



SPEC® CINT2006 Result

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Intel Corporation

SPECint®2006 = 42.6

Intel DQ87PG motherboard (Intel Pentium G3220)

SPECint_base2006 = 40.8

CPU2006 license: 13

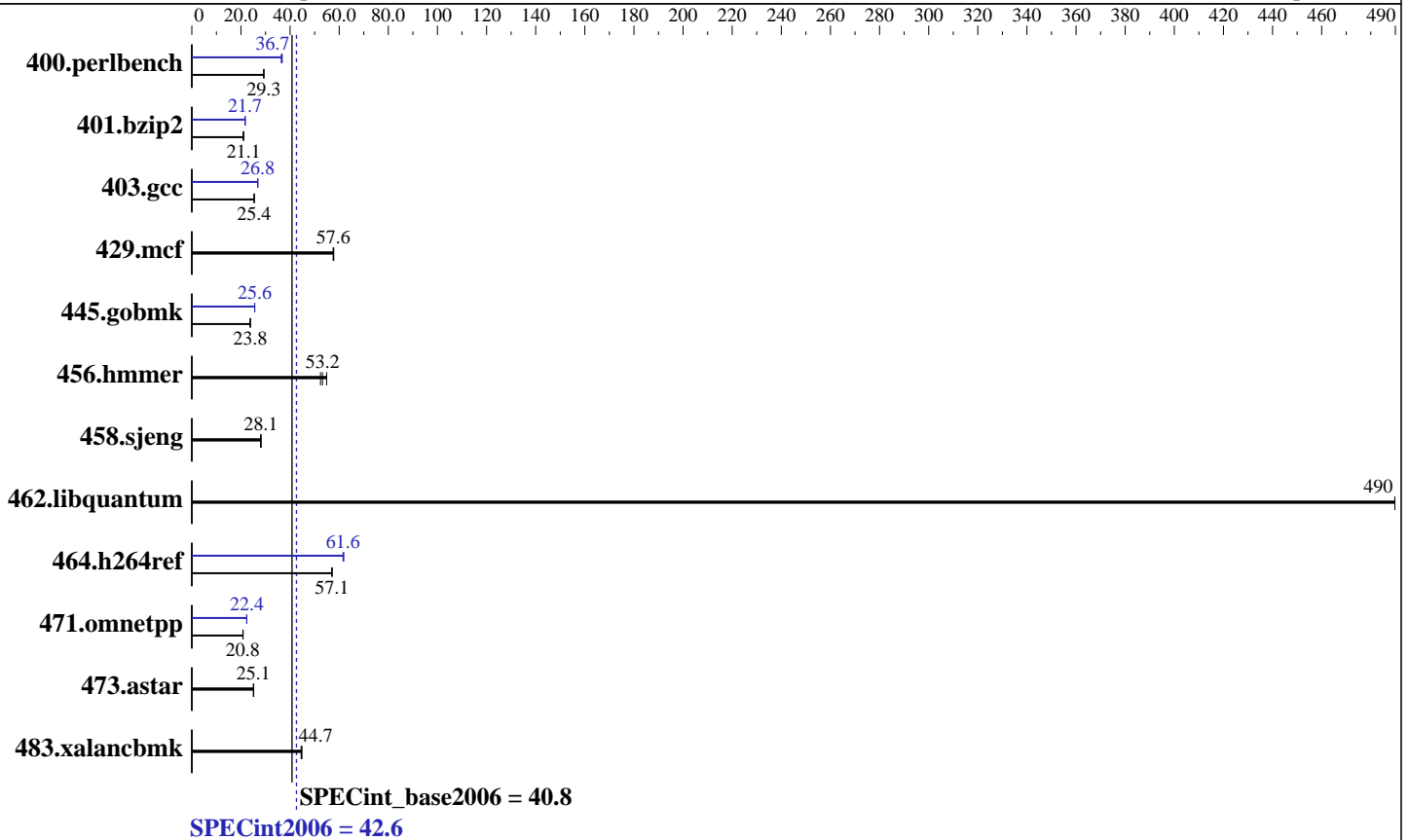
Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013



