

Intel Core i7-10700K processor 3.8 GHz 16 MB Smart Cache Box

Brand : Intel

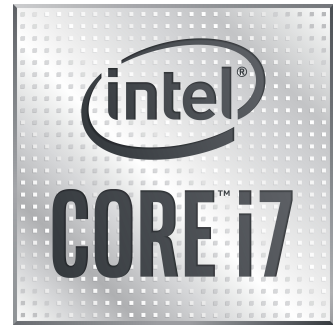
Product family: Core

Product code:
BX8070110700K

Product name : i7-10700K

Intel Core i7-10700K Processor (16MB Cache, up to 5.1 GHz)

Intel Core i7-10700K. Processor family: Intel® Core™ i7, Processor socket: LGA 1200 (Socket H5), Processor lithography: 14 nm. Memory channels: Dual-channel, Maximum internal memory supported by processor: 128 GB, Memory types supported by processor: DDR4-SDRAM. On-board graphics card model: Intel® UHD Graphics 630, Maximum on-board graphics card memory: 64 GB, On-board graphics card base frequency: 350 MHz. Market segment: Desktop, PCI Express configurations: 1x16, 2x8, 1x8+2x4, Supported instruction sets: SSE4.1, SSE4.2, AVX 2.0. Intel® Turbo Boost Max Technology 3.0 frequency: 5.1 GHz, Intel® Turbo Boost Technology 2.0 frequency: 5 GHz



Processor		Features	
Processor manufacturer *	Intel	Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0
Processor generation	10th gen Intel® Core™ i7	Scalability	1S
Processor model *	i7-10700K	CPU configuration (max)	1
Processor base frequency *	3.8 GHz	Embedded options available	✗
Processor family *	Intel® Core™ i7	Thermal solution specification	PCG 2015D
Processor cores *	8	PCI Express CEM revision	3.0
Processor socket *	LGA 1200 (Socket H5)	Harmonized System (HS) code	85423119
Component for	PC	Export Control Classification Number (ECCN)	5A992C
Processor lithography *	14 nm	Commodity Classification Automated Tracking System (CCATS)	G077159
Processor threads	16		
System bus rate	8 GT/s		
Processor operating modes *	64-bit		
Processor boost frequency	5.1 GHz		
Processor cache	16 MB		
Processor cache type	Smart Cache		
Thermal Design Power (TDP)	125 W		
Box *	✓		
Configurable TDP-down frequency	3.5 GHz		
Cooler included *	✗		
Configurable TDP-down	95 W		
Generation	10th Generation		
Memory bandwidth supported by processor (max)	45.8 GB/s		
Processor codename	Comet Lake		
Processor ARK ID	199335		
Memory		Processor special features	
Maximum internal memory supported by processor	128 GB	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Memory types supported by processor	DDR4-SDRAM	Intel® Identity Protection Technology (Intel® IPT)	✓
Memory clock speeds supported by processor	2933 MHz	Intel® Turbo Boost Technology	2.0
Memory channels *	Dual-channel	Intel® Quick Sync Video Technology	✓
ECC	✗	Intel® InTru™ 3D Technology	✓
		Intel® Clear Video HD Technology (Intel® CVT HD)	✓
		Intel® AES New Instructions (Intel® AES-NI)	✓
		Enhanced Intel SpeedStep Technology	✓
		Intel Trusted Execution Technology	✓
		Intel® Thermal Velocity Boost	✗
		Intel® Turbo Boost Max Technology 3.0 frequency	5.1 GHz
		Intel® Turbo Boost Technology 2.0 frequency	5 GHz
		Intel® Transactional Synchronization Extensions	✗
		Intel VT-x with Extended Page Tables (EPT)	✓
		Intel® Secure Key	✓
		Intel Stable Image Platform Program (SIPP)	✓
		Intel® OS Guard	✓
		Intel Clear Video Technology	✓
		Intel Software Guard Extensions (Intel SGX)	✓
Graphics			
On-board graphics card *	✓		
Discrete graphics card *	✗		
On-board graphics card model *	Intel® UHD Graphics 630		
Maximum on-board graphics card memory	64 GB		

Graphics		Processor special features	
On-board graphics card base frequency	350 MHz	Intel 64	✓
On-board graphics card dynamic frequency (max)	1200 MHz	Intel Virtualization Technology (VT-x)	✓
Number of displays supported (on-board graphics)	3	Intel Virtualization Technology for Directed I/O (VT-d)	✓
On-board graphics card 4K support	✓	Intel Turbo Boost Max Technology 3.0	✓
On-board graphics card DirectX version	12.0	Intel® Optane™ Memory Ready	✓
On-board graphics card OpenGL version	4.5	Intel® Boot Guard	✓
On-board graphics card maximum resolution (DisplayPort)	4096 x 2304 pixels	Intel® vPro™ Platform Eligibility	✓
On-board graphics card maximum resolution (eDP - Integrated Flat Panel)	4096 x 2304 pixels	Operational conditions	
On-board graphics card maximum resolution (HDMI)	4096 x 2160 pixels	Tjunction	100 °C
On-board graphics card refresh rate at maximum resolution (DisplayPort)	60 Hz	Technical details	
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	60 Hz	Target market	Gaming, Content Creation
On-board graphics card refresh rate at maximum resolution (HDMI)	30 Hz	Launch date	Q2'20
On-board graphics card ID	0x9BC5	Maximum resolution & refresh rate (DisplayPort)	4096 x 2304@60Hz
Discrete graphics card model *	Not available	Product type	Processor
Features		Status	Launched
Execute Disable Bit	✓	Maximum memory	128 GB
Idle States	✓	Supported memory types	DDR4-SDRAM
Thermal Monitoring Technologies	✓	Bus speed	8 GT/s
Market segment	Desktop	Maximum graphics card memory	64 GB
Maximum number of PCI Express lanes	16	Processor ID	0x9BC5
PCI Express slots version	3.0	Packaging data	
PCI Express configurations	1x16, 2x8, 1x8+2x4	Package type	Retail box
		Weight & dimensions	
		Processor package size	37.5 x 37.5 mm
		Other features	
		Maximum internal memory	128 GB



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