

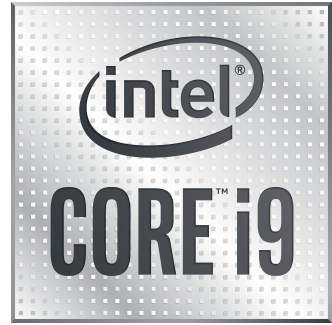
Intel Core i9-10850K processor 3.6 GHz 20 MB Smart Cache Box

Brand : Intel

Product family: Core

Product code:
BX8070110850K

Product name : i9-10850K



Intel Core i9-10850K Processor (20MB Cache, up to 5.2 GHz)

Intel Core i9-10850K. Processor family: Intel® Core™ i9, 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, Intel® Thermal Velocity Boost Temperature: 70 °C



Processor		Features	
Processor manufacturer *	Intel	Embedded options available	✗
Processor generation	10th gen Intel® Core™ i9	Thermal solution specification	PCG 2015D
Processor model *	i9-10850K	PCI Express CEM revision	3.0
Processor base frequency *	3.6 GHz	Export Control Classification Number (ECCN)	5A992C
Processor family *	Intel® Core™ i9	Commodity Classification Automated Tracking System (CCATS)	G077159
Processor cores *	10	Processor special features	
Processor socket *	LGA 1200 (Socket H5)	Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Component for	PC	Intel® Identity Protection Technology (Intel® IPT)	✓
Processor lithography *	14 nm	Intel® Turbo Boost Technology	2.0
Processor threads	20	Intel® Quick Sync Video Technology	✓
System bus rate	8 GT/s	Intel® InTru™ 3D Technology	✓
Processor operating modes *	64-bit	Intel® Clear Video HD Technology (Intel® CVT HD)	✓
Processor boost frequency	5.2 GHz	Intel® AES New Instructions (Intel® AES-NI)	✓
Processor cache	20 MB	Enhanced Intel SpeedStep Technology	✓
Processor cache type	Smart Cache	Intel Trusted Execution Technology	✗
Thermal Design Power (TDP) Box *	125 W ✓	Intel® Thermal Velocity Boost	✓
Configurable TDP-down frequency	3.3 GHz	Intel® Turbo Boost Max Technology 3.0 frequency	5.1 GHz
Cooler included *	✗	Intel® Turbo Boost Technology 2.0 frequency	5 GHz
Configurable TDP-down	95 W	Intel® Transactional Synchronization Extensions	✗
Generation	10th Generation	Intel® Thermal Velocity Boost Temperature	70 °C
Memory bandwidth supported by processor (max)	45.8 GB/s	Intel® Thermal Velocity Boost Frequency	5.2 GHz
Processor codename	Comet Lake	Intel VT-x with Extended Page Tables (EPT)	✓
Processor ARK ID	205904	Intel® Secure Key	✓
Memory		Intel Stable Image Platform Program (SIPP)	✗
Maximum internal memory supported by processor	128 GB	Intel® OS Guard	✓
Memory types supported by processor	DDR4-SDRAM	Intel Clear Video Technology	✓
Memory clock speeds supported by processor	2933 MHz	Intel Software Guard Extensions (Intel SGX)	✓
Memory channels *	Dual-channel		
ECC	✗		
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	Q3'20
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	Logistics data	
PCI Express configurations	1x16, 2x8, 1x8+2x4	Harmonized System (HS) code	85423119
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0	Packaging data	
Scalability	1S	Package type	Retail box
CPU configuration (max)	1	Weight & dimensions	
		Processor package size	37.5 x 37.5 mm
		Other features	
		Maximum internal memory	128 GB



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