



SPEC® CINT2006 Result

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Intel Corporation

SPECint®2006 = 67.9

ASUS Z97-A motherboard (Intel Core i7-4790K)

SPECint_base2006 = 65.4

CPU2006 license: 13

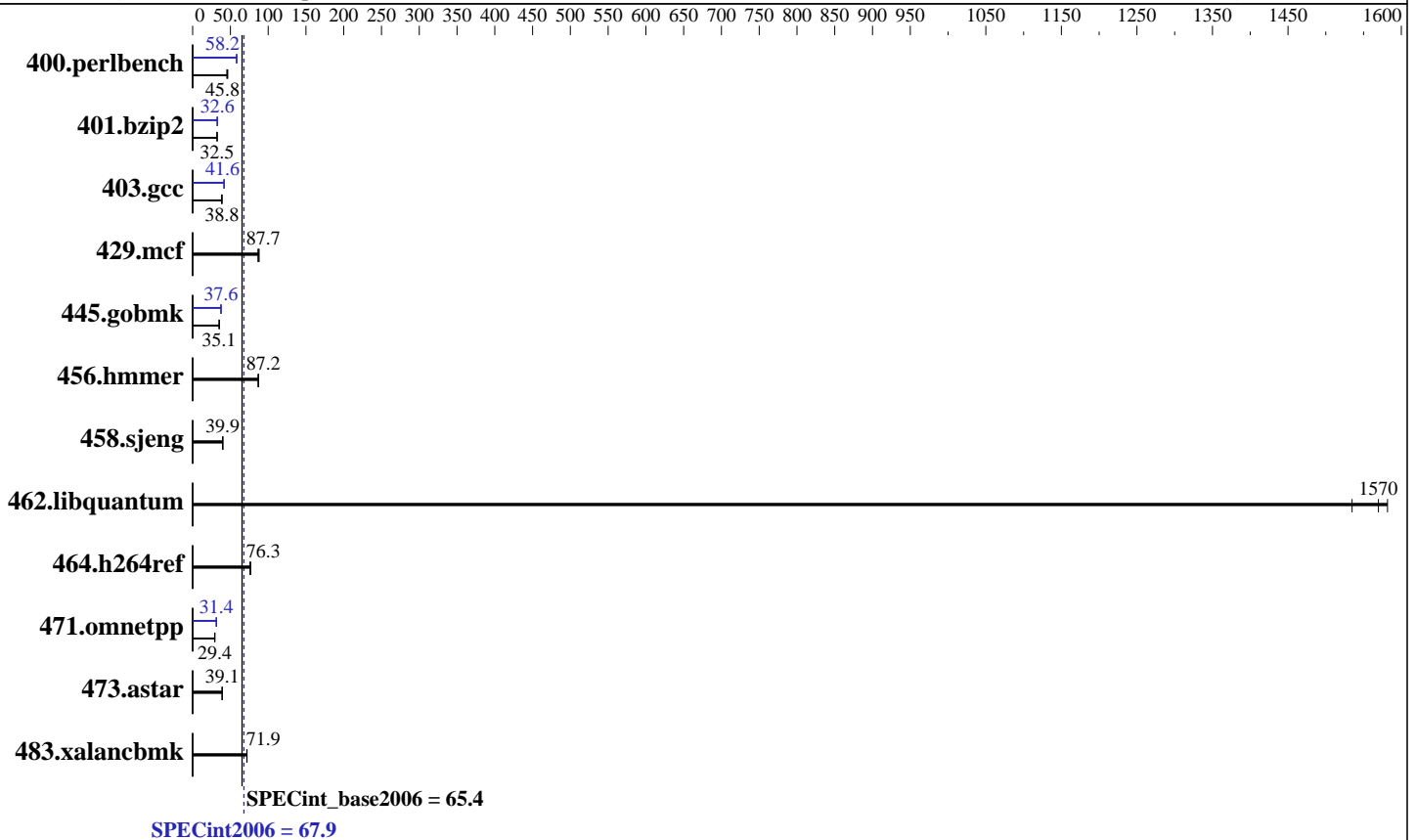
Test date: Mar-2015

Test sponsor: Intel Corporation

Hardware Availability: May-2014

Tested by: Intel Corporation

Software Availability: Oct-2013



Hardware

CPU Name: Intel Core i7-4790K
 CPU Characteristics: Intel Turbo Boost Technology up to 4.40 GHz
 CPU MHz: 4000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 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: 8 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 HDD 7200 RPM
 Other Hardware: None

