



# Intel® Core™ i5-12500TE Processor

18M Cache, up to 4.30 GHz

Spec Code

SRL6V

Ordering Code

CM8071504654307

| Intel® Core™ i5-12500TE Processor (18M Cache- up to 4.30 GHz) |                                            |
|---------------------------------------------------------------|--------------------------------------------|
| Essentials                                                    |                                            |
| Product Collection                                            | 12th Generation Intel® Core™ i5 Processors |
| Code Name                                                     | Products formerly Alder Lake               |
| Vertical Segment                                              | Embedded                                   |
| Processor Number                                              | i5-12500TE                                 |
| Status                                                        | Launched                                   |
| Launch Date                                                   | Q1'22                                      |
| Lithography                                                   | Intel 7                                    |
| Use Conditions                                                | Embedded Broad Market Commercial Temp      |
| Recommended Customer Price                                    | 205                                        |
| CPU Specifications                                            |                                            |
| Total Cores                                                   | 6                                          |
| # of Performance-cores                                        | 6                                          |
| # of Efficient-cores                                          | 0                                          |
| Total Threads                                                 | 12                                         |
| Max Turbo Frequency                                           | 4.30 GHz                                   |
| Performance-core Max Turbo Frequency                          | 4.30 GHz                                   |
| Performance-core Base Frequency                               | 1.90 GHz                                   |
| Cache                                                         | 18 MB Intel® Smart Cache                   |
| Total L2 Cache                                                | 7.5 MB                                     |
| Processor Base Power                                          | 35 W                                       |
| Supplemental Information                                      |                                            |
| Embedded Options Available                                    | Yes                                        |
| 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                                  |
| Processor Graphics                                            |                                            |
| Processor Graphics ‡                                          | Intel® UHD Graphics 770                    |
| Graphics Base Frequency                                       | 300 MHz                                    |
| Graphics Max Dynamic Frequency                                | 1.45 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                                         |
| Multi-Format Codec Engines                                 | 2                                           |
| Intel® Quick Sync Video                                    | Yes                                         |
| Intel® Clear Video HD Technology                           | Yes                                         |
| # of Displays Supported ‡                                  | 4                                           |
| Device ID                                                  | 0x4690                                      |
| OpenCL* Support                                            | 2.1                                         |
|                                                            |                                             |
| Expansion Options                                          |                                             |
| Direct Media Interface (DMI) Revision                      | 4                                           |
| 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                           |
|                                                            |                                             |
| Advanced Technologies                                      |                                             |
| Intel® Gaussian & Neural Accelerator                       | 3                                           |
| Intel® Thread Director                                     | No                                          |
| Intel® Deep Learning Boost (Intel® DL Boost)               | Yes                                         |
| Intel® Optane™ Memory Supported ‡                          | No                                          |
| Intel® Speed Shift Technology                              | Yes                                         |
| Intel® Turbo Boost Max Technology 3.0 ‡                    | No                                          |
| Intel® Turbo Boost Technology ‡                            | 2                                           |
| Intel® Hyper-Threading Technology ‡                        | Yes                                         |
| 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                                         |
| Intel® 64 ‡                                                | Yes                                         |
| Instruction Set                                            | 64-bit                                      |
| Instruction Set Extensions                                 | Intel® SSE4.1   Intel® SSE4.2   Intel® AVX2 |
| Idle States                                                | Yes                                         |
| Enhanced Intel SpeedStep® Technology                       | Yes                                         |
| Thermal Monitoring Technologies                            | Yes                                         |
| Intel® Volume Management Device (VMD)                      | Yes                                         |
|                                                            |                                             |
| Security & Reliability                                     |                                             |
| Intel® AES New Instructions                                | Yes                                         |
| Secure Key                                                 | Yes                                         |

|                                            |     |
|--------------------------------------------|-----|
| Intel® OS Guard                            | Yes |
| Execute Disable Bit ‡                      | Yes |
| Intel® Boot Guard                          | Yes |
| Mode-based Execute Control (MBEC)          | Yes |
| Intel® Control-Flow Enforcement Technology | Yes |
|                                            |     |
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