**PESQUISA SOBRE PROCESSADORES.**

*por: Breno Freitas Aguirres. data: 28/03/23*

* Pesquisar sobre os mais novos processadores = potência, arquitetura, construção;
* (INTEL) = Core I7 10th gen
* Capacidade de processamento.

I7 10th gen 10700t

**Especificações da CPU**

* Número de núcleos 8
* Nº de threads 16
* Frequência turbo max 4.50 GHz
* Frequência da Tecnologia Intel® Turbo Boost Max 3.0 ‡ 4.50 GHz
* Frequência da Tecnologia Intel® Turbo Boost 2.0‡ 4.40 GHz
* Frequência baseada em processador 2.00 GHz
* Cache 16 MB Intel® Smart Cache
* Velocidade do barramento 8 GT/s
* TDP 35 W
* Frequência de TDP Configurável - baixo 1.30 GHz
* TDP Configurável - baixo 25 W

**Informações complementares**

* Status Launched
* Data de introdução Q2'20
* Opções integradas disponíveis Não
* Ficha técnica [Ver agora](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Especificações de memória**

* Tamanho máximo de memória (de acordo com o tipo de memória) 128 GB
* Tipos de memória DDR4-2933
* Nº máximo de canais de memória 2
* Largura de banda máxima da memória 45.8 GB/s
* Compatibilidade com memória ECC ‡ Não

**Gráficos de processador**

* Gráficos do processador ‡ Gráficos UHD Intel® 630
* Frequência da base gráfica 350 MHz
* Máxima frequência dinâmica da placa gráfica 1.20 GHz
* Quantidade máxima de memória gráfica de vídeo 64 GB
* Suporte para 4K Yes, at 60Hz
* Resolução máxima (HDMI)‡ 4096 x 2160@30Hz
* Resolução máxima (DP)‡ 4096 x 2304@60Hz
* Resolução máxima (eDP - tela plana integrada)‡ 4096 x 2304@60Hz
* Suporte para DirectX\* 12
* Suporte para OpenGL\* 4.5
* Intel® Quick Sync Video Sim
* Tecnologia Intel InTru 3D Sim
* Tecnologia de Alta Definição Intel® Clear Video Sim
* Intel® Clear Video Technology Sim
* Nº de monitores aceitos ‡ 3
* ID do dispositivo 0x9BC5

**Opções de expansão**

* Escalabilidade 1S Only
* Revisão de PCI Express 3.0
* Configurações PCI Express ‡ Up to 1x16, 2x8, 1x8+2x4
* Nº máximo de linhas PCI Express 16

**Especificações de encapsulamento**

* Soquetes suportados FCLGA1200
* Configuração máxima da CPU 1
* Especificação de solução térmica PCG 2015B
* TJUNCTION 100°C
* Tamanho do pacote 37.5mm x 37.5mm

I7 10th gen 10700kf

**Especificações da CPU**

* Número de núcleos 8
* Nº de threads 16
* Frequência turbo max 5.10 GHz
* Frequência da Tecnologia Intel® Turbo Boost Max 3.0 ‡ 5.10 GHz
* Frequência da Tecnologia Intel® Turbo Boost 2.0‡ 5.00 GHz
* Frequência baseada em processador 3.80 GHz
* Cache 16 MB Intel® Smart Cache
* Velocidade do barramento 8 GT/s
* TDP 125 W
* Frequência de TDP Configurável - baixo 3.50 GHz
* TDP Configurável - baixo 95 W

**Informações complementares**

* Status Launched
* Data de introdução Q2'20
* Opções integradas disponíveis Não
* Ficha técnica [Ver agora](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Especificações de memória**

* Tamanho máximo de memória (de acordo com o tipo de memória) 128 GB
* Tipos de memória DDR4-2933
* Nº máximo de canais de memória 2
* Largura de banda máxima da memória 45.8 GB/s
* Compatibilidade com memória ECC ‡ Não

**Opções de expansão**

* Escalabilidade 1S Only
* Revisão de PCI Express 3.0
* Configurações PCI Express ‡ Up to 1x16, 2x8, 1x8+2x4
* Nº máximo de linhas PCI Express 16

**Especificações de encapsulamento**

* Soquetes suportados FCLGA1200
* Configuração máxima da CPU 1
* Especificação de solução térmica PCG 2015D
* TJUNCTION 100°C
* Tamanho do pacote 37.5mm x 37.5mm

