



# SPEC® CINT2006 Result

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ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECint®2006 = 63.6

ASUS Q170M-C motherboard (Intel Core i3-6300)

SPECint\_base2006 = 61.8

CPU2006 license: 13

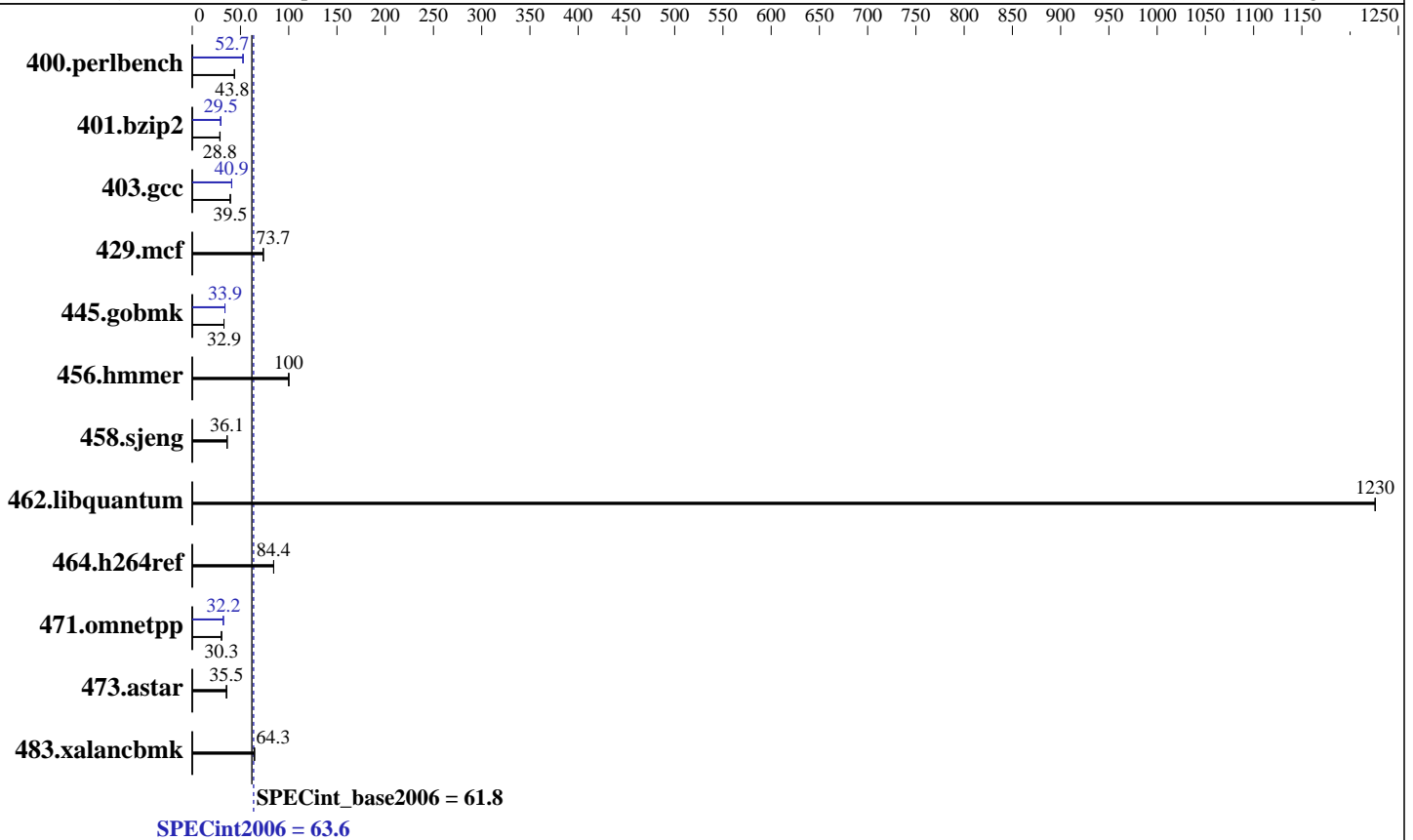
Test date: Mar-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015



## Hardware

CPU Name: Intel Core i3-6300  
 CPU Characteristics: 3800  
 CPU MHz: 3800  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core  
 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: 4 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	224	43.7	<b><u>223</u></b>	<b><u>43.8</u></b>	223	43.8	185	52.7	186	52.6	<b><u>185</u></b>	<b><u>52.7</u></b>
401.bzip2	338	28.5	<b><u>335</u></b>	<b><u>28.8</u></b>	334	28.9	<b><u>327</u></b>	<b><u>29.5</u></b>	327	29.5	327	29.5
403.gcc	204	39.5	<b><u>204</u></b>	<b><u>39.5</u></b>	204	39.4	197	40.9	<b><u>197</u></b>	<b><u>40.9</u></b>	197	40.9
429.mcf	124	73.7	124	73.5	<b><u>124</u></b>	<b><u>73.7</u></b>	124	73.7	124	73.5	<b><u>124</u></b>	<b><u>73.7</u></b>
445.gobmk	<b><u>319</u></b>	<b><u>32.9</u></b>	319	32.9	319	32.9	310	33.9	310	33.9	<b><u>310</u></b>	<b><u>33.9</u></b>
456.hmmer	93.2	100	<b><u>93.3</u></b>	<b><u>100</u></b>	93.3	100	93.2	100	<b><u>93.3</u></b>	<b><u>100</u></b>	93.3	100
458.sjeng	<b><u>335</u></b>	<b><u>36.1</u></b>	335	36.2	335	36.1	<b><u>335</u></b>	<b><u>36.1</u></b>	335	36.2	335	36.1
462.libquantum	16.9	1230	<b><u>16.9</u></b>	<b><u>1230</u></b>	16.9	1230	16.9	1230	<b><u>16.9</u></b>	<b><u>1230</u></b>	16.9	1230
464.h264ref	<b><u>262</u></b>	<b><u>84.4</u></b>	262	84.4	262	84.4	<b><u>262</u></b>	<b><u>84.4</u></b>	262	84.4	262	84.4
471.omnetpp	<b><u>207</u></b>	<b><u>30.3</u></b>	207	30.3	206	30.4	<b><u>194</u></b>	<b><u>32.2</u></b>	194	32.2	194	32.2
473.astar	198	35.5	<b><u>198</u></b>	<b><u>35.5</u></b>	197	35.6	198	35.5	<b><u>198</u></b>	<b><u>35.5</u></b>	197	35.6
483.xalancbmk	<b><u>107</u></b>	<b><u>64.3</u></b>	108	64.0	107	64.8	<b><u>107</u></b>	<b><u>64.3</u></b>	108	64.0	107	64.8

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 CltF832E4885A95 Wed Mar 16 17:37:19 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 ~3800 Mhz
BIOS Version  : American Megatrends Inc. 0704, 1/12/2016
Total Physical Memory: 8,070 MB
```

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

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## Platform Notes (Continued)

L2CacheSize : 512  
L3CacheSize : 4096  
MaxClockSpeed : 3800  
Name : Intel(R) Core(TM) i3-6300 CPU @ 3.80GHz  
NumberOfCores : 2  
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

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.hmmmer: -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:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel  
-Qauto-ilp32 /F64000000

C++ benchmarks:

-QxCORE-AVX2 -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: -QxCORE-AVX2(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: -QxCORE-AVX2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias  
-Qauto-ilp32 /F64000000

403.gcc: -QxCORE-AVX2(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: -QxCORE-AVX2(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: -QxCORE-AVX2(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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Jul 12 11:02:42 2016 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 12 July 2016.