



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

**SPECint\_rate2006 = 67.3**

Intel DH87MC Motherboard (Intel Celeron G1820)

**SPECint\_rate\_base2006 = 63.3**

CPU2006 license: 13

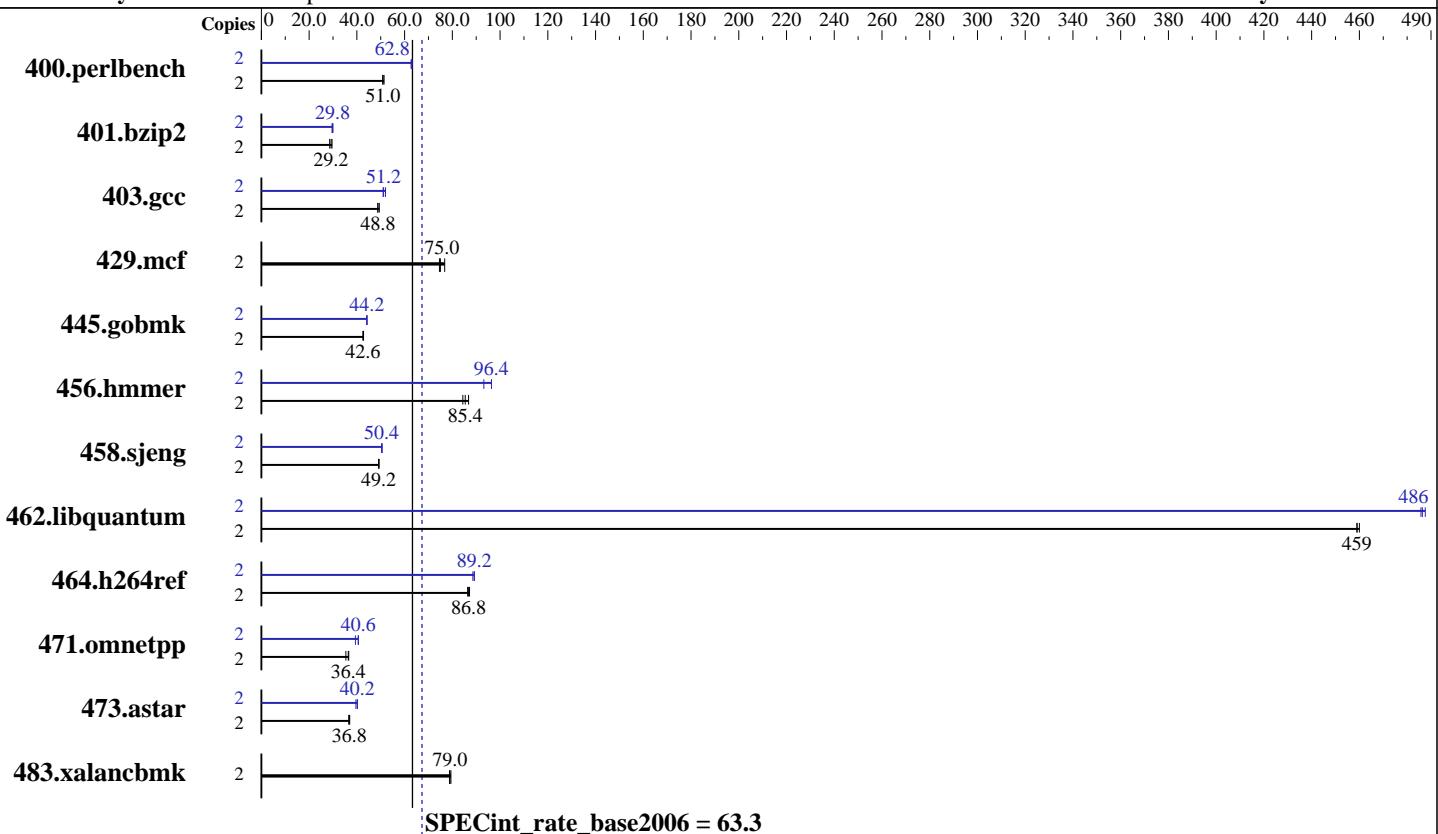
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jun-2014

