PRIMER

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iCOMP® Index 2.0

Answers to Commonly Asked Questions

General

What is the iCOMP® Index?

The iCOMP® index is an easy-to understand tool that reflects the relative performance of Intel's microprocessors.

How is iCOMP Index 2.0 different from the original iCOMP Index?

iCOMP Index 2.0 is the first major revision to the iCOMP index since it was introduced in 1992. iCOMP Index 2.0 better reflects today's trend toward modern 32-bit software and the proliferation of multimedia applications. The base processor on iCOMP Index 2.0 is a Pentium® processor running at 120MHz rated at 100 on the new scale.

What does iCOMP Index 2.0 measure?

iCOMP Index 2.0 is a forward-looking performance measurement tool designed to model typical application usage. It includes 32-bit applications which measure integer, floating point, and multimedia performance. iCOMP Index 2.0 reflects the performance of the microprocessor only, not the performance of an entire system.

How is iCOMP Index 2.0 computed?

iCOMP Index 2.0 is a weighted average of several measures of processor performance. The index is composed of four industry standard benchmarks, CPUmark32*, Norton SI-32*, SPECint95*, SPECfp95* as well as the Intel Media Benchmark. The measures were chosen because they best measure microprocessor performance on the mix of application software found on most systems over the next several years.

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Alternative Performance Measurements

What does megahertz (MHz) measure?

Megahertz (MHz) is a measurement of the frequency (or clock speed) at which the microprocessor operates. Megahertz can be compared to revolutions per minute (RPM) in a car's engine. When comparing engines, however, horsepower is a better indicator of performance than RPMs. This is because a small engine might operate at high RPMs but have much less power and performance than a bigger engine. In the same way, faster frequencies do not always translate to faster microprocessors. iCOMP® Index 2.0, just like the horsepower of an engine, provides a better measure of performance.

Why isn't megahertz (MHz) a good indicator of a processor's performance?

While megahertz is one component of overall processor performance, it is not, by itself, a good measurement of processor performance. Advanced microprocessors, like the Pentium® Pro processor, incorporate many new features and technologies that dramatically impact processor performance. As such, the Pentium Pro processor running at 200MHz offers considerably higher performance than a Pentium processor running at 200MHz, despite operating at the same frequency (MHz) or clock speed.

Why create another benchmark?

iCOMP Index 2.0 is not a benchmark but rather an index that combines the best benchmarks in the industry into an easy-to-use tool that reflects processor performance. It was designed to reduce the need to learn and understand numerous, technical microprocessor benchmarks by providing a single value for each Intel microprocessor.

Don't all benchmarks give essentially the same results?

No. Depending on the type of benchmark that you use, you can get different results. There are two classes of benchmarks: component and system. Component benchmarks test only a specific component within a computer, such as the processor, disk, or graphics board. System benchmarks test overall system performance.

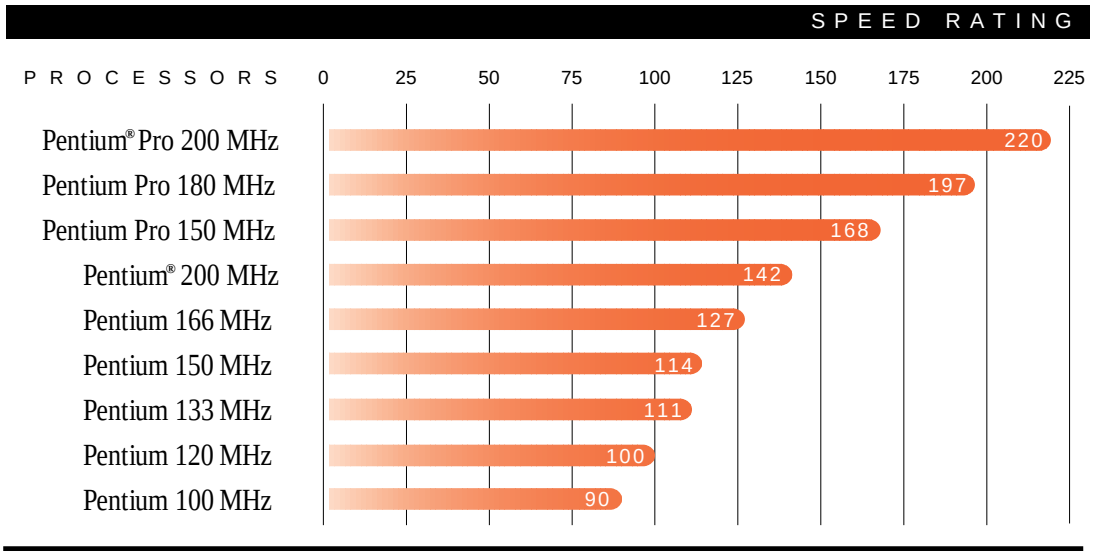
Within each class there are both application and synthetic benchmarks. Application benchmarks test performance by using real applications the way you might use them. Synthetic benchmarks use software programs created specifically for performance testing. Please refer to Intel’s Web site at http://www.intel.com for more information on performance measurement.