I7 10th gen 10700k

**Especificações da CPU**

* Número de núcleos 8
* Nº de threads 16
* Frequência turbo max 5.10 GHz
* Frequência da Tecnologia Intel® Turbo Boost Max 3.0 ‡ 5.10 GHz
* Frequência da Tecnologia Intel® Turbo Boost 2.0‡ 5.00 GHz
* Frequência baseada em processador 3.80 GHz
* Cache 16 MB Intel® Smart Cache
* Velocidade do barramento 8 GT/s
* TDP 125 W
* Frequência de TDP Configurável - baixo 3.50 GHz
* TDP Configurável - baixo 95 W

**Informações complementares**

* Status Launched
* Data de introdução Q2'20
* Opções integradas disponíveis Não
* Ficha técnica [Ver agora](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Especificações de memória**

* Tamanho máximo de memória (de acordo com o tipo de memória) 128 GB
* Tipos de memória DDR4-2933
* Nº máximo de canais de memória 2
* Largura de banda máxima da memória 45.8 GB/s
* Compatibilidade com memória ECC ‡ Não

**Gráficos de processador**

* Gráficos do processador ‡ Gráficos UHD Intel® 630
* Frequência da base gráfica 350 MHz
* Máxima frequência dinâmica da placa gráfica 1.20 GHz
* Quantidade máxima de memória gráfica de vídeo 64 GB
* Suporte para 4K Yes, at 60Hz
* Resolução máxima (HDMI)‡ 4096 x 2160@30Hz
* Resolução máxima (DP)‡ 4096 x 2304@60Hz
* Resolução máxima (eDP - tela plana integrada)‡ 4096 x 2304@60Hz
* Suporte para DirectX\* 12
* Suporte para OpenGL\* 4.5
* Intel® Quick Sync Video Sim
* Tecnologia Intel InTru 3D Sim
* Tecnologia de Alta Definição Intel® Clear Video Sim
* Intel® Clear Video Technology Sim
* Nº de monitores aceitos ‡ 3
* ID do dispositivo 0x9BC5

**Opções de expansão**

* Escalabilidade 1S Only
* Revisão de PCI Express 3.0
* Configurações PCI Express ‡ Up to 1x16, 2x8, 1x8+2x4
* Nº máximo de linhas PCI Express 16

**Especificações de encapsulamento**

* Soquetes suportados FCLGA1200
* Configuração máxima da CPU 1
* Especificação de solução térmica PCG 2015D
* TJUNCTION 100°C
* Tamanho do pacote 37.5mm x 37.5mm

I7 10th gen 10700f

**Especificações da CPU**

* Número de núcleos 8
* Nº de threads 16
* Frequência turbo max 4.80 GHz
* Frequência da Tecnologia Intel® Turbo Boost Max 3.0 ‡ 4.80 GHz
* Frequência da Tecnologia Intel® Turbo Boost 2.0‡ 4.70 GHz
* Frequência baseada em processador 2.90 GHz
* Cache 16 MB Intel® Smart Cache
* Velocidade do barramento 8 GT/s
* TDP 65 W

**Informações complementares**

* Status Launched
* Data de introdução Q2'20
* Opções integradas disponíveis Não
* Ficha técnica [Ver agora](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Especificações de memória**

* Tamanho máximo de memória (de acordo com o tipo de memória) 128 GB
* Tipos de memória DDR4-2933
* Nº máximo de canais de memória 2
* Largura de banda máxima da memória 45.8 GB/s
* Compatibilidade com memória ECC ‡ Não

**Opções de expansão**

* Escalabilidade 1S Only
* Revisão de PCI Express 3.0
* Configurações PCI Express ‡ Up to 1x16, 2x8, 1x8+2x4
* Nº máximo de linhas PCI Express 16

**Especificações de encapsulamento**

* Soquetes suportados FCLGA1200
* Configuração máxima da CPU 1
* Especificação de solução térmica PCG 2015C
* TJUNCTION 100°C
* Tamanho do pacote 37.5mm x 37.5mm

I7 10th gen 10700

**Especificações da CPU**

* Número de núcleos 8
* Nº de threads 16
* Frequência turbo max 4.80 GHz
* Frequência da Tecnologia Intel® Turbo Boost Max 3.0 ‡ 4.80 GHz
* Frequência da Tecnologia Intel® Turbo Boost 2.0‡ 4.70 GHz
* Frequência baseada em processador 2.90 GHz
* Cache 16 MB Intel® Smart Cache
* Velocidade do barramento 8 GT/s
* TDP 65 W

