SPEC® CINT2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

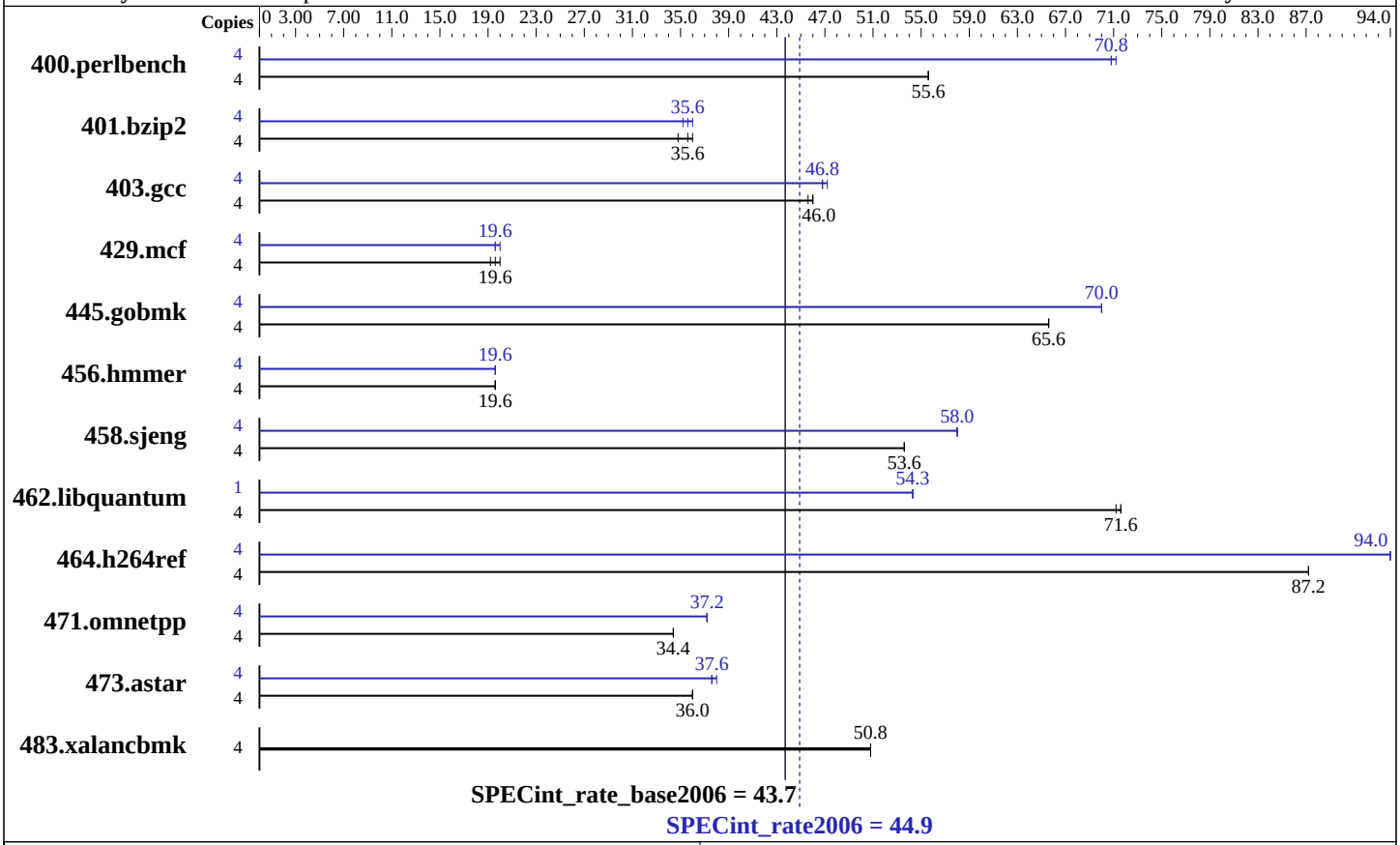
Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X4 805)

SPECint®_rate2006 = 44.9

SPECint_rate_base2006 = 43.7

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 805
CPU Characteristics:	
CPU MHz:	2500
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	704	55.6	**704**	**55.6**	704	55.6	4	**551**	**70.8**	550	71.2	551	70.8
401.bzip2	4	1112	34.8	1077	36.0	**1081**	**35.6**	4	**1088**	**35.6**	1069	36.0	1102	35.2
403.gcc	4	**701**	**46.0**	709	45.6	701	46.0	4	**685**	**46.8**	684	47.2	688	46.8
429.mcf	4	1893	19.2	**1874**	**19.6**	1842	20.0	4	**1856**	**19.6**	1864	19.6	1813	20.0
445.gobmk	4	640	65.6	642	65.6	**641**	**65.6**	4	599	70.0	598	70.0	**598**	**70.0**
456.hmmer	4	1891	19.6	1896	19.6	**1891**	**19.6**	4	1890	19.6	1886	19.6	**1890**	**19.6**
458.sjeng	4	**903**	**53.6**	904	53.6	902	53.6	4	836	58.0	837	58.0	**837**	**58.0**
462.libquantum	4	**1160**	**71.6**	1160	71.6	1164	71.2	1	381	54.3	382	54.3	**381**	**54.3**
464.h264ref	4	1014	87.2	1016	87.2	**1015**	**87.2**	4	941	94.0	940	94.0	**940**	**94.0**
471.omnetpp	4	**728**	**34.4**	727	34.4	728	34.4	4	672	37.2	672	37.2	**672**	**37.2**
473.astar	4	780	36.0	**780**	**36.0**	780	36.0	4	**743**	**37.6**	745	37.6	743	38.0
483.xalancbmk	4	542	50.8	544	50.8	**543**	**50.8**	4	542	50.8	544	50.8	**543**	**50.8**

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`

Continued on next page

Base Portability Flags (Continued)

483.xalancbmk: `-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.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`

Continued on next page

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.hmmer: /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.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.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 01:35:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 June 2009.