	Intel® Core™ i5-1135G7 Processor	Intel® Core™ i5-1235U Processor	Intel® Core™ i5-1335U Processor
Essentials			
Product Collection	11th Generation Intel® Core™ i5 Processors	12th Generation Intel® Core™ i5 Processors	13th Generation Intel® Core™ i5 Processors
Vertical Segment	Mobile	Mobile	Mobile
Processor Number	i5-1135G7	i5-1235U	i5-1335U
CPU Specifications			
Total Cores	4	10	10
Total Threads	8	12	12
Max Turbo Frequency	4.20 GHz	4.40 GHz	4.60 GHz
Cache	8 MB Intel® Smart Cache	12 MB Intel® Smart Cache	12 MB Intel® Smart Cache
Bus Speed	4 GT/s		
Configurable TDP-up Base Frequency	2.40 GHz		
Configurable TDP-up	28 W		
Configurable TDP-down Base Frequency	900 MHz		
Configurable TDP-down	12 W		
# of Performance-cores		2	2
# of Efficiency-cores		8	8
Single P-core Turbo Frequency		4.40 GHz	4.60 GHz
Single E-core Turbo Frequency		3.30 GHz	3.40 GHz
Processor Base Power		15 W	15 W
Maximum Turbo Power		55 W	55 W
Minimum Assured Power			12 W
Marketing Status	Launched	Launched	Launched
Launch Date	Q3'20	Q1'22	Q1'23
Memory Specifications			
Max Memory Size (dependent on memory type)	64 GB	64 GB	64 GB
Memory Types	DDR4-3200 | LPDDR4x-4267	Up to DDR5 4800 MT/s Up to DDR4 3200	Up to DDR5 5200 MT/s Up to DDR4 3200
Max # of Memory Channels	2	2	2
ECC Memory Supported ‡	No	No	No
Processor Graphics			
Processor Graphics ‡	Intel® Iris® Xe Graphics	Intel® Iris® Xe Graphics eligible	Intel® Iris® Xe Graphics eligible
Graphics Max Dynamic Frequency	1.30 GHz	1.20 GHz	1.25 GHz
Graphics Output	eDP 1.4b | MIPI-DSI 2.0 | DP 1.4 | HDMI	eDP 1.4b | DP 1.4a | HDMI 2.1	eDP 1.4b | DP 1.4a | HDMI 2.1
Execution Units	80	80	80
Max Resolution (HDMI)‡	4096x2304@60Hz	4096 x 2304 @ 60Hz	4096 x 2304 @ 60Hz
Max Resolution (DP)‡	7680x4320@60Hz	7680 x 4320 @ 60Hz	7680 x 4320 @ 60Hz
Max Resolution (eDP - Integrated Flat Panel)‡	4096x2304@60Hz	4096 x 2304 @ 120Hz	4096 x 2304 @ 120Hz
DirectX* Support	12.1	12.1	12.1
OpenGL* Support	4.6	4.6	4.6
OpenCL* Support	3.0	3.0	3.0
Multi-Format Codec Engines	2	2	2
Intel® Quick Sync Video	Yes	Yes	Yes
Intel® Clear Video HD Technology	Yes		
# of Displays Supported ‡	4	4	4
Device ID	0x9A49	0x46A8	0xA7A1
Expansion Options			
Intel® Thunderbolt™ 4	Yes	Yes	Yes
Microprocessor PCIe Revision	Gen 4	Gen 4	Gen 4
Chipset / PCH PCIe Revision	Gen 3	Gen 3	Gen 3
Max # of PCI Express Lanes		20	20
Package Specifications			
Sockets Supported	FCBGA1449	FCBGA1744	FCBGA1744
Max CPU Configuration	1	1	1
TJUNCTION	100°C	100°C	100°C
Package Size	45.5x25	50 x 25	50mm x25mm
Advanced Technologies			
Intel® Gaussian & Neural Accelerator	2.0	3.0	3.0
Intel® Smart Sound Technology	Yes	Yes	Yes
Intel® Wake on Voice	Yes	Yes	Yes
Intel® High Definition Audio	Yes	Yes	Yes
MIPI SoundWire*	1.1	1.2	1.2
Intel® Deep Learning Boost (Intel® DL Boost)	Yes	Yes	Yes
Intel® Adaptix™ Technology	Yes	Yes	Yes
Intel® Optane™ Memory Supported ‡	Yes		
Intel® Speed Shift Technology	Yes	Yes	Yes
Intel® Turbo Boost Technology ‡	2.0		
Intel® Hyper-Threading Technology ‡	Yes	Yes	Yes
Instruction Set	64-bit	64-bit	64-bit
Instruction Set Extensions	Intel® SSE4.1 | Intel® SSE4.2 | Intel® AVX2 | Intel® AVX-512	Intel® SSE4.1 | Intel® SSE4.2 | Intel® AVX2	Intel® SSE4.1 | Intel® SSE4.2 | Intel® AVX2
Idle States	Yes		
Thermal Monitoring Technologies	Yes	Yes	Yes
Intel® Volume Management Device (VMD)	Yes	Yes	Yes
Intel® Thread Director		Yes	Yes
Intel® Flex Memory Access		Yes	Yes
Intel® Image Processing Unit			6.0
Security & Reliability			
Intel® Control-Flow Enforcement Technology	Yes	Yes	Yes
Intel® Total Memory Encryption	No		
Intel® AES New Instructions	Yes	Yes	Yes
Intel® Software Guard Extensions (Intel® SGX)	No		
Intel® Trusted Execution Technology ‡	No	Yes	Yes
Intel® OS Guard	Yes	Yes	Yes
Intel® Boot Guard	Yes	Yes	Yes
Mode-based Execute Control (MBEC)	Yes	Yes	Yes
Intel® Stable IT Platform Program (SIPP)	No		
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 vPro® Eligibility ‡		Intel vPro® Essentials	Intel vPro® Essentials
Intel® Threat Detection Technology (TDT)		Yes	Yes
Intel® Standard Manageability (ISM) ‡		Yes	Yes
Intel® Hardware Shield Eligibility ‡		Yes	Yes
Intel® QuickAssist Software Acceleration		Yes	Yes
Secure Key		Yes	Yes
Execute Disable Bit ‡		Yes	Yes

Bron: ark.intel.com