**Informações complementares**

* Status Launched
* Data de introdução Q2'20
* Opções integradas disponíveis Não
* Ficha técnica [Ver agora](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Especificações de memória**

* Tamanho máximo de memória (de acordo com o tipo de memória) 128 GB
* Tipos de memória DDR4-2933
* Nº máximo de canais de memória 2
* Largura de banda máxima da memória 45.8 GB/s
* Compatibilidade com memória ECC ‡ Não

**Gráficos de processador**

* Gráficos do processador ‡ Gráficos UHD Intel® 630
* Frequência da base gráfica 350 MHz
* Máxima frequência dinâmica da placa gráfica 1.20 GHz
* Quantidade máxima de memória gráfica de vídeo 64 GB
* Suporte para 4K Yes, at 60Hz
* Resolução máxima (HDMI)‡ 4096 x 2160@30Hz
* Resolução máxima (DP)‡ 4096 x 2304@60Hz
* Resolução máxima (eDP - tela plana integrada)‡ 4096 x 2304@60Hz
* Suporte para DirectX\* 12
* Suporte para OpenGL\* 4.5
* Intel® Quick Sync Video Sim
* Tecnologia Intel InTru 3D Sim
* Tecnologia de Alta Definição Intel® Clear Video Sim
* Intel® Clear Video Technology Sim
* Nº de monitores aceitos ‡ 3
* ID do dispositivo 0x9BC5

**Opções de expansão**

* Escalabilidade 1S Only
* Revisão de PCI Express 3.0
* Configurações PCI Express ‡ Up to 1x16, 2x8, 1x8+2x4
* Nº máximo de linhas PCI Express 16

**Especificações de encapsulamento**

* Soquetes suportados FCLGA1200
* Configuração máxima da CPU 1
* Especificação de solução térmica PCG 2015C
* TJUNCTION 100°C
* Tamanho do pacote 37.5mm x 37.5mm

I7 11th gen 11700K

**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**

* Marketing Status Launched
* Launch Date Q1'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Memory Specifications**

* 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

**Processor Graphics**

* Processor Graphics ‡ Intel® UHD Graphics 750
* Graphics Base Frequency 350 MHz
* Graphics Max Dynamic Frequency 1.30 GHz
* Graphics Video Max Memory 64 GB
* Execution Units 32
* 4K Support Yes, at 60Hz
* Max Resolution (HDMI)‡ 4096x2160@60Hz
* Max Resolution (DP)‡ 5120 x 3200 @60Hz
* Max Resolution (eDP - Integrated Flat Panel)‡ 5120 x 3200 @60Hz
* DirectX\* Support 12.1
* OpenGL\* Support 4.5
* OpenCL\* Support 3.0
* Intel® Quick Sync Video Yes
* Intel® InTru™ 3D Technology Yes
* Intel® Clear Video HD Technology Yes
* Intel® Clear Video Technology Yes
* # of Displays Supported ‡ 3
* Device ID 0x4C8A

**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**

* Sockets Supported FCLGA1200
* Max CPU Configuration 1
* Thermal Solution Specification PCG 2019C
* TJUNCTION 100°C
* Package Size 37.5 mm x 37.5 mm

I7 11th gen 11700F

**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**

* Marketing Status Launched
* Launch Date Q1'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Memory Specifications**

* 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**

* Sockets Supported FCLGA1200
* Max CPU Configuration 1
* Thermal Solution Specification PCG 2019C
* TJUNCTION 100°C
* Package Size 37.5 mm x 37.5 mm

I7 11th gen 11700k

**CPU Specifications**

* Total Cores 8
* Total Threads 16
* Max Turbo Frequency 5.00 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.00 GHz
* Intel® Turbo Boost Technology 2.0 Frequency‡ 4.90 GHz
* Processor Base Frequency 3.60 GHz
* Cache 16 MB Intel® Smart Cache
* Bus Speed 8 GT/s
* TDP 125 W
* Configurable TDP-down Base Frequency 3.10 GHz
* Configurable TDP-down 95 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Memory Specifications**

