



SPEC® CINT2006 Result

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Intel Corporation

SPECint®2006 = 44.9

Intel DQ87PG motherboard (Intel Pentium G3420)

SPECint_base2006 = 42.9

CPU2006 license: 13

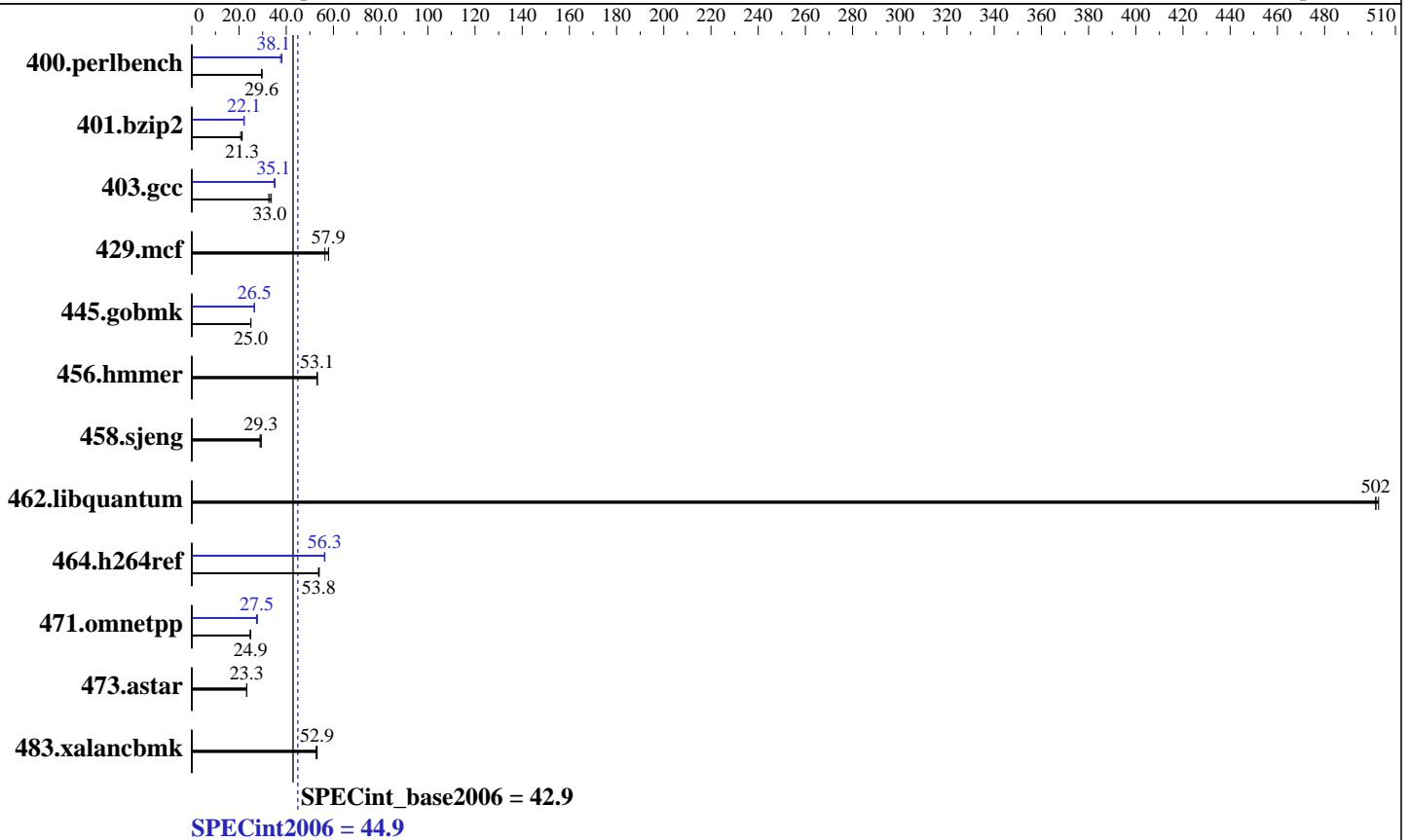
Test date: Sep-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Sep-2012



Hardware

CPU Name: Intel Pentium G3420
 CPU Characteristics:
 CPU MHz: 3200
 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)
 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 15.00.30729.01 of Microsoft Visual Studio 2008 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	<u>331</u>	<u>29.6</u>	332	29.5	328	29.8	256	38.2	<u>256</u>	<u>38.1</u>	260	37.6
401.bzip2	466	20.7	453	21.3	<u>453</u>	<u>21.3</u>	435	22.2	<u>436</u>	<u>22.1</u>	437	22.1
403.gcc	247	32.6	239	33.7	<u>244</u>	<u>33.0</u>	<u>229</u>	<u>35.1</u>	229	35.2	230	35.0
429.mcf	162	56.4	157	58.0	<u>158</u>	<u>57.9</u>	162	56.4	157	58.0	<u>158</u>	<u>57.9</u>
445.gobmk	420	25.0	<u>420</u>	<u>25.0</u>	420	25.0	<u>395</u>	<u>26.5</u>	395	26.5	395	26.5
456.hammer	<u>176</u>	<u>53.1</u>	176	53.1	175	53.2	<u>176</u>	<u>53.1</u>	176	53.1	175	53.2
458.sjeng	419	28.9	411	29.4	<u>413</u>	<u>29.3</u>	419	28.9	411	29.4	<u>413</u>	<u>29.3</u>
462.libquantum	<u>41.3</u>	<u>502</u>	41.2	503	41.3	502	<u>41.3</u>	<u>502</u>	41.2	503	41.3	502
464.h264ref	<u>411</u>	<u>53.8</u>	412	53.7	410	54.0	394	56.2	392	56.4	<u>393</u>	<u>56.3</u>
471.omnetpp	253	24.7	<u>251</u>	<u>24.9</u>	251	24.9	228	27.4	225	27.8	<u>227</u>	<u>27.5</u>
473.astar	303	23.2	302	23.3	<u>302</u>	<u>23.3</u>	303	23.2	302	23.3	<u>302</u>	<u>23.3</u>
483.xalancbmk	<u>131</u>	<u>52.9</u>	130	53.1	131	52.7	<u>131</u>	<u>52.9</u>	130	53.1	131	52.7

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 13.0 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 Clt7C05070FB2EF Mon Sep 23 00:46:04 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 ~3200 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    : 3200
Name              : Intel(R) Pentium(R) CPU G3420 @ 3.20GHz
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

```

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 -Qparallel
 /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:

icl -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

Peak Portability Flags

403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

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
/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- /F512000000

429.mcf: basepeak = yes

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Peak Optimization Flags (Continued)

445.gobmk: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: 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 /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: 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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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