

# Quick Reference Guide

Intel® Core™ Ultra Processors

## **NEW** 3D Performance Hybrid Architecture<sup>1</sup>

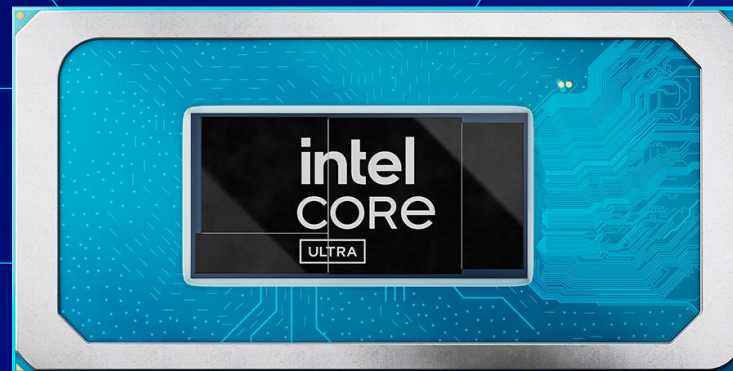
- **NEW** Performance-cores
- **NEW** Efficient-cores
- **NEW** Low-power Efficient-cores

## **NEW** Built-in Intel® Arc™ GPU<sup>2</sup>

## **NEW** Intel® AI Boost (Integrated NPU)

## **IMPROVED** Intel® Image Processing Unit

## **IMPROVED** Intel® Adaptix™ Dynamic Tuning Technology<sup>8</sup>



## **FIRST** on Intel 4 Process Technology

## **NEW** Intel® Connectivity Performance Suite<sup>3</sup>

## **NEW** Discrete Intel® Wi-Fi 7 & Bluetooth 5.4 Support<sup>4</sup>

## **NEW** Enhanced Media Experiences

## **IMPROVED** Thunderbolt™ 4 Technology

## **NEW** Intel® Intelligent Display Technology<sup>9</sup>

# Specifications

## Intel® Core™ Ultra Processors

Processor Number	Processor Cores (P-cores + E-cores + LPE-cores) <sup>5</sup>	Processor Threads	Intel® Smart Cache (LLC)	Max Turbo Frequency <sup>6</sup>		Graphics Max Frequency <sup>2</sup>	Processor Graphics <sup>2</sup>	Total PCIe Lanes	Max Memory Speed <sup>7</sup>	Maximum Memory Capacity	Processor Base Power	Maximum Turbo Power
				P-core	E-core							
Intel® Core™ Ultra 9 processor 185H	16 (6+8+2)	22	24 MB	Up to 5.1 GHz	Up to 3.8 GHz	Up to 2.35 GHz	Intel® Arc™ GPU	1x8 Gen5  3x4 Gen4  8 Gen4 Lanes (x1,x2,x4) Configurable	DDR5- 5600  LPDDR5/x- 7467	64 GB (LP5)  96 GB (DDR5)	45 W	115 W
Intel® Core™ Ultra 7 processor 165H	16 (6+8+2)	22	24 MB	Up to 5.0 GHz	Up to 3.8 GHz	Up to 2.3 GHz					28 W	64 W, 115 W
Intel® Core™ Ultra 7 processor 155H	16 (6+8+2)	22	24 MB	Up to 4.8 GHz	Up to 3.8 GHz	Up to 2.25 GHz						
Intel® Core™ Ultra 5 processor 135H	14 (4+8+2)	18	18 MB	Up to 4.6 GHz	Up to 3.6 GHz	Up to 2.2 GHz						
Intel® Core™ Ultra 5 processor 125H	14 (4+8+2)	18	18 MB	Up to 4.5 GHz	Up to 3.6 GHz	Up to 2.2 GHz						

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## Intel® Core™ Ultra Processors

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				P-core	E-core							
Intel® Core™ Ultra 7 165U	12 (2+8+2)	14	12 MB	Up to 4.9 GHz	Up to 3.8 GHz	Up to 2 GHz	Intel® Graphics	3 (x4) Gen 4 + 8 (x1, x2, x4) Gen4 Configurable	DDR5-5600  LPDDR5/x- 7467	64GB (LP5)  96GB (DDR5)	15W	57W
Intel® Core™ Ultra 7 155U	12 (2+8+2)	14	12 MB	Up to 4.8 GHz	Up to 3.8 GHz	Up to 1.95 GHz						
Intel® Core™ Ultra 5 135U	12 (2+8+2)	14	12 MB	Up to 4.4 GHz	Up to 3.6 GHz	Up to 1.9 GHz						
Intel® Core™ Ultra 5 125U	12 (2+8+2)	14	12 MB	Up to 4.3 GHz	Up to 3.6 GHz	Up to 1.86 GHz						
Intel® Core™ Ultra 7 164U	12 (2+8+2)	14	12 MB	Up to 4.8 GHz	Up to 3.8 GHz	Up to 1.8 GHz		1 (x4) Gen 4 + 8 (x1, x2, x4) Gen4 Configurable	LPDDR5/x- 6400	64 GB (LP5)	9W	30W
Intel® Core™ Ultra 5 134U	12 (2+8+2)	14	12 MB	Up to 4.4 GHz	Up to 3.6 GHz	Up to 1.75 GHz						

# Notices & Disclaimers

Performance varies by use, configuration, and other factors. Learn more on the [Performance Index site](#).

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.

All features may require software purchase, subscription or enablement by a software or platform provider, or may have specific configuration or compatibility requirements. Details at [www.intel.com/PerformanceIndex](http://www.intel.com/PerformanceIndex). Results may vary.

Your costs and results may vary.

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

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1. Performance hybrid architecture combines two core microarchitectures, Performance-cores (P-cores) and Efficient-cores (E-cores), on a single processor die first introduced on 12th Gen Intel® Core™ processors. Select 12th Gen and newer Intel® Core™ processors do not have performance hybrid architecture, only P-cores or E-cores, and may have the same cache size. See [ark.intel.com](http://ark.intel.com) for SKU details, including cache size and core frequency.
2. Intel® Arc™ GPUs only available on select H-series Intel® Core™ Ultra processor-powered systems with at least 16 GB of system memory in a dual-channel configuration. OEM enablement required; check with OEM or retailer for system configuration details.
3. Only available on Windows OS. See [intel.com/performance-wireless](http://intel.com/performance-wireless) for details.
4. Wi-Fi 7 is subject to regional availability and operation requires use of Intel® Wi-Fi 7 (5 Gig) products in conjunction with operating systems and routers/APs/Gateways that support Wi-Fi 7. Learn more at <https://www.intel.com/performance-wireless>
5. Processor cores listed first are the total number of cores in the processor. The number of Performance-cores, Efficient-cores, and Low-power E-cores are listed in parentheses (P+E+LPE).
6. The frequency of cores and core types varies by workload, power consumption and other factors. Visit <https://www.intel.com/content/www/us/en/architecture-and-technology/turbo-boost/turbo-boost-technology.html> for more information.
7. For latest memory configurations and speeds, refer to [ark.intel.com](http://ark.intel.com). DDR5 top speed enabled with specific DIMMs, other DIMMs may operate with one speed bin lower and different SAGV points. (1 SPC, 1 DPC, 1R).
8. Performance varies by use, configuration, and other factors. Learn more at [www.Intel.com/PerformanceIndex](http://www.Intel.com/PerformanceIndex).
9. Intel® Core™ Ultra Processors enable Intel® Intelligent Display capabilities. System requirements must include compatible TCON and display panel. Some features require vision inputs.