



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint®_rate2006 = 147

Intel DQ87PG motherboard (Intel Core i5-4440)

SPECint_rate_base2006 = 137

CPU2006 license: 13

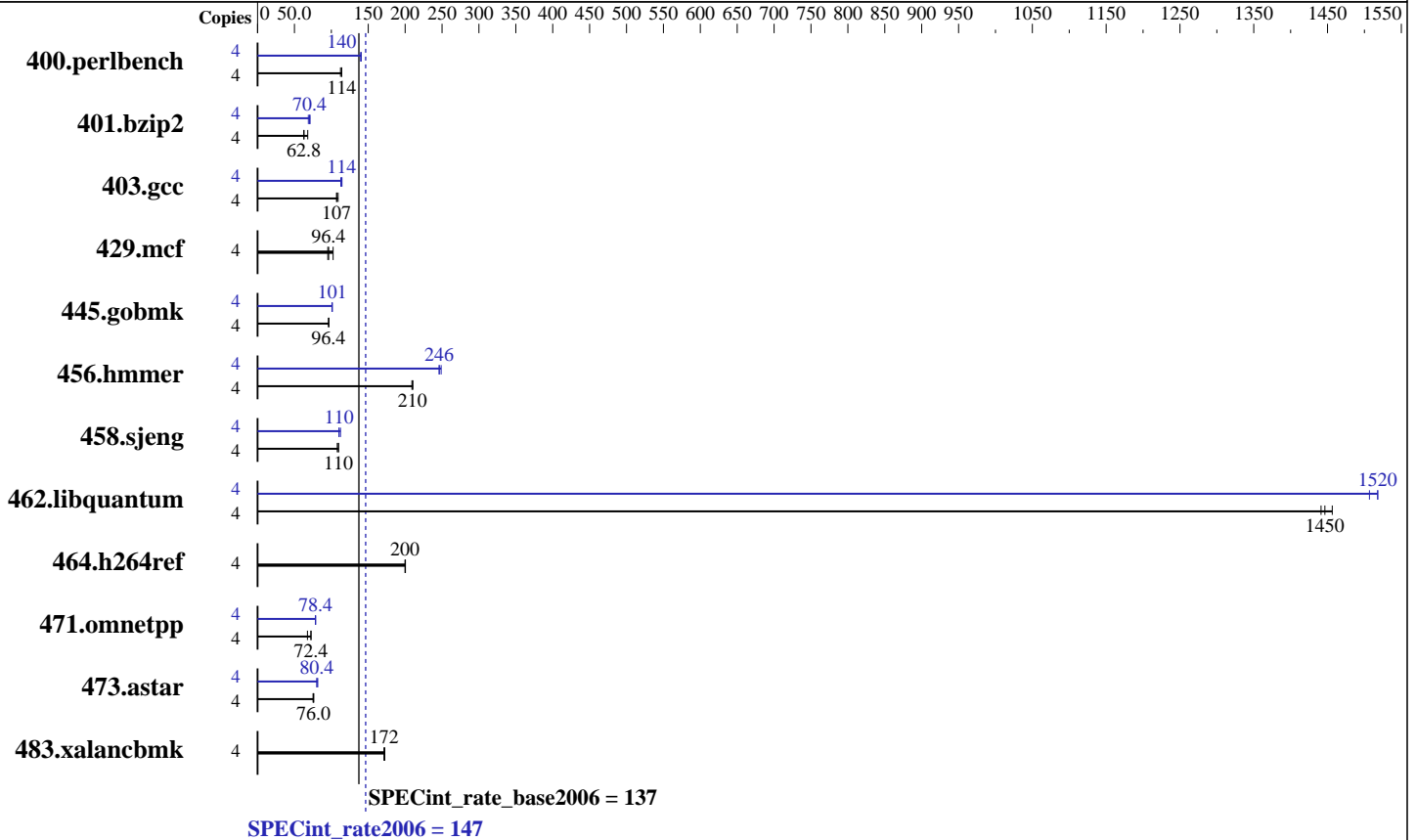
Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013



Hardware

CPU Name: Intel Core i5-4440
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 3100
 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 1Rx8 PC3-12800U-11)
 Disk Subsystem: 250 GB Seagate SATA HDD, 7200 RPM
 Other Hardware: None

Software

Operating System: Microsoft Windows 7 Enterprise 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 13.1.1.171 of Intel C++ Studio XE for Windows;
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 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 10.0 from <http://www.microquill.com/>



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint_rate2006 = 147

Intel DQ87PG motherboard (Intel Core i5-4440)

