



# SPEC® CINT2006 Result

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## Intel Corporation

SPECint®\_rate2006 = 143

Intel DH77KC motherboard (Intel Core i5-3470S)

SPECint\_rate\_base2006 = 134

CPU2006 license: 13

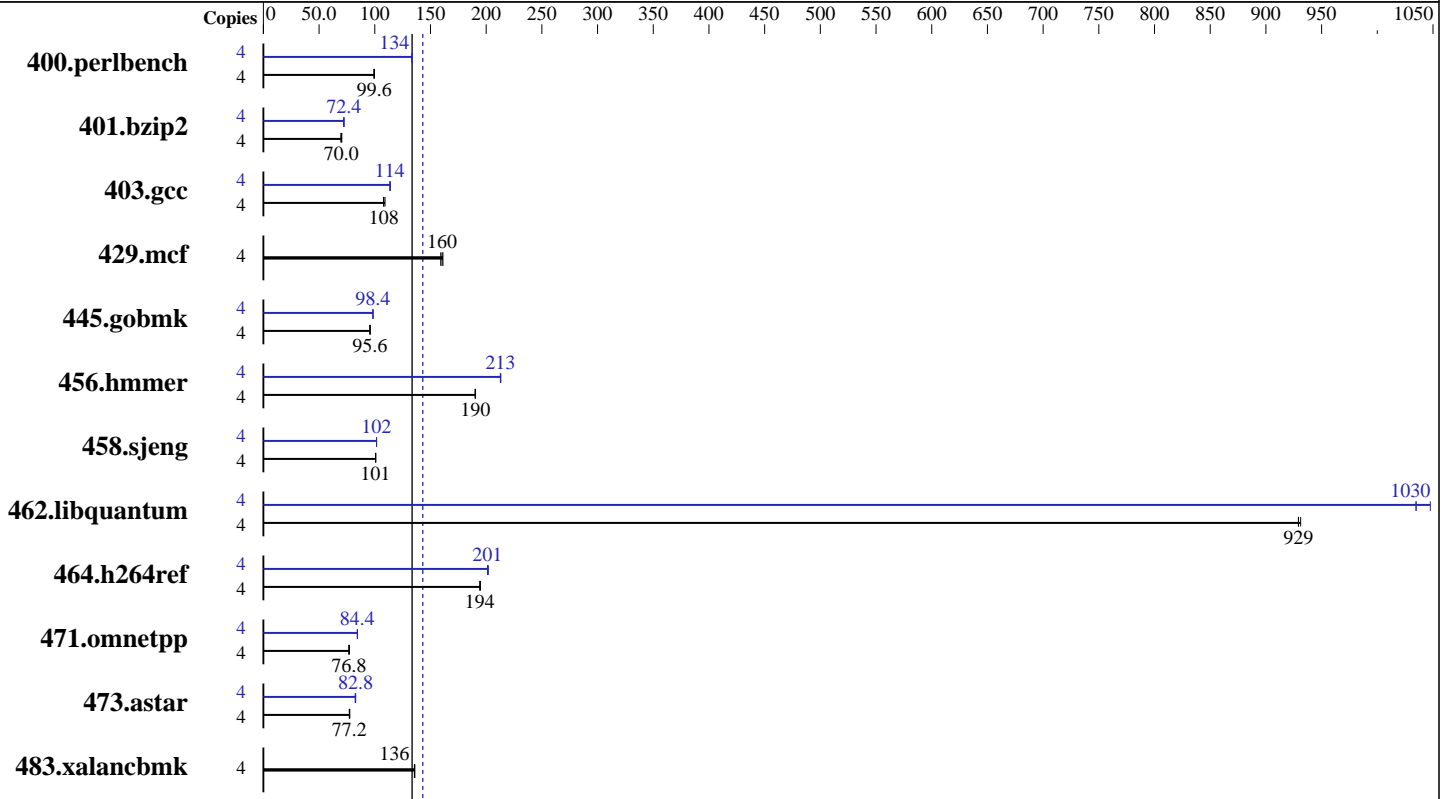
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2012

