



SPEC® CINT2006 Result

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Intel Corporation

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

SPECint®_rate2006 = 394

SPECint_rate_base2006 = 377

CPU2006 license: 13

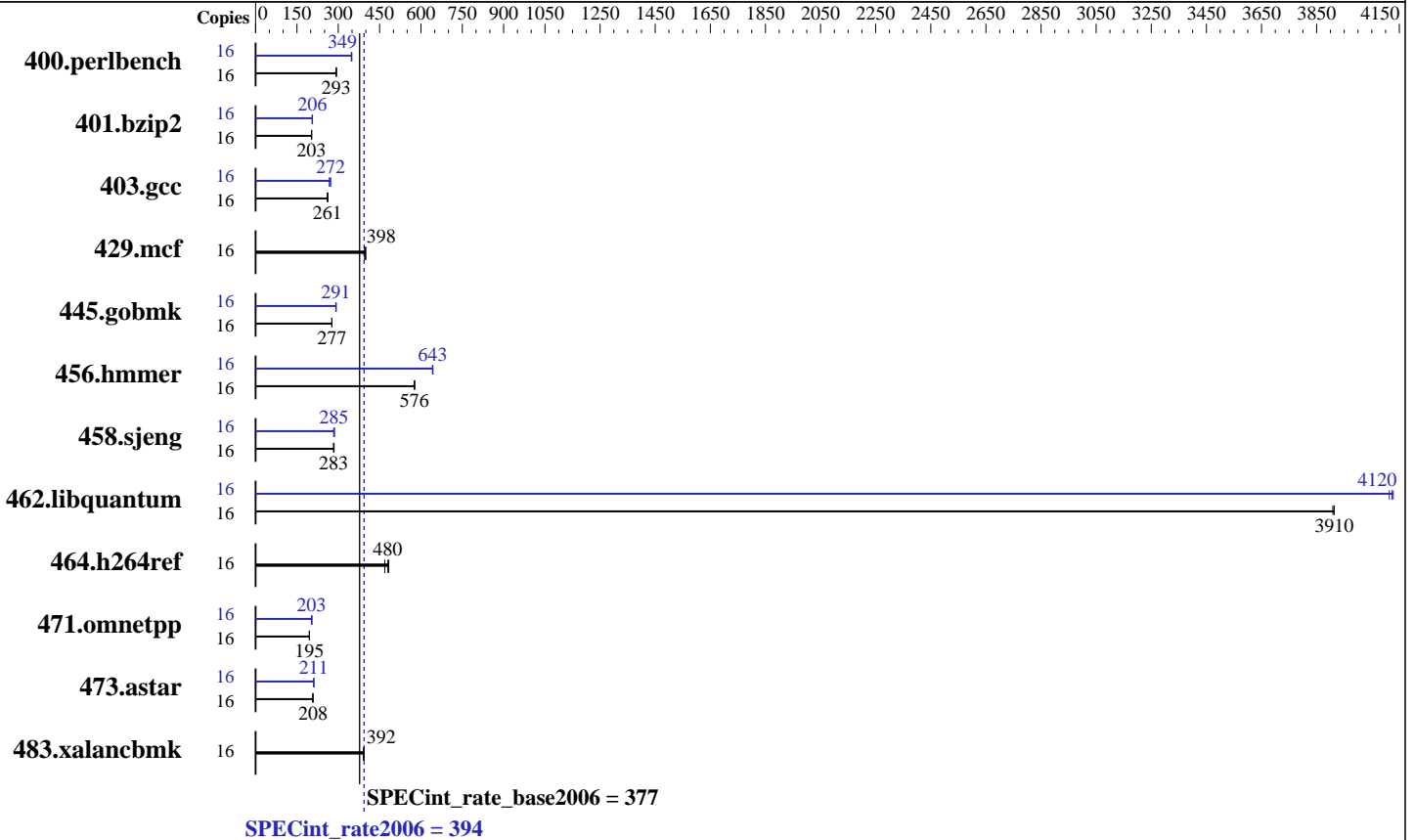
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Aug-2014