Hardware

CPU Name: Intel Pentium G3220
 CPU Characteristics: 3000
 CPU MHz: 3000
 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: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11, running at 1333 MHz and CL9)
 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: Yes
 File System: NTFS
 System State: Default
 Base Pointers: 32/64-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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	334	29.3	333	29.3	<u>333</u>	<u>29.3</u>	<u>266</u>	<u>36.7</u>	265	36.8	269	36.4
401.bzip2	462	20.9	458	21.1	<u>458</u>	<u>21.1</u>	<u>445</u>	<u>21.7</u>	445	21.7	445	21.7
403.gcc	317	25.4	316	25.4	<u>317</u>	<u>25.4</u>	300	26.9	300	26.8	<u>300</u>	<u>26.8</u>
429.mcf	<u>158</u>	<u>57.6</u>	158	57.8	158	57.6	<u>158</u>	<u>57.6</u>	158	57.8	158	57.6
445.gobmk	441	23.8	<u>440</u>	<u>23.8</u>	440	23.8	<u>410</u>	<u>25.6</u>	409	25.6	410	25.6
456.hammer	<u>175</u>	<u>53.2</u>	178	52.4	170	54.9	<u>175</u>	<u>53.2</u>	178	52.4	170	54.9
458.sjeng	<u>431</u>	<u>28.1</u>	430	28.2	432	28.0	<u>431</u>	<u>28.1</u>	430	28.2	432	28.0
462.libquantum	42.3	490	<u>42.3</u>	<u>490</u>	42.3	490	<u>42.3</u>	<u>490</u>	<u>42.3</u>	<u>490</u>	42.3	490
464.h264ref	389	57.0	<u>388</u>	<u>57.1</u>	387	57.1	<u>359</u>	<u>61.6</u>	359	61.6	358	61.9
471.omnetpp	<u>300</u>	<u>20.8</u>	299	20.9	301	20.8	<u>280</u>	<u>22.3</u>	<u>279</u>	<u>22.4</u>	279	22.4
473.astar	280	25.1	279	25.2	<u>280</u>	<u>25.1</u>	<u>280</u>	<u>25.1</u>	279	25.2	<u>280</u>	<u>25.1</u>
483.xalancbmk	155	44.5	154	44.8	<u>154</u>	<u>44.7</u>	<u>155</u>	<u>44.5</u>	154	44.8	<u>154</u>	<u>44.7</u>

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 64-bit binaries with the command:
"ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

Platform Notes

Sysinfo program C:\SPEC13.1\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt7C05070FB2AD Thu Sep 19 07:23:10 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.
               [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3000 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
```

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Platform Notes (Continued)

```

L2CacheSize      : 512
L3CacheSize      : 3072
MaxClockSpeed    : 3000
Name              : Intel(R) Pentium(R) CPU G3220 @ 3.00GHz
NumberOfCores    : 2
NumberOfLogicalProcessors: 2

```

(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

OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
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

```

400.perlbench: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64_X64
               -DSPEC_CPU_NO_NEED_VA_COPY
401.bzip2: -DSPEC_CPU_P64
403.gcc: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
429.mcf: -DSPEC_CPU_P64
445.gobmk: -DSPEC_CPU_P64
456.hmmer: -DSPEC_CPU_P64
458.sjeng: -DSPEC_CPU_P64
462.libquantum: -DSPEC_CPU_P64
464.h264ref: -DSPEC_CPU_P64 -DWIN32 -DSPEC_CPU_NO_INTTYPES

```

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Base Portability Flags (Continued)

471.omnetpp: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
473.astar: -DSPEC_CPU_P64
483.xalancbmk: -DSPEC_CPU_P64 -Qoption,cpp,--no_wchar_t_keyword

Base Optimization Flags

C benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F512000000
C++ benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F512000000 shlw64M.lib -link /FORCE:MULTIPLE

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks:
icl -Qvc10 -Qstd=c99
C++ benchmarks:
icl -Qvc10

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
400.perlbench: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F512000000 shlw64M.lib
-link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

401.bzip2: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
-Qauto-ilp32 /F512000000

403.gcc: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qauto-ilp32 /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 -Qauto-ilp32
/F512000000

456.hmmr: basepeak = yes

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qauto-ilp32 /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 -Qauto-ilp32 /F512000000
shlW64M.lib -link /FORCE:MULTIPLE

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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>



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

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