SPEC® CINT2006 Result

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Intel Corporation

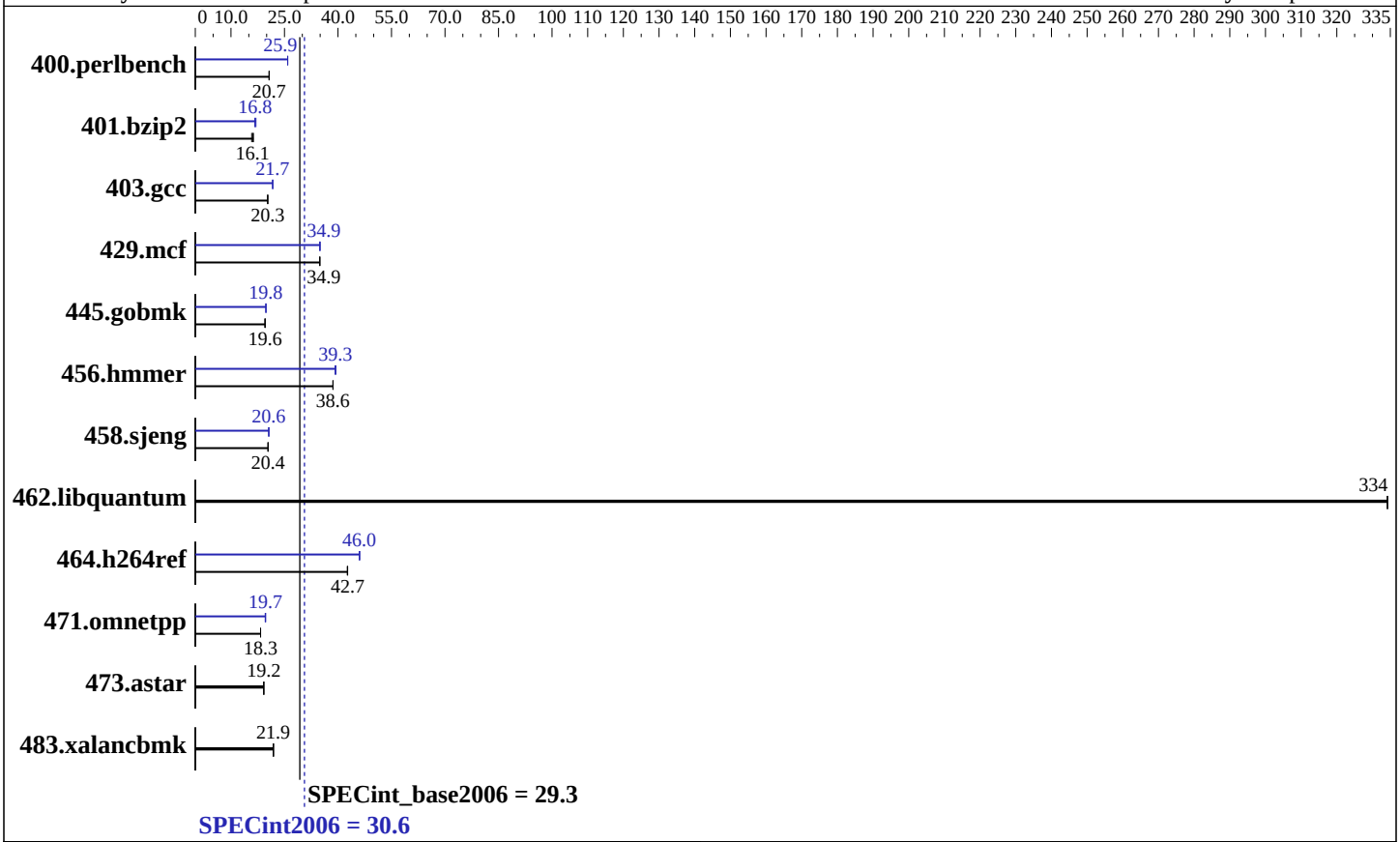
Intel DH61WW motherboard (Intel Pentium G620)

SPECint®2006 = 30.6

SPECint_base2006 = 29.3

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

Test date: Sep-2011
Hardware Availability: Aug-2011
Software Availability: Apr-2011



Hardware

CPU Name:	Intel Pentium G620
CPU Characteristics:	
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
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:	3 MB I+D on chip per chip
Other Cache:	None
Memory:	4 GB (2 x 2 GB 2Rx4 PC3-10600U-9, running at 1066 MHz)
Disk Subsystem:	1 TB Segate SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Windows 7 Ultimate (64-bit)
Compiler:	Intel C++ Studio XE for Windows 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	473	20.7	**472**	**20.7**	472	20.7	377	25.9	**377**	**25.9**	377	25.9
401.bzip2	593	16.3	611	15.8	**599**	**16.1**	**574**	**16.8**	578	16.7	569	17.0
403.gcc	397	20.3	396	20.3	**396**	**20.3**	**371**	**21.7**	371	21.7	371	21.7
429.mcf	261	34.9	**261**	**34.9**	261	34.9	**261**	**34.9**	261	34.9	261	35.0
445.gobmk	537	19.5	536	19.6	**536**	**19.6**	529	19.8	529	19.8	**529**	**19.8**
456.hmmer	242	38.6	241	38.6	**242**	**38.6**	**237**	**39.3**	238	39.2	237	39.4
458.sjeng	594	20.4	594	20.4	**594**	**20.4**	587	20.6	**588**	**20.6**	588	20.6
462.libquantum	62.0	334	**62.0**	**334**	62.0	334	62.0	334	**62.0**	**334**	62.0	334
464.h264ref	520	42.6	518	42.7	**518**	**42.7**	481	46.0	480	46.1	**481**	**46.0**
471.omnetpp	**342**	**18.3**	342	18.3	342	18.3	318	19.6	318	19.7	**318**	**19.7**
473.astar	367	19.2	366	19.2	**366**	**19.2**	367	19.2	366	19.2	**366**	**19.2**
483.xalancbmk	315	21.9	315	21.9	**315**	**21.9**	315	21.9	315	21.9	**315**	**21.9**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

```
OMP_NUM_THREADS set to number of processor cores
KMP_AFFINITY set to granularity=fine,scatter
```

Component Notes

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

General Notes

```
Binaries compiled on a system with 1x Intel Core i7-860 CPU
+ 8GB memory using Windows 7 Enterprise 64-bit
```

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
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:

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 shlW64M.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 shlW64M.lib -link /FORCE:MULTIPLE

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

Continued on next page

Peak Other Flags (Continued)

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.20111012.html`
`http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.20111012.xml`
`http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.xml`

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