



# SPEC® CINT2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X4 925)

SPECint®2006 = 17.0

SPECint\_base2006 = 16.0

CPU2006 license: 13

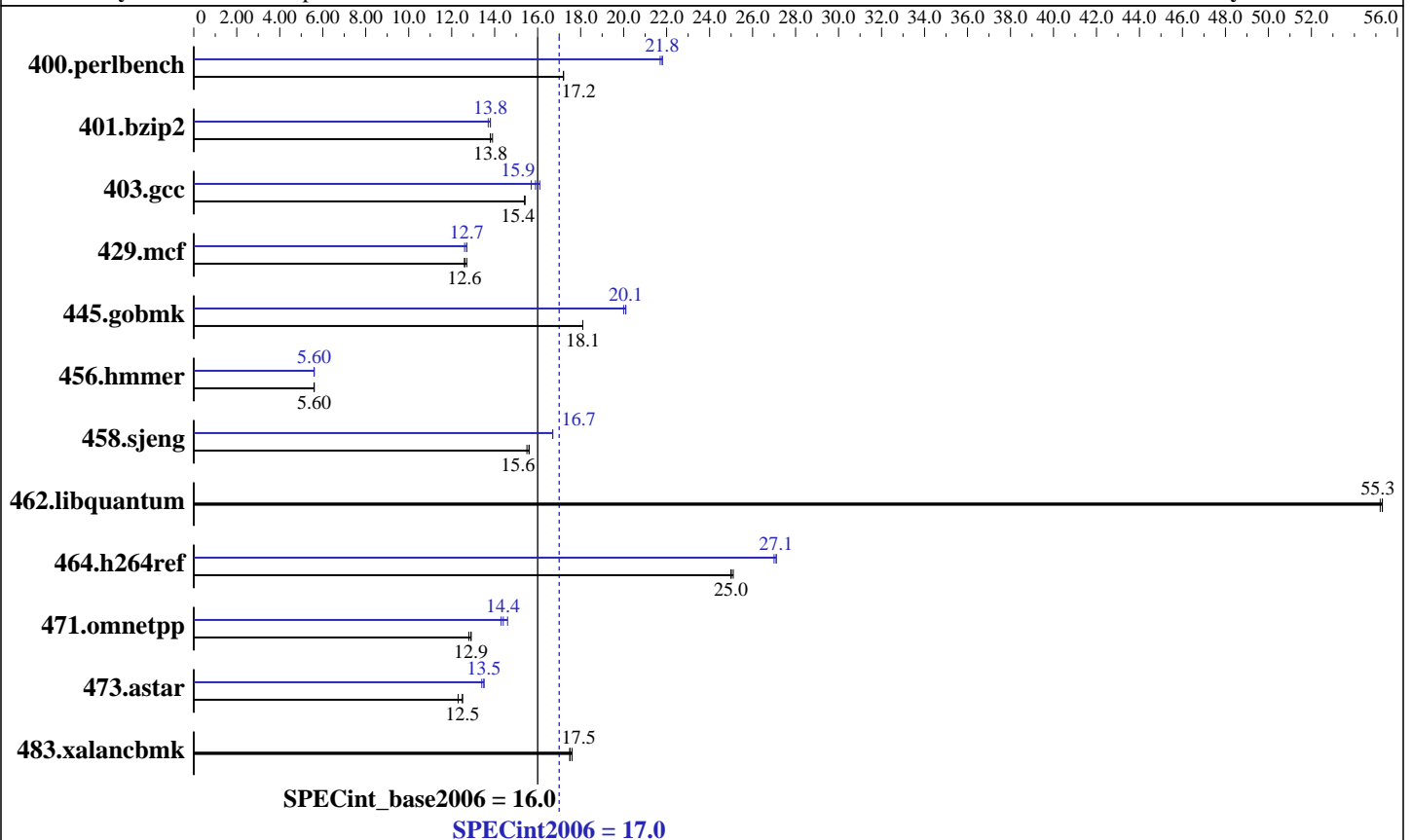
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2009

