SPEC® CINT2006 Result

Intel Corporation

Intel DH77KC motherboard (Intel Core i5-3570K)

$SPECint^®2006 =$　　51.1

$SPECint\_base2006 =$　　48.5

CPU2006 license: 13	**Test date:** May-2012
Test sponsor: Intel Corporation	**Hardware Availability:** Apr-2012
Tested by: Intel Corporation	**Software Availability:** Apr-2011

Benchmark results:

- 400.perlbench: 40.4 / 30.7
- 401.bzip2: 26.8 / 26.0
- 403.gcc: 31.9 / 30.1
- 429.mcf: 71.9
- 445.gobmk: 30.4 / 27.6
- 456.hmmer: 64.4
- 458.sjeng: 29.7
- 462.libquantum: 933
- 464.h264ref: 70.7 / 63.1
- 471.omnetpp: 26.0 / 24.8
- 473.astar: 30.5
- 483.xalancbmk: 42.2

SPECint_base2006 = 48.5
SPECint2006 = 51.1

Hardware

CPU Name:	Intel Core i5-3570K
CPU Characteristics:	Intel Turbo Boost Technology up to 3.80 GHz
CPU MHz:	3400
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

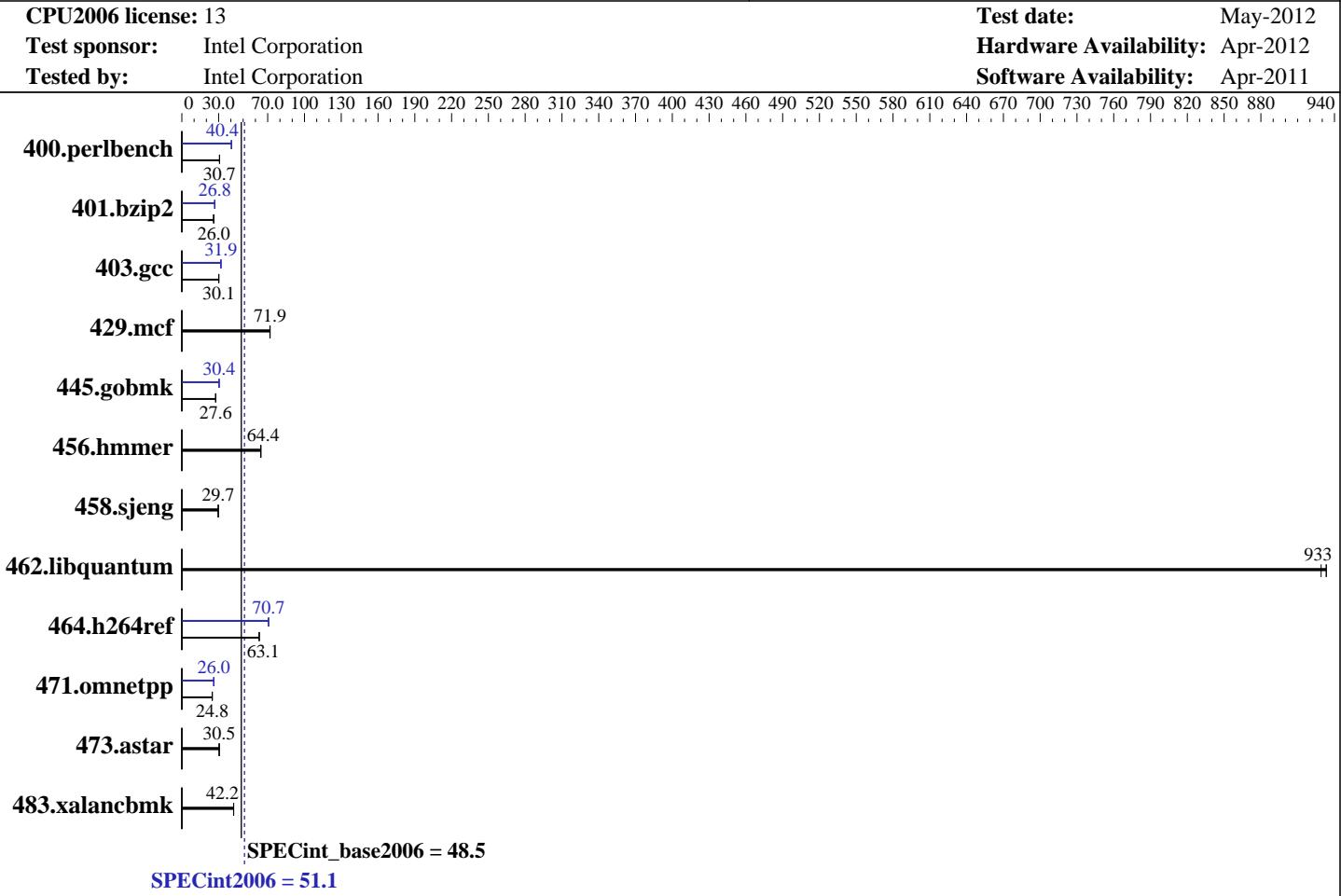|	
Operating System:	Microsoft Windows 7 Ultimate (64-bit) 6.1.7601 Service Pack 1 Build 7601
Compiler:	C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows; Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
Auto Parallel:	Yes
File System:	NTFS
System State:	Default
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	319	30.7	317	30.8	**318**	**30.7**	242	40.5	242	40.4	**242**	**40.4**
401.bzip2	372	25.9	371	26.0	**372**	**26.0**	**361**	**26.8**	360	26.8	361	26.8
403.gcc	267	30.1	267	30.2	**267**	**30.1**	252	31.9	**252**	**31.9**	252	31.9
429.mcf	**127**	**71.9**	127	72.0	127	71.8	**127**	**71.9**	127	72.0	127	71.8
445.gobmk	**380**	**27.6**	380	27.6	381	27.6	346	30.4	345	30.4	**345**	**30.4**
456.hmmer	**145**	**64.4**	145	64.5	145	64.3	**145**	**64.4**	145	64.5	145	64.3
458.sjeng	**407**	**29.7**	407	29.7	408	29.7	**407**	**29.7**	407	29.7	408	29.7
462.libquantum	22.3	929	22.2	933	**22.2**	**933**	22.3	929	22.2	933	**22.2**	**933**
464.h264ref	351	63.1	**351**	**63.1**	351	63.1	313	70.7	**313**	**70.7**	313	70.7
471.omnetpp	252	24.8	**252**	**24.8**	252	24.8	240	26.0	**240**	**26.0**	240	26.1
473.astar	230	30.5	231	30.4	**230**	**30.5**	230	30.5	231	30.4	**230**	**30.5**
483.xalancbmk	164	42.2	163	42.3	**163**	**42.2**	164	42.2	163	42.3	**163**	**42.2**

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 CltE840F20AA11B Wed May 16 22:30:13 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 ~3401 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 : 3401
    Name          : Intel(R) Core(TM) i5-3570K CPU @ 3.40GHz
    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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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