



SPEC® CINT2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X4 810)

SPECint®_rate2006 = 45.7

SPECint_rate_base2006 = 44.5

CPU2006 license: 13

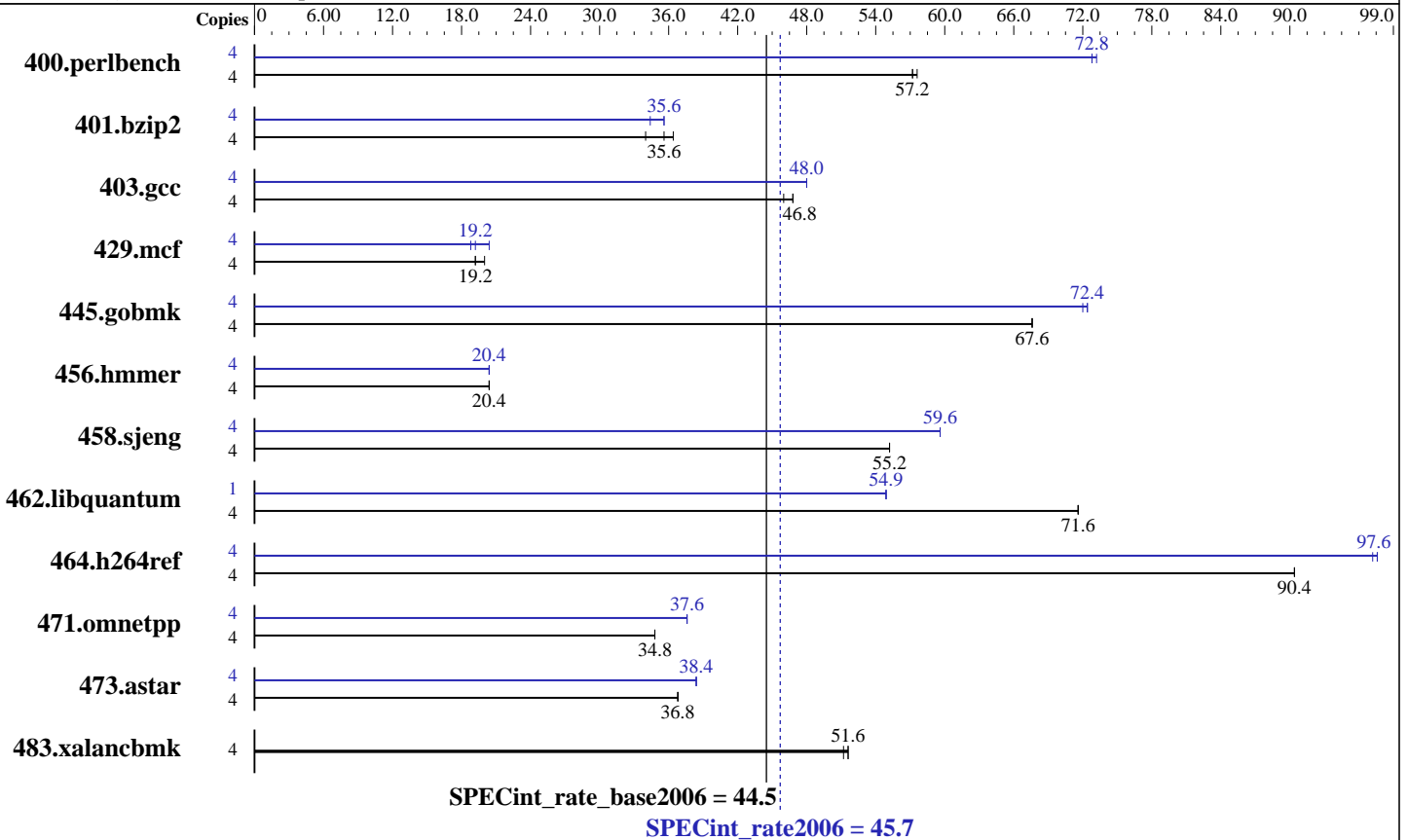
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2009

Hardware Availability: Feb-2009

Software Availability: Nov-2008



Hardware

CPU Name: AMD Phenom II X4 810
 CPU Characteristics:
 CPU MHz: 2600
 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: 4 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	683	<u>57.2</u>	678	57.6	685	57.2	4	536	72.8	536	<u>72.8</u>	535	73.2
401.bzip2	4	1088	<u>35.6</u>	1063	36.4	1132	34.0	4	1085	<u>35.6</u>	1081	35.6	1129	34.4
403.gcc	4	685	46.8	699	46.0	688	46.8	4	668	48.0	669	48.0	671	48.0
429.mcf	4	1830	20.0	1881	19.2	1902	19.2	4	1913	19.2	1783	20.4	1923	18.8
445.gobmk	4	620	67.6	622	67.6	620	67.6	4	582	72.0	579	72.4	581	72.4
456.hammer	4	1820	20.4	1817	20.4	1813	20.4	4	1814	20.4	1812	20.4	1812	20.4
458.sjeng	4	879	<u>55.2</u>	880	55.2	879	55.2	4	811	59.6	811	59.6	811	59.6
462.libquantum	4	1157	71.6	1158	71.6	1157	71.6	1	377	54.9	377	54.9	378	54.9
464.h264ref	4	979	90.4	980	90.4	981	90.4	4	909	97.2	908	97.6	907	97.6
471.omnetpp	4	719	34.8	719	34.8	719	34.8	4	667	37.6	667	37.6	667	37.6
473.astar	4	764	36.8	764	36.8	764	36.8	4	729	38.4	728	38.4	728	38.4
483.xalancbmk	4	537	51.2	536	51.6	536	51.6	4	537	51.2	536	51.6	536	51.6

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

Submit Notes

The config file option 'submit' was used.

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
submit disabled for 462.libquantum peak

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

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Base Portability Flags (Continued)

483.xalanbmk: -Qoption,cpp,--no_wchar_t_keyword

Base Optimization Flags

C benchmarks:

/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /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

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Peak Optimization Flags (Continued)

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- -Qopt-prefetch /F512000000

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

445.gobmk: /arch:SSE2 -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O2 -Qprec-div- -Qansi-alias /F512000000

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

464.h264ref: Same as 456.hmmcr

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



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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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