* 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

**Processor Graphics**

* Processor Graphics ‡ Intel® UHD Graphics 750
* Graphics Base Frequency 350 MHz
* Graphics Max Dynamic Frequency 1.30 GHz
* Graphics Video Max Memory 64 GB
* Execution Units 32
* 4K Support Yes, at 60Hz
* Max Resolution (HDMI)‡ 4096x2160@60Hz
* Max Resolution (DP)‡ 5120 x 3200 @60Hz
* Max Resolution (eDP - Integrated Flat Panel)‡ 5120 x 3200 @60Hz
* DirectX\* Support 12.1
* OpenGL\* Support 4.5
* OpenCL\* Support 3.0
* Intel® Quick Sync Video Yes
* Intel® InTru™ 3D Technology Yes
* Intel® Clear Video HD Technology Yes
* Intel® Clear Video Technology Yes
* # of Displays Supported ‡ 3
* Device ID 0x4C8A

**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**

* Sockets Supported FCLGA1200
* Max CPU Configuration 1
* Thermal Solution Specification PCG 2019A
* TJUNCTION 100°C
* Package Size 37.5 mm x 37.5 mm

I7 11th gen 11700KF

**CPU Specifications**

* Total Cores 8
* Total Threads 16
* Max Turbo Frequency 5.00 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.00 GHz
* Intel® Turbo Boost Technology 2.0 Frequency‡ 4.90 GHz
* Processor Base Frequency 3.60 GHz
* Cache 16 MB Intel® Smart Cache
* Bus Speed 8 GT/s
* TDP 125 W
* Configurable TDP-down Base Frequency 3.10 GHz
* Configurable TDP-down 95 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Memory Specifications**

* 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**

* Sockets Supported FCLGA1200
* Max CPU Configuration 1
* Thermal Solution Specification PCG 2019A
* TJUNCTION 100°C
* Package Size 37.5 mm x 37.5 mm

I7 11th gen 11700T

**CPU Specifications**

* Total Cores 8
* Total Threads 16
* Max Turbo Frequency 4.60 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 4.60 GHz
* Intel® Turbo Boost Technology 2.0 Frequency‡ 4.50 GHz
* Processor Base Frequency 1.40 GHz
* Cache 16 MB Intel® Smart Cache
* Bus Speed 8 GT/s
* TDP 35 W
* Configurable TDP-down Base Frequency 900 MHz
* Configurable TDP-down 25 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**Memory Specifications**

* 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

**Processor Graphics**

* Processor Graphics ‡ Intel® UHD Graphics 750
* Graphics Base Frequency 350 MHz
* Graphics Max Dynamic Frequency 1.30 GHz
* Graphics Video Max Memory 64 GB
* Execution Units 32
* 4K Support Yes, at 60Hz
* Max Resolution (HDMI)‡ 4096x2160@60Hz
* Max Resolution (DP)‡ 5120 x 3200 @60Hz
* Max Resolution (eDP - Integrated Flat Panel)‡ 5120 x 3200 @60Hz
* DirectX\* Support 12.1
* OpenGL\* Support 4.5
* OpenCL\* Support 3.0
* Intel® Quick Sync Video Yes
* Intel® InTru™ 3D Technology Yes
* Intel® Clear Video HD Technology Yes
* Intel® Clear Video Technology Yes
* # of Displays Supported ‡ 3
* Device ID 0x4C8A

**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**

* Sockets Supported FCLGA1200
* Max CPU Configuration 1
* Thermal Solution Specification PCG 2019D
* TJUNCTION 100°C
* Package Size 37.5 mm x 37.5 mm

I7 12th gen 12700

**CPU Specifications**

* Total Cores 12
* # of Performance-cores 8
* # of Efficient-cores 4
* Total Threads 20
* Max Turbo Frequency 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**

* Marketing Status Launched
* Launch Date Q1'22
* Embedded Options Available Yes
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**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
* ECC Memory Supported ‡ Yes

**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
* OpenCL\* Support 3.0
* Multi-Format Codec Engines 2
* Intel® Quick Sync Video Yes
* Intel® Clear Video HD Technology Yes
* # of Displays Supported ‡ 4
* Device ID 0x4680

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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

I7 12th gen 12700F

**CPU Specifications**

* Total Cores 12
* # of Performance-cores 8
* # of Efficient-cores 4
* Total Threads 20
* Max Turbo Frequency 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**

* Marketing Status Launched
* Launch Date Q1'22
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**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

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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

I7 12th gen 12700T

**CPU Specifications**

* Total Cores 12
* # of Performance-cores 8
* # of Efficient-cores 4
* Total Threads 20
* Max Turbo Frequency 4.70 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 4.70 GHz
* Performance-core Max Turbo Frequency 4.60 GHz
* Efficient-core Max Turbo Frequency 3.40 GHz
* Performance-core Base Frequency 1.40 GHz
* Efficient-core Base Frequency 1.00 GHz
* Cache 25 MB Intel® Smart Cache
* Total L2 Cache 12 MB
* Processor Base Power 35 W
* Maximum Turbo Power 99 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'22
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**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
* ECC Memory Supported ‡ Yes

