



# SPEC® CINT2006 Result

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## Intel Corporation

**SPECint®2006 = 34.5**

Intel DH61WW motherboard (Intel Pentium G840)

**SPECint\_base2006 = 33.1**

CPU2006 license: 13

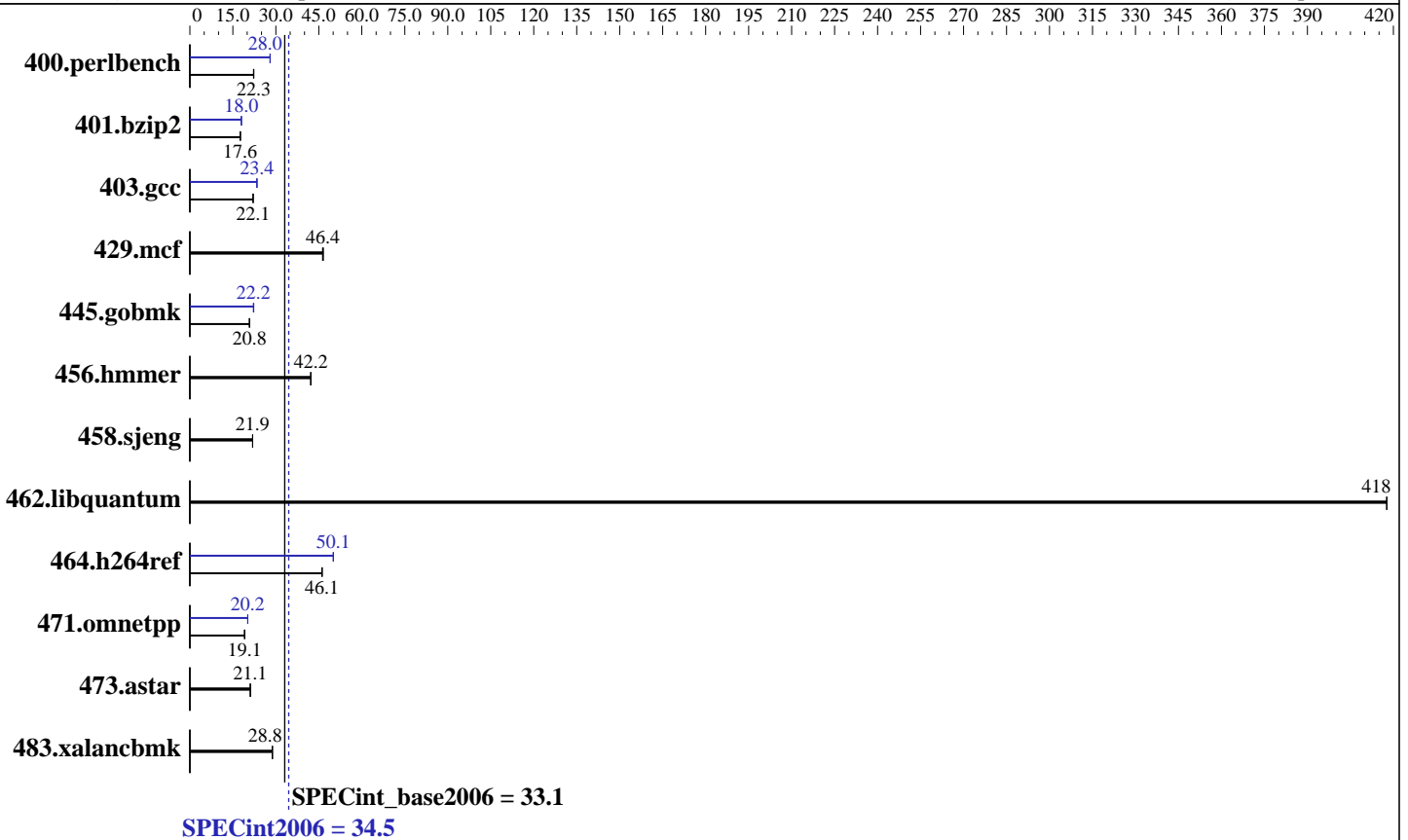
Test date: Dec-2011

Test sponsor: Intel Corporation

Hardware Availability: May-2011

Tested by: Intel Corporation

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: 2 GB (2 x 1 GB 1Rx16 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	440	22.2	<b><u>439</u></b>	<b><u>22.3</u></b>	439	22.3	349	28.0	349	28.0	<b><u>349</u></b>	<b><u>28.0</u></b>
401.bzip2	545	17.7	<b><u>549</u></b>	<b><u>17.6</u></b>	551	17.5	538	17.9	<b><u>537</u></b>	<b><u>18.0</u></b>	537	18.0
403.gcc	365	22.0	364	22.1	<b><u>365</u></b>	<b><u>22.1</u></b>	<b><u>344</u></b>	<b><u>23.4</u></b>	344	23.4	344	23.4
429.mcf	196	46.6	<b><u>197</u></b>	<b><u>46.4</u></b>	197	46.3	196	46.6	<b><u>197</u></b>	<b><u>46.4</u></b>	197	46.3
445.gobmk	505	20.8	<b><u>505</u></b>	<b><u>20.8</u></b>	505	20.8	<b><u>472</u></b>	<b><u>22.2</u></b>	472	22.2	471	22.3
456.hammer	221	42.2	<b><u>221</u></b>	<b><u>42.2</u></b>	221	42.2	221	42.2	<b><u>221</u></b>	<b><u>42.2</u></b>	221	42.2
458.sjeng	552	21.9	<b><u>552</u></b>	<b><u>21.9</u></b>	552	21.9	552	21.9	<b><u>552</u></b>	<b><u>21.9</u></b>	552	21.9
462.libquantum	49.6	418	<b><u>49.6</u></b>	<b><u>418</u></b>	49.6	418	49.6	418	<b><u>49.6</u></b>	<b><u>418</u></b>	49.6	418
464.h264ref	479	46.2	<b><u>480</u></b>	<b><u>46.1</u></b>	480	46.1	442	50.0	442	50.1	<b><u>442</u></b>	<b><u>50.1</u></b>
471.omnetpp	327	19.1	328	19.1	<b><u>327</u></b>	<b><u>19.1</u></b>	309	20.2	<b><u>309</u></b>	<b><u>20.2</u></b>	309	20.2
473.astar	333	21.1	333	21.1	<b><u>333</u></b>	<b><u>21.1</u></b>	333	21.1	333	21.1	<b><u>333</u></b>	<b><u>21.1</u></b>
483.xalancbmk	239	28.8	<b><u>239</u></b>	<b><u>28.8</u></b>	239	28.8	239	28.8	<b><u>239</u></b>	<b><u>28.8</u></b>	239	28.8

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 Thu Dec 22 05:45:44 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: 1,956 MB
```

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

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## 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



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## 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

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## 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.hmmr: 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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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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