Hardware Availability: Aug-2014

Software Availability: Oct-2013



Hardware

CPU Name: Intel Core i7-5960X
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 8 cores, 1 chip, 8 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: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (4 x 4 GB 1Rx8 PC4-2133N-U)
 Disk Subsystem: 480 GB Intel 520 Series SATA SSD
 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: 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/>



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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	16	534	293	533	293	<u>534</u>	<u>293</u>	16	448	349	<u>449</u>	<u>349</u>	449	347
401.bzip2	16	<u>757</u>	<u>203</u>	759	203	757	203	16	748	206	752	205	<u>749</u>	<u>206</u>
403.gcc	16	492	262	494	261	<u>493</u>	<u>261</u>	16	482	267	472	272	<u>475</u>	<u>272</u>
429.mcf	16	365	400	<u>366</u>	<u>398</u>	369	395	16	365	400	<u>366</u>	<u>398</u>	369	395
445.gobmk	16	<u>605</u>	<u>277</u>	606	277	605	277	16	<u>576</u>	<u>291</u>	576	291	572	293
456.hammer	16	259	578	<u>259</u>	<u>576</u>	259	576	16	232	643	<u>232</u>	<u>643</u>	233	642
458.sjeng	16	683	283	<u>682</u>	<u>283</u>	682	285	16	<u>680</u>	<u>285</u>	676	286	682	283
462.libquantum	16	84.8	3910	84.7	3910	<u>84.7</u>	<u>3910</u>	16	80.6	4110	<u>80.4</u>	<u>4120</u>	80.3	4130
464.h264ref	16	754	469	733	483	<u>737</u>	<u>480</u>	16	754	469	733	483	<u>737</u>	<u>480</u>
471.omnetpp	16	514	195	513	195	<u>513</u>	<u>195</u>	16	490	205	<u>491</u>	<u>203</u>	492	203
473.astar	16	<u>540</u>	<u>208</u>	539	208	541	208	16	531	211	532	211	<u>531</u>	<u>211</u>
483.xalancbmk	16	<u>282</u>	<u>392</u>	282	392	280	394	16	<u>282</u>	<u>392</u>	282	392	280	394

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 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:\SPEC14.0\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt8888888888788 Sun Aug 17 22:05:49 2014

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: Gigabyte Technology Co., Ltd.
System Model : To be filled by O.E.M.
Processor(s) : 1 Processor(s) Installed.

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Platform Notes (Continued)

[01]: Intel64 Family 6 Model 63 Stepping 2 GenuineIntel ~3001 Mhz
BIOS Version : American Megatrends Inc. Flo, 7/22/2014
Total Physical Memory: 16,218 MB

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 2048
L3CacheSize   : 4096
MaxClockSpeed : 3001
Name          : Intel(R) Core(TM) i7-5960X CPU @ 3.00GHz
NumberOfCores : 8
NumberOfLogicalProcessors: 16
```

(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 -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

Base Optimization Flags

C benchmarks:
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

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Base Optimization Flags (Continued)

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.hmmmer: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe`

`458.sjeng: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe`

`462.libquantum: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe -Qstd=c99`

C++ benchmarks (except as noted below):

`icl -Qvc10`

`473.astar: C:\Program Files (x86)\Intel\Composer XE 2013 SP1/bin/intel64/icl.exe`

Peak Portability Flags

`403.gcc: -DSPEC_CPU_WIN32`

`456.hmmmer: -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:

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Peak Optimization Flags (Continued)

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.bzip2: -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- -Qunroll14
/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:

403.gcc: -Dalloca=_alloca

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Peak Other Flags (Continued)

```
456.hmmr: -link -LIBPATH:C:\Program Files (x86)\Intel\Composer XE 2013 SP1/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 SP1/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 SP1/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 SP1/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-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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Tested with SPEC CPU2006 v1.2.
Report generated on Wed Sep 10 16:13:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 September 2014.