



# SPEC® CINT2006 Result

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## Intel Corporation

**SPECint®2006 = 48.5**

Intel DH77KC motherboard (Intel Core i5-3470S)

**SPECint\_base2006 = 45.7**

CPU2006 license: 13

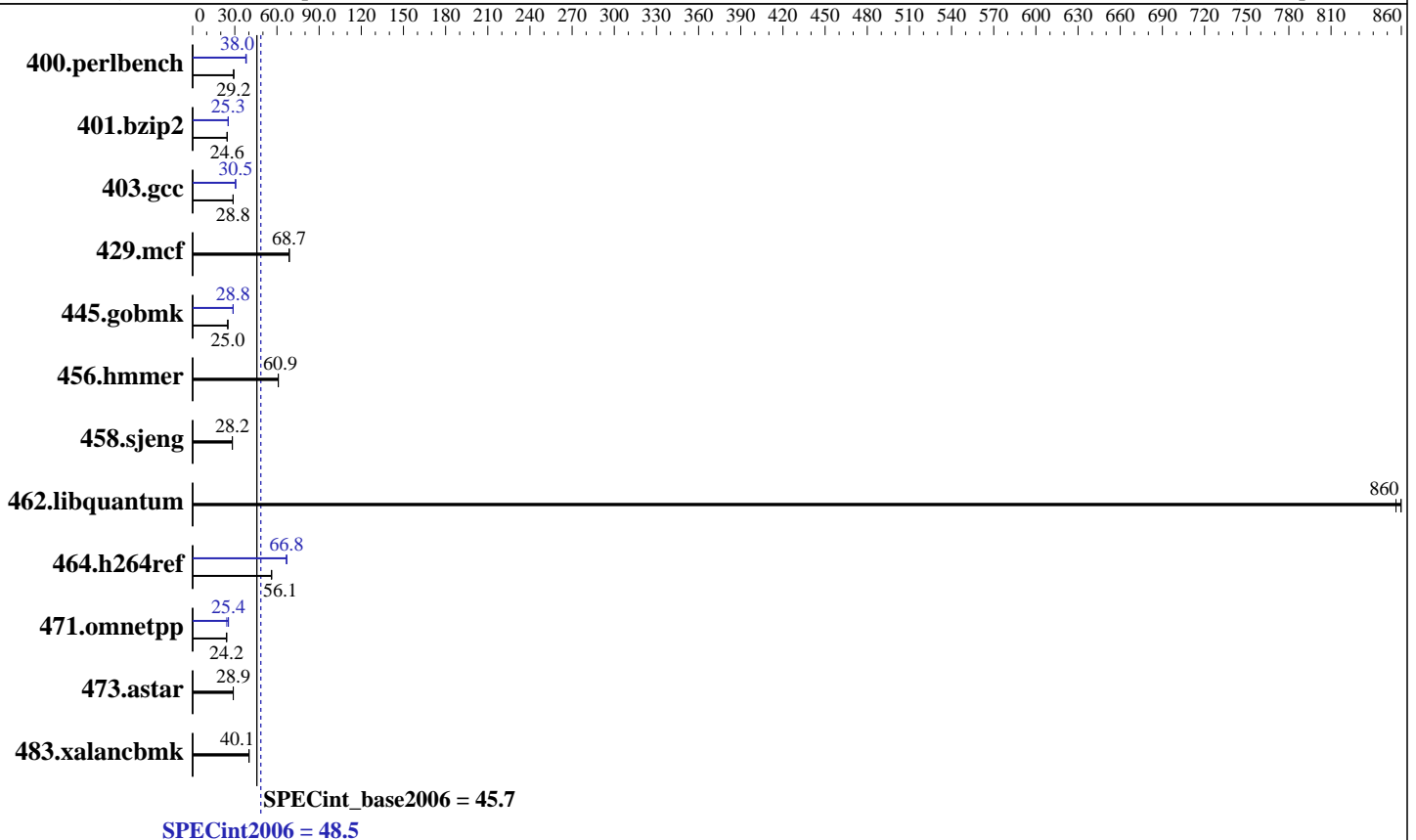
Test date: May-2012

Test sponsor: Intel Corporation

Hardware Availability: Apr-2012

Tested by: Intel Corporation

Software Availability: Apr-2011



### Hardware

CPU Name: Intel Core i5-3470S  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 2900  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 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: 6 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)  
 Disk Subsystem: 1 TB Seagate SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Microsoft Windows 7 Ultimate (64-bit) 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	335	29.2	<u>335</u>	<u>29.2</u>	334	29.2	256	38.2	259	37.8	<u>257</u>	<u>38.0</u>
401.bzip2	394	24.5	<u>393</u>	<u>24.6</u>	393	24.6	382	25.3	382	25.3	<u>382</u>	<u>25.3</u>
403.gcc	<u>280</u>	<u>28.8</u>	280	28.8	280	28.8	264	30.6	264	30.5	<u>264</u>	<u>30.5</u>
429.mcf	<u>133</u>	<u>68.7</u>	133	68.8	133	68.6	<u>133</u>	<u>68.7</u>	133	68.8	133	68.6
445.gobmk	<u>419</u>	<u>25.0</u>	419	25.0	419	25.0	364	28.8	<u>364</u>	<u>28.8</u>	364	28.8
456.hammer	153	60.9	153	61.0	<u>153</u>	<u>60.9</u>	153	60.9	153	61.0	<u>153</u>	<u>60.9</u>
458.sjeng	429	28.2	428	28.3	<u>429</u>	<u>28.2</u>	429	28.2	428	28.3	<u>429</u>	<u>28.2</u>
462.libquantum	24.1	860	<u>24.1</u>	<u>860</u>	24.2	856	24.1	860	<u>24.1</u>	<u>860</u>	24.2	856
464.h264ref	<u>394</u>	<u>56.1</u>	394	56.2	394	56.1	<u>331</u>	<u>66.8</u>	331	66.9	331	66.8
471.omnetpp	<u>259</u>	<u>24.2</u>	258	24.2	260	24.0	257	24.3	245	25.5	<u>246</u>	<u>25.4</u>
473.astar	<u>243</u>	<u>28.9</u>	243	28.9	243	28.9	<u>243</u>	<u>28.9</u>	243	28.9	243	28.9
