



SPEC[®] CINT2006 Result

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Intel Corporation

SPECint[®]_rate2006 = 90.6

Intel DH77KC motherboard (Intel Core i5-3470T)

SPECint_rate_base2006 = 83.8

CPU2006 license: 13

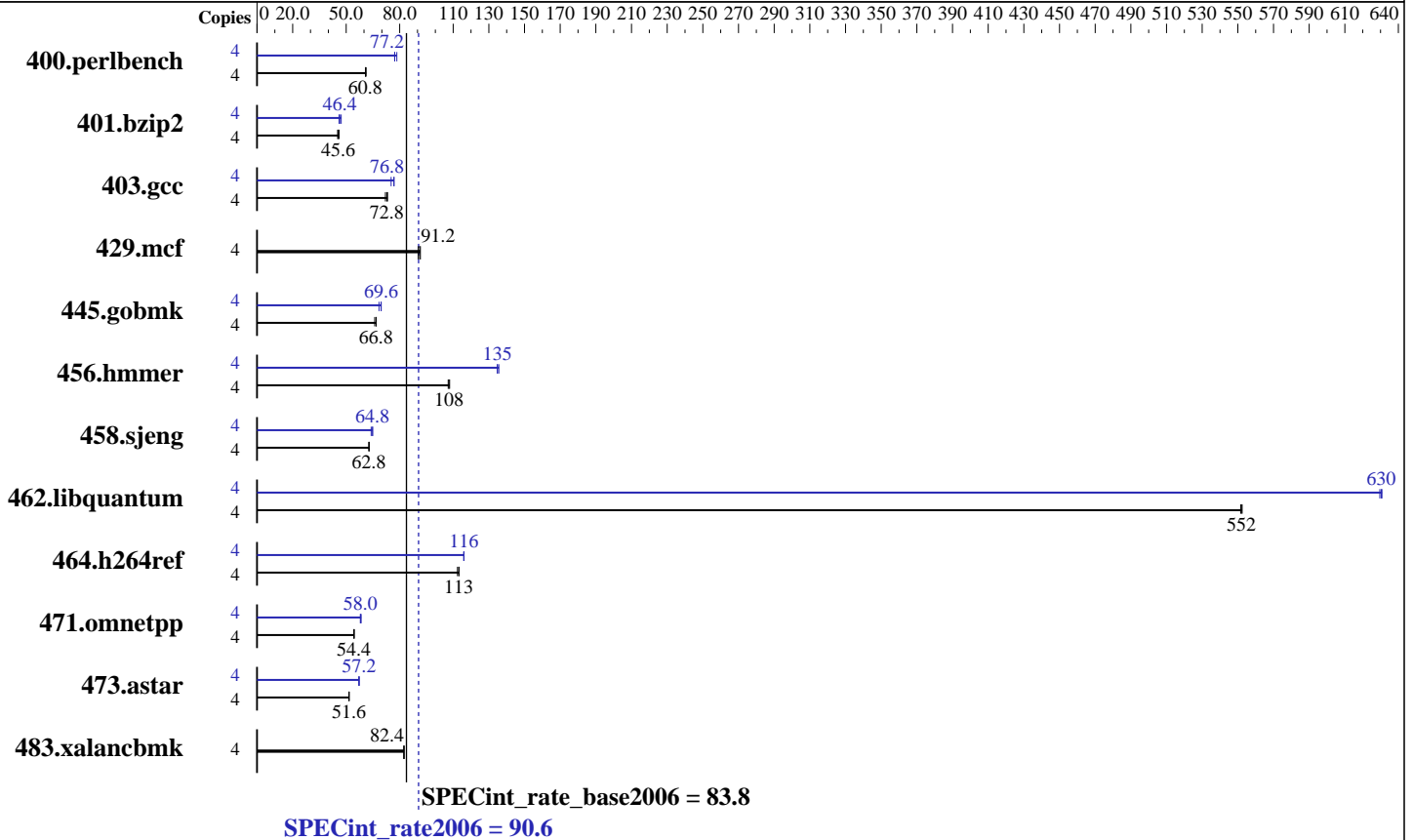
Test date: May-2012

Test sponsor: Intel Corporation

Hardware Availability: Apr-2012

Tested by: Intel Corporation

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i5-3470T
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2900
 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 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	641	60.8	640	61.2	642	60.8	4	499	78.4	507	77.2	507	77.2
401.bzip2	4	840	46.0	853	45.2	847	45.6	4	842	46.0	830	46.4	817	47.2
403.gcc	4	446	72.0	443	72.8	439	73.2	4	420	76.8	419	76.8	429	75.2
429.mcf	4	400	91.2	403	90.4	398	91.6	4	400	91.2	403	90.4	398	91.6
445.gobmk	4	630	66.8	627	66.8	636	66.0	4	603	69.6	604	69.6	613	68.4
456.hammer	4	346	108	348	107	347	108	4	275	136	277	135	277	135
458.sjeng	4	772	62.8	769	62.8	772	62.8	4	749	64.8	749	64.8	755	64.0
462.libquantum	4	150	552	150	552	150	552	4	131	631	132	630	132	630
464.h264ref	4	782	113	781	113	788	112	4	762	116	762	116	763	116
471.omnetpp	4	459	54.4	460	54.4	459	54.4	4	430	58.0	429	58.4	431	58.0
473.astar	4	543	51.6	544	51.6	543	51.6	4	492	57.2	492	57.2	493	57.2
483.xalancbmk	4	336	82.4	336	82.4	335	82.4	4	336	82.4	336	82.4	335	82.4

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 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 CltE840F20AA0BD Wed May 16 06:30:13 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 ~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 : 512

L3CacheSize : 3072

MaxClockSpeed : 2901

Name : Intel(R) Core(TM) i5-3470T CPU @ 2.90GHz

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

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.hmmr: 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.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

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 other inquiries, please contact webmaster@spec.org.

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