Are there any good, overall system benchmarks?

Yes. A good, industry-standard, benchmark for measuring 16-bit application performance is BAPCo SYSmark95* while BAPCo SYSmarkNT* measures performance for Windows NT* applications. The BAPCo benchmarks are based on a survey of real-world PC software usage patterns and use leading applications.

iCOMP® Index 2.0

iCOMP® Index 2.0 compares the relative performance of different Intel microprocessors.



Differences in hardware and software configuration will affect actual performance. iCOMP® Index 2.0 reflects 32-bit applications and benchmarks. It combines 5 benchmarks: CPUmark32*, Norton SI-32*, SPECint95*, SPECfp95*, and Intel Media Benchmark. Each processor's rating is calculated at the time the processor is introduced. Ratings for processors introduced before iCOMP Index 2.0, were calculated upon version 2.0's release. For more information about iCOMP Index 2.0, including a description of the systems used to calculate ratings, contact Intel at 1-800-628-8686.

How does iCOMP Index 2.0 help resellers?

- Reduces the time to explain performance differences between Intel's microprocessors.
- Enables a clear demonstration of price/performance advantages. For example, by comparing the percentage increase in performance (iCOMP Index 2.0 ratings) to the percentage increase in price, a reseller can easily show the price/performance advantage between a Pentium Pro processor running at 200MHz and a Pentium Pro processor running at 150MHz.

How should PC buyers use iCOMP Index 2.0 when selecting a PC?

Since the microprocessor determines which software can run on a system and how fast it operates, users need to get the processor that's right for them, depending on their applications and usage patterns. An Intel study has found that PC buyers' biggest regret one year after their PC purchase was that they did not buy a powerful enough system. To help users avoid this mistake, Intel developed iCOMP Index 2.0. It provides a single, simple number that helps users compare processors so they can pick the one that best fits their software needs for today and the future. Thus, users should first select a processor powerful enough to run their software for the next few years, and then select the system that contains the other system features that they desire.

Will all systems based on processors with the same iCOMP® Index 2.0 rating perform the same?

No. Differences in system design and configuration will affect performance considerably. Factors such as disk capacity and speed, system memory, system bus features, and video and graphics capabilities will all affect how the system performs under actual conditions of use. However, given systems of comparable configuration and design, the one with the higher iCOMP® Index 2.0 rating will have more power and run software faster. This is where a good, industry-standard benchmark, such as BAPCo SYSmark95* or SYSmarkNT*, would be appropriate for comparing similar systems.

Are there iCOMP Index 2.0 ratings for non-Intel microprocessors?

No. Intel computes and publishes iCOMP Index 2.0 ratings to help users understand the relative performance between Intel microprocessors. However, the iCOMP Index 2.0 formula is publicly available via the Intel World Wide Web site. Anyone who wishes to compute an iCOMP 2.0 rating for their microprocessor can do so.

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For more information on Intel microprocessors, please call 800-628-8686, or see the Intel World Wide Web Home Page at http://www.intel.com

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