
Subject: Re: GPUlib on my 64-bit WinXP machine
Posted by [b_gom](#) on Fri, 07 Nov 2008 23:30:00 GMT
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OK, I've run some tests on a Core2 Extreme 3 GHz system (Q6850 processor) with 8 GB ram running WinXP 64-bit, against a GeForce GTX 280 video card (~240 pipelines, 1GB RAM). Running the 'bench.pro' routine included with the GPUlib package, I get the following:

```
% Compiled module: BENCH.  
  0.756607  0.756607  1.19352  0.206724  0.0188206  
0.756607  
  0.756607  0.756607  1.19352  0.206724  0.0188206  
0.756607  
N iter =    50  
CPU Time =    2.4840000  
GPU Time =    0.016000032  
Speedup =    155.24968
```

This seems impressive, but the bench routine is highly artificial; it just runs the `gpuLGamma` function repeatedly on a static input array. If I include the time to load the array to GPU memory and read it out after each iteration, the speedup drops to a factor of ~12.

For the other test programs, which have more realistic problems, the speedup ranges from 10 to 100 times.

At any rate, assuming the PC has a fast bus and memory, it appears that for appropriate types of calculations, you are much better off buying a \$500 video card than spending the premium for multiple or faster CPUs. Once the bugs get worked out of the library (memory management is a serious limitation), this should be an extremely useful package.

Brad

On Oct 23, 9:11 am, Vince Hradil <vincehra...@gmail.com> wrote:

```
> I just wanted to share with the group that I got  
theGPUlib[http://www.txcorp.com/technologies/GPULib/] to run on my 64-bit Windows XP  
> machine with the new NVidia Quadro FX 5600 graphics card (1.5Gb frame  
> buffer [http://www.nvidia.com/object/quadro\_fx\_5600\_4600.html]). Many  
> thanks to Peter Messmer at Tech-X for his help getting the correct  
> executable.  
>  
> The results are impressive. I ran all the "demos" and the difference  
> is about 21-24 X! I can't wait to try to do some "real" work using  
> this.
```

```
>
> The CPU on this machine is a Dual Quad-core Intel Xeon (X5482 @
> 3.2GHz), and it has 64Gb RAM, so it's not too shabby itself ;^)
>
> Here's the log from running "bench.pro":
>
> IDL> dlm_load, 'gpulib'
> % Loaded DLM:GPULIB.
>   0.756607   0.756607   1.19352   0.206724   0.0188206
> 0.756607
>   0.756607   0.756607   1.19352   0.206724   0.0188206
> 0.756607
> N iter =    50
> CPU Time =    0.64100003
> GPU Time =    0.031000137
> Speedup =    20.677329
> IDL> print, !version
> { x86_64 Win32 Windows Microsoft Windows 7.0 Oct 25 2007    64
> 64}
>
> Vincehttp://vincehradil.wordpress.com/
```
