



SPEC[®] CINT2006 Result

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ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECint[®]2006 = 52.1

ASUS Q170M-C motherboard (Intel Pentium G4400)

SPECint_base2006 = 50.8

CPU2006 license: 13

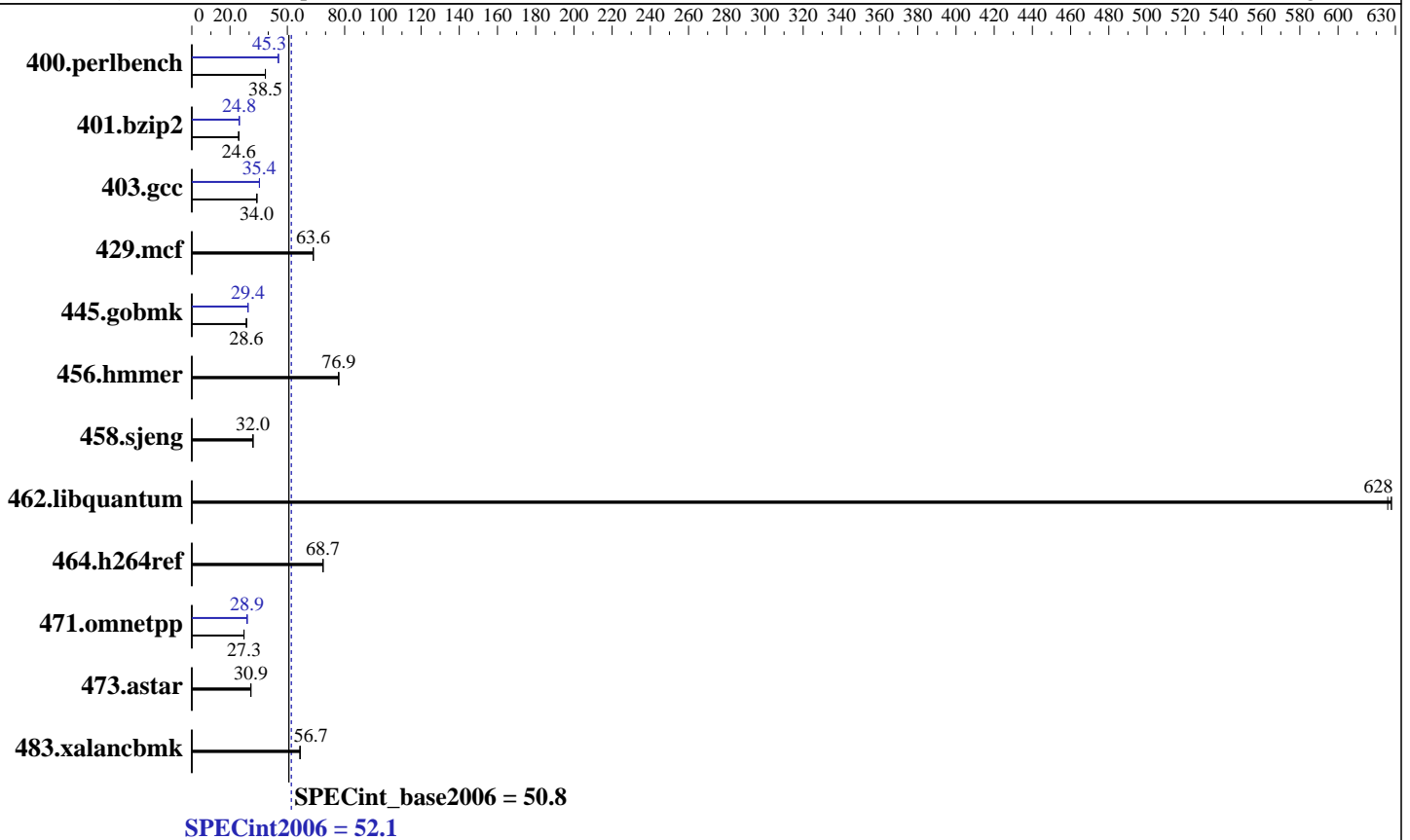
Test date: Mar-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015



Hardware

CPU Name: Intel Pentium G4400
 CPU Characteristics: 3300
 CPU MHz: Integrated
 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: 8 GB (2 x 4 GB 2Rx4 PC4-2133P-U)
 Disk Subsystem: 1 TB Seagate Barracuda HDD, 7200 RPM
 Other Hardware: None