Hardware Availability: Dec-2013

Software Availability: Oct-2013



## Hardware

CPU Name:	Intel Celeron G1820
CPU Characteristics:	
CPU MHz:	2694
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 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:	2 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 GB 2Rx4 PC3-12800U-11, running at 1333 MHz and CL9)
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 <a href="http://www.microquill.com/">http://www.microquill.com/</a>



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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	2	380	51.4	<b>383</b>	<b>51.0</b>	384	50.8	2	312	62.8	309	63.2	<b>311</b>	<b>62.8</b>
401.bzip2	2	653	29.6	674	28.6	<b>661</b>	<b>29.2</b>	2	652	29.6	644	30.0	<b>646</b>	<b>29.8</b>
403.gcc	2	<b>330</b>	<b>48.8</b>	326	49.4	330	48.8	2	310	52.0	<b>314</b>	<b>51.2</b>	315	51.0
429.mcf	2	237	76.8	244	74.6	<b>243</b>	<b>75.0</b>	2	237	76.8	244	74.6	<b>243</b>	<b>75.0</b>
445.gobmk	2	491	42.8	<b>491</b>	<b>42.6</b>	492	42.6	2	476	44.2	474	44.2	<b>475</b>	<b>44.2</b>
456.hmmer	2	221	84.4	<b>219</b>	<b>85.4</b>	215	86.8	2	194	96.4	200	93.2	<b>194</b>	<b>96.4</b>
458.sjeng	2	491	49.2	493	49.2	<b>492</b>	<b>49.2</b>	2	479	50.6	<b>479</b>	<b>50.4</b>	481	50.4
462.libquantum	2	<b>90.3</b>	<b>459</b>	90.3	459	90.1	460	2	<b>85.2</b>	<b>486</b>	85.0	488	85.3	486
464.h264ref	2	507	87.2	<b>510</b>	<b>86.8</b>	512	86.4	2	496	89.2	499	88.6	<b>496</b>	<b>89.2</b>
471.omnetpp	2	353	35.4	342	36.6	<b>343</b>	<b>36.4</b>	2	308	40.6	<b>309</b>	<b>40.6</b>	317	39.4
473.astar	2	380	37.0	<b>382</b>	<b>36.8</b>	383	36.6	2	354	39.6	349	40.2	<b>349</b>	<b>40.2</b>
483.xalancbmk	2	175	78.8	174	79.4	<b>175</b>	<b>79.0</b>	2	175	78.8	174	79.4	<b>175</b>	<b>79.0</b>

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 Clt54BEF70B2EDF Sat Jun 28 07:23:17 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 ~2694 Mhz  
BIOS Version : Intel Corp. MCH8710H.86A.0047.2013.0606.1508, 6/6/2013  
Total Physical Memory: 7,864 MB

```
Trying 'wmic cpu get /value'  
DeviceID      : CPU0  
L2CacheSize   : 512  
L3CacheSize   : 2048  
MaxClockSpeed : 2694  
Name          : Intel(R) Celeron(R) CPU G1820 @ 2.70GHz  
NumberOfCores : 2  
NumberOfLogicalProcessors: 2
```

(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:

```
-Qxsse4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000
```

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## Base Optimization Flags (Continued)

C++ benchmarks:

```
-QxSSE4.2 -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:

Continued on next page



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## Peak Optimization Flags (Continued)

400.perlbench: -QxSSE4.2(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: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
                  -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias  
                  /F512000000

403.gcc: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
                  -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

429.mcf: basepeak = yes

445.gobmk: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
                  -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmr: -Qauto-ilp32 -QxSSE4.2(pass 2) -Qprof\_gen(pass 1)  
                  -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch  
                  /F512000000

458.sjeng: -Qauto-ilp32 -QxSSE4.2(pass 2) -Qprof\_gen(pass 1)  
                  -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll14  
                  /F512000000

462.libquantum: -Qauto-ilp32 -QxSSE4.2 -Qipo -O3 -Qprec-div-  
                  -Qopt-prefetch /F512000000

464.h264ref: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
                  -Qipo -O3 -Qprec-div- -Qunroll12 -Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: -QxSSE4.2(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 -QxSSE4.2 -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



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## Peak Other Flags (Continued)

403.gcc: -Dalloca=\_alloca

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/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](mailto:webmaster@spec.org).

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