intel

Intel Core i3-13100 processor 12 MB Smart Cache Box

Brand : Intel

Product family: Core

Product code: BX8071513100

Product name : i3-13100

intel CORE i3

Boxed Intel® Core™ i3-13100 Processor (12M Cache, up to 4.50 GHz) FC-LGA16A
Intel Core i3-13100. Processor family: Intel® Core™ i3, Processor socket: LGA 1700, Processor
manufacturer: Intel. Memory channels: Dual-channel, Maximum internal memory supported by
processor: 192 GB, Memory types supported by processor: DDR4-SDRAM, DDR5-SDRAM. On-board
graphics card model: Intel UHD Graphics 730, On-board graphics card outputs supported: Embedded
DisplayPort (eDP) 1.4b, DisplayPort 1.4a, HDMI 2.1, On-board graphics card base frequency: 300 MHz.
Market segment: Desktop, Use conditions: PC/Client/Tablet, PCI Express slots version: 5.0, 4.0. Package
type: Retail box

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Processor

Processor manufacturer *	Intel
Processor generation	Intel Core i3-13xxx
Processor model *	i3-13100
Processor family *	Intel® Core™ i3
Processor cores *	4
Processor socket *	LGA 1700
Processor threads	8
Processor operating modes *	64-bit
Performance cores	4
Processor boost frequency	4.5 GHz
Performance-core boost frequency	4.5 GHz
Performance-core base frequency	3.4 GHz
Processor cache	12 MB
Processor cache type	Smart Cache
Box *	✓
Cooler included *	✓
Processor base power	60 W
Maximum turbo power	89 W
Bus type	DMI4
Maximum number of DMI lanes	8
Memory bandwidth supported by processor (max)	76.8 GB/s
Processor codename	Raptor Lake
Processor ARK ID	230575

Memory

Maximum internal memory supported by processor	192 GB
Memory types supported by processor	DDR4-SDRAM, DDR5-SDRAM
Memory channels *	Dual-channel
Non-ECC	✓
Memory bandwidth (max)	76.8 GB/s

Graphics

On-board graphics card *	✓
Discrete graphics card *	✗
On-board graphics card model *	Intel UHD Graphics 730
On-board graphics card outputs supported	Embedded DisplayPort (eDP) 1.4b, DisplayPort 1.4a, HDMI 2.1
On-board graphics card base frequency	300 MHz
On-board graphics card dynamic frequency (max)	1500 MHz
Number of displays supported (on-board graphics)	4

Features

Use conditions	PC/Client/Tablet
Maximum number of PCI Express lanes	20
PCI Express slots version	5.0, 4.0
PCI Express configurations	1x16+1x4, 2x8+1x4
Supported instruction sets	SSE4.1, SSE4.2, AVX 2.0
Scalability	1S
CPU configuration (max)	1
Embedded options available	✓
Direct Media Interface (DMI) Revision	4.0
Export Control Classification Number (ECCN)	5A992C
Commodity Classification Automated Tracking System (CCATS)	740.17B1

Processor special features

Intel® Hyper Threading Technology (Intel® HT Technology)	✓
Intel® Turbo Boost Technology	2.0
Intel® Quick Sync Video Technology	✓
Intel® Clear Video HD Technology (Intel® CVT HD)	✓
Intel® AES New Instructions (Intel® AES-NI)	✓
Enhanced Intel SpeedStep Technology	✓
Intel® Speed Shift Technology	✓
Intel® Gaussian & Neural Accelerator (Intel® GNA) 3.0	✓
Intel® Control-flow Enforcement Technology (CET)	✓
Intel® Thread Director	✗
Intel VT-x with Extended Page Tables (EPT)	✓
Intel® Secure Key	✓
Intel® OS Guard	✓
Intel 64	✓
Intel Virtualization Technology (VT-x)	✓
Intel Virtualization Technology for Directed I/O (VT-d)	✓
Intel Turbo Boost Max Technology 3.0	✗
Intel® Boot Guard	✓
Intel® Deep Learning Boost (Intel® DL Boost)	✓

Graphics

On-board graphics card DirectX version	12.0
On-board graphics card OpenGL version	4.5
On-board graphics card maximum resolution (DisplayPort)	7680 x 4320 pixels
On-board graphics card maximum resolution (eDP - Integrated Flat Panel)	5120 x 3200 pixels
On-board graphics card maximum resolution (HDMI)	4096 x 2160 pixels
On-board graphics card refresh rate at maximum resolution (DisplayPort)	60 Hz
On-board graphics card refresh rate at maximum resolution (eDP - Integrated Flat Panel)	120 Hz
On-board graphics card refresh rate at maximum resolution (HDMI)	60 Hz
On-board graphics card ID	0x4692
Discrete graphics card model *	Not available
Number of execution units	24
Multi-Format Codec Engines	1

Features

Execute Disable Bit	✓
Idle States	✓
Thermal Monitoring Technologies	✓
Market segment	Desktop

Processor special features

Intel® Volume Management Device (VMD)	✓
Mode-based Execute Control (MBE)	✓
Intel® Standard Manageability (ISM)	✓
Intel® Threat Detection Technology (TDT)	✓

Operational conditions

Tjunction	100 °C

Technical details

OpenCL version	3.0
Launch date	Q1'23
Status	Launched

Logistics data

Harmonized System (HS) code	8542310001

Packaging data

Package type	Retail box

Weight & dimensions

Processor package size	45 x 37.5 mm

Other features

L2 cache	5120 KB
Maximum internal memory	192 GB
Graphics output	eDP 1.4b, DP 1.4a, HDMI 2.1

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