

Product Collection 11th Generation Intel® Core™ i7 Processors

Code Name Products formerly Rocket Lake

Vertical Segment Desktop

Processor Number i7-11700F

Status Launched

Launch Date Q1'21

Lithography 14 nm

Use Conditions PC/Client/Tablet

CPU Specifications

Total Cores 8

Total Threads 16

Max Turbo Frequency 4.90 GHz

Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 4.90 GHz

Intel® Turbo Boost Technology 2.0 Frequency † 4.80 GHz

Processor Base Frequency 2.50 GHz

Cache 16 MB Intel® Smart Cache

Bus Speed 8 GT/s

TDP 65 W

Supplemental Information

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|----------------------------|--------------------------|
| Embedded Options Available | No |
| Datasheet | View now |

Memory Specifications

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|--|-----------|
| Max Memory Size (dependent on memory type) | 128 GB |
| Memory Types | DDR4-3200 |
| Max # of Memory Channels | 2 |
| Max Memory Bandwidth | 50 GB/s |
| ECC Memory Supported † | No |

Expansion Options

| | |
|------------------------------|----------------------------------|
| Scalability | 1S Only |
| PCI Express Revision | 4.0 |
| PCI Express Configurations † | Up to 1x16+1x4, 2x8+1x4, 1x8+3x4 |
| Max # of PCI Express Lanes | 20 |

Package Specifications

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|--------------------------------|-------------------|
| Sockets Supported | FCLGA1200 |
| Max CPU Configuration | 1 |
| Thermal Solution Specification | PCG 2019C |
| T _{JUNCTION} | 100°C |
| Package Size | 37.5 mm x 37.5 mm |

Advanced Technologies

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|--|---|
| Intel® Gaussian & Neural Accelerator | 2.0 |
| Intel® Deep Learning Boost (Intel® DL Boost) | Yes |
| Intel® Optane™ Memory Supported † | Yes |
| Intel® Thermal Velocity Boost | No |
| Intel® Turbo Boost Max Technology 3.0 † | Yes |
| 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, Intel® AVX-512 |
| Idle States | Yes |
| Enhanced Intel SpeedStep® Technology | Yes |
| Thermal Monitoring Technologies | Yes |
| Intel® Identity Protection Technology † | Yes |

Security & Reliability

| | |
|---|-----|
| Intel® AES New Instructions | Yes |
| Secure Key | Yes |
| Intel® Software Guard Extensions (Intel® SGX) | No |
| Intel® OS Guard | Yes |
| Intel® Trusted Execution Technology † | No |
| Execute Disable Bit † | Yes |
| Intel® Boot Guard | Yes |

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|--|-----|
| Intel® Stable IT Platform Program (SIPP) | No |
| 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 |