



SPEC® CINT2006 Result

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Intel Corporation

Asus P5E3 Pro motherboard (Intel Core 2 Extreme QX9770)

SPECint®2006 = 28.4

SPECint_base2006 = 27.3

CPU2006 license: 13

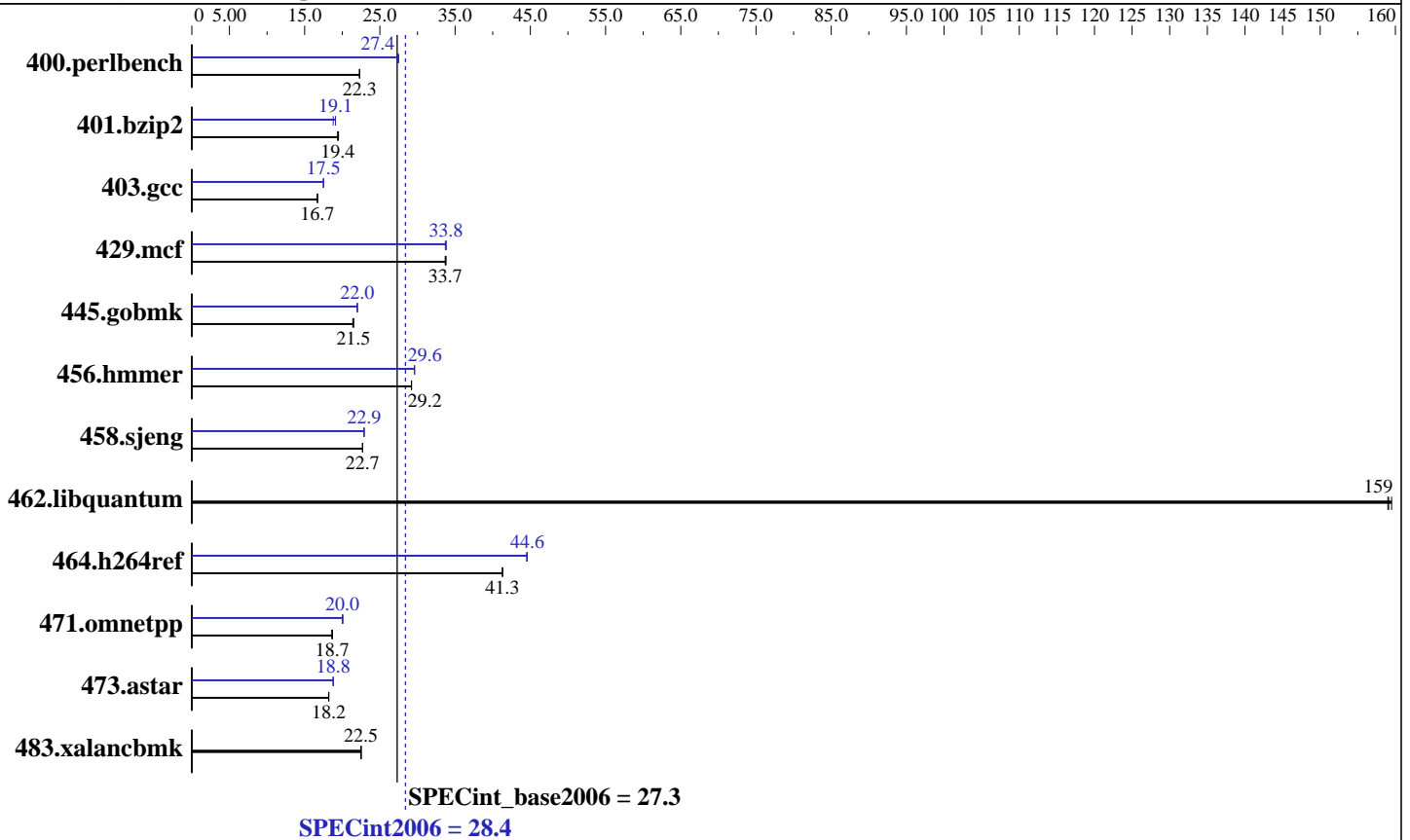
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Feb-2010

Hardware Availability: Jun-2009

Software Availability: Oct-2009



Hardware

CPU Name: Intel Core 2 Extreme QX9770
 CPU Characteristics:
 CPU MHz: 3200
 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 (2x2GB Micron MT16JTF25664AZ-1G4 DDR3-1333 CL9)
 Disk Subsystem: Intel X25-M 80GB SSD
 Other Hardware: None