Software

Operating System: Microsoft Windows 7 Professional 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 16.0.0.110 of Intel C++ Studio XE for Windows;
 Libraries: Version 18.00.30723 of Microsoft Visual Studio 2013
 Auto Parallel: Yes
 File System: NTFS
 System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 11.0 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>254</u>	<u>38.5</u>	254	38.5	254	38.5	<u>216</u>	<u>45.3</u>	216	45.3	216	45.3
401.bzip2	393	24.5	393	24.6	<u>393</u>	<u>24.6</u>	389	24.8	388	24.9	<u>389</u>	<u>24.8</u>
403.gcc	237	34.0	<u>237</u>	<u>34.0</u>	236	34.1	<u>227</u>	<u>35.4</u>	227	35.4	227	35.4
429.mcf	143	63.6	<u>143</u>	<u>63.6</u>	144	63.5	143	63.6	<u>143</u>	<u>63.6</u>	144	63.5
445.gobmk	367	28.6	367	28.6	<u>367</u>	<u>28.6</u>	357	29.4	357	29.4	<u>357</u>	<u>29.4</u>
456.hammer	<u>121</u>	<u>76.9</u>	122	76.8	121	76.9	<u>121</u>	<u>76.9</u>	122	76.8	121	76.9
458.sjeng	378	32.0	378	32.0	<u>378</u>	<u>32.0</u>	378	32.0	378	32.0	<u>378</u>	<u>32.0</u>
462.libquantum	33.0	628	33.1	626	<u>33.0</u>	<u>628</u>	33.0	628	33.1	626	<u>33.0</u>	<u>628</u>
464.h264ref	322	68.7	323	68.6	<u>322</u>	<u>68.7</u>	322	68.7	323	68.6	<u>322</u>	<u>68.7</u>
471.omnetpp	229	27.3	<u>229</u>	<u>27.3</u>	229	27.3	<u>216</u>	<u>28.9</u>	216	28.9	216	29.0
473.astar	227	30.9	227	30.9	<u>227</u>	<u>30.9</u>	227	30.9	227	30.9	<u>227</u>	<u>30.9</u>
483.xalancbmk	122	56.7	<u>122</u>	<u>56.7</u>	122	56.6	122	56.7	<u>122</u>	<u>56.7</u>	122	56.6

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 16.0 was set up to generate 64-bit binaries with the command:
"psxevars.bat intel64" (shortcut provided in the Intel(r) Parallel Studio XE 2016 program folder)

Platform Notes

Sysinfo program C:\SPEC16.0\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on CltF832E48859C5 Mon Mar 7 22:13:15 2016

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 Professional
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: System manufacturer
System Model   : System Product Name
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~3300 Mhz
BIOS Version  : American Megatrends Inc. 0704, 1/12/2016
Total Physical Memory: 8,074 MB
```

```
Trying 'wmic cpu get /value'
DeviceID     : CPU0
```

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Platform Notes (Continued)

L2CacheSize : 512
L3CacheSize : 3072
MaxClockSpeed : 3300
Name : Intel(R) Pentium(R) CPU G4400 @ 3.30GHz
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

OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
Binaries compiled on a system with 1x Intel Xeon E5-2699 v3 CPU
+ 64GB memory using Windows 8.1 Enterprise 64-bit

Base Compiler Invocation

C benchmarks:
icl -Qvc12 -Qstd=c99

C++ benchmarks:
icl -Qvc12

Base Portability Flags

400.perlbench: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64_X64
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
471.omnetpp: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64
473.astar: -DSPEC_CPU_P64
483.xalancbmk: -DSPEC_CPU_P64 -Qoption,cpp,--no_wchar_t_keyword -DWIN64



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Base Optimization Flags

C benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel
-Qauto-ilp32 /F64000000

C++ benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F64000000 shlw64M.lib -link /FORCE:MULTIPLE

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks:

icl -Qvc12 -Qstd=c99

C++ benchmarks:

icl -Qvc12

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 /F64000000 shlw64M.lib
/F256000000 -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
-Qauto-ilp32 /F64000000

403.gcc: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qauto-ilp32 /F64000000

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Peak Optimization Flags (Continued)

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
/F64000000

456.hmmer: basepeak = yes

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

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 /F64000000
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-ic16.0-official-windows.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-windows.xml>



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

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