

Information about the new generation Intel Core i3 / i5 / i7 mobile processors

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Intel has provided complete and detailed information about new generation processors for laptops based on 32-nanometer technology. This launch is quite important for the company because there are 11 products introduced, Core i3, i5, i7 mobile processor products will gradually replace the existing Core Duo and Core 2 Duo processors. time.

If at the end of 2009, Intel just introduced two versions of Core i7-720QM and i7-820QM for the high-end computer market. Now, Core i7 has a mid-market version with 2-core design (instead of 4 cores like Core i7-7xx and 8xx series). Processors like the Core i7-620M still support Turbo Boost clocking speed to help speed up processor, bring in level 3 smart cache (Smart Cache L3) 4 MB capacity, support DDR3 .



In addition to the Core i7 Low Voltage version with 35 watts of power consumption, Intel also offers an energy-efficient **version of the 2 GHz i7-620LM** and 2.13 GHz **i7-640LM** with a compact board that is suitable for super machines. Mobile as the Macbook Air, consumes 25 watts of energy. With Turbo Boost, these processors can raise the clock up to 2.8 GHz or 2.93 GHz like the regular Core i7-6xxM. Intel also added the Core i7 Ultra-Low Voltage processor line that only consumes 18 watts, 800 MHz bandwidth limit with two i7-620UM 1.06 GHz representatives (turbo boost 2.13 GHz) and i7- 640UM 1.2 GHz (turbo boost 2.26 GHz).

The vast majority of users interested in this launch are the Core i5 line with the introduced versions including the i5-540M 2.53 GHz and the i5-430M 2.26 GHz. These processors also support Turbo Boost technology to increase the clock rate to 3.06 GHz and 2.53 GHz. Most Core i5 processors are limited to 3 MB of L2 cache. ULV energy-saving version includes a Core i5-520UM 1.06 GHz (turbo boost of 1.86 GHz).

Finally, the Core i3 products with the i3-330M 2.13 GHz and 2.26 GHz i3-350M do not use Turbo Boost acceleration technology.

The introduced processors are manufactured on 32 nm technology with the code name **Westmere** . In particular, the line of processors for laptops named Arrandale integrates both physical processing chips and graphics processing chips. The graphics chip has 45 nm technology with a 166MHz core clock (when Turbo Boost reaches 500MHz).

Brand Name & Processor Number ¹	Base Clock Speed	Turbo Frequency ²	Cores/Threads	Cache	Memory Speed Support DDR-3	TDP	Package	Pricing (1Ku)
Intel® Core™ i7-620M	2.66 GHz	Up to 3.33 GHz	2/4	4 MB	1066	35 W	rPGA BGA	\$332
Intel® Core™ i7-640LM	2.13 GHz	Up to 2.93 GHz	2/4	4 MB	1066	25 W	BGA	\$332
Intel® Core™ i7-620LM	2.0 GHz	Up to 2.8 GHz	2/4	4 MB	1066	25 W	BGA	\$300
Intel® Core™ i7-640UM	1.20 GHz	Up to 2.26 GHz	2/4	4 MB	800	18 W	BGA	\$305
Intel® Core™ i7-620UM	1.06 GHz	Up to 2.13 GHz	2/4	4 MB	800	18 W	BGA	\$278
Intel® Core™ i5-540M	2.53 GHz	Up to 3.06 GHz	2/4	3 MB	1066	35 W	rPGA BGA	\$257
Intel® Core™ i5-520M	2.40 GHz	Up to 2.93 GHz	2/4	3 MB	1066	35 W	rPGA BGA	\$225
Intel® Core™ i5-520UM	1.06 GHz	Up to 1.86 GHz	2/4	3 MB	800	18 W	BGA	\$241
Intel® Core™ i5-430M	2.26 GHz	Up to 2.53 GHz	2/4	3 MB	1066	35 W	rPGA BGA	Not listed
Intel® Core™ i3-350M	2.26 GHz	N/A	2/4	3 MB	1066	35 W	rPGA BGA	Not listed
Intel® Core™ i3-330M	2.13 GHz	N/A	2/4	3 MB	1066	35 W	rPGA BGA	Not listed

Quite a lot of websites that are well known for this preliminary test hardware line show many positive results. AnandTech sites show that at the same clock rate of 2.53 GHz, Core i5 is higher than 7 - 46% Core 2 Duo in intensive processing tasks. Graphics performance in the CPU's integrated processor chip also exceeded 129% compared to GMA 4500MHD graphics card with World of Warcraft game (despite testing at low resolution and detail).

Intel is expected to officially announce these processors in the second week of January 2010. Shortly after, there were performances by laptop manufacturers with new products integrated with new Intel processors.

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