



# Intel® Core™ i7-7700 Processor

8M Cache, up to 4.20 GHz

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## Specifications

### Essentials

- Performance
- Supplemental Information
- Memory Specifications
- Processor Graphics
- Expansion Options
- Package Specifications
- Advanced Technologies
- Security & Reliability

### Ordering and Compliance

### Product Images

### Compatible Products

### Downloads and Software

## Essentials

Export specifications

|                              |                                           |
|------------------------------|-------------------------------------------|
| Product Collection           | 7th Generation Intel® Core™ i7 Processors |
| Code Name                    | Products formerly Kaby Lake               |
| Vertical Segment             | Desktop                                   |
| Processor Number             | i7-7700                                   |
| Status                       | Launched                                  |
| Launch Date ?                | Q1'17                                     |
| Lithography ?                | 14 nm                                     |
| Recommended Customer Price ? | -                                         |
| Use Conditions ?             | PC/Client/Tablet                          |

## Performance

|                            |                 |
|----------------------------|-----------------|
| # of Cores ?               | 4               |
| # of Threads ?             | 8               |
| Processor Base Frequency ? | 3.60 GHz        |
| Max Turbo Frequency ?      | 4.20 GHz        |
| Cache ?                    | 8 MB SmartCache |
| Bus Speed ?                | 8 GT/s DMI3     |
| # of QPI Links ?           | 0               |
| TDP ?                      | 65 W            |

## Supplemental Information

|                              |                          |
|------------------------------|--------------------------|
| Embedded Options Available ? | Yes                      |
| Datasheet                    | <a href="#">View now</a> |

## Memory Specifications

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Max Memory Size (dependent on memory type) ? | 64 GB                                   |
| Memory Types ?                               | DDR4-2133/2400, DDR3L-1333/1600 @ 1.35V |
| Max # of Memory Channels ?                   | 2                                       |
| ECC Memory Supported ‡ ?                     | No                                      |

## Processor Graphics

|                        |                        |
|------------------------|------------------------|
| Processor Graphics ‡ ? | Intel® HD Graphics 630 |
|------------------------|------------------------|

|                                                                                                                                 |                |
|---------------------------------------------------------------------------------------------------------------------------------|----------------|
| Graphics Base Frequency                          | 350 MHz        |
| Graphics Max Dynamic Frequency                  | 1.15 GHz       |
| Graphics Video Max Memory                      | 64 GB          |
| 4K Support                                     | Yes, at 60Hz   |
| Max Resolution (HDMI 1.4)†                     | 4096x2304@24Hz |
| Max Resolution (DP)†                           | 4096x2304@60Hz |
| Max Resolution (eDP - Integrated Flat Panel)†  | 4096x2304@60Hz |
| DirectX* Support                               | 12             |
| OpenGL* Support                                | 4.5            |
| 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                                                                                                                       | 0x5912         |

### Expansion Options

|                                                                                                                  |                          |
|------------------------------------------------------------------------------------------------------------------|--------------------------|
| Scalability                                                                                                      | 1S Only                  |
| PCI Express Revision           | 3.0                      |
| PCI Express Configurations ‡  | Up to 1x16, 2x8, 1x8+2x4 |
| Max # of PCI Express Lanes    | 16                       |

### Package Specifications

|                                                                                                                    |                 |
|--------------------------------------------------------------------------------------------------------------------|-----------------|
| Sockets Supported               | FCLGA1151       |
| Max CPU Configuration                                                                                              | 1               |
| Thermal Solution Specification  | PCG 2015C (65W) |
| T <sub>JUNCTION</sub>           | 100°C           |
| Package Size                                                                                                       | 37.5mm x 37.5mm |
| Low Halogen Options Available                                                                                      | See MDDS        |

### Advanced Technologies

|                                                                                                                                                  |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Intel® Optane™ Memory Supported ‡                             | Yes    |
| Intel® Turbo Boost Technology ‡                               | 2.0    |
| Intel® vPro™ Platform Eligibility ‡                           | Yes    |
| 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® TSX-NI                                                 | 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® Identity Protection Technology ‡ ?     | Yes |
| Intel® Stable Image Platform Program (SIPP) ? | Yes |

### Security & Reliability

|                                                    |     |
|----------------------------------------------------|-----|
| Intel® AES New Instructions ?                      | Yes |
| Secure Key ?                                       | Yes |
| Intel® Software Guard Extensions (Intel® SGX) ?    | Yes |
| Intel® Memory Protection Extensions (Intel® MPX) ? | Yes |
| Intel® OS Guard                                    | Yes |
| Intel® Trusted Execution Technology ‡ ?            | Yes |
| Execute Disable Bit ‡ ?                            | Yes |
| Intel® Boot Guard ?                                | Yes |

## More support options for Intel® Core™ i7-7700 Processor (8M Cache, up to 4.20 GHz)

[Product Support](#)[Downloads and Software](#)[Support Community](#)[Warranty and Replacement](#)

### Need more help?

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Refer to Datasheet for formal definitions of product properties and features.

"Announced" SKUs are not yet available. Please refer to the Launch Date for market availability.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

‡ This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading> for more information including details on which processors support Intel® HT Technology.

Downloaded from [Arrow.com](#) - [View our performance to the maximum](#) single-core processor frequency that can be achieved with Intel® Turbo Boost Technology. See

[www.intel.com/technology/turboboost/](http://www.intel.com/technology/turboboost/) for more information.

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System and Maximum TDP is based on worst case scenarios. Actual TDP may be lower if not all I/Os for chipsets are used.

Low Halogen: Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709 requirements, and the PCB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

For benchmarking data see <http://www.intel.com/performance>.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See <http://www.intel.com/content/www/us/en/processors/processor-numbers.html> for details.

Processors that support 64-bit computing on Intel® architecture require an Intel 64 architecture-enabled BIOS.



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