



# SPEC® CINT2006 Result

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## Intel Corporation

**SPECint®2006 = 41.7**

Intel DH77KC Motherboard (Intel Core i3-3220)

**SPECint\_base2006 = 40.0**

CPU2006 license: 13

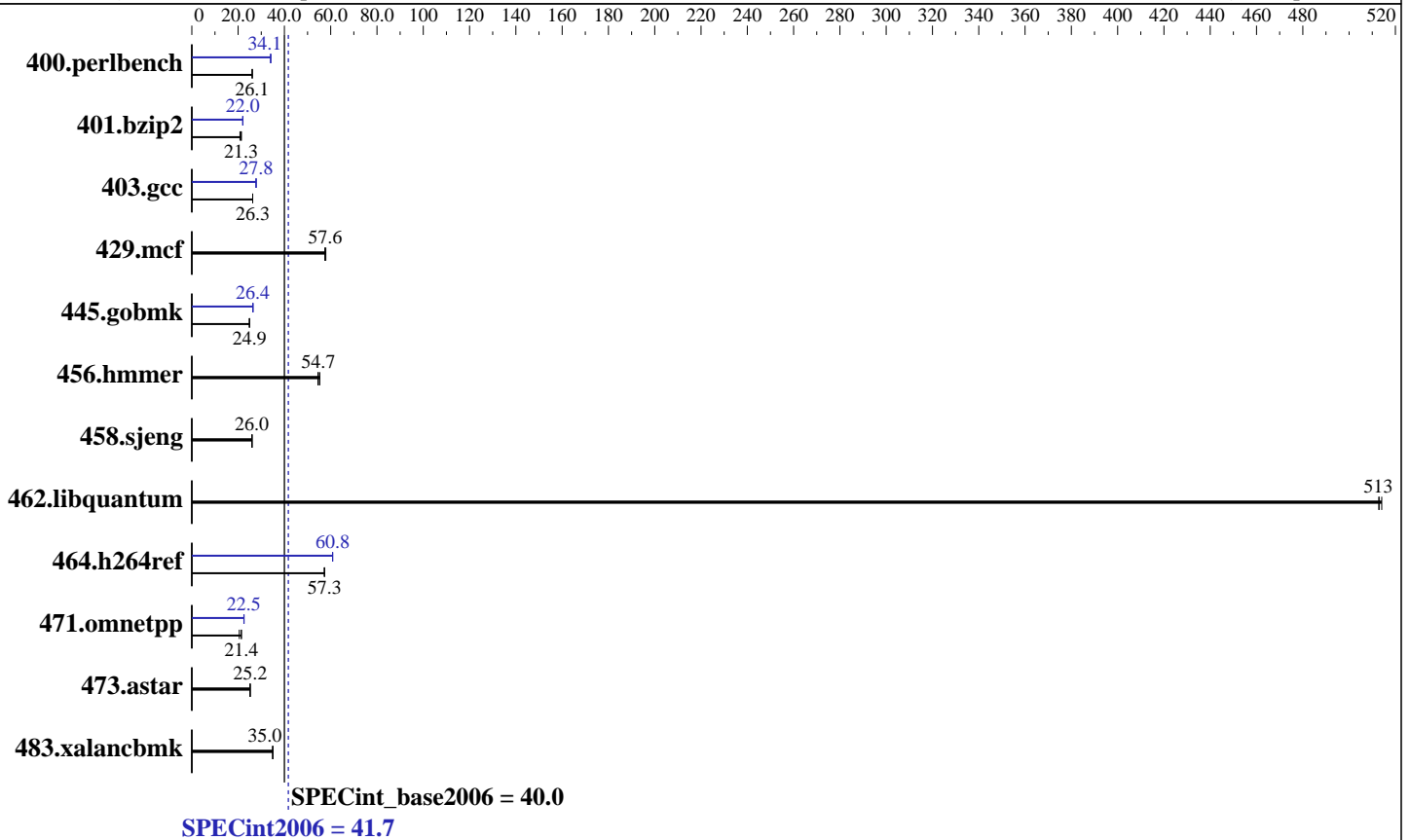
Test date: Sep-2012

Test sponsor: Intel Corporation

Hardware Availability: Sep-2012

Tested by: Intel Corporation

Software Availability: Apr-2011



### Hardware

CPU Name: Intel Core i3-3220  
 CPU Characteristics:  
 CPU MHz: 3300  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core  
 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: 8 GB (2 x 4 GB 2Rx8 PC3-12800U-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	<b>375</b>	<b>26.1</b>	375	26.1	375	26.1	287	34.1	288	34.0	<b>287</b>	<b>34.1</b>
401.bzip2	465	20.8	452	21.4	<b>453</b>	<b>21.3</b>	438	22.1	438	22.0	<b>438</b>	<b>22.0</b>
403.gcc	306	26.3	<b>306</b>	<b>26.3</b>	306	26.3	289	27.8	<b>290</b>	<b>27.8</b>	290	27.7
429.mcf	159	57.5	<b>158</b>	<b>57.6</b>	158	57.9	159	57.5	<b>158</b>	<b>57.6</b>	158	57.9
445.gobmk	<b>421</b>	<b>24.9</b>	421	24.9	421	24.9	397	26.4	<b>397</b>	<b>26.4</b>	397	26.4
456.hammer	169	55.3	<b>171</b>	<b>54.7</b>	171	54.5	169	55.3	<b>171</b>	<b>54.7</b>	171	54.5
458.sjeng	465	26.0	<b>465</b>	<b>26.0</b>	465	26.0	465	26.0	<b>465</b>	<b>26.0</b>	465	26.0
462.libquantum	<b>40.4</b>	<b>513</b>	40.4	513	40.3	514	<b>40.4</b>	<b>513</b>	40.4	513	40.3	514
464.h264ref	386	57.3	<b>386</b>	<b>57.3</b>	386	57.3	364	60.8	364	60.9	<b>364</b>	<b>60.8</b>
471.omnetpp	292	21.4	<b>292</b>	<b>21.4</b>	305	20.5	<b>277</b>	<b>22.5</b>	277	22.6	277	22.5
473.astar	278	25.2	<b>279</b>	<b>25.2</b>	279	25.2	278	25.2	<b>279</b>	<b>25.2</b>	279	25.2
483.xalancbmk	197	35.0	198	34.9	<b>197</b>	<b>35.0</b>	197	35.0	198	34.9	<b>197</b>	<b>35.0</b>

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:\CPU200~1.17A\Docs\sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on CltE840F20AA165 Wed Sep 19 19:12:21 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 ~3300 Mhz
BIOS Version  : Intel Corp. KCH7710H.86A.0095.2012.0608.1754, 6/8/2012
Total Physical Memory: 8,092 MB
```

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize  : 512
L3CacheSize  : 3072
MaxClockSpeed : 3300
```

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## Platform Notes (Continued)

Name : Intel(R) Core(TM) i3-3220 CPU @ 3.30GHz

NumberOfCores : 2

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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