**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
* OpenCL\* Support 3.0
* Multi-Format Codec Engines 2
* Intel® Quick Sync Video Yes
* Intel® Clear Video HD Technology Yes
* # of Displays Supported ‡ 4
* Device ID 0x4680

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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 2020D
* TJUNCTION 100°C
* Package Size 45.0 mm x 37.5 mm

I7 12th gen 12700K

**CPU Specifications**

* Total Cores 12
* # of Performance-cores 8
* # of Efficient-cores 4
* Total Threads 20
* Max Turbo Frequency 5.00 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.00 GHz
* Performance-core Max Turbo Frequency 4.90 GHz
* Efficient-core Max Turbo Frequency 3.80 GHz
* Performance-core Base Frequency 3.60 GHz
* Efficient-core Base Frequency 2.70 GHz
* Cache 25 MB Intel® Smart Cache
* Total L2 Cache 12 MB
* Processor Base Power 125 W
* Maximum Turbo Power 190 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q4'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**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
* ECC Memory Supported ‡ Yes

**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
* OpenCL\* Support 3.0
* Multi-Format Codec Engines 2
* Intel® Quick Sync Video Yes
* Intel® Clear Video HD Technology Yes
* # of Displays Supported ‡ 4
* Device ID 0x4680

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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 2020A
* TJUNCTION 100°C
* Package Size 45.0 mm x 37.5 mm

I7 12th gen 12700KF

**CPU Specifications**

* Total Cores 12
* # of Performance-cores 8
* # of Efficient-cores 4
* Total Threads 20
* Max Turbo Frequency 5.00 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.00 GHz
* Performance-core Max Turbo Frequency 4.90 GHz
* Efficient-core Max Turbo Frequency 3.80 GHz
* Performance-core Base Frequency 3.60 GHz
* Efficient-core Base Frequency 2.70 GHz
* Cache 25 MB Intel® Smart Cache
* Total L2 Cache 12 MB
* Processor Base Power 125 W
* Maximum Turbo Power 190 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q4'21
* Embedded Options Available No
* Datasheet [View now](https://www.intel.com/content/www/us/en/products/docs/processors/core/core-technical-resources.html)

**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

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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 2020A
* TJUNCTION 100°C
* Package Size 45.0 mm x 37.5 mm

I7 13th gen 13700

**CPU Specifications**

* Total Cores 16
* # of Performance-cores 8
* # of Efficient-cores 8
* Total Threads 24
* Max Turbo Frequency 5.20 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.20 GHz
* Performance-core Max Turbo Frequency 5.10 GHz
* Efficient-core Max Turbo Frequency 4.10 GHz
* Performance-core Base Frequency 2.10 GHz
* Efficient-core Base Frequency 1.50 GHz
* Cache 30 MB Intel® Smart Cache
* Total L2 Cache 24 MB
* Processor Base Power 65 W
* Maximum Turbo Power 219 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'23
* Embedded Options Available Yes

**Memory Specifications**

* Max Memory Size (dependent on memory type) 128 GB
* Memory Types Up to DDR5 5600 MT/s  
  Up to DDR4 3200 MT/s
* Max # of Memory Channels 2
* Max Memory Bandwidth 89.6 GB/s
* ECC Memory Supported ‡ Yes

**Processor Graphics**

* Processor Graphics ‡ Intel® UHD Graphics 770
* Graphics Base Frequency 300 MHz
* Graphics Max Dynamic Frequency 1.60 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
* OpenCL\* Support 3.0
* Multi-Format Codec Engines 2
* Intel® Quick Sync Video Yes
* Intel® Clear Video HD Technology Yes
* # of Displays Supported ‡ 4
* Device ID 0xA780

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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

I7 13th gen 13700F

**CPU Specifications**

* Total Cores 16
* # of Performance-cores 8
* # of Efficient-cores 8
* Total Threads 24
* Max Turbo Frequency 5.20 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.20 GHz
* Performance-core Max Turbo Frequency 5.10 GHz
* Efficient-core Max Turbo Frequency 4.10 GHz
* Performance-core Base Frequency 2.10 GHz
* Efficient-core Base Frequency 1.50 GHz
* Cache 30 MB Intel® Smart Cache
* Total L2 Cache 24 MB
* Processor Base Power 65 W
* Maximum Turbo Power 219 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'23
* Embedded Options Available No

