

# Intel® Core™ i3-12100 Processor

---

[intel ark.intel.com/content/www/us/en/ark/products/134584/intel-core-i312100-processor-12m-cache-up-to-4-30-ghz.html](https://ark.intel.com/content/www/us/en/ark/products/134584/intel-core-i312100-processor-12m-cache-up-to-4-30-ghz.html)

12M Cache, up to 4.30 GHz



## Essentials

---

- Product Collection [12th Generation Intel® Core™ i3 Processors](#)
- Processor Number [i3-12100](#)

## CPU Specifications

---

- [Total Cores](#) 4
- # of Performance-cores 4
- # of Efficient-cores 0
- [Total Threads](#) 8
- [Max Turbo Frequency](#) 4.30 GHz
- [Performance-core Max Turbo Frequency](#) 4.30 GHz
- Performance-core Base Frequency 3.30 GHz
- [Cache](#) 12 MB Intel® Smart Cache
- Total L2 Cache 5 MB
- [Processor Base Power](#) 60 W
- [Maximum Turbo Power](#) 89 W

## Memory Specifications

---

- [Max Memory Size \(dependent on memory type\)](#) 128 GB
- [Memory Types](#) Up to DDR5 4800 MT/s  
Up to DDR4 3200 MT/s
- [Max # of Memory Channels](#) 2
- [Max Memory Bandwidth](#) 76.8 GB/s

## Processor Graphics

---

- [Processor Graphics](#) <sup>‡</sup> Intel® UHD Graphics 730
- [Graphics Base Frequency](#) 300 MHz
- [Graphics Max Dynamic Frequency](#) 1.40 GHz
- [Graphics Output](#) eDP 1.4b, DP 1.4a, HDMI 2.1

- Execution Units 24
- Max Resolution (HDMI)‡ 4096 x 2160 @ 60Hz
- Max Resolution (DP)‡ 7680 x 4320 @ 60Hz
- Max Resolution (eDP - Integrated Flat Panel)‡ 5120 x 3200 @ 120Hz
- DirectX\* Support 12
- OpenGL\* Support 4.5
- OpenCL\* Support 3.0
- Multi-Format Codec Engines 1
- Intel® Quick Sync Video Yes
- Intel® Clear Video HD Technology Yes
- # of Displays Supported † 4
- Device ID 0x4692

## Expansion Options

---

- Direct Media Interface (DMI) Revision 4.0
- Max # of DMI Lanes 8
- Scalability 1S Only
- PCI Express Revision 5.0 and 4.0
- PCI Express Configurations ‡ Up to 1x16+4, 2x8+4
- Max # of PCI Express Lanes 20

## Advanced Technologies

---

- Intel® Gaussian & Neural Accelerator 3.0
- Intel® Thread Director No
- Intel® Deep Learning Boost (Intel® DL Boost) Yes
- Intel® Optane™ Memory Supported ‡ Yes
- Intel® Speed Shift Technology Yes
- Intel® Turbo Boost Max Technology 3.0 ‡ No
- Intel® Turbo Boost Technology ‡ 2.0
- Intel® Hyper-Threading Technology ‡ Yes
- Intel® 64 ‡ Yes
- Instruction Set 64-bit
- Instruction Set Extensions Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2
- Idle States Yes
- Enhanced Intel SpeedStep® Technology Yes
- Thermal Monitoring Technologies Yes
- Intel® Volume Management Device (VMD) Yes

## Security & Reliability

---

- Intel® Threat Detection Technology (TDT) Yes
- Intel® Standard Manageability (ISM) ‡ Yes

- Intel® Control-Flow Enforcement Technology Yes
- Intel® AES New Instructions Yes
- Secure Key Yes
- Intel® OS Guard Yes
- Execute Disable Bit <sup>‡</sup> 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