SPEC® CINT2006 Result
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GIGA-BYTE Technology Co. Ltd.
(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X3 720)

$SPECint^®\_rate2006 =$ 41.2
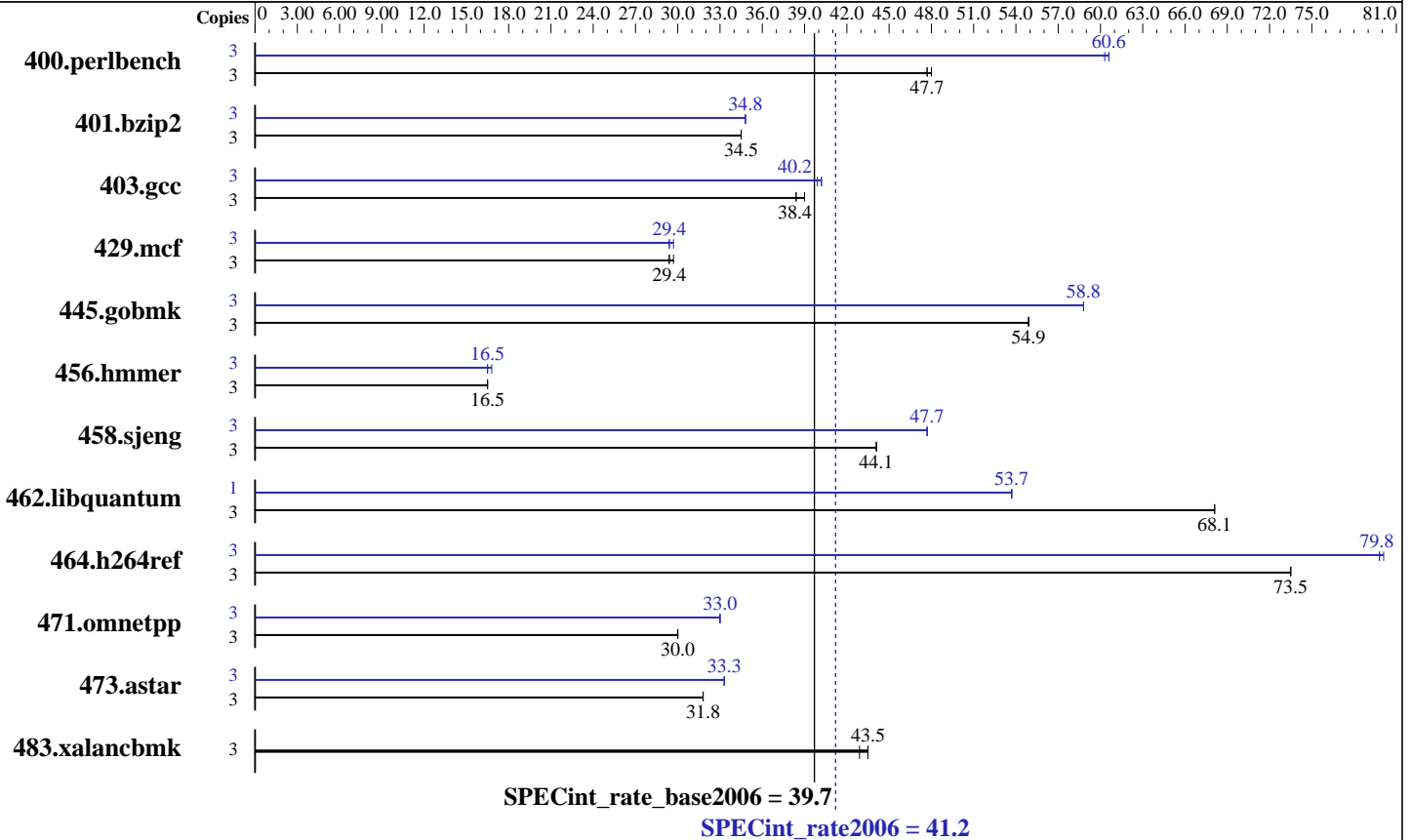
SPECint_rate_base2006 = 39.7

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: May-2009
Hardware Availability: Feb-2009
Software Availability: Nov-2008

Benchmark	Copies	Value (blue)	Value (black)
400.perlbench	3 / 3	60.6	47.7
401.bzip2	3 / 3	34.8	34.5
403.gcc	3 / 3	40.2	38.4
429.mcf	3 / 3	29.4	29.4
445.gobmk	3 / 3	58.8	54.9
456.hmmer	3 / 3	16.5	16.5
458.sjeng	3 / 3	47.7	44.1
462.libquantum	1 / 3	53.7	68.1
464.h264ref	3 / 3	79.8	73.5
471.omnetpp	3 / 3	33.0	30.0
473.astar	3 / 3	33.3	31.8
483.xalancbmk	3		43.5

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Hardware

CPU Name: AMD Phenom II X3 720
CPU Characteristics:
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 3 cores, 1 chip, 3 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 Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	3	615	47.7	**614**	**47.7**	612	48.0	3	**485**	**60.6**	484	60.6	486	60.3
401.bzip2	3	837	34.5	836	34.5	**837**	**34.5**	3	832	34.8	833	34.8	**832**	**34.8**
403.gcc	3	620	39.0	627	38.4	**627**	**38.4**	3	**601**	**40.2**	599	40.2	604	39.9
429.mcf	3	**928**	**29.4**	930	29.4	924	29.7	3	**927**	**29.4**	925	29.7	930	29.4
445.gobmk	3	574	54.9	575	54.9	**574**	**54.9**	3	536	58.8	**536**	**58.8**	536	58.8
456.hmmer	3	1688	16.5	**1686**	**16.5**	1686	16.5	3	**1683**	**16.5**	1689	16.5	1677	16.8
458.sjeng	3	824	44.1	**823**	**44.1**	823	44.1	3	**760**	**47.7**	760	47.7	759	47.7
462.libquantum	3	914	68.1	913	68.1	**914**	**68.1**	1	386	53.7	**386**	**53.7**	386	53.7
464.h264ref	3	902	73.5	**903**	**73.5**	903	73.5	3	831	79.8	**831**	**79.8**	830	80.1
471.omnetpp	3	625	30.0	**624**	**30.0**	623	30.0	3	**571**	**33.0**	571	33.0	571	33.0
473.astar	3	**663**	**31.8**	661	31.8	664	31.8	3	633	33.3	631	33.3	**632**	**33.3**
483.xalancbmk	3	481	42.9	**477**	**43.5**	476	43.5	3	481	42.9	**477**	**43.5**	476	43.5

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.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`

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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.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`

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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-icl1.0-win32-revA.html

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

http://www.spec.org/cpu2006/flags/Intel-icl1.0-win32-revA.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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