**Memory Specifications**

* Max Memory Size (dependent on memory type) 128 GB
* Memory Types Up to DDR5 5600 MT/s  
  Up to DDR4 3200 MT/s
* Max # of Memory Channels 2
* Max Memory Bandwidth 89.6 GB/s

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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

I7 13th gen 13700T

**CPU Specifications**

* Total Cores 16
* # of Performance-cores 8
* # of Efficient-cores 8
* Total Threads 24
* Max Turbo Frequency 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 1.40 GHz
* Efficient-core Base Frequency 1.00 GHz
* Cache 30 MB Intel® Smart Cache
* Total L2 Cache 24 MB
* Processor Base Power 35 W
* Maximum Turbo Power 106 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q1'23
* Embedded Options Available Yes

**Memory Specifications**

* Max Memory Size (dependent on memory type) 128 GB
* Memory Types Up to DDR5 5600 MT/s  
  Up to DDR4 3200 MT/s
* Max # of Memory Channels 2
* Max Memory Bandwidth 89.6 GB/s
* ECC Memory Supported ‡ Yes

**Processor Graphics**

* Processor Graphics ‡ Intel® UHD Graphics 770
* Graphics Base Frequency 300 MHz
* Graphics Max Dynamic Frequency 1.60 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
* OpenCL\* Support 3.0
* Multi-Format Codec Engines 2
* Intel® Quick Sync Video Yes
* Intel® Clear Video HD Technology Yes
* # of Displays Supported ‡ 4
* Device ID 0xA780

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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 2020D
* TJUNCTION 100°C
* Package Size 45.0 mm x 37.5 mm

I7 13th gen 13700K

**CPU Specifications**

* Total Cores 16
* # of Performance-cores 8
* # of Efficient-cores 8
* Total Threads 24
* Max Turbo Frequency 5.40 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.40 GHz
* Performance-core Max Turbo Frequency 5.30 GHz
* Efficient-core Max Turbo Frequency 4.20 GHz
* Performance-core Base Frequency 3.40 GHz
* Efficient-core Base Frequency 2.50 GHz
* Cache 30 MB Intel® Smart Cache
* Total L2 Cache 24 MB
* Processor Base Power 125 W
* Maximum Turbo Power 253 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q4'22
* Embedded Options Available No

**Memory Specifications**

* Max Memory Size (dependent on memory type) 128 GB
* Memory Types Up to DDR5 5600 MT/s  
  Up to DDR4 3200 MT/s
* Max # of Memory Channels 2
* Max Memory Bandwidth 89.6 GB/s
* ECC Memory Supported ‡ Yes

**Processor Graphics**

* Processor Graphics ‡ Intel® UHD Graphics 770
* Graphics Base Frequency 300 MHz
* Graphics Max Dynamic Frequency 1.60 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
* OpenCL\* Support 3.0
* Multi-Format Codec Engines 2
* Intel® Quick Sync Video Yes
* Intel® Clear Video HD Technology Yes
* # of Displays Supported ‡ 4
* Device ID 0xA780

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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
* TJUNCTION 100°C

I7 13th gen 13700KF

**CPU Specifications**

* Total Cores 16
* # of Performance-cores 8
* # of Efficient-cores 8
* Total Threads 24
* Max Turbo Frequency 5.40 GHz
* Intel® Turbo Boost Max Technology 3.0 Frequency ‡ 5.40 GHz
* Performance-core Max Turbo Frequency 5.30 GHz
* Efficient-core Max Turbo Frequency 4.20 GHz
* Performance-core Base Frequency 3.40 GHz
* Efficient-core Base Frequency 2.50 GHz
* Cache 30 MB Intel® Smart Cache
* Total L2 Cache 24 MB
* Processor Base Power 125 W
* Maximum Turbo Power 253 W

**Supplemental Information**

* Marketing Status Launched
* Launch Date Q4'22
* Embedded Options Available No

**Memory Specifications**

* Max Memory Size (dependent on memory type) 128 GB
* Memory Types Up to DDR5 5600 MT/s  
  Up to DDR4 3200 MT/s
* Max # of Memory Channels 2
* Max Memory Bandwidth 89.6 GB/s

**Expansion Options**

* Direct Media Interface (DMI) Revision 4.0
* 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
* TJUNCTION 100°C