



SPEC® CINT2006 Result

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Intel Corporation

SPECint®2006 = 43.6

Intel DH67BL Motherboard (Intel Core i5-2320)

SPECint_base2006 = 41.5

CPU2006 license: 13

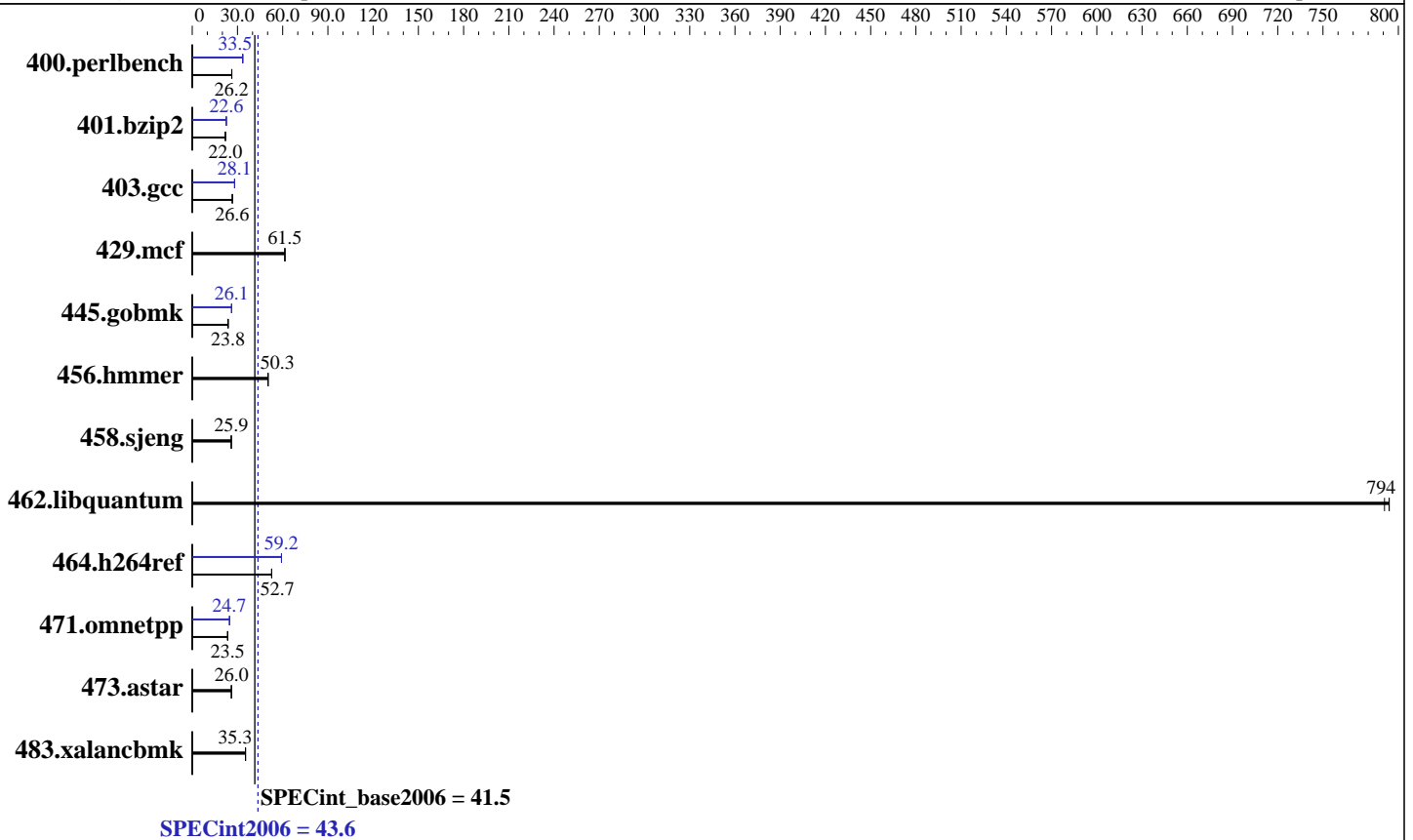
Test date: May-2012

Test sponsor: Intel Corporation

Hardware Availability: Sep-2011

Tested by: Intel Corporation

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i5-2320
 CPU Characteristics: Intel Turbo Boost Technology up to 3.3 GHz
 CPU MHz: 3000
 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 2Rx4 PC3-10600U-9)
 Disk Subsystem: 1 TB 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 | 373 | 26.2 | <u>372</u> | <u>26.2</u> | 372 | 26.3 | <u>292</u> | <u>33.5</u> | 292 | 33.5 | 292 | 33.5 |
| 401.bzip2 | 441 | 21.9 | <u>438</u> | <u>22.0</u> | 438 | 22.1 | 428 | 22.6 | 427 | 22.6 | <u>427</u> | <u>22.6</u> |
| 403.gcc | 302 | 26.6 | <u>302</u> | <u>26.6</u> | 302 | 26.6 | 286 | 28.1 | <u>286</u> | <u>28.1</u> | 286 | 28.1 |
| 429.mcf | 149 | 61.4 | 148 | 61.5 | <u>148</u> | <u>61.5</u> | 149 | 61.4 | 148 | 61.5 | <u>148</u> | <u>61.5</u> |
| 445.gobmk | <u>440</u> | <u>23.8</u> | 440 | 23.8 | 440 | 23.8 | 402 | 26.1 | <u>402</u> | <u>26.1</u> | 402 | 26.1 |
| 456.hammer | <u>186</u> | <u>50.3</u> | 185 | 50.3 | 186 | 50.3 | <u>186</u> | <u>50.3</u> | 185 | 50.3 | 186 | 50.3 |
| 458.sjeng | 468 | 25.9 | <u>468</u> | <u>25.9</u> | 468 | 25.9 | 468 | 25.9 | <u>468</u> | <u>25.9</u> | 468 | 25.9 |
| 462.libquantum | 26.2 | 791 | 26.1 | 794 | <u>26.1</u> | <u>794</u> | 26.2 | 791 | 26.1 | 794 | <u>26.1</u> | <u>794</u> |
| 464.h264ref | 420 | 52.7 | <u>420</u> | <u>52.7</u> | 420 | 52.7 | 374 | 59.2 | 374 | 59.2 | <u>374</u> | <u>59.2</u> |
| 471.omnetpp | <u>266</u> | <u>23.5</u> | 265 | 23.5 | 266 | 23.5 | <u>253</u> | <u>24.7</u> | 253 | 24.7 | 253 | 24.8 |
| 473.astar | <u>270</u> | <u>26.0</u> | 270 | 26.0 | 270 | 26.0 | <u>270</u> | <u>26.0</u> | 270 | 26.0 | 270 | 26.0 |
| 483.xalancbmk | 195 | 35.3 | <u>195</u> | <u>35.3</u> | 195 | 35.4 | 195 | 35.3 | <u>195</u> | <u>35.3</u> | 195 | 35.4 |

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 CltE06995D78610 Fri May 4 16:02:07 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   : DH67BL_
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~3001 Mhz
BIOS Version  : Intel Corp. BLH6710H.86A.0125.2011.0705.1517, 7/5/2011
Total Physical Memory: 4,003 MB
```

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

Continued on next page



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Platform Notes (Continued)

MaxClockSpeed : 3001
Name : Intel(R) Core(TM) i5-2320 CPU @ 3.00GHz
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.

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