



SPEC® CINT2006 Result

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Intel Corporation

SPECint®_rate2006 = 63.9

Intel DH55PJ Motherboard (Intel Core i5-650)

SPECint_rate_base2006 = 59.3

CPU2006 license: 13

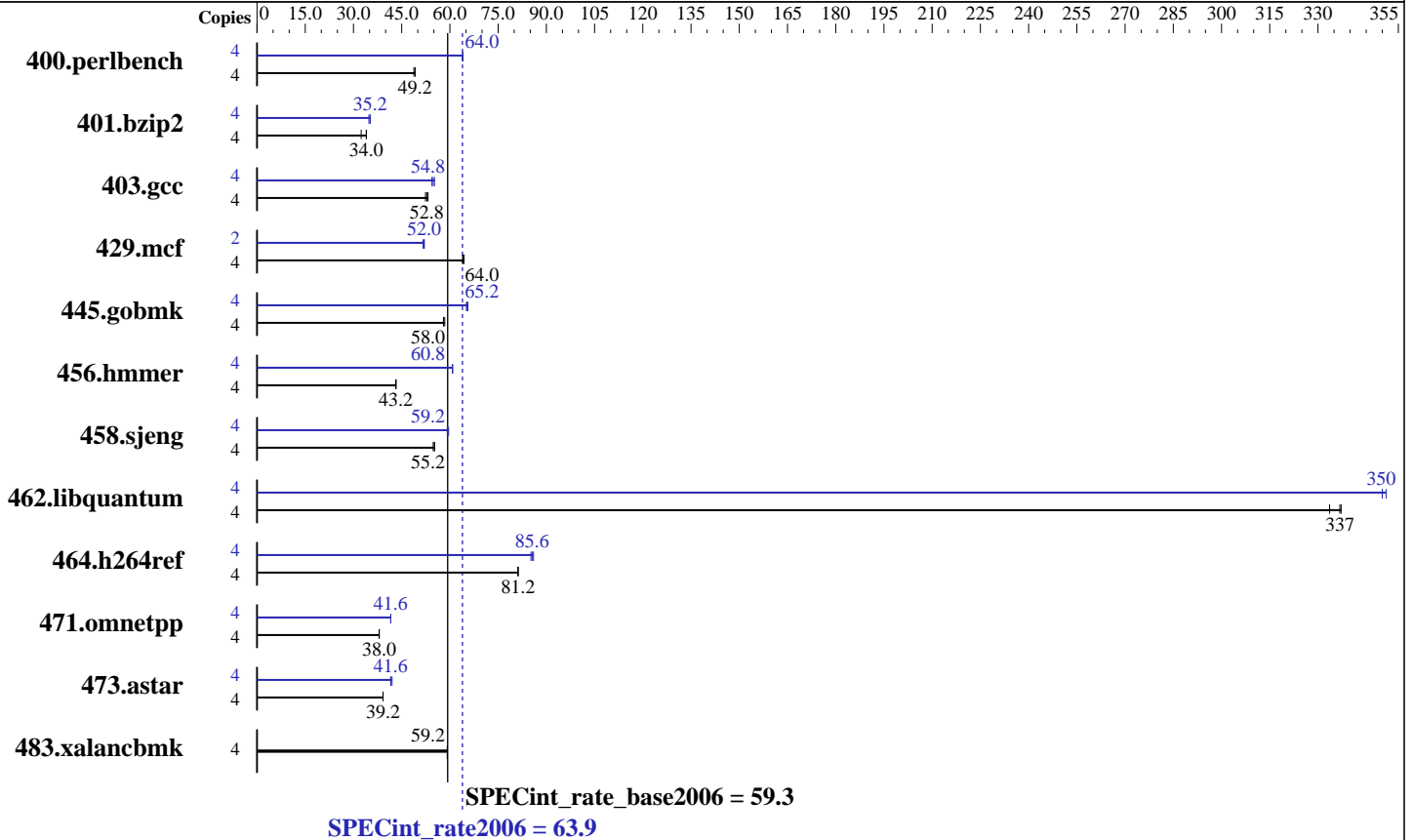
Test date: Feb-2011

Test sponsor: Intel Corporation

Hardware Availability: Jan-2010

Tested by: Intel Corporation

Software Availability: Oct-2010



Hardware

CPU Name: Intel Core i5-650
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 4 MB I+D on chip per chip
 Other Cache: None
 Memory: 4 GB (2 x 2 GB 2Rx8 PC3-10600U-9)
 Disk Subsystem: Seagate 1 TB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Windows Vista Ultimate w/ SP1 (64-bit)
 Compiler: Intel C++ Compiler XE for IA32 and Intel 64 Version 12.0.0.104 Build 20101006
 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
 Auto Parallel: No
 File System: NTFS
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 9.01 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	795	49.2	<u>797</u>	<u>49.2</u>	799	48.8	4	<u>610</u>	<u>64.0</u>	610	64.0	609	64.0
401.bzip2	4	1185	32.4	1141	34.0	<u>1141</u>	<u>34.0</u>	4	1105	34.8	<u>1103</u>	<u>35.2</u>	1103	35.2
403.gcc	4	<u>609</u>	<u>52.8</u>	614	52.4	606	53.2	4	585	55.2	<u>588</u>	<u>54.8</u>	592	54.4
429.mcf	4	567	64.4	569	64.0	<u>569</u>	<u>64.0</u>	2	<u>351</u>	<u>52.0</u>	351	52.0	354	51.6
445.gobmk	4	720	58.4	<u>723</u>	<u>58.0</u>	724	58.0	4	<u>642</u>	<u>65.2</u>	645	65.2	639	65.6
456.hammer	4	864	43.2	<u>865</u>	<u>43.2</u>	866	43.2	4	615	60.8	<u>615</u>	<u>60.8</u>	615	60.8
458.sjeng	4	879	55.2	<u>880</u>	<u>55.2</u>	881	54.8	4	<u>815</u>	<u>59.2</u>	816	59.2	810	59.6
462.libquantum	4	246	337	248	334	<u>246</u>	<u>337</u>	4	<u>237</u>	<u>350</u>	237	350	236	351
464.h264ref	4	1088	81.2	<u>1092</u>	<u>81.2</u>	1092	81.2	4	1038	85.2	<u>1034</u>	<u>85.6</u>	1030	86.0
471.omnetpp	4	657	38.0	<u>657</u>	<u>38.0</u>	656	38.0	4	<u>599</u>	<u>41.6</u>	600	41.6	599	41.6
473.astar	4	717	39.2	<u>717</u>	<u>39.2</u>	716	39.2	4	675	41.6	672	42.0	<u>673</u>	<u>41.6</u>
483.xalancbmk	4	466	59.2	<u>466</u>	<u>59.2</u>	466	59.2	4	466	59.2	<u>466</u>	<u>59.2</u>	466	59.2

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.

The start command with the /affinity switch was used to bind processes to cores

General Notes

Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply

Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qstd=c99
```

C++ benchmarks:

```
icl -Qvc9
```

Base Portability Flags

```
403.gcc: -DSPEC_CPU_WIN32
