SPEC® CINT2006 Result

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Intel Corporation

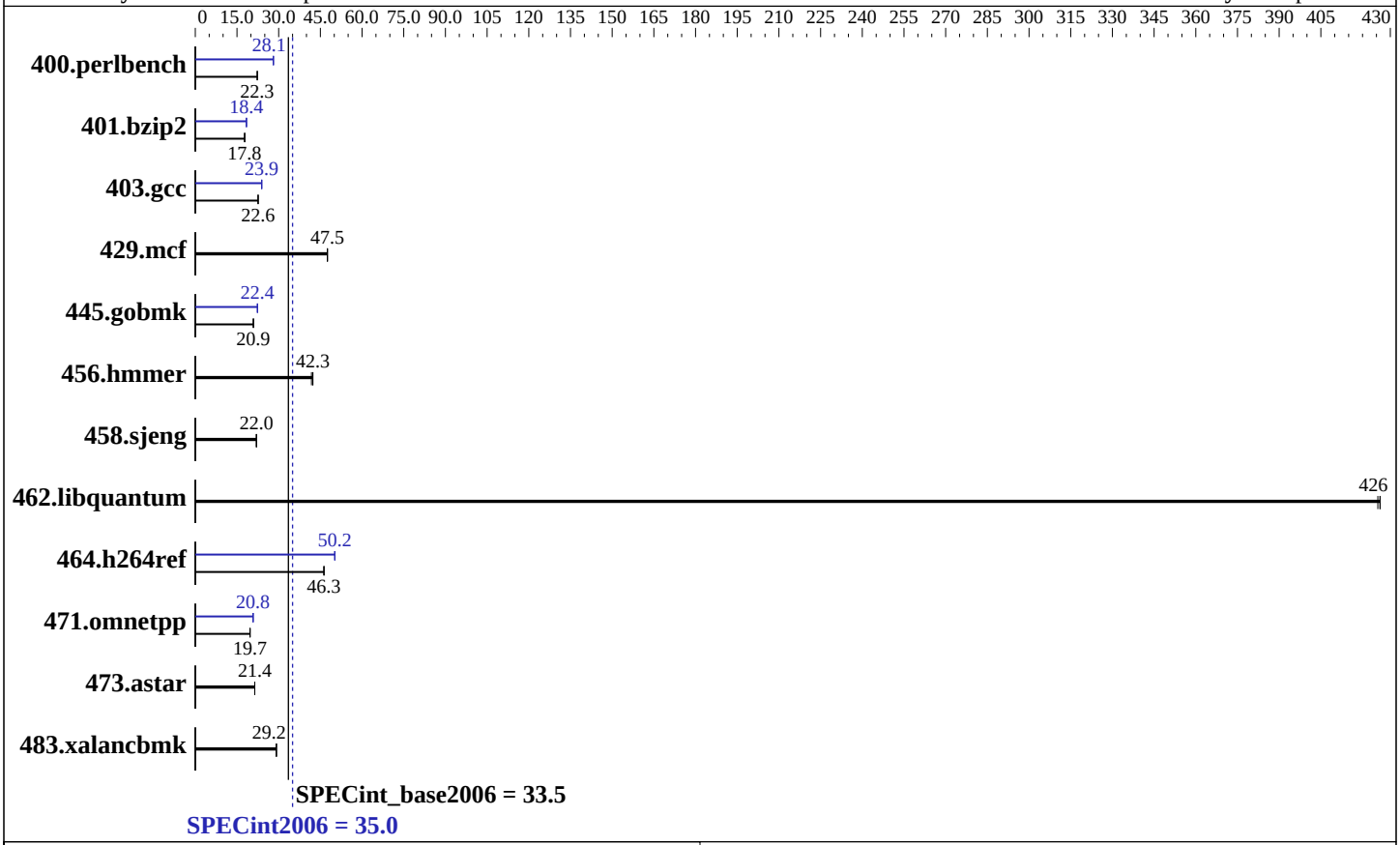
Intel DH61WW motherboard (Intel Pentium G840)

SPECint®2006 = 35.0

SPECint_base2006 = 33.5

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

Test date: Dec-2011
Hardware Availability: May-2011
Software Availability: Sep-2011



Hardware

CPU Name:	Intel Pentium G840
CPU Characteristics:	
CPU MHz:	2800
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 2Rx8 PC3-10600U-9)
Disk Subsystem:	1 TB Seagate SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Microsoft Windows 7 Ultimate 6.1.7601 Service Pack 1 Build 7601
Compiler:	C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows; Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
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	438	22.3	**437**	**22.3**	437	22.3	348	28.1	**348**	**28.1**	348	28.1
401.bzip2	545	17.7	**541**	**17.8**	541	17.8	**524**	**18.4**	524	18.4	525	18.4
403.gcc	**357**	**22.6**	357	22.6	357	22.6	336	23.9	**337**	**23.9**	337	23.9
429.mcf	192	47.6	192	47.5	**192**	**47.5**	192	47.6	192	47.5	**192**	**47.5**
445.gobmk	502	20.9	**502**	**20.9**	502	20.9	469	22.3	469	22.4	**469**	**22.4**
456.hmmer	223	41.8	221	42.3	**221**	**42.3**	223	41.8	221	42.3	**221**	**42.3**
458.sjeng	**551**	**22.0**	551	22.0	551	22.0	**551**	**22.0**	551	22.0	551	22.0
462.libquantum	48.7	426	48.6	426	**48.6**	**426**	48.7	426	48.6	426	**48.6**	**426**
464.h264ref	478	46.3	478	46.3	**478**	**46.3**	441	50.2	441	50.2	**441**	**50.2**
471.omnetpp	**318**	**19.7**	318	19.7	318	19.7	300	20.8	**300**	**20.8**	300	20.8
473.astar	**328**	**21.4**	328	21.4	328	21.4	**328**	**21.4**	328	21.4	328	21.4
483.xalancbmk	237	29.2	237	29.1	**237**	**29.2**	237	29.2	237	29.1	**237**	**29.2**

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

Compiler Invocation Notes

```
ipsxe-comp-vars batch file invoked with intel64
```

Platform Notes

```
Sysinfo program C:\SPEC12.1/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on CltE06995A30C92 Tue Dec 20 15:04:40 2011

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

Trying 'systeminfo'
OS Name       : Microsoft Windows 7 Ultimate
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model  : DH61WW__
Processor(s)  : 1 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~2800 Mhz
BIOS Version  : Intel Corp. BEH6110H.86A.0016.2011.0118.1128, 1/18/2011
Total Physical Memory: 4,004 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 512
L3CacheSize   : 3072
MaxClockSpeed : 2800
```

Continued on next page

Platform Notes (Continued)

```
Name          : Intel(R) Pentium(R) CPU G840 @ 2.80GHz
NumberOfCores : 2
NumberOfLogicalProcessors: 2

(End of data from sysinfo program)
```

Component Notes

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

General Notes

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

Continued on next page

Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

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: basepeak = yes

458.sjeng: basepeak = yes

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:

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-ic12.1-official-windows.20120117.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml

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