



Intel® Core™ 7 processor 150U

12M Cache, up to 5.40 GHz

Add To Compare

Specifications

Ordering & Compliance

Downloads

Support

Essentials

Essentials

Download Specifications ↓

CPU Specifications

Product Collection

Intel® Core™ processors (Series 1)

Supplemental Information

Code Name

Products formerly Raptor Lake

Memory Specifications

Vertical Segment

Mobile

GPU Specifications

Processor Number ⓘ

150U

Expansion Options

Lithography ⓘ

Intel 7

Package Specifications

Advanced Technologies

Security & Reliability

CPU Specifications

Total Cores ⓘ

10

# of Performance-cores

2

# of Efficient-cores

8

Total Threads ⓘ

12

Max Turbo Frequency ⓘ

5.4 GHz

Performance-core Max Turbo Frequency ⓘ

5.4 GHz

Efficient-core Max Turbo Frequency ⓘ

4 GHz

Performance-core Base Frequency ⓘ

1.8 GHz

Efficient-core Base Frequency ⓘ

1.2 GHz

Cache ⓘ

12 MB Intel® Smart Cache

Processor Base Power ⓘ

15 W

Maximum Turbo Power ⓘ

55 W

Minimum Assured Power

12 W

Intel® Deep Learning Boost (Intel® DL Boost) on CPU ⓘ

Yes

Supplemental Information

Marketing Status

Launched

Launch Date ⓘ

Q1'24

Embedded Options Available ⓘ

No

Product Tuning (Embedded Uses) ⓘ

Yes

Memory Specifications

Max Memory Size (dependent on memory type) ⓘ

96 GB

Memory Types ⓘ

Up to DDR5 5200 MT/s  
Up to DDR4 3200 MT/s  
Up to LPDDR5/x 6400 MT/s  
Up to LPDDR4x 4267 MT/s

Max # of Memory Channels ⓘ

2

ECC Memory Supported <sup>†</sup> ⓘ

No

GPU Specifications

GPU Name <sup>‡</sup> ⓘ

Intel® Graphics

Graphics Max Dynamic Frequency ⓘ

1.3 GHz

Graphics Output ⓘ

eDP 1.4b, DP 1.4a, HDMI 2.1

Execution Units ⓘ

96

Max Resolution (HDMI) <sup>‡</sup> ⓘ

4096 x 2304 @ 60Hz

Max Resolution (DP) <sup>‡</sup> ⓘ

7680 x 4320 @ 60Hz

Max Resolution (eDP - Integrated Flat Panel) <sup>‡</sup> ⓘ

4096 x 2304 @ 120Hz

DirectX® Support ⓘ

12.1

OpenGL® Support ⓘ

4.6

OpenCL® Support ⓘ

3.0

Multi-Format Codec Engines ⓘ

2

Intel® Quick Sync Video ⓘ

Yes

# of Displays Supported <sup>†</sup>

4

Device ID

0xA7AC

Expansion Options

Intel® Thunderbolt™ 4 ⓘ

Yes

Microprocessor PCIe Revision ⓘ

Gen 4

Chipset / PCH PCIe Revision ⓘ

Gen 3

Max # of PCI Express Lanes ⓘ

20

Package Specifications

Sockets Supported ⓘ

FCBGA1744

Max CPU Configuration

1

T<sub>JUNCTION</sub> ⓘ

100°C

Max Operating Temperature ⓘ

100 °C

Package Size

50mm x25mm

Advanced Technologies

Intel® Volume Management Device (VMD) ⓘ

Yes

Intel® Gaussian & Neural Accelerator ⓘ

3.0

Intel® Thread Director ⓘ

Yes

Intel® Image Processing Unit ⓘ

6.0

Intel® Smart Sound Technology ⓘ

Yes

Intel® Wake on Voice ⓘ

Yes

Intel® High Definition Audio ⓘ

Yes

MIPI SoundWire® ⓘ

1.2

Intel® Adaptix™ Technology ⓘ

Yes

Intel® Speed Shift Technology ⓘ

Yes

Intel® Hyper-Threading Technology <sup>†</sup> ⓘ

Yes

Instruction Set ⓘ

64-bit

Instruction Set Extensions ⓘ

Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2

Thermal Monitoring Technologies ⓘ

Yes

Intel® Flex Memory Access ⓘ

Yes

Security & Reliability

Intel vPro® Eligibility <sup>†</sup> ⓘ

Intel vPro® Essentials

Intel® Hardware Shield Eligibility <sup>†</sup> ⓘ

Yes

Intel® Threat Detection Technology (TDT)

