



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Intel Corporation

SPECint®\_rate2006 = 131

Intel DQ77MK motherboard (Intel Core i5-3450S)

SPECint\_rate\_base2006 = 124

CPU2006 license: 13

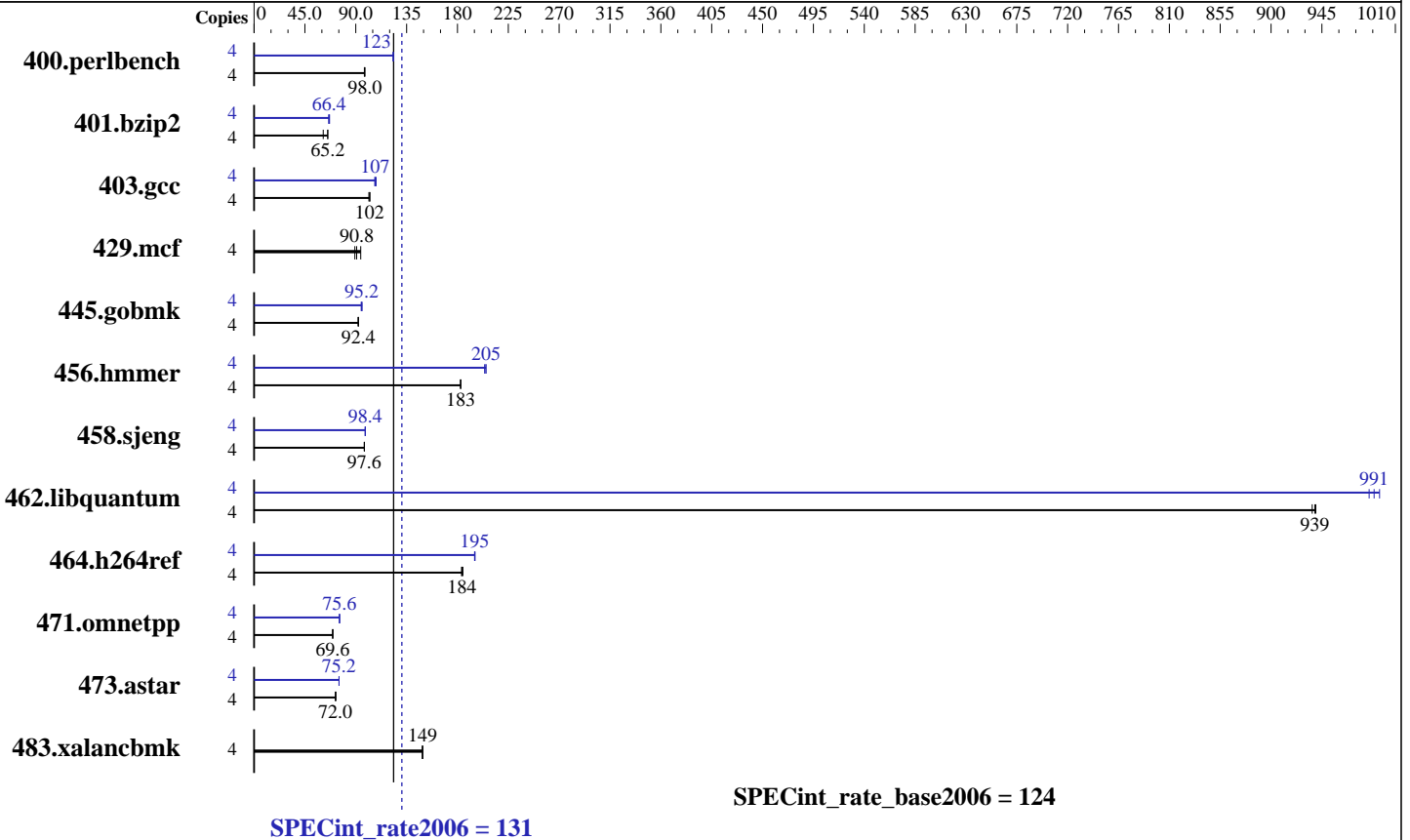
Test date: Nov-2013

Test sponsor: Intel Corporation

Hardware Availability: Nov-2012

Tested by: Intel Corporation

Software Availability: Apr-2013



### Hardware

CPU Name: Intel Core i5-3450S  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz  
 CPU MHz: 2800  
 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: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11)  
 Disk Subsystem: 250 GB Seagate SATA HDD, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Microsoft Windows 7 Enterprise 6.1.7601 Service Pack 1 Build 7601  
 Compiler: C/C++: Version 13.1.1.171 of Intel C++ Studio XE for Windows;  
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 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 10.0 from <http://www.microquill.com/>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint\_rate2006 = 131

Intel DQ77MK motherboard (Intel Core i5-3450S)

