SPEC® CINT2006 Result

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Intel Corporation

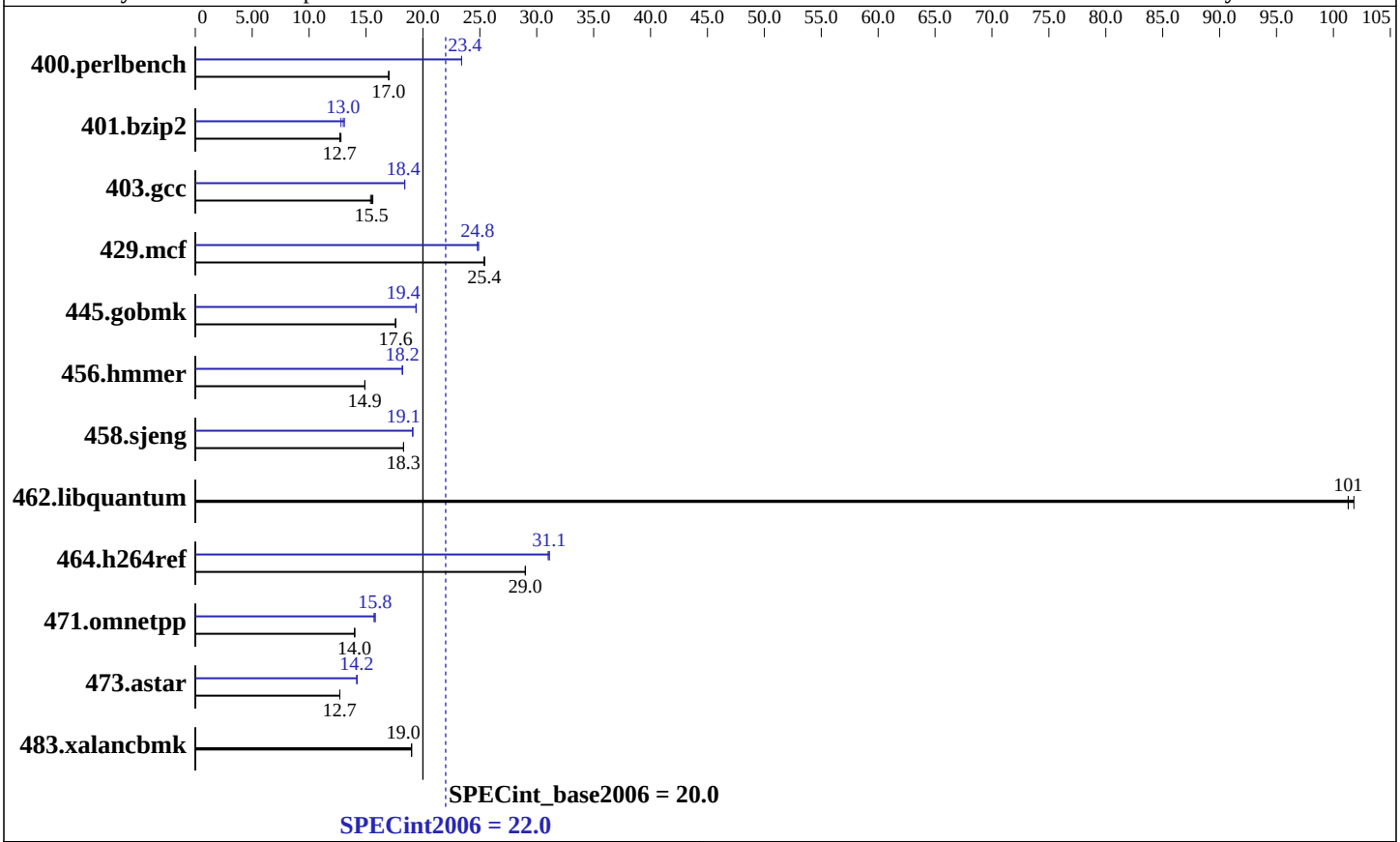
Intel DQ45CB motherboard (Intel Core 2 Quad Q8400)

SPECint®2006 = 22.0

SPECint_base2006 = 20.0

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

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



Hardware

CPU Name:	Intel Core 2 Quad Q8400
CPU Characteristics:	
CPU MHz:	2666
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:	4 MB I+D on chip per chip, 2 MB shared / 2 cores
L3 Cache:	None
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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	573	17.0	**573**	**17.0**	574	17.0	**418**	**23.4**	418	23.4	418	23.4
401.bzip2	760	12.7	**760**	**12.7**	752	12.8	756	12.8	**745**	**13.0**	734	13.1
403.gcc	**518**	**15.5**	516	15.6	524	15.4	438	18.4	**438**	**18.4**	437	18.4
429.mcf	358	25.4	360	25.4	**359**	**25.4**	366	24.9	**367**	**24.8**	368	24.8
445.gobmk	**595**	**17.6**	595	17.6	596	17.6	540	19.4	**540**	**19.4**	540	19.4
456.hmmer	625	14.9	625	14.9	**625**	**14.9**	514	18.2	514	18.2	**514**	**18.2**
458.sjeng	**662**	**18.3**	661	18.3	662	18.3	634	19.1	634	19.1	**634**	**19.1**
462.libquantum	204	102	205	101	**205**	**101**	204	102	205	101	**205**	**101**
464.h264ref	763	29.0	**763**	**29.0**	763	29.0	**713**	**31.1**	712	31.1	713	31.0
471.omnetpp	446	14.0	**446**	**14.0**	446	14.0	397	15.7	396	15.8	**397**	**15.8**
473.astar	551	12.7	**552**	**12.7**	552	12.7	495	14.2	494	14.2	**494**	**14.2**
483.xalancbmk	363	19.0	363	19.0	**363**	**19.0**	363	19.0	363	19.0	**363**	**19.0**

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,
Antec Truepower Trio power supply TP3-650
Binaries were built on Windows Vista Ultimate (32-bit)
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:
```
-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qpar-runtime-control -Qvec-guard-write /F512000000
```

C++ benchmarks:
```
-QxSSSE3 -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: `-QxSSSE3`(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: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2)
`-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias`
`/F512000000`

403.gcc: `-QxSSSE3`(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: -QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

445.gobmk: -QxSSSE3 -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: -QxSSSE3 -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

458.sjeng: -QxSSSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: basepeak = yes

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -QxSSSE3(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: -QxSSSE3(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.20090710.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.20090710.xml

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