SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

Intel DH87MC Motherboard (Intel Core i5-4430)

$SPECint^{®}\_rate2006 = 154$

$SPECint\_rate\_base2006 = 146$

CPU2006 license: 13　　　　　　　　　　　　　　　　　　　　　　**Test date:** Jun-2014
Test sponsor: Intel Corporation　　　　　　　　　　　　　　**Hardware Availability:** Jun-2013
Tested by: Intel Corporation　　　　　　　　　　　　　　　**Software Availability:** Oct-2013

	Copies		
400.perlbench	4	142	
	4	114	
401.bzip2	4	70.4	
	4	70.0	
403.gcc	4	112	
	4	107	
429.mcf	4	164	
445.gobmk	4	99.6	
	4	96.8	
456.hmmer	4	236	
	4	215	
458.sjeng	4	108	
	4	108	
462.libquantum	4		1610
	4		1530
464.h264ref	4	195	
471.omnetpp	4	84.8	
	4	74.4	
473.astar	4	84.8	
	4	80.0	
483.xalancbmk	4	173	

SPECint_rate_base2006 = 146

SPECint_rate2006 = 154

Hardware

CPU Name: Intel Core i5-4430
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 3000
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: 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/

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

Intel DH87MC Motherboard (Intel Core i5-4430)

