2-mic Far Field audio pre-processing USB audio offload Bluetooth Audio Offload MVA (Multiple Voice Assistant) Programmable Quad-Core Audio DSP, Soundwire Digital Audio Interface, Intel® GNA 2.0 for low-power neural network acceleration
I/O & Connectivity	<ul style="list-style-type: none"> Integrated Wi-Fi*/BT (CNVi AC/Wi-Fi 6 support) – Intel® Wi-Fi 6 AX201 (2x2/160 MHz, Gig+) Integrated USB Type-C* (USB 4, Thunderbolt™ 4, DisplayPort 1.4) – up to 4 ports
Storage	Intel® Optane™ H10 memory with Solid State Storage, 4 x PCIe Gen4
Security	Control Flow Enforcement Technology (CET) malware protection
Board Area Savings	Board savings due to IP integration – FIVR (both CPU and PCH), Type-C subsystem, HDMI 2.0b, Wi-Fi*/BT (CNVi MAC)

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 www.intel.com/11thgen for configuration details. No product or component can be absolutely secure.

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¹As measured by industry benchmarks, Representative Usage Guide testing and unique features of the Intel® Core™ i7-1185G7 processor, including in comparison to AMD Ryzen 7 4800U, across 5 key usages: productivity, creation, gaming, collaboration, and entertainment. For more complete information about performance and benchmark results, visit www.intel.com/11thgen.

²Based on integrated Intel® Wi-Fi 6 (Gig+) and Thunderbolt™ 4 technology. Intel® Wi-Fi 6 (Gig+) products enable the fastest possible maximum speed for typical laptop Wi-Fi products. Thunderbolt™ 4 is the fastest port available on a laptop, at 40 Gb/s, as compared to other laptop I/O connection technologies including eSATA, USB, and IEEE 1394 Firewire*. Performance varies by use, configuration and other factors.

³As measured by MLPerf v0.5 Inference with Offline Scenario using OpenVINO 2020.2 framework Closed ResNet50-v1.5 offline int8 GPU (Batch=32) on 11th Gen Intel® Core™ i7-1185G7 Processor vs OpenVINO 2020.2 framework Closed ResNet50-v1.5 offline FP32 GPU (Batch=32)

⁴Verified, measured and tested against a premium specification and Key Experience Indicators as part of Intel's laptop innovation program Project Athena. Testing results as of August 2020, and do not guarantee individual laptop performance. Power and performance vary by use, configuration and other factors. For more complete information about performance and benchmark results, visit Intel.com/Evo.