

Re: Laptop Performance Revelation

Source:

<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.hardware/2004-09/3249.html>

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Date: 09/17/04

Date: Fri, 17 Sep 2004 15:10:11 -0700

This is a known issue. This is why there is such a push for Low K fabrication which attempts to reduce not only the power consumption, but also the heat. You cannot cram a Pentium 4 Desktop chip into a laptop and expect it to deal with the heat in the same manner as a desktop would. There is not enough space for the heatsink that is necessary. Also, you may notice that the heat on those laptops are enough to burn people. The chips can actually take quite a bit of heat, but they do prevent damaging themselves by reducing their clock frequencies.

This is the price you pay for having a portable solution. This is not false advertising or a scam. It should be understood up front that if you want a mobile computer, it is not going to offer the same performance as a desktop computer. If you need stability and performance, buy a desktop.

As for your tests seeing things running at 600 MHz instead of the 1.33 GHz it should be running at, I would double check all BIOS settings and the program you are using to check the chip's speed. Even the smallest laptops I have used have not dropped that much even when attempting video editing. I have seen it just barely drop under 1.4 GHz on my 1.7 GHz (Pentium M 735) processor at the worst. It is also known that the older Pentium M CPU's (not the Dothan core which started the new numbering scheme) are not as good at dealing with the heat as the new Dothan core ones.

Nathan McNulty

Ron Reaugh wrote:

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> Some small format/ultracompact laptops suffer from a major performance
> deficiency that is being hidden by laptop manufacturers.
>
> Intel CPUs come with built in thermal sensing and self throttle when too
> hot. Some small format laptops simply can not EVER run at full rated CPU
> speed for more than short bursts in a room at normal temperature, 20C.
> Their design includes insufficient thermal dissipation for continuous
> saturated CPU usage. Such continuous CPU usage is seen in backups using
> data compression and many other types of CPU intensive processing like voice
> recognition and Matlab. A Toshiba 3500 TabletPC I've been studying can at
> best run continuously at about 600 MHz(spec is 1.33GHz Pentium M) in a 25C
> room. A Sony X505 contains a very obfuscated disclaimer regarding CPU speed
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> in its spec sheet on its website which is this issue. Similar obfuscated
> disclaimers about CPU speed do appear in both the 3500 and M200 spec sheets
> at Toshiba's website.
>
> This is not a battery saving issue where CPU throttling is a designed in
> positive advertised feature/advanatge. This is all about when the laptop is
> AC powered and one ASSUMES that the laptop provides full performance. It
> does NOT!
>
> One can see this behavior using a program like MobileMeter which will show
> the CPU temperature jumping to a maximum like 88C and then the CPU speed
> plummets.
> <http://dssc3031.ece.cmu.edu/~tamaru/mobilemeter/mobilemeterreadme-e.htm>
> download:
> <http://www.geocities.co.jp/SiliconValley-Oakland/8259/release/0310/mm0310.zip>
>
> Large format laptops like the Sony K27 and Gateway M505 have sufficient
> cooling and will run at full speed continuously.
>
> Is anyone aware of this issue and how widely spread this fraud is?
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