Essentials ⌃

Product Collection ‹ ›	7th Generation Intel® Core™ i7 Processors	6th Generation Intel® Core™ i7 Processors	4th Generation Intel® Core™ i7 Processors
‹ Vertical Segment ›	Desktop	Desktop	Desktop
‹ Processor Number ›	i7-7700T	i7-6700T	i7-4790T
‹ Status ›	Launched	Launched	Launched
‹ Launch Date ›	Q1'17	Q3'15	Q2'14
‹ Lithography ›	14 nm	14 nm	22 nm
‹ Recommended Customer Price ›	$303.00 – $312.00	$303.00	$303.00
‹ Included Items ›		Thermal Solution – E98290	

Performance ⌃

‹ # of Cores ›	4	4	4
‹ # of Threads ›	8	8	8

‹ **Processor Base Frequency** ›	2.90 GHz	2.80 GHz	2.70 GHz
‹ **Max Turbo Frequency** ›	3.80 GHz	3.60 GHz	3.90 GHz
‹ **Cache** ›	8 MB SmartCache	8 MB SmartCache	8 MB SmartCache
‹ **Bus Speed** ›	8 GT/s DMI3	8 GT/s DMI3	5 GT/s DMI2
‹ **# of QPI Links** ›	0		
‹ **TDP** ›	35 W	35 W	45 W
‹ **Configurable TDP-down Frequency** ›	1.90 GHz		
‹ **Configurable TDP-down** ›	25 W		

Supplemental Information ⌃

‹ **Embedded Options Available** ›	Yes	No	No
‹ **Conflict Free** ›	Yes	Yes	Yes
‹ **Datasheet** ›	View now	View now	View now

Memory Specifications ⌃

Max Memory Size (dependent on memory type)	64 GB	64 GB	32 GB
Memory Types	DDR4-2133/2400, DDR3L-1333/1600 @ 1.35V	DDR4-1866/2133, DDR3L-1333/1600 @ 1.35V	DDR3-1333/1600, DDR3L-1333/1600 @ 1.5V
Max # of Memory Channels	2	2	2
ECC Memory Supported ‡	No	No	No
Max Memory Bandwidth		34.1 GB/s	25.6 GB/s

Graphics Specifications ⌃

Processor Graphics ‡	Intel® HD Graphics 630	Intel® HD Graphics 530	Intel® HD Graphics 4600
Graphics Base Frequency	350.00 MHz	350.00 MHz	350.00 MHz
Graphics Max Dynamic Frequency	1.15 GHz	1.10 GHz	1.20 GHz
Graphics Video Max Memory	64 GB	64 GB	2 GB
4K Support	Yes, at 60Hz	Yes, at 60Hz	

‹ Max Resolution (HDMI 1.4)‡ ›	4096x2304@24Hz	4096x2304@24Hz	4096x2304@24Hz
‹ Max Resolution (DP)‡ ›	4096x2304@60Hz	4096x2304@60Hz	3840x2160@60Hz
‹ Max Resolution (eDP – Integrated Flat Panel)‡ ›	4096x2304@60Hz	4096x2304@60Hz	3840x2160@60Hz
‹ DirectX* Support ›	12	12	11.2/12
‹ OpenGL* Support ›	4.4	4.4	4.3
‹ Intel® Quick Sync Video ›	Yes	Yes	Yes
‹ Intel® InTru™ 3D Technology ›	Yes	Yes	Yes
‹ Intel® Clear Video HD Technology ›	Yes	Yes	Yes
‹ Intel® Clear Video Technology ›	Yes	Yes	
‹ # of Displays Supported ‡ ›	3	3	3
‹ Device ID ›	0x5912	0x1912	0x412
‹ Graphics Output ›		eDP/DP/HDMI/DVI	eDP/DP /HDMI/DVI/VGA
‹ Max Resolution (VGA)‡ ›		N/A	1920x1200@60Hz

‹ Intel® Flexible Display Interface (Intel® FDI) ›			Yes

Expansion Options ⌃

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

Package Specifications ⌃

‹ Sockets Supported ›	FCLGA1151	FCLGA1151	FCLGA1150
‹ Max CPU Configuration ›	1	1	1
‹ Thermal Solution Specification ›	PCG 2015A (35W)	PCG 2015A (35W)	PCG 2013B
‹ T$_{JUNCTION}$ ›	80°C		
‹ Package Size ›	37.5mm x 37.5mm	37.5mm x 37.5mm	37.5mm x 37.5mm

‹ Low Halogen Options Available ›	See MDDS	See MDDS	See MDDS
‹ T$_{CASE}$ ›		66°C	71.45°C

Advanced Technologies ⌃

‹ Intel® Optane™ Memory Supported ‡ ›	Yes	No	
‹ Intel® Turbo Boost Technology ‡ ›	2.0	2.0	2.0
‹ Intel® vPro Technology ‡ ›	Yes	Yes	Yes
‹ Intel® Hyper-Threading Technology ‡ ›	Yes	Yes	Yes
‹ Intel® Virtualization Technology (VT-x) ‡ ›	Yes	Yes	Yes
‹ Intel® Virtualization Technology for Directed I/O (VT-d) ‡ ›	Yes	Yes	Yes
‹ Intel® VT-x with Extended Page Tables (EPT) ‡ ›	Yes	Yes	Yes
‹ Intel® TSX-NI ›	Yes	Yes	No
‹ Intel® 64 ‡ ›	Yes	Yes	Yes

⟨ Instruction Set ⟩	64-bit	64-bit	64-bit
⟨ Instruction Set Extensions ⟩	SSE4.1/4.2, AVX 2.0	SSE4.1/4.2, AVX 2.0	SSE4.1/4.2, AVX 2.0
⟨ Idle States ⟩	Yes	Yes	Yes
⟨ Enhanced Intel SpeedStep® Technology ⟩	Yes	Yes	Yes
⟨ Thermal Monitoring Technologies ⟩	Yes	Yes	Yes
⟨ Intel® Identity Protection Technology ‡ ⟩	Yes	Yes	Yes
⟨ Intel® Stable Image Platform Program (SIPP) ⟩	Yes	Yes	Yes
⟨ Intel® My WiFi Technology ⟩			Yes

Intel® Data Protection Technology ⌃

⟨ Intel® AES New Instructions ⟩	Yes	Yes	Yes
⟨ Secure Key ⟩	Yes	Yes	Yes
⟨ Intel® Software Guard Extensions (Intel® SGX) ⟩	Yes	Yes	
⟨ Intel® Memory Protection Extensions (Intel® MPX) ⟩	Yes	Yes	

Intel® Platform Protection Technology ⌃

‹ **OS Guard** ›	Yes	Yes	Yes
‹ **Trusted Execution Technology** ‡ ›	Yes	Yes	Yes
‹ **Execute Disable Bit** ‡ ›	Yes	Yes	Yes
‹ **Intel® Device Protection Technology with Boot Guard** ›	Yes	Yes	
‹ **Anti-Theft Technology** ›			Yes

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