Hardware Availability: Apr-2009

Software Availability: Nov-2008



## Hardware

CPU Name: AMD Phenom II X4 925  
 CPU Characteristics:  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 512 KB I+D on chip per core  
 L3 Cache: 6 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 4 GB (4x1GB DDR2-800 CL5)  
 Disk Subsystem: Seagate 320 GB SATA, 7200RPM  
 Other Hardware: None

## Software

Operating System: Windows Vista Ultimate w/ SP1 (64-bit)  
 Compiler: Intel C++ Compiler Professional 11.0 for IA32  
 Build 20080930 Package ID: w\_cproc\_p\_11.0.054  
 Microsoft Visual Studio 2008 (for libraries)  
 Auto Parallel: Yes  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32-bit  
 Peak Pointers: 32-bit  
 Other Software: SmartHeap Library Version 8.1 from  
<http://www.microquill.com/>



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>568</b>	<b>17.2</b>	568	17.2	569	17.2	451	21.7	<b>448</b>	<b>21.8</b>	448	21.8
401.bzip2	<b>697</b>	<b>13.8</b>	695	13.9	698	13.8	698	13.8	<b>699</b>	<b>13.8</b>	705	13.7
403.gcc	<b>523</b>	<b>15.4</b>	522	15.4	523	15.4	514	15.7	<b>508</b>	<b>15.9</b>	499	16.1
429.mcf	724	12.6	<b>721</b>	<b>12.6</b>	720	12.7	<b>718</b>	<b>12.7</b>	716	12.7	722	12.6
445.gobmk	<b>579</b>	<b>18.1</b>	580	18.1	579	18.1	524	20.0	<b>523</b>	<b>20.1</b>	522	20.1
456.hammer	1661	5.60	1675	5.60	<b>1673</b>	<b>5.60</b>	1664	5.60	<b>1668</b>	<b>5.60</b>	1675	5.60
458.sjeng	778	15.5	777	15.6	<b>777</b>	<b>15.6</b>	724	16.7	723	16.7	<b>723</b>	<b>16.7</b>
462.libquantum	375	55.3	<b>375</b>	<b>55.3</b>	375	55.2	375	55.3	<b>375</b>	<b>55.3</b>	375	55.2
464.h264ref	<b>885</b>	<b>25.0</b>	885	25.0	883	25.1	816	27.1	819	27.0	<b>816</b>	<b>27.1</b>
471.omnetpp	<b>485</b>	<b>12.9</b>	484	12.9	487	12.8	428	14.6	437	14.3	<b>433</b>	<b>14.4</b>
473.astar	<b>562</b>	<b>12.5</b>	560	12.5	569	12.3	520	13.5	525	13.4	<b>521</b>	<b>13.5</b>
483.xalancbmk	391	17.6	394	17.5	<b>393</b>	<b>17.5</b>	391	17.6	394	17.5	<b>393</b>	<b>17.5</b>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## General Notes

Tested systems can be used with Shin-G ATX case, Antec NeoPower 480W power supply  
Binaries were built on Windows Vista Ultimate (32-bit)

OMP\_NUM\_THREADS set to number of logical processors as seen by the OS

KMP\_AFFINITY set to physical,0

## Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qc99
```

C++ benchmarks:

```
icl -Qvc9
```

## Base Portability Flags

```
403.gcc: -DSPEC_CPU_WIN32
```

```
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
```

```
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```



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## Base Optimization Flags

C benchmarks:

```
/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qpar-runtime-control -Qvec-guard-write /F512000000
```

C++ benchmarks:

```
/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qc99
```

C++ benchmarks:

```
icl -Qvc9
```

## Peak Portability Flags

```
403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE
```

```
401.bzip2: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
/F512000000
```

```
403.gcc: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- /F512000000
```

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## Peak Optimization Flags (Continued)

429.mcf: /arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

445.gobmk: /arch:SSE2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: /arch:SSE2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

458.sjeng: /arch:SSE2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: basepeak = yes

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: /arch:SSE2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-ra-region-strategy=block /F512000000 shlw32m.lib -link /FORCE:MULTIPLE

473.astar: /arch:SSE2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-ra-region-strategy=routine /F512000000 shlw32m.lib -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 01:38:15 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 23 June 2009.