

# What are U, M, MQ, HQ, K chips? Decode the meaning of the Intel chip name structure

Let's join TipsMake.com to decode the structure of Intel chip names, find out what the characters in the names of the most popular 'Core iX' product lines mean.

If you only look at the "X" value (varying from 3, 5, 7 to 9) in the official name 'Core iX' to identify the rank and performance of Intel processors, it will not be completely accurate. In addition to "X", in the name structure of Intel microprocessors, there are also other numbers and characters that help you know more about the performance and main functions of that chip.



The X after 'i' in 'Core iX' indicates the overall performance of the processor.

# Core i"X"

As follows:

Core 'i3' chip: This is a low-cost processor with stable performance for computers with limited budgets.

Core 'i5' chip: A mid-range processor, compared to the Core i3 series, it has significantly better performance and of course the price of this product line is also higher.

Core 'i7' chip: A high-end processor with good performance suitable for professional purposes such as graphics editing and high-configuration gaming.

Core 'i9' chip: This is the most advanced processor, with a powerful clock speed enough to handle professional tasks such as editing photos and videos, streaming games on online platforms. Of course the price of this product is also quite high.

**The thousands digit in the following four numbers represents the generation of birth.**

# Core i7-"8"700

Up to now, there have been 10 generations of Intel's Core iX released and all processors in this 10th generation have nicknames starting with the number '10'. Similarly, microprocessors of other generations also have nicknames starting with the corresponding generation number.

In addition, Intel also gives each of its Core iX generations a unique name to make it easier for users to remember. For example, the 5th generation Core iX is Haswell, the 6th generation is Broadwell, the 7th generation is Sky Lake, the 8th generation is Coffee Lake, the 9th is Ice Lake, the 10th is Comet Lake.

## The last three digits from the hundreds place onwards



Core i7-8700

These numbers represent the performance of processors when compared to the same generation and Core iX series. For example, Core i5-8600 will provide stronger processing speed than Core i5-8400.

The most obvious difference lies in the clock speed and clock increase speed, the chip's processing speed is proportional to the clock increase. For example, a Core i5-8600 clocked at up to 3.1 Ghz will be more powerful than a Core i5-8400 chip clocked at 2.8 GHz.

Needless to say, the Core i7 chip will be more powerful than the Core i5 even though it has a lower clock speed, and the Core i5 will still 'beat' the Core i3 even though the Core i3 has a higher clock speed.

### Meaning of the numbers behind the number name.



Core i7-8700K

If no letters appear after the code name, it is Intel's basic chip version.

If there are letters behind a chip's brand name, each letter will provide the user with general information about the purpose of use as well as the power of the computer system running that chip.

**The K chip is the most powerful version of an Intel chip line**, with a higher clock speed than basic versions of the same line and is used for professional PCs or laptops. Additionally, the K chip is an 'unlocked' chip, allowing overclocking for higher performance.

**Chip G is a chip that Intel is equipped with a powerful graphics processor** from rival AMD. With the G chip, users will not need to equip an expensive discrete graphics card and can still play online games with mid-range configuration with stable frames.

**The T chip is an energy-saving chip line**, with poorer performance than basic chips without characters. Therefore, the processor has a 'T' for users with light needs such as typing, listening to music, and watching movies.

**Chip U is a microprocessor designed specifically for mobile devices and laptops**. This chip line has a much lower clock speed than its full-size brothers, so it has the most modest performance and consumes the least power. This helps the 'U' chip avoid thermal overload problems.



Codename of an 8th generation Intel Core i3 processor U version.

Table of alphabetic suffixes and their specific meanings:

Letter suffix	Describe	For example
K	Unlock (Most powerful, unlock all features)	Intel® Core™ i9-9900K
F	Requires discrete graphics card	Intel® Core™ i9-9900KF
G	Includes discrete graphics card in packaging	Intel® Core™ i7-8705G
U	Extremely low power consumption	Intel® Core™ i7-8650U
H	High performance graphics	Intel® Core™ i3-7100H
HK	High-performance, unlocked graphics	Intel® Core™ i7-7820HK
HQ	High-performance, quad-core graphics	Intel® Core™ i7-7920HQ
Y	Consumes very little electricity	Intel® Core™ i7-7Y75
T	Optimize electricity consumption	Intel® Core™ i7-6700T processor
M	Mobile	Intel® Xeon® E3-1535M
C	Unlocked desktop processor based on LGA 1150 package with high-performance graphics	Intel® Core™ i7-5775C

R	Desktop processor based on BGA1364 package (mobile) with high performance graphics	Intel® Core™ i7-5775R
S	Optimized for performance	Intel® Core™ i7-4770S
MQ, MQ	Quad core mobile	Intel® Core™ i7-4702MQ Intel® Core™ i7-2860QM
MX	Ultra portable version	Intel® Core™ i7-4940MX
E	Power-efficient dual-core desktop processor with a TDP greater than or equal to 55 W	
L	Highly power efficient processor for mobile devices with 12-19 W TDP	
P	Highly power efficient processor for mobile devices with 20-29W TDP	
Q	Quad-core high-performance mobile processor	
QX	Extremely high-performance quad-core processor for desktop or mobile	

### Number of chip cores.

In theory, the processor will be faster if it has a large number of cores. But this is not true with the 8th generation of Intel chips because low-end Core i3 models even have 4 cores. However, the performance of dual-core processors with only 2 cores will be significantly slower.



Hopefully with the above content, you can decode some basic information about the Intel chip line you are learning about through its name.

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