Real world performance and immersive graphics are at the heart of 11th Gen Intel® Core™ Processors with Intel® Iris® Xe graphics. This family delivers the best processor for thin and light laptops.[1] This processor surpasses everything in its class — with outstanding performance in every area that matters to you. 11th Gen Intel® Core™ processors bring together industry-leading CPU and graphics performance, amazing AI acceleration, and best-in-class wired and wireless connectivity[2] to help you focus, create, and engage at new levels.

Breaking the Boundaries of Performance

11th Gen Intel® Core™ Processors
with Intel® Iris® Xe Graphics

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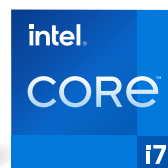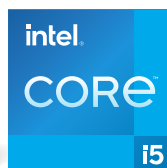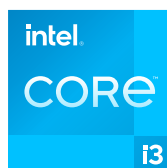
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Immerse, Create, Collaborate

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 technologies[2], like integrated Intel® 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 5.0 GHz Turbo clock speeds and the first processor to integrate Thunderbolt 4, the truly universal single-cable connection, supporting up to 4 simultaneous 4K HDR displays. Combine 11th Gen Intel Core processors with Intel® Optane™ Memory H20 with Solid State storage to boost your storage performance and system responsiveness.

Leading the AI Revolution

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[3] 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.

*Intel Over The Air (OTA) multi-client Wi-Fi testing in simulated standard managed IT environment highlighted a major reduction in Skype videoconferencing latency due to core technology advantages of Wi-Fi 6/6E vs. Wi-Fi 5. Learn more at www.intel.com/performanceindex (connectivity). Results may vary.

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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GRAPHICS

Intel® Evo™ Platform — A New Class of Laptops

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® Xᵉ 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.[4] 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 3.0	Yes	No
Intel® Speedshift™ Technology	Yes	Yes
Per-core P-states	Yes	Yes
Last Level Cache (LLC)	Up to 12M	Up to 12M

[5]NOT ALL FEATURES INDICATED ARE SUPPORTED ON ALL SKUs

[6]Level of support may vary by SKU

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

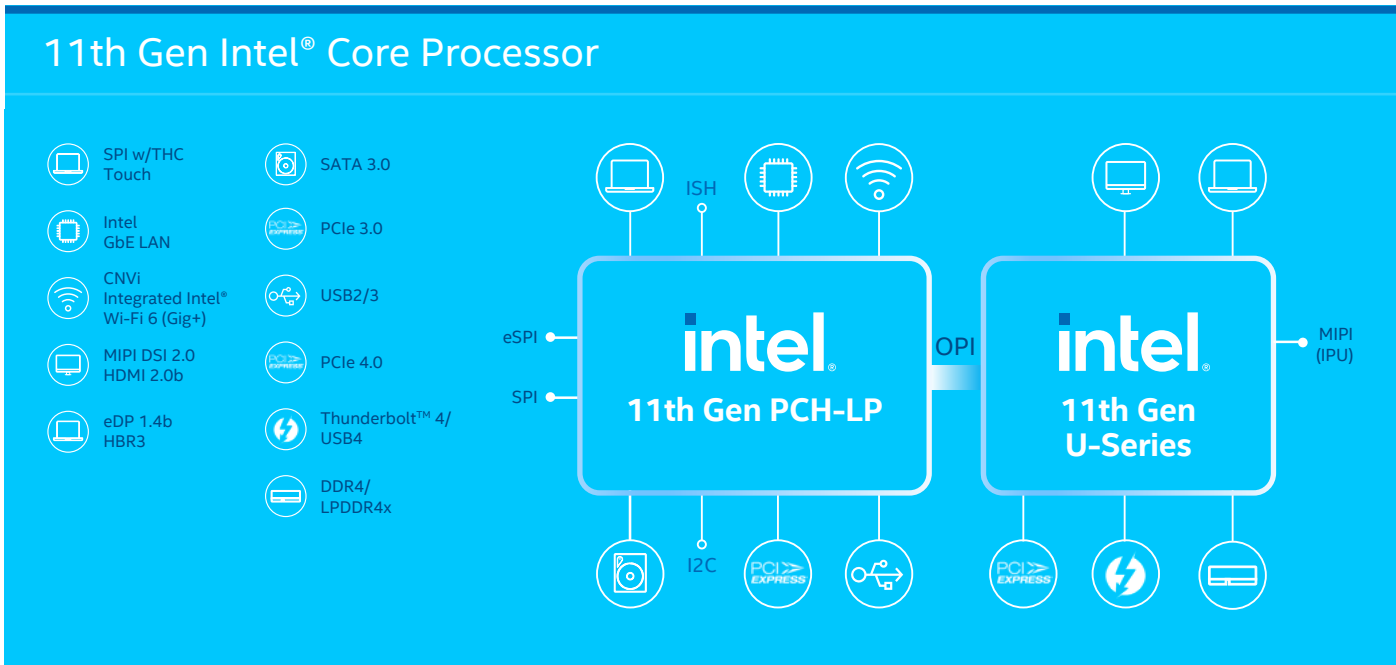|	CTDP DOWN	CTDP UP
UP3	12W	28W
UP4	7W	15W

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 High-definition Audio (HAD), Soundwire Interface	

[7]Enabled with I/O Port Flexibility

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

11th Gen Intel® Core Processor

SPI w/THC Touch
Intel GbE LAN
CNVi Integrated Intel® Wi-Fi 6 (Gig+)
MIPI DSI 2.0 HDMI 2.0b
eDP 1.4b HBR3
SATA 3.0
PCIe 3.0
USB2/3
PCIe 4.0
Thunderbolt™ 4/ USB4
DDR4/ LPDDR4x

ISH
eSPI
SPI
OPI
I2C
MIPI (IPU)

Intel® 11th Gen PCH-LP
Intel® 11th Gen U-Series

Product Brief

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® X^e-LP graphics engine, Up to 96EU
Memory	DDR4 up to 3200, LPDDR4/x up to 4266
Imaging	• 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	• 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	• 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 feature
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)

Performance varies by use, configuration and other factors. Learn more at www.Intel.com/PerformanceIndex.

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See www.intel.com/11thgenmobile for configuration details. No product or component can be absolutely secure.

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

[1] In thin and light, Windows-based devices, as measured by industry benchmarks, Representative Usage Guide testing and unique features of the Intel® Core. i7-1195G7 processor, including in comparison to AMD Ryzen 7 5800U, across 5 key usages: productivity, creation, gaming, collaboration, and entertainment. For more complete information about performance and benchmark results, visit www.intel.com/11thgenmobile.

[2] Based 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. Learn more at www.intel.com/PerformanceIndex (connectivity). Results may vary.

[3] On Windows-based PCs, as measured by MLPerf v1.0 Mobile Inference, Closed Notebooks with Offline Scenario using OpenVINO 2021.3.394 framework on MobileNetEdge model int8 GPU (Batch=16) on 11th Gen Intel® Core i7-1195G7 Processor vs highest attainable MLPerf v1.0 Mobile Inference, Closed Notebooks with Offline Scenario using OpenVINO 2021.3.394 framework on MobileNetEdge model int8 CPU (Batch=1) on AMD Ryzen 5800U processor. For more complete information about performance and benchmark results, visit www.intel.com/11thgenmobile.

[4] Verified, 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. Learn more at Intel.com/Evo.

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