SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

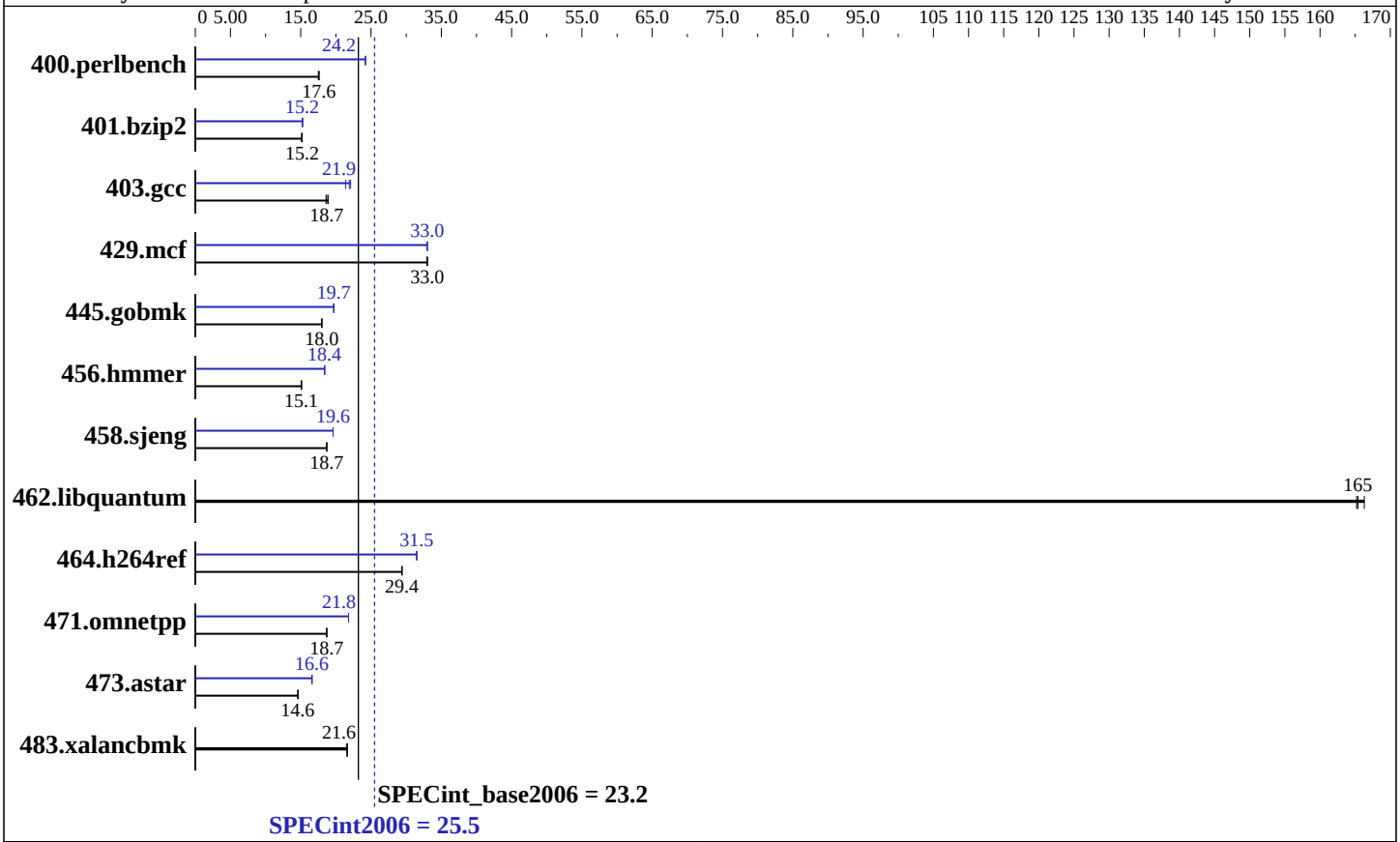
Asus P5E3 Premium (Intel Core 2 Quad Q9450)

SPECint®2006 = 25.5

SPECint_base2006 = 23.2

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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	556	17.6	558	17.5	**556**	**17.6**	404	24.2	**404**	**24.2**	403	24.2
401.bzip2	**637**	**15.2**	638	15.1	635	15.2	**633**	**15.2**	633	15.2	632	15.3
403.gcc	433	18.6	**431**	**18.7**	427	18.9	**368**	**21.9**	376	21.4	364	22.1
429.mcf	276	33.0	**276**	**33.0**	276	33.0	276	33.0	276	33.0	**276**	**33.0**
445.gobmk	582	18.0	**582**	**18.0**	582	18.0	**532**	**19.7**	532	19.7	532	19.7
456.hmmer	**618**	**15.1**	618	15.1	618	15.1	506	18.4	**506**	**18.4**	506	18.4
458.sjeng	**648**	**18.7**	648	18.7	648	18.7	**618**	**19.6**	618	19.6	618	19.6
462.libquantum	**125**	**165**	125	166	125	165	**125**	**165**	125	166	125	165
464.h264ref	**752**	**29.4**	752	29.4	753	29.4	702	31.5	**702**	**31.5**	702	31.5
471.omnetpp	334	18.7	**334**	**18.7**	335	18.7	287	21.8	287	21.8	**287**	**21.8**
473.astar	482	14.6	482	14.6	**482**	**14.6**	424	16.6	**424**	**16.6**	424	16.6
483.xalancbmk	319	21.6	**319**	**21.6**	320	21.6	319	21.6	**319**	**21.6**	320	21.6

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,
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
```

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 -Qparallel
-Qpar-runtime-control -Qvec-guard-write /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`

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- /F512000000`

Continued on next page

Peak Optimization Flags (Continued)

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: basepeak = yes

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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