

Intel® Core™ i5-12600 Processor

[intel ark.intel.com/content/www/us/en/ark/products/96149/intel-core-i512600-processor-18m-cache-up-to-4-80-ghz.html](https://ark.intel.com/content/www/us/en/ark/products/96149/intel-core-i512600-processor-18m-cache-up-to-4-80-ghz.html)

18M Cache, up to 4.80 GHz



Essentials

- Product Collection [12th Generation Intel® Core™ i5 Processors](#)
- Processor Number [i5-12600](#)

CPU Specifications

- [Total Cores](#) 6
- # of Performance-cores 6
- # of Efficient-cores 0
- [Total Threads](#) 12
- [Max Turbo Frequency](#) 4.80 GHz
- [Performance-core Max Turbo Frequency](#) 4.80 GHz
- Performance-core Base Frequency 3.30 GHz
- [Cache](#) 18 MB Intel® Smart Cache
- Total L2 Cache 7.5 MB
- [Processor Base Power](#) 65 W
- [Maximum Turbo Power](#) 117 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
- [ECC Memory Supported](#) [‡] Yes

Processor Graphics

- [Processor Graphics](#) [‡] Intel® UHD Graphics 770
- [Graphics Base Frequency](#) 300 MHz
- [Graphics Max Dynamic Frequency](#) 1.45 GHz
- [Graphics Output](#) eDP 1.4b, DP 1.4a, HDMI 2.1

- Execution Units 32
- 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 2
- Intel® Quick Sync Video Yes
- Intel® Clear Video HD Technology Yes
- # of Displays Supported † 4
- Device ID 0x4690

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 vPro® Eligibility ‡ Intel vPro® Enterprise, Intel vPro® Essentials
- Intel® Threat Detection Technology (TDT) Yes

- Intel® Active Management Technology (AMT) ‡ Yes
- Intel® Standard Manageability (ISM) ‡ Yes
- Intel® One-Click Recovery † Yes
- Intel® Hardware Shield Eligibility ‡ Yes
- Intel® Control-Flow Enforcement Technology Yes
- Intel® Total Memory Encryption - Multi Key Yes
- Intel® Total Memory Encryption Yes
- Intel® AES New Instructions Yes
- Secure Key Yes
- Intel® OS Guard Yes
- Intel® Trusted Execution Technology ‡ Yes
- Execute Disable Bit ‡ Yes
- Intel® Boot Guard Yes
- Mode-based Execute Control (MBEC) Yes
- Intel® Stable IT Platform Program (SIPP) Yes
- Intel® Virtualization Technology with Redirect Protection (VT-rp) † Yes
- Intel® Virtualization Technology (VT-x) ‡ Yes
- Intel® Virtualization Technology for Directed I/O (VT-d) ‡ Yes
- Intel® VT-x with Extended Page Tables (EPT) ‡ Yes