SPECint_rate_base2006 = 137

CPU2006 license: 13

Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	343	114	343	114	348	112	4	279	140	279	140	279	140
401.bzip2	4	616	62.8	567	68.0	613	62.8	4	541	71.2	548	70.4	563	68.8
403.gcc	4	300	107	301	107	295	109	4	281	114	286	113	283	114
429.mcf	4	383	95.2	356	102	379	96.4	4	383	95.2	356	102	379	96.4
445.gobmk	4	434	96.4	435	96.4	436	96.4	4	416	101	414	101	415	101
456.hammer	4	177	210	178	209	178	210	4	152	246	150	249	152	246
458.sjeng	4	442	110	448	108	442	110	4	431	112	438	110	439	110
462.libquantum	4	57.5	1440	56.9	1460	57.3	1450	4	55.0	1510	54.6	1520	54.6	1520
464.h264ref	4	442	200	441	200	443	200	4	442	200	441	200	443	200
471.omnetpp	4	345	72.4	346	72.4	371	67.6	4	319	78.4	319	78.4	318	78.8
473.astar	4	369	76.0	369	76.0	373	75.2	4	350	80.4	344	81.6	349	80.4
483.xalancbmk	4	161	172	160	172	161	172	4	161	172	160	172	161	172

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 13.1 was set up to generate 32-bit binaries with the command:
"ipsxe-comp-vars.bat ia32 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 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:\SPEC13.1\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 # \$ \8787f7622badcf24e01c368b1db4377c
running on Clt7C05070FB2B7 Sat Sep 21 22:24:13 2013

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 Enterprise
OS Version : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model : DQ87PG_
Processor(s) : 1 Processor(s) Installed.

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint_rate2006 = 147

Intel DQ87PG motherboard (Intel Core i5-4440)

SPECint_rate_base2006 = 137

CPU2006 license: 13

Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

Platform Notes (Continued)

[01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3101 Mhz
BIOS Version : Intel(R) Corp. PGQ8710H.86A.0036.2013.0702.1908, 7/2/2013
Total Physical Memory: 3,749 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0
L2CacheSize : 1024
L3CacheSize : 6144
MaxClockSpeed : 3101
Name : Intel(R) Core(TM) i5-4440 CPU @ 3.10GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 4

(End of data from sysinfo program)

BIOS: SATA mode set to RAID

Windows Disk Driver: Intel Rapid Storage Technology 12.5.0.1066

Windows Chipset Driver: Intel Chipset Driver 9.4.0.1027

Component Notes

Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
Micron MT8JTF25664AZ-1G6 Series Memory DIMMs

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 -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

Base Portability Flags

403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint_rate2006 = 147

Intel DQ87PG motherboard (Intel Core i5-4440)

SPECint_rate_base2006 = 137

CPU2006 license: 13

Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

Base Optimization Flags

C benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

C++ benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F512000000 shlw32M.lib -link /FORCE:MULTIPLE

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icl -Qvc10 -Qstd=c99

456.hmmr: C:\Program Files (x86)\Intel\Composer XE 2013.171/bin/intel64/icl.exe

458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2013.171/bin/intel64/icl.exe

462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2013.171/bin/intel64/icl.exe
-Qstd=c99

C++ benchmarks (except as noted below):

icl -Qvc10

473.astar: C:\Program Files (x86)\Intel\Composer XE 2013.171/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



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint_rate2006 = 147

Intel DQ87PG motherboard (Intel Core i5-4440)

SPECint_rate_base2006 = 137

CPU2006 license: 13

Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

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
/F512000000 shlw32M.lib -link /FORCE:MULTIPLE

401.bzp2: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
/F512000000

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

456.hmmer: -Qauto-ilp32 -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1)
-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F512000000

458.sjeng: -Qauto-ilp32 -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1)
-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4
/F512000000

462.libquantum: -Qauto-ilp32 -QxCORE-AVX2 -Qipo -O3 -Qprec-div-
-Qopt-prefetch /F512000000

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 /F512000000 shlw32M.lib
-link /FORCE:MULTIPLE

473.astar: -Qauto-ilp32 -QxCORE-AVX2 -Qipo -O3 -Qprec-div-
-Qopt-prefetch /F512000000 shlw64M.lib
-link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECint_rate2006 = 147

Intel DQ87PG motherboard (Intel Core i5-4440)

SPECint_rate_base2006 = 137

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Sep-2013

Hardware Availability: Sep-2013

Software Availability: Apr-2013

Peak Other Flags (Continued)

403.gcc: -Dalloca=_alloca

456.hmmr: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013.171/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/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 2013.171/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib
-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64

462.libquantum: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013.171/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/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 2013.171/compiler/lib/intel64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/VC/lib/AMD64
-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 10.0/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-ic13.1-official-windows.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13.1-official-windows.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Sep 9 10:56:23 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 July 2014.