SPEC® CINT2006 Result
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Intel Corporation

SPECint®_rate2006 =　59.4

Intel DQ45CB motherboard (Intel Core 2 Quad Q8400)
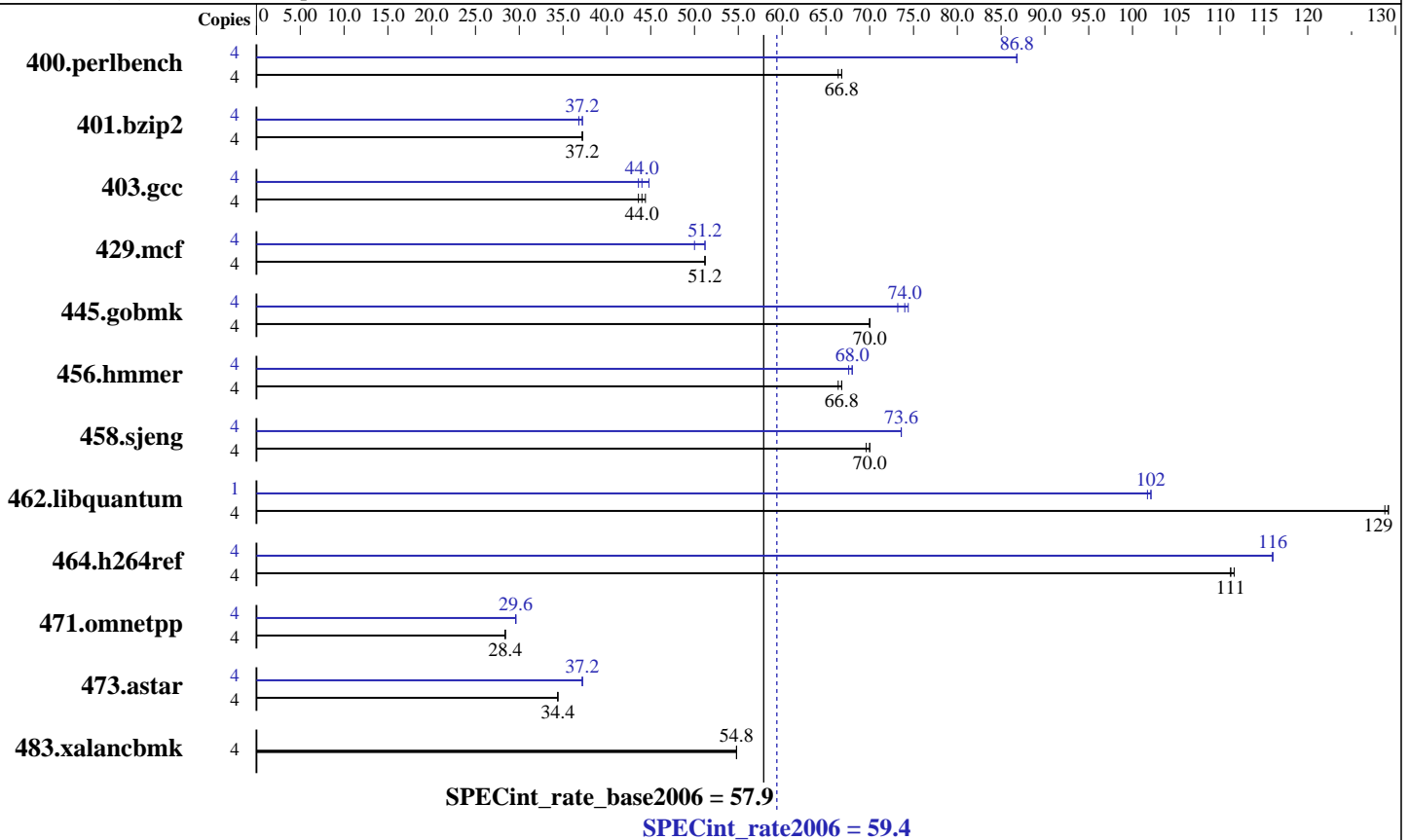
SPECint_rate_base2006 = 57.9

CPU2006 license: 13　　　　　　　　　　　　　　　　　　　　　　**Test date:**　Apr-2009
Test sponsor:　Intel Corporation　　　　　　　　　　　　　**Hardware Availability:** May-2009
Tested by:　　Intel Corporation　　　　　　　　　　　　　**Software Availability:**　Nov-2008

SPECint_rate_base2006 = 57.9

SPECint_rate2006 = 59.4

400.perlbench	4 → 86.8; 4 → 66.8
401.bzip2	4 → 37.2; 4 → 37.2
403.gcc	4 → 44.0; 4 → 44.0
429.mcf	4 → 51.2; 4 → 51.2
445.gobmk	4 → 74.0; 4 → 70.0
456.hmmer	4 → 68.0; 4 → 66.8
458.sjeng	4 → 73.6; 4 → 70.0
462.libquantum	1 → 102; 4 → 129
464.h264ref	4 → 116; 4 → 111
471.omnetpp	4 → 29.6; 4 → 28.4
473.astar	4 → 37.2; 4 → 34.4
483.xalancbmk	4 → 54.8

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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	587	66.4	**586**	**66.8**	585	66.8	4	**450**	**86.8**	449	86.8	450	86.8
401.bzip2	4	**1038**	**37.2**	1038	37.2	1035	37.2	4	1035	37.2	1045	36.8	**1037**	**37.2**
403.gcc	4	**731**	**44.0**	725	44.4	736	43.6	4	**732**	**44.0**	736	43.6	721	44.8
429.mcf	4	713	51.2	713	51.2	**713**	**51.2**	4	733	50.0	**714**	**51.2**	713	51.2
445.gobmk	4	599	70.0	**598**	**70.0**	598	70.0	4	574	73.2	**568**	**74.0**	563	74.4
456.hmmer	4	559	66.8	**560**	**66.8**	560	66.4	4	**550**	**68.0**	550	68.0	551	67.6
458.sjeng	4	**693**	**70.0**	694	69.6	693	70.0	4	**658**	**73.6**	658	73.6	658	73.6
462.libquantum	4	643	129	642	129	**642**	**129**	1	203	102	**203**	**102**	204	102
464.h264ref	4	795	112	796	111	**796**	**111**	4	764	116	**764**	**116**	763	116
471.omnetpp	4	**886**	**28.4**	886	28.4	886	28.4	4	847	29.6	846	29.6	**847**	**29.6**
473.astar	4	**819**	**34.4**	819	34.4	820	34.4	4	757	37.2	**757**	**37.2**	758	37.2
483.xalancbmk	4	503	54.8	504	54.8	**504**	**54.8**	4	503	54.8	504	54.8	**504**	**54.8**

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 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
submit disabled for 462.libquantum peak
```

Base Compiler Invocation

C benchmarks:
```
icl -Qvc9 -Qc99
```

C++ benchmarks:
```
icl -Qvc9
```

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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 /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
```

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Peak Optimization Flags (Continued)

```
   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- -Qopt-prefetch /F512000000

     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: -QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
              -Qpar-runtime-control -Qvec-guard-write /F512000000

  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

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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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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 00:59:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 June 2009.