



Intel® Core™ i7-12700 Processor

25M Cache, up to 4.90 GHz

Esenciales

Colección de productos	Procesadores Intel® Core™ i7 de 12.ª generación
Nombre clave	Productos anteriormente Alder Lake
Segmento vertical	Escritorio
Número de procesador	i7-12700
Estado	Lanzado
Fecha de lanzamiento	T1'22
Litografía	Intel 7

Especificaciones de la CPU

Núcleos totales	12
N.º de núcleos de rendimiento	8
# de núcleos eficientes	4
Subprocesos totales	20
Frecuencia turbo máxima	4 90 GHz
Intel® Turbo Boost Max Technology 3.0 Frequency ‡	4.90 GHz
Performance-core Max Turbo Frequency	4.80 GHz
Efficient-core Max Turbo Frequency	3.60 GHz
Performance-core Base Frequency	2.10 GHz
Efficient-core Base Frequency	1.60 GHz
Cache	25 MB Intel® Smart Cache
Total L2 Cache	12 MB
Processor Base Power	65 W
Maximum Turbo Power	180 W

Supplemental Information

Embedded Options Available	No
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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



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Processor Graphics

Processor Graphics ‡	Intel® UHD Graphics 770
Graphics Base Frequency	300 MHz
Graphics Max Dynamic Frequency	1.50 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
Multi-Format Codec Engines	2
Intel® Quick Sync Video	Yes
Intel® Clear Video HD Technology	Yes
# of Displays Supported ‡	4
Device ID	0x4680
OpenCL* Support	2.1

Expansion Options

Direct Media Interface (DMI) Revision	4
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

Package Specifications

Sockets Supported	FCLGA1700
Max CPU Configuration	1
Thermal Solution Specification	PCG 2020C
TJUNCTION	100°C
Package Size	45.0 mm x 37.5 mm



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Advanced Technologies

Intel® Gaussian & Neural Accelerator	3
Intel® Thread Director	Yes
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 ‡	Yes
Intel® Turbo Boost Technology ‡	2
Intel® Hyper-Threading Technology ‡	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
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® AES New Instructions	Yes
Secure Key	Yes
Intel® OS Guard	Yes
Execute Disable Bit ‡	Yes
Intel® Boot Guard	Yes
Mode-based Execute Control (MBE)	Yes
Intel® Control-Flow Enforcement Technology	Yes