483.xalancbmk	172	40.1	<u>172</u>	<u>40.1</u>	172	40.1	172	40.1	<u>172</u>	<u>40.1</u>	172	40.1

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

## Compiler Invocation Notes

To compile these binaries, the Intel Compiler was set up to generate 64-bit binaries with the command:  
"ipsxe-comp-vars.bat intel64 vs2008" (shortcut provided in the Intel(r) Parallel Studio XE 2011 program folder)

## Platform Notes

Sysinfo program C:\CPU200~1.17A\Docs\sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on CltE840F20A9E2F Tue May 15 15:55:04 2012

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   : DH77KC_
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~2901 Mhz
BIOS Version  : Intel Corp. KCH7710H.86A.0069.2012.0224.1825, 2/24/2012
Total Physical Memory: 8,090 MB
```

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize  : 1024
L3CacheSize  : 6144
```

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## Platform Notes (Continued)

MaxClockSpeed : 2901  
Name : Intel(R) Core(TM) i5-3470S CPU @ 2.90GHz  
NumberOfCores : 4  
NumberOfLogicalProcessors: 4

(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:

-QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qauto-ilp32 /F512000000

C++ benchmarks:

-QxAVX -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: -QxAVX(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: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias -Qauto-ilp32 /F512000000

403.gcc: -QxAVX(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: -QxAVX(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: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32  
/F512000000

C++ benchmarks:

471.omnetpp: -QxAVX(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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