```

```
464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES
```

```
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword
```



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Base Optimization Flags

C benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

C++ benchmarks:

-QxSSE4.2 -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 (except as noted below):

icl -Qvc9 -Qstd=c99

456.hmmer: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe

-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

458.sjeng: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe

-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

462.libquantum: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe

-Qstd=c99
-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

C++ benchmarks (except as noted below):

icl -Qvc9

473.astar: C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe

-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64



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Peak Portability Flags

```

403.gcc: -DSPEC_CPU_WIN32
456.hmmer: -DSPEC_CPU_P64
458.sjeng: -DSPEC_CPU_P64
462.libquantum: -DSPEC_CPU_P64
464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES
473.astar: -DSPEC_CPU_P64
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

```

Peak Optimization Flags

C benchmarks:

```

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

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

429.mcf: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
         /F512000000

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

456.hmmer: -Qauto-ilp32 -QxSSE4.2(pass 2) -Qprof_gen(pass 1)
            -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
            /F512000000

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

462.libquantum: -Qauto-ilp32 -QxSSE4.2 -Qipo -O3 -Qprec-div-
                -Qopt-prefetch /F512000000

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

```

C++ benchmarks:

```

471.omnetpp: -QxSSE4.2(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

```

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Peak Optimization Flags (Continued)

```
473.astar: -Qauto-ilp32 -QxSSE4.2 -Qipo -O3 -Qprec-div-
          -Qopt-prefetch /F512000000 shlw64M.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-ic12-win32-revA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revA.xml>

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

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