Software

Operating System: Windows Vista Ultimate w/ SP1 (64-bit)
 Compiler: Intel C++ Compiler Professional 11.1 for Intel 64 Build 20090903 Package ID: w_cproc_p_11.1.045
 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
 Auto Parallel: Yes
 File System: NTFS
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 64-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	438	22.3	438	22.3	<u>438</u>	<u>22.3</u>	356	27.5	356	27.4	<u>356</u>	<u>27.4</u>
401.bzip2	499	19.4	494	19.5	<u>497</u>	<u>19.4</u>	506	19.1	515	18.8	<u>506</u>	<u>19.1</u>
403.gcc	481	16.7	481	16.7	<u>481</u>	<u>16.7</u>	461	17.5	<u>461</u>	<u>17.5</u>	461	17.5
429.mcf	270	33.7	<u>270</u>	<u>33.7</u>	270	33.8	270	33.8	<u>270</u>	<u>33.8</u>	271	33.7
445.gobmk	488	21.5	<u>488</u>	<u>21.5</u>	489	21.4	477	22.0	477	22.0	<u>477</u>	<u>22.0</u>
456.hmmer	319	29.2	<u>319</u>	<u>29.2</u>	319	29.2	<u>315</u>	<u>29.6</u>	315	29.6	315	29.6
458.sjeng	533	22.7	<u>533</u>	<u>22.7</u>	533	22.7	528	22.9	528	22.9	<u>528</u>	<u>22.9</u>
462.libquantum	130	159	<u>130</u>	<u>159</u>	130	160	130	159	<u>130</u>	<u>159</u>	130	160
464.h264ref	536	41.3	536	41.3	<u>536</u>	<u>41.3</u>	497	44.6	497	44.5	<u>497</u>	<u>44.6</u>
471.omnetpp	<u>335</u>	<u>18.7</u>	334	18.7	335	18.6	312	20.1	313	20.0	<u>312</u>	<u>20.0</u>
473.astar	385	18.2	<u>386</u>	<u>18.2</u>	386	18.2	373	18.8	373	18.8	<u>373</u>	<u>18.8</u>
483.xalancbmk	307	22.5	<u>306</u>	<u>22.5</u>	306	22.5	307	22.5	<u>306</u>	<u>22.5</u>	306	22.5

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
 OMP_NUM_THREADS set to number of processors cores
 KMP_AFFINITY set to granularity=fine,scatter
 System was configured with an ATI 5970 discrete graphics card

Base Compiler Invocation

C benchmarks:

icl -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

Base Portability Flags

400.perlbench: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64_X64
 -DSPEC_CPU_NO_NEED_VA_COPY

401.bzip2: -DSPEC_CPU_P64

403.gcc: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64

429.mcf: -DSPEC_CPU_P64

445.gobmk: -DSPEC_CPU_P64

456.hmmer: -DSPEC_CPU_P64

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Base Portability Flags (Continued)

```

458.sjeng: -DSPEC_CPU_P64
462.libquantum: -DSPEC_CPU_P64
464.h264ref: -DSPEC_CPU_P64 -DWIN32 -DSPEC_CPU_NO_INTTYPES
471.omnetpp: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
473.astar: -DSPEC_CPU_P64
483.xalancbmk: -DSPEC_CPU_P64 -Qoption,cpp,--no_wchar_t_keyword

```

Base Optimization Flags

```

C benchmarks:
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F512000000

C++ benchmarks:
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F512000000 shlw64M.lib -link /FORCE:MULTIPLE

```

Base Other Flags

```

C benchmarks:
403.gcc: -Dalloca=_alloca

```

Peak Compiler Invocation

```

C benchmarks:
icl -Qvc9 -Qstd=c99

C++ benchmarks:
icl -Qvc9

```

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

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Peak Optimization Flags (Continued)

400.perlbench: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F512000000 shlw64M.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
-Qauto-ilp32 /F512000000

403.gcc: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qauto-ilp32 /F512000000

429.mcf: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch
-Qauto-ilp32 /F512000000

445.gobmk: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O2 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F512000000

456.hmmer: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qauto-ilp32 /F512000000

458.sjeng: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto-ilp32 /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
-Qauto-ilp32 /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 -Qauto-ilp32 /F512000000
shlw64M.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 -Qauto-ilp32 /F512000000
shlw64M.lib -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes



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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-winx64-revA.20100302.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20100302.01.xml>

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

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