SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

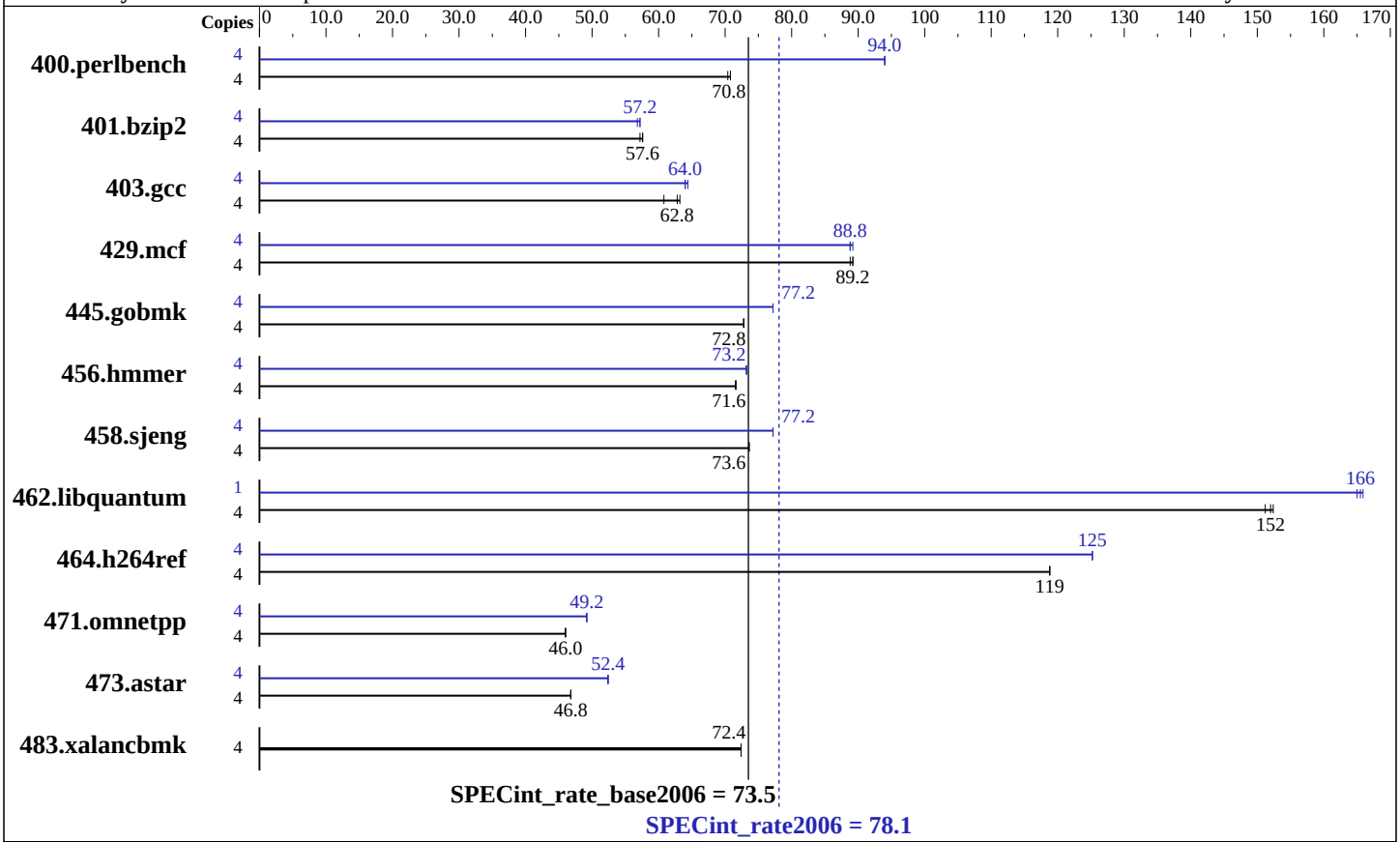
Asus P5E3 Premium (Intel Core 2 Quad Q9450)

SPECint®_rate2006 = 78.1

SPECint_rate_base2006 = 73.5

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

Test date: Oct-2008
Hardware Availability: Apr-2008
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Core 2 Quad Q9450
CPU Characteristics:	
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	4 GB (4 x 1GB Corsair CM3X1024-1333C9DHX DDR3-1333 CL9)
Disk Subsystem:	80 GB Intel X-25M SATA Solid-State Drive
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:	None
	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	554	70.4	**553**	**70.8**	553	70.8	4	**416**	**94.0**	416	94.0	416	94.0
401.bzip2	4	672	57.6	673	57.2	**672**	**57.6**	4	674	57.2	**674**	**57.2**	678	56.8
403.gcc	4	**513**	**62.8**	529	60.8	511	63.2	4	502	64.4	**504**	**64.0**	504	64.0
429.mcf	4	**410**	**89.2**	410	88.8	409	89.2	4	**410**	**88.8**	409	89.2	411	88.8
445.gobmk	4	576	72.8	576	72.8	**576**	**72.8**	4	544	77.2	544	77.2	**544**	**77.2**
456.hmmer	4	**521**	**71.6**	521	71.6	521	71.6	4	510	73.2	510	73.2	**510**	**73.2**
458.sjeng	4	657	73.6	657	73.6	**657**	**73.6**	4	629	77.2	**628**	**77.2**	628	77.2
462.libquantum	4	548	151	**546**	**152**	543	152	1	**125**	**166**	125	166	126	165
464.h264ref	4	**745**	**119**	745	119	745	119	4	**707**	**125**	707	125	707	125
471.omnetpp	4	543	46.0	543	46.0	**543**	**46.0**	4	507	49.2	**508**	**49.2**	508	49.2
473.astar	4	601	46.8	602	46.8	**601**	**46.8**	4	537	52.4	**537**	**52.4**	537	52.4
483.xalancbmk	4	382	72.4	382	72.4	**382**	**72.4**	4	382	72.4	382	72.4	**382**	**72.4**

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,
PC Power and Cooling 1200W power supply
The system bus runs at 1333 MHz
System was configured with nVidia GTX 280 discrete graphics card
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`
483.xalancbmk: `-Qoption,cpp,--no_wchar_t_keyword`

Base Optimization Flags

C benchmarks:
`-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000`

C++ benchmarks:
`-QxSSE4.1 -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: `-QxSSE4.1`(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: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias /F512000000

403.gcc: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

429.mcf: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

445.gobmk: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

458.sjeng: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qpar-runtime-control -Qvec-guard-write /F512000000

464.h264ref: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: -QxSSE4.1(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: -QxSSE4.1(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 files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090713.html
http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090713.xml
http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.xml

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 20:21:38 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 11 November 2008.