



SPEC® CINT2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X4 955)

SPECint®2006 = 18.6

SPECint_base2006 = 17.6

CPU2006 license: 13

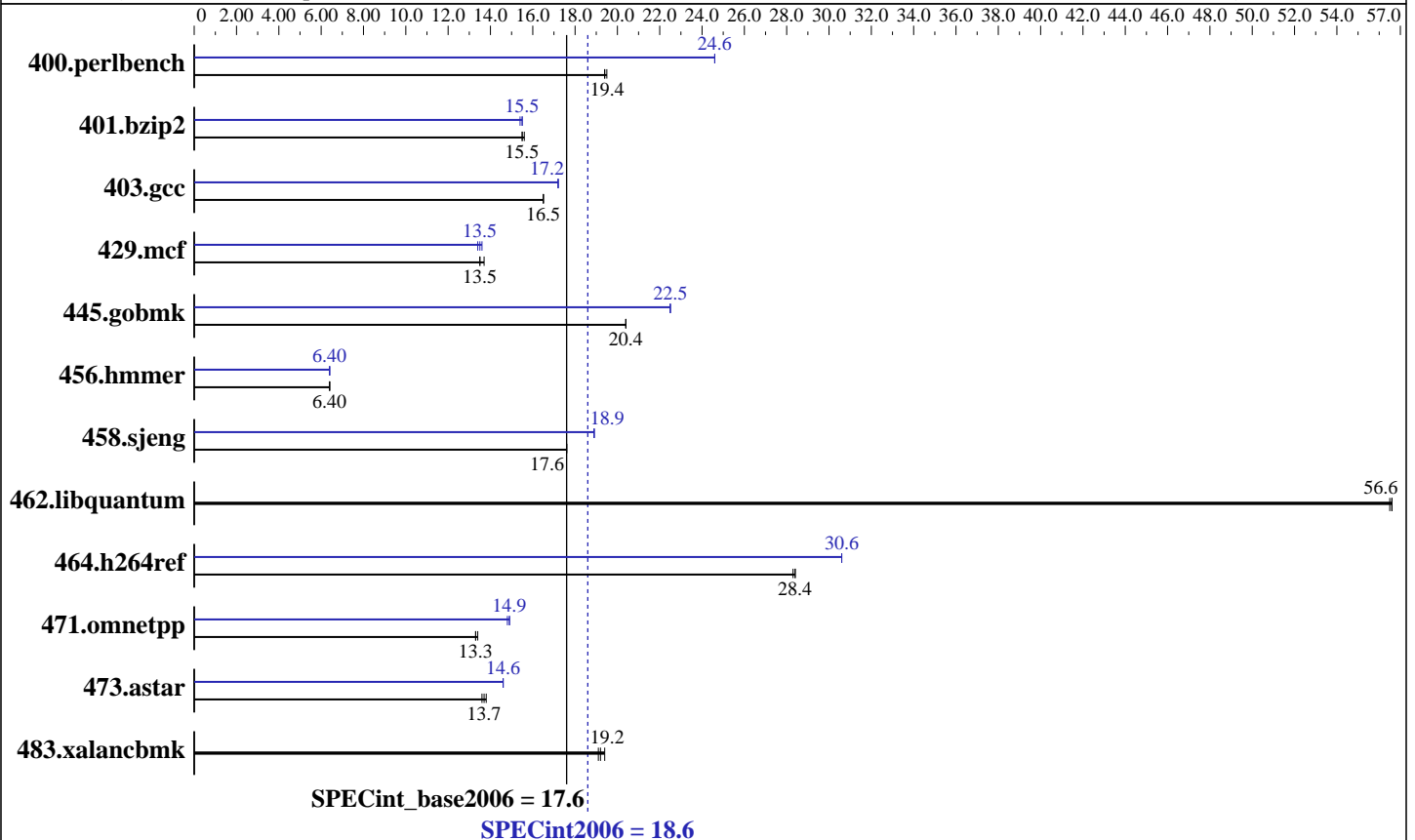
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2009

Hardware Availability: Apr-2009

Software Availability: Nov-2008



Hardware

CPU Name: AMD Phenom II X4 955
 CPU Characteristics:
 CPU MHz: 3200
 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	504	19.4	504	19.4	502	19.5	397	24.6	398	24.6	397	24.6
401.bzip2	620	15.6	621	15.5	623	15.5	628	15.4	624	15.5	624	15.5
403.gcc	488	16.5	488	16.5	488	16.5	467	17.2	467	17.2	468	17.2
429.mcf	677	13.5	666	13.7	674	13.5	669	13.6	674	13.5	679	13.4
445.gobmk	515	20.4	514	20.4	513	20.4	465	22.5	467	22.5	466	22.5
456.hmmr	1468	6.40	1453	6.40	1466	6.40	1463	6.40	1463	6.40	1463	6.40
458.sjeng	688	17.6	688	17.6	687	17.6	640	18.9	641	18.9	640	18.9
462.libquantum	367	56.5	366	56.6	366	56.6	367	56.5	366	56.6	366	56.6
464.h264ref	780	28.4	782	28.3	778	28.4	722	30.6	724	30.6	724	30.6
471.omnetpp	469	13.3	470	13.3	467	13.4	419	14.9	421	14.9	423	14.8
473.astar	515	13.6	514	13.7	510	13.8	480	14.6	482	14.6	481	14.6
483.xalancbmk	361	19.1	360	19.2	355	19.4	361	19.1	360	19.2	355	19.4

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.xalanbmk: -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.

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