SPECint_rate2006 = 154

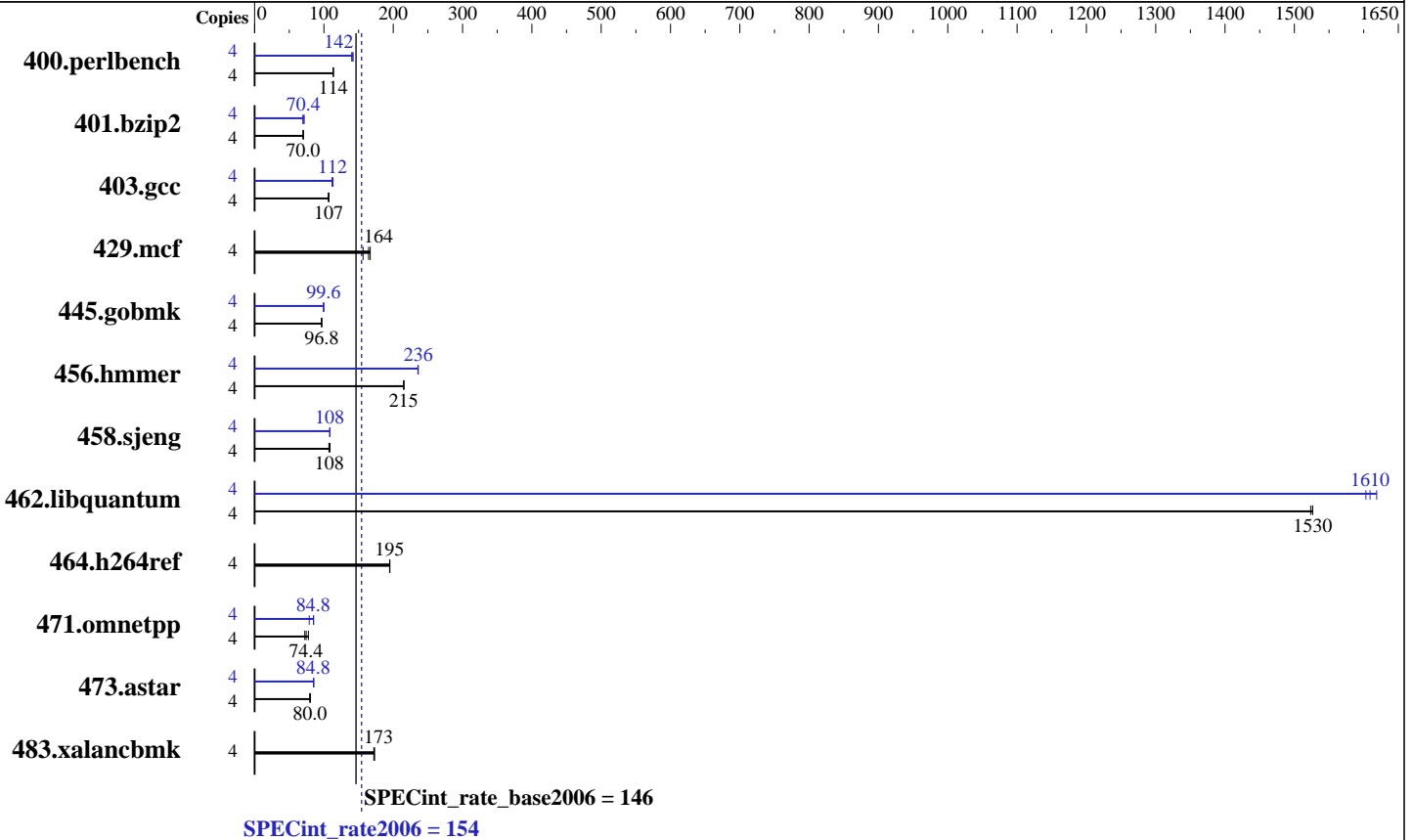SPECint_rate_base2006 = 146

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jun-2014
Hardware Availability: Jun-2013
Software Availability: Oct-2013

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	344	114	345	113	**344**	**114**	4	279	140	**276**	**142**	275	142
401.bzip2	4	**551**	**70.0**	553	70.0	548	70.4	4	**547**	**70.4**	553	69.6	539	71.6
403.gcc	4	**302**	**107**	300	107	302	106	4	285	113	288	112	**286**	**112**
429.mcf	4	219	167	**222**	**164**	233	156	4	219	167	**222**	**164**	233	156
445.gobmk	4	435	96.4	**433**	**96.8**	433	96.8	4	421	99.6	421	99.6	**421**	**99.6**
456.hmmer	4	**174**	**215**	174	215	173	215	4	158	236	158	236	**158**	**236**
458.sjeng	4	**448**	**108**	444	109	452	107	4	**446**	**108**	446	109	446	108
462.libquantum	4	54.3	1530	**54.3**	**1530**	54.4	1520	4	**51.5**	**1610**	51.7	1600	51.2	1620
464.h264ref	4	454	195	454	195	**454**	**195**	4	454	195	454	195	**454**	**195**
471.omnetpp	4	**336**	**74.4**	322	77.6	344	72.4	4	317	78.8	**294**	**84.8**	294	85.2
473.astar	4	350	80.4	353	79.6	**351**	**80.0**	4	328	85.6	**331**	**84.8**	331	84.8
483.xalancbmk	4	160	173	**160**	**173**	160	172	4	160	173	**160**	**173**	160	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 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 Clt7C05070D841B Sat Jun 28 03:00:21 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.
```

SPEC CINT2006 Result

Intel Corporation

Intel DH87MC Motherboard (Intel Core i5-4430)

SPECint_rate2006 = 154

SPECint_rate_base2006 = 146

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jun-2014
Hardware Availability: Jun-2013
Software Availability: Oct-2013

Platform Notes (Continued)

```
     [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3001 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   : 1024
  L3CacheSize   : 6144
  MaxClockSpeed : 3001
  Name          : Intel(R) Core(TM) i5-4430 CPU @ 3.00GHz
  NumberOfCores : 4
  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
```

Continued on next page

Intel Corporation

Intel DH87MC Motherboard (Intel Core i5-4430)

SPECint_rate2006 =   154

SPECint_rate_base2006 = 146

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jun-2014

Hardware Availability: Jun-2013

Software Availability: Oct-2013

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.hmmer: `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.hmmer: `-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:

Intel Corporation

Intel DH87MC Motherboard (Intel Core i5-4430)

SPECint_rate2006 =   154

SPECint_rate_base2006 = 146

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jun-2014
Hardware Availability: Jun-2013
Software Availability: Oct-2013

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- -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:

        403.gcc: -Dalloca=_alloca

Intel Corporation

Intel DH87MC Motherboard (Intel Core i5-4430)

SPECint_rate2006 =   154

SPECint_rate_base2006 = 146

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jun-2014
Hardware Availability: Jun-2013
Software Availability: Oct-2013

Peak Other Flags (Continued)

```
 456.hmmer: -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/AMD6
            -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/AMD6
            -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/AMD6
            -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/AMD6
            -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

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 11:02:22 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 July 2014.