



SPEC® CINT2006 Result

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Intel Corporation

SPECint®2006 = 40.1

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECint_base2006 = 38.3

CPU2006 license: 13

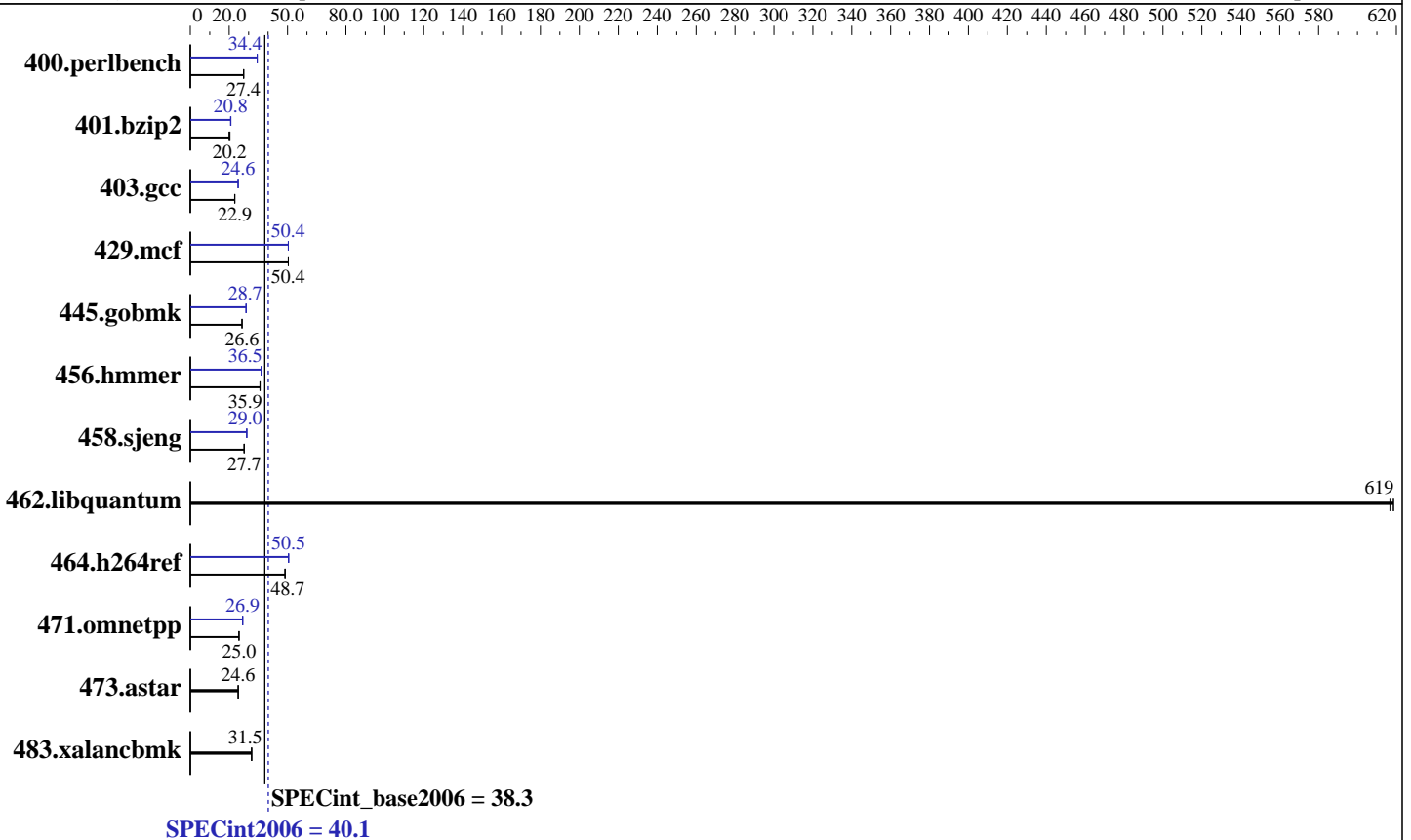
Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Feb-2011

Tested by: Intel Corporation

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i7-990X
 CPU Characteristics: Intel Turbo Boost Technology up to 3.73 GHz
 CPU MHz: 3466
 FPU: Integrated
 CPU(s) enabled: 6 cores, 1 chip, 6 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: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 12 GB (3 x 4 GB 2Rx8 PC3-8500U-7)
 Disk Subsystem: Seagate 1 TB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Windows 7 Ultimate (64-bit)
 Compiler: Intel C++ Compiler XE for Intel64
 Version 12.0.3.163 Build 20110217
 Microsoft Visual Studio 2008 Professional SP1
 (for libraries)
 Auto Parallel: Yes
 File System: NTFS
 System State: Default
 Base Pointers: 32/64-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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>356</u>	<u>27.4</u>	356	27.4	356	27.5	284	34.4	284	34.4	<u>284</u>	<u>34.4</u>
401.bzip2	473	20.4	<u>478</u>	<u>20.2</u>	485	19.9	<u>464</u>	<u>20.8</u>	466	20.7	461	20.9
403.gcc	352	22.9	352	22.8	<u>352</u>	<u>22.9</u>	327	24.6	328	24.6	<u>328</u>	<u>24.6</u>
429.mcf	<u>181</u>	<u>50.4</u>	181	50.4	181	50.4	181	50.4	<u>181</u>	<u>50.4</u>	181	50.4
445.gobmk	394	26.6	<u>394</u>	<u>26.6</u>	395	26.6	366	28.7	<u>365</u>	<u>28.7</u>	365	28.7
456.hmmer	260	35.8	260	35.9	<u>260</u>	<u>35.9</u>	255	36.5	<u>256</u>	<u>36.5</u>	256	36.5
458.sjeng	436	27.7	<u>436</u>	<u>27.7</u>	436	27.7	<u>417</u>	<u>29.0</u>	417	29.0	417	29.1
462.libquantum	33.5	619	<u>33.5</u>	<u>619</u>	33.6	617	33.5	619	<u>33.5</u>	<u>619</u>	33.6	617
464.h264ref	455	48.7	454	48.8	<u>454</u>	<u>48.7</u>	<u>438</u>	<u>50.5</u>	438	50.6	438	50.5
471.omnetpp	249	25.1	<u>250</u>	<u>25.0</u>	250	25.0	<u>232</u>	<u>26.9</u>	232	27.0	232	26.9
473.astar	<u>285</u>	<u>24.6</u>	284	24.7	285	24.6	<u>285</u>	<u>24.6</u>	284	24.7	285	24.6
483.xalancbmk	<u>219</u>	<u>31.5</u>	218	31.6	219	31.5	<u>219</u>	<u>31.5</u>	218	31.6	219	31.5

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 HD6990 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:

```

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F512000000

```

C++ benchmarks:

```

-QxSSE4.2 -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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F512000000 sh1W64M.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
-Qauto-ilp32 /F512000000

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

429.mcf: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
-Qauto-ilp32 /F512000000

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

456.hmmer: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qauto-ilp32 /F512000000

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

462.libquantum: basepeak = yes

464.h264ref: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qauto-ilp32 /F512000000

C++ benchmarks:

471.omnetpp: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias
-Qopt-ra-region-strategy=block -Qauto-ilp32 /F512000000
sh1W64M.lib -link /FORCE:MULTIPLE

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.html>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.xml>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.xml>

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

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