Intel Introduces Processor Numbers

Intel is introducing “processor numbers” for its desktop and notebook products. Processor numbers allow your customers to consider features besides just clock speed (GHz)—like architecture, front side bus, cache, and other Intel technologies. This will help your customers make more educated decisions when choosing processors.

Focusing On More Than One Feature

Manufacturers in many industries use a product-numbering system or other categorization method to differentiate products within a product line or brand. This allows your customers to compare specific products within a product line or brand. For example, consumers considering a digital camera purchase may wish to compare optical zoom and digital zoom capabilities and camera size in addition to megapixels when selecting among various camera models.

The same is true with processors. When your customer is selecting a processor, there are additional features to consider in addition to clock speed, like architecture, cache, front side bus, and other Intel technologies.

Processor features and definitions

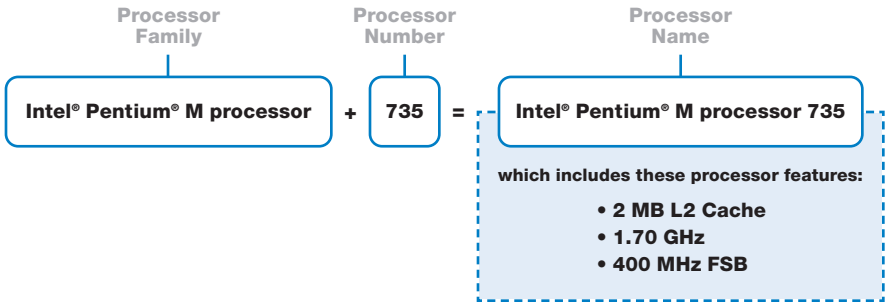
Processor Feature[1]	Feature Definition
Architecture	Basic design of a microprocessor that may include process technology and/or other architectural enhancements.
Cache (MB/KB)	Temporary storage for frequently accessed or recently accessed data. Storing certain data in a cache speeds up the computer’s operation. Cache size is measured in megabytes (MB) or kilobytes (KB).
Clock Speed (MHz/GHz)	The speed of the processor’s internal clock which dictates how fast the processor can process data. Clock speed is typically measured in GHz (Gigahertz, or billions of cycles per second).
Front Side Bus (MHz/GHz)	The connecting path between the processor and other key components, such as the memory controller hub. Front side bus speed is measured in MHz or GHz.

[1] As Intel processors evolve and advance over time, Intel will integrate new feature technologies and capabilities that may increment the processor number.

Take a Sneak Peek at the Details

Intel processor names will be composed of the processor family and a 3-digit processor number.

Example:



Processor numbers will be categorized by a 3-digit number sequence such as 7xx, 5xx, and 3xx. This number plus the processor family make up the overall "processor name." Within each number sequence are specific processor numbers such as 735, 550, or 325. References to the clock speed in the processor name (as has been used in the past) will be replaced with the processor number, which now represents a broader set of features that influence the overall user experience.

Processor numbers at a glance

What it is	What it isn't
Differentiates relative features *within* a processor family. Example: Intel® Pentium® 4 processor 550 vs. Intel® Pentium® 4 processor 540.	**A way to compare numbers *across* processor families.** Example: 710 is not "better" than a 510 simply because 7 is greater than 5 from a numerical perspective. Processor numbers are only relevant within a processor family.
Indicates more features, more of a single feature[2], or a change in architecture. Example: There may be a case where the processor number increments due to a front side bus increase (e.g. from 400 MHz to 533 MHz), or cache increase (e.g. from 512 KB to 1 MB), even though the clock speed may stay constant or decrease.	**Linear increments between processor numbers are not meant to indicate linear feature advancements.** Example: The differences in processor features between an Intel® Pentium® M processor 715 and an Intel® Pentium® M processor 725 may not be the same as the differences in processor features between an Intel® Pentium® M processor 725 and an Intel® Pentium® M processor 735.
Represents a set of available processor features such as the architecture, cache, clock speed, front side bus, and other Intel technologies.	**A measurement of higher performance. Processor numbers cannot be used as a substitute for performance benchmarks.**

Examples of specific Intel processor families include:

	Desktop	Number sequence
	**Intel® Pentium® 4 processor (including the Intel® Pentium® 4 processor supporting Hyper-Threading Technology[3] and the Intel® Pentium® 4 Processor with HT Technology)**	5xx
	**Intel® Celeron® D processor**	3xx

	Notebook	Number sequence
	**Intel® Pentium® M processor[4]**	7xx
	Intel® Pentium® M processor Low Voltage (or LV)	7xx
	Intel® Pentium® M processor Ultra Low Voltage (or ULV)	7xx
	**Mobile Intel® Pentium® 4 processor (including the Mobile Intel® Pentium® 4 processor supporting Hyper-Threading Technology and the Mobile Intel® Pentium® 4 Processor with HT Technology)**	5xx
	**Intel® Celeron® M processor**	3xx
	Intel® Celeron® M processor Ultra Low Voltage (or ULV)	3xx

Help Your Customers Make More Educated Decisions

Intel is introducing “processor numbers” for its desktop and notebook products in order to better convey the overall feature set of our processors and help your customers make more informed decisions about their PC purchase. Processor numbers are meant to help your customers evaluate different processors by comparing relevant feature sets. Ultimately, your customers will be able to make more educated decisions and feel satisfied about their final purchase.

Discover More

Feature specifications for all Intel processors are public and easily accessible from the Intel Web site. The processor number nomenclature is scheduled to take effect with notebook processors starting in May 2004 and with desktop processors starting in June 2004.

For more information, please go to www.intel.com/products/processor_number

[2] Note that there may be more of one feature and less of another.

[3] Look for systems with the Intel® Pentium® 4 Processor with HT Technology logo which your system vendor has verified utilize Hyper-Threading Technology. Hyper-Threading Technology requires a computer system with an Intel® Pentium® 4 processor supporting HT Technology and an HT Technology enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/info/hyperthreading for more information including details on which processors support HT Technology.

[4] The Intel® Pentium® M processor is the processor component of the Intel® Centrino™ brand, which also comprises a mobile chipset and integrated wireless LAN capability.

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