Hardware Availability: Apr-2012

Software Availability: Apr-2011



SPECint\_rate\_base2006 = 134

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### 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: No  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32-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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	393	99.2	<u>392</u>	<u>99.6</u>	392	99.6	4	<u>292</u>	<u>134</u>	292	134	293	134
401.bzip2	4	554	69.6	<u>552</u>	<u>70.0</u>	548	70.4	4	535	72.0	<u>535</u>	<u>72.4</u>	532	72.4
403.gcc	4	<u>298</u>	<u>108</u>	295	109	298	108	4	282	114	<u>283</u>	<u>114</u>	284	114
429.mcf	4	229	159	<u>228</u>	<u>160</u>	226	161	4	229	159	<u>228</u>	<u>160</u>	226	161
445.gobmk	4	<u>439</u>	<u>95.6</u>	439	95.6	438	96.0	4	427	98.4	<u>427</u>	<u>98.4</u>	427	98.4
456.hammer	4	196	190	196	190	<u>196</u>	<u>190</u>	4	176	213	175	213	<u>175</u>	<u>213</u>
458.sjeng	4	480	101	480	101	<u>480</u>	<u>101</u>	4	477	102	476	102	<u>477</u>	<u>102</u>
462.libquantum	4	<u>89.2</u>	<u>929</u>	89.2	929	89.0	931	4	<u>80.1</u>	<u>1030</u>	79.1	1050	80.1	1030
464.h264ref	4	<u>456</u>	<u>194</u>	456	194	455	195	4	438	202	440	201	<u>440</u>	<u>201</u>
471.omnetpp	4	<u>325</u>	<u>76.8</u>	325	76.8	324	77.2	4	<u>296</u>	<u>84.4</u>	296	84.4	296	84.4
473.astar	4	362	77.6	<u>363</u>	<u>77.2</u>	363	77.2	4	339	82.8	340	82.4	<u>339</u>	<u>82.8</u>
483.xalancbmk	4	<u>203</u>	<u>136</u>	203	136	203	136	4	<u>203</u>	<u>136</u>	203	136	203	136

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 32-bit binaries with the command: "ipsxe-comp-vars.bat ia32 vs2008" (shortcut provided in the Intel(r) Parallel Studio XE 2011 program folder)

## Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.

## Platform Notes

Sysinfo program C:\CPU200~1.17A\Docs\sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on CltE840F20A9E2F Wed May 16 03:31:40 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

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## Platform Notes (Continued)

Total Physical Memory: 8,090 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0

L2CacheSize : 1024

L3CacheSize : 6144

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

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

403.gcc: -DSPEC\_CPU\_WIN32

464.h264ref: -DWIN32 -DSPEC\_CPU\_NO\_INTTYPES

483.xalancbmk: -Qoption,cpp,--no\_wchar\_t\_keyword

## Base Optimization Flags

C benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

C++ benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
/F512000000 shlw32M.lib -link /FORCE:MULTIPLE



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## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icl -Qvc9 -Qstd=c99

456.hmmer: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe

458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe

462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe  
-Qstd=c99

C++ benchmarks (except as noted below):

icl -Qvc9

473.astar: C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/bin/intel64/icl.exe

## Peak Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32

456.hmmer: -DSPEC\_CPU\_P64

458.sjeng: -DSPEC\_CPU\_P64

462.libquantum: -DSPEC\_CPU\_P64

464.h264ref: -DWIN32 -DSPEC\_CPU\_NO\_INTTYPES

473.astar: -DSPEC\_CPU\_P64

483.xalancbmk: -Qoption,cpp,--no\_wchar\_t\_keyword

## 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 /F512000000  
shlw32M.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 /F512000000

403.gcc: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Qopt-prefetch /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 /F512000000

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

458.sjeng: -Qauto-ilp32 -QxAVX(pass 2) -Qprof\_gen(pass 1)  
-Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4  
/F512000000

462.libquantum: -Qauto-ilp32 -QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/F512000000

464.h264ref: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Qunroll2 -Qansi-alias /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 /F512000000 shlW32M.lib  
-link /FORCE:MULTIPLE

473.astar: -Qauto-ilp32 -QxAVX -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/F512000000 shlW64M.lib -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

456.hmmer: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib  
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

458.sjeng: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib  
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

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## Peak Other Flags (Continued)

```
462.libquantum: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64
               -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
               -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
               -link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64
```

C++ benchmarks:

```
473.astar: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2011 SP1.229/compiler/lib/intel64
           -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64
           -link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib
           -link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64
```

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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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