SPECint\_rate\_base2006 = 124

CPU2006 license: 13

Test date: Nov-2013

Test sponsor: Intel Corporation

Hardware Availability: Nov-2012

Tested by: Intel Corporation

Software Availability: Apr-2013

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	<b>400</b>	<b>98.0</b>	398	98.0	400	97.6	4	<b>317</b>	<b>123</b>	317	123	318	123
401.bzip2	4	631	61.2	592	65.2	<b>593</b>	<b>65.2</b>	4	584	66.0	578	66.8	<b>583</b>	<b>66.4</b>
403.gcc	4	318	102	314	102	<b>314</b>	<b>102</b>	4	302	107	<b>300</b>	<b>107</b>	299	108
429.mcf	4	386	94.4	<b>402</b>	<b>90.8</b>	409	89.2	4	386	94.4	<b>402</b>	<b>90.8</b>	409	89.2
445.gobmk	4	455	92.0	<b>455</b>	<b>92.4</b>	455	92.4	4	<b>441</b>	<b>95.2</b>	439	95.6	442	94.8
456.hammer	4	<b>204</b>	<b>183</b>	204	183	204	183	4	182	205	<b>182</b>	<b>205</b>	183	204
458.sjeng	4	<b>496</b>	<b>97.6</b>	496	97.6	496	97.6	4	<b>493</b>	<b>98.4</b>	493	98.4	493	98.4
462.libquantum	4	88.5	936	<b>88.3</b>	<b>939</b>	88.2	940	4	84.0	987	83.2	996	<b>83.6</b>	<b>991</b>
464.h264ref	4	479	185	482	184	<b>481</b>	<b>184</b>	4	<b>454</b>	<b>195</b>	453	196	454	195
471.omnetpp	4	<b>360</b>	<b>69.6</b>	359	69.6	360	69.6	4	<b>331</b>	<b>75.6</b>	331	75.6	330	75.6
473.astar	4	389	72.4	390	72.0	<b>389</b>	<b>72.0</b>	4	373	75.2	<b>373</b>	<b>75.2</b>	373	75.2
483.xalancbmk	4	185	149	<b>185</b>	<b>149</b>	185	149	4	185	149	<b>185</b>	<b>149</b>	185	149

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 13.1 was set up to generate 32-bit binaries with the command:  
"ipsxe-comp-vars.bat ia32 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 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:\SPEC13.1\Docs\sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on Clt7054D218890C Sat Nov 9 17:31:07 2013

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 Enterprise  
OS Version : 6.1.7601 Service Pack 1 Build 7601  
System Manufacturer: INTEL\_  
System Model : DQ77MK\_  
Processor(s) : 1 Processor(s) Installed.

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint\_rate2006 = 131

Intel DQ77MK motherboard (Intel Core i5-3450S)

SPECint\_rate\_base2006 = 124

CPU2006 license: 13

Test date: Nov-2013

Test sponsor: Intel Corporation

Hardware Availability: Nov-2012

Tested by: Intel Corporation

Software Availability: Apr-2013

## Platform Notes (Continued)

[01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~2801 Mhz  
BIOS Version : Intel Corp. MKQ7710H.86A.0054.2012.1120.1444, 11/20/2012  
Total Physical Memory: 3,912 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0  
L2CacheSize : 1024  
L3CacheSize : 6144  
MaxClockSpeed : 2801  
Name : Intel(R) Core(TM) i5-3450S CPU @ 2.80GHz  
NumberOfCores : 4  
NumberOfLogicalProcessors: 4

(End of data from sysinfo program)

BIOS: SATA mode set to RAID

Windows Disk Driver: Intel Rapid Storage Technology 12.5.0.1066

Windows Chipset Driver: Intel Chipset Driver 9.4.0.1027

## Component Notes

Tested systems can be used with Shin-G ATX case,  
PC Power and Cooling 1200W power supply  
Micron MT8JTF25664AZ-1G6 Series Memory DIMMs

## 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 -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

## Base Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32  
464.h264ref: -DWIN32 -DSPEC\_CPU\_NO\_INTTYPES  
483.xalancbmk: -Qoption,cpp,--no\_wchar\_t\_keyword



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint\_rate2006 = 131

Intel DQ77MK motherboard (Intel Core i5-3450S)

SPECint\_rate\_base2006 = 124

CPU2006 license: 13

Test date: Nov-2013

Test sponsor: Intel Corporation

Hardware Availability: Nov-2012

Tested by: Intel Corporation

Software Availability: Apr-2013

## 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

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icl -Qvc10 -Qstd=c99

456.hmmr: C:\Program Files (x86)\Intel\Composer XE 2013.171\bin\intel64\icl.exe

458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2013.171\bin\intel64\icl.exe

462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2013.171\bin\intel64\icl.exe  
-Qstd=c99

C++ benchmarks (except as noted below):

icl -Qvc10

473.astar: C:\Program Files (x86)\Intel\Composer XE 2013.171\bin\intel64\icl.exe

## Peak Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32

456.hmmr: -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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint\_rate2006 = 131

Intel DQ77MK motherboard (Intel Core i5-3450S)

SPECint\_rate\_base2006 = 124

CPU2006 license: 13

Test date: Nov-2013

Test sponsor: Intel Corporation

Hardware Availability: Nov-2012

Tested by: Intel Corporation

Software Availability: Apr-2013

## 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

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:

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint\_rate2006 = 131

Intel DQ77MK motherboard (Intel Core i5-3450S)

SPECint\_rate\_base2006 = 124

CPU2006 license: 13

Test date: Nov-2013

Test sponsor: Intel Corporation

Hardware Availability: Nov-2012

Tested by: Intel Corporation

Software Availability: Apr-2013

## Peak Other Flags (Continued)

403.gcc: -Dalloca=\_alloca

456.hmmr: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013.171/compiler/lib/intel64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/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 2013.171/compiler/lib/intel64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib  
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

462.libquantum: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013.171/compiler/lib/intel64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/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 2013.171/compiler/lib/intel64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64  
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/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-ic13.1-official-windows.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic13.1-official-windows.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Sep 9 10:56:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 15 July 2014.