Yes

Intel® Standard Manageability (ISM) <sup>†</sup> ⓘ

Yes

Intel® Control-Flow Enforcement Technology ⓘ

Yes

Intel® AES New Instructions ⓘ

Yes

Secure Key ⓘ

Yes

Intel® Trusted Execution Technology <sup>†</sup> ⓘ

Yes

Execute Disable Bit <sup>‡</sup> ⓘ

Yes

Intel® OS Guard

Yes

Intel® Boot Guard ⓘ

Yes

Mode-based Execute Control (MBEC) ⓘ

Yes

Intel® Virtualization Technology (VT-x) <sup>†</sup> ⓘ

Yes

Intel® Virtualization Technology for Directed I/O (VT-d) <sup>†</sup> ⓘ

Yes

Intel® VT-x with Extended Page Tables (EPT) <sup>†</sup> ⓘ

Yes

All information provided is subject to change at any time, without notice. Intel may make changes to manufacturing life cycle, specifications, and product descriptions at any time, without notice. The information herein is provided "as-is" and Intel does not make any representations or warranties whatsoever regarding accuracy of the information, nor on the product features, availability, functionality, or compatibility of the products listed. Please contact system vendor for more information on specific products or systems.

Intel classifications are for general, educational and planning purposes only and consist of Export Control Classification Numbers (ECCN) and Harmonized Tariff Schedule (HTS) numbers. Any use made of Intel classifications are without recourse to Intel and shall not be construed as a representation or warranty regarding the proper ECCN or HTS. Your company as an importer and/or exporter is responsible for determining the correct classification of your transaction.

Refer to Datasheet for formal definitions of product properties and features.

‡ This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See <http://www.intel.com/content/www/us/en/processors/processor-numbers.html> for details.

\*Announced" SKUs are not yet available. Please refer to the Launch Date for market availability.

Intel® Arc™ graphics only available on select V-Series Intel® Core™ Ultra processor-powered systems with qualifying system thermal design or H-series Intel® Core™ Ultra processor-powered systems with at least 16GB of system memory in a dual-channel configuration. OEM enablement required. Other Intel® Core™ Ultra processor-powered system configurations feature Intel® Graphics. Check with OEM or retailer for system configuration details.

Intel® Iris® Xe Graphics only: to use the Intel® Iris® Xe brand, the system must be populated with 128-bit (dual channel) memory. Otherwise, use the Intel® UHD brand.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading> for more information including details on which processors support Intel® HT Technology.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

Company Overview

Contact Intel

Newsroom

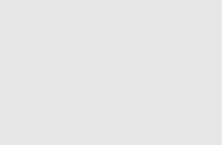
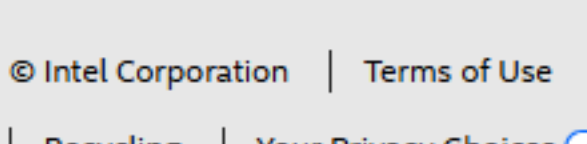
Investors

Careers

Corporate Responsibility

Inclusion

Public Policy



© Intel Corporation

|

Terms of Use

|

\*Trademarks

|

Cookies

|

Privacy

|

Supply Chain Transparency

|

Site Map

|

Recycling

|

Your Privacy Choices

|

Notice at Collection

Intel technologies may require enabled hardware, software or service activation. // No product or component can be absolutely secure. // Your costs and results may vary. // Performance varies by use, configuration, and other factors. Learn more at [intel.com/performanceindex](https://www.intel.com/performanceindex). // See our complete legal [Notices and Disclaimers](#). // Intel is committed to respecting human rights and avoiding causing or contributing to adverse impacts on human rights. See Intel's [Global Human Rights Principles](#). Intel's products and software are intended only to be used in applications that do not cause or contribute to adverse impacts on human rights.