Software

Operating System: Microsoft Windows 8.1 Pro
 6.3.9600 N/A Build 9600
 Compiler: C/C++: Version 14.0.1.139 of Intel C++ Studio XE for Windows;
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 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 10.0 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	216	45.3	<u>213</u>	<u>45.8</u>	210	46.5	<u>168</u>	<u>58.2</u>	168	58.1	167	58.4
401.bzip2	300	32.1	297	32.5	<u>297</u>	<u>32.5</u>	297	32.4	<u>296</u>	<u>32.6</u>	295	32.8
403.gcc	210	38.3	<u>207</u>	<u>38.8</u>	207	38.9	<u>194</u>	<u>41.6</u>	194	41.6	193	41.6
429.mcf	106	86.4	104	87.8	<u>104</u>	<u>87.7</u>	106	86.4	104	87.8	<u>104</u>	<u>87.7</u>
445.gobmk	300	35.0	<u>299</u>	<u>35.1</u>	296	35.4	<u>279</u>	<u>37.6</u>	279	37.5	279	37.6
456.hammer	108	86.5	107	87.2	<u>107</u>	<u>87.2</u>	108	86.5	107	87.2	<u>107</u>	<u>87.2</u>
458.sjeng	305	39.7	<u>304</u>	<u>39.9</u>	302	40.0	305	39.7	<u>304</u>	<u>39.9</u>	302	40.0
462.libquantum	13.5	1530	13.1	1580	<u>13.2</u>	<u>1570</u>	13.5	1530	13.1	1580	<u>13.2</u>	<u>1570</u>
464.h264ref	<u>290</u>	<u>76.3</u>	288	76.8	291	76.0	<u>290</u>	<u>76.3</u>	288	76.8	291	76.0
471.omnetpp	215	29.1	213	29.4	<u>213</u>	<u>29.4</u>	198	31.6	201	31.1	<u>199</u>	<u>31.4</u>
473.astar	180	39.0	179	39.2	<u>180</u>	<u>39.1</u>	180	39.0	179	39.2	<u>180</u>	<u>39.1</u>
483.xalancbmk	<u>95.9</u>	<u>71.9</u>	96.2	71.7	95.8	72.0	<u>95.9</u>	<u>71.9</u>	96.2	71.7	95.8	72.0

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 14.0 was set up to generate 64-bit binaries with the command:
 "ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

Platform Notes

Sysinfo program C:\SPEC14.0\Docs\sysinfo
 \$Rev: 6775 \$ \$Date: 2011-08-16 # \$ \8787f7622badcf24e01c368b1db4377c
 running on Z97A Wed Mar 25 02:30:12 2015

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 8.1 Pro
OS Version    : 6.3.9600 N/A Build 9600
System Manufacturer: ASUS
System Model   : All Series
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~4001 Mhz
BIOS Version  : American Megatrends Inc. 0702, 4/23/2014
Total Physical Memory: 8,069 MB
```

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
```

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Platform Notes (Continued)

L2CacheSize : 1024
L3CacheSize : 8192
MaxClockSpeed : 4001
Name : Intel(R) Core(TM) i7-4790K CPU @ 4.00GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 8

(End of data from sysinfo program)

BIOS: SATA mode set to RAID

Windows Disk Driver: Intel Rapid Storage Technology 12.9.0.1001

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 -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

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

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Base Portability Flags (Continued)

483.xalanbmk: -DSPEC_CPU_P64 -Qoption,cpp,--no_wchar_t_keyword

Base Optimization Flags

C benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F512000000

C++ benchmarks:

-QxCORE-AVX2 -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 -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

400.perlbench: -QxCORE-AVX2(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

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Peak Optimization Flags (Continued)

401.bzip2: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
-Qauto-ilp32 /F512000000

403.gcc: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qauto-ilp32 /F512000000

429.mcf: basepeak = yes

445.gobmk: -QxCORE-AVX2(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: basepeak = yes

C++ benchmarks:

471.omnetpp: -QxCORE-AVX2(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-ic14.0-official-windows.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-windows.xml>



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