



SPEC® CINT2006 Result

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Intel Corporation

SPECint®_rate2006 = 114

Intel DH87MC Motherboard (Intel Core i3-4340)

SPECint_rate_base2006 = 109

CPU2006 license: 13

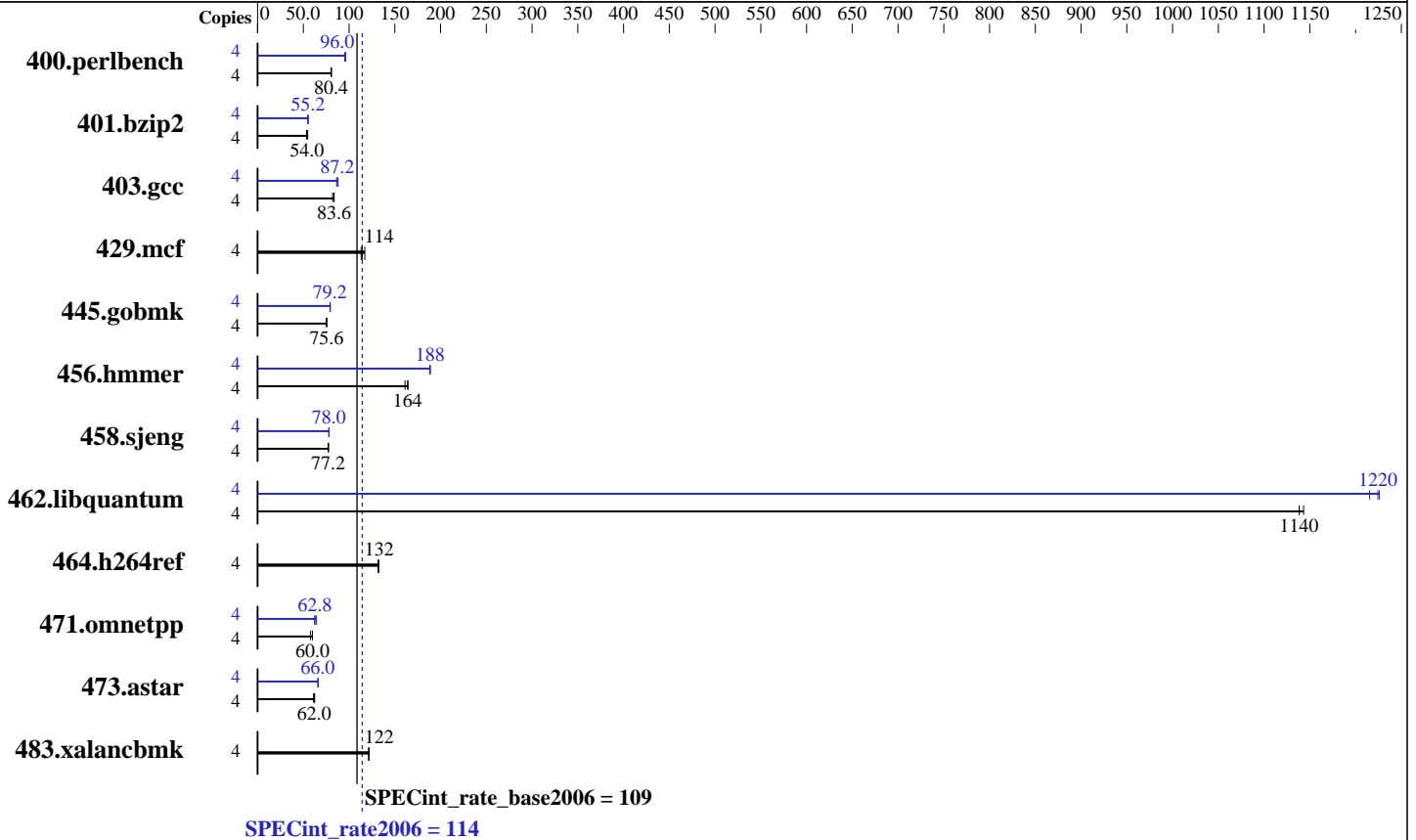
Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Oct-2013



Hardware

CPU Name: Intel Core i3-4340
 CPU Characteristics: 3600
 CPU MHz: Integrated
 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: 4 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 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: 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 | 4 | 485 | 80.8 | 485 | 80.4 | 486 | 80.4 | 4 | 410 | 95.2 | 407 | 96.0 | 406 | 96.4 | | |
| 401.bzip2 | 4 | 719 | 53.6 | 713 | 54.0 | 706 | 54.8 | 4 | 699 | 55.2 | 699 | 55.2 | 698 | 55.2 | | |
| 403.gcc | 4 | 393 | 82.0 | 385 | 83.6 | 385 | 83.6 | 4 | 366 | 88.0 | 372 | 86.4 | 369 | 87.2 | | |
| 429.mcf | 4 | 322 | 113 | 319 | 114 | 311 | 117 | 4 | 322 | 113 | 319 | 114 | 311 | 117 | | |
| 445.gobmk | 4 | 554 | 75.6 | 557 | 75.2 | 555 | 75.6 | 4 | 528 | 79.6 | 529 | 79.2 | 529 | 79.2 | | |
| 456.hammer | 4 | 232 | 161 | 227 | 164 | 227 | 164 | 4 | 198 | 189 | 198 | 188 | 198 | 188 | | |
| 458.sjeng | 4 | 626 | 77.2 | 626 | 77.2 | 624 | 77.6 | 4 | 621 | 78.0 | 619 | 78.0 | 619 | 78.0 | | |
| 462.libquantum | 4 | 72.5 | 1140 | 72.8 | 1140 | 72.8 | 1140 | 4 | 68.2 | 1220 | 67.7 | 1220 | 67.6 | 1230 | | |
| 464.h264ref | 4 | 670 | 132 | 671 | 132 | 670 | 132 | 4 | 670 | 132 | 671 | 132 | 670 | 132 | | |
| 471.omnetpp | 4 | 432 | 58.0 | 416 | 60.0 | 416 | 60.0 | 4 | 399 | 62.8 | 389 | 64.4 | 401 | 62.4 | | |
| 473.astar | 4 | 458 | 61.2 | 451 | 62.4 | 452 | 62.0 | 4 | 423 | 66.4 | 425 | 66.0 | 424 | 66.0 | | |
| 483.xalancbmk | 4 | 226 | 122 | 227 | 121 | 226 | 122 | 4 | 226 | 122 | 227 | 121 | 226 | 122 | | |

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 Clt54BEF7090207 Sat Jun 28 02:05:35 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: INTEL_
System Model : DH87MC_
Processor(s) : 1 Processor(s) Installed.

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Platform Notes (Continued)

[01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3600 Mhz
BIOS Version : Intel Corp. MCH8710H.86A.0047.2013.0606.1508, 6/6/2013
Total Physical Memory: 7,862 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0

L2CacheSize : 512

L3CacheSize : 4096

MaxClockSpeed : 3600

Name : Intel(R) Core(TM) i3-4340 CPU @ 3.60GHz

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 -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.hmmr: 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.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:

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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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For other inquiries, please contact webmaster@spec.org.

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