



# SPEC® CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp®2006 = 77.9

ASUS Q170M-C motherboard (Intel Core i5-6500T)

SPECfp\_base2006 = 76.0

CPU2006 license: 13

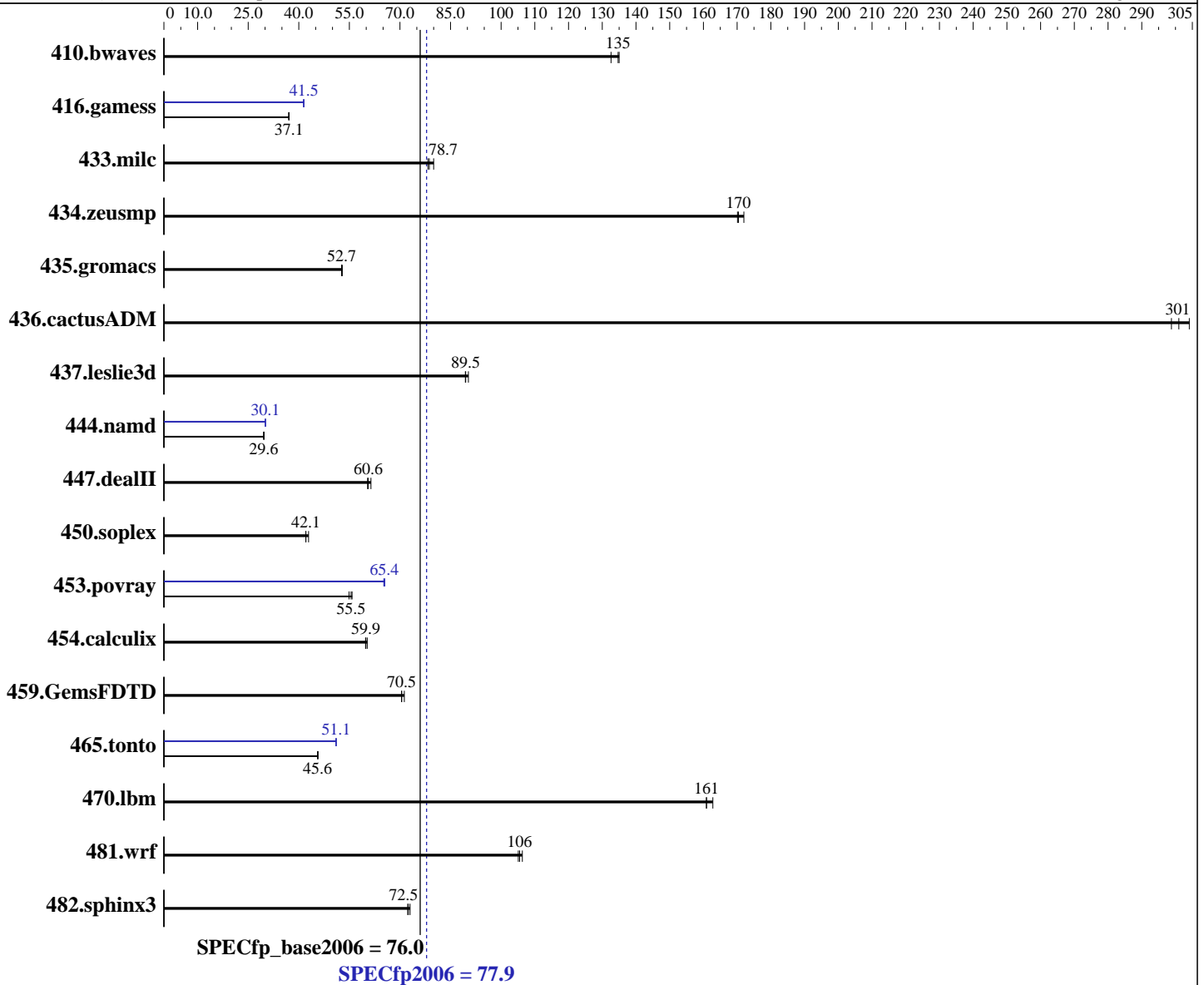
Test date: May-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015



## Hardware

CPU Name: Intel Core i5-6500T  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.10 GHz  
 CPU MHz: 2500  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 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

Continued on next page

## 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;  
 Fortran: Version 16.0.0.110 of Intel Fortran Studio XE for Windows;  
 Libraries: Version 18.00.30723 of Microsoft Visual Studio 2013  
 Auto Parallel: Yes

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp2006 = **77.9**

ASUS Q170M-C motherboard (Intel Core i5-6500T)

SPECfp\_base2006 = **76.0**

CPU2006 license: 13

Test date: May-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

L3 Cache: 6 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

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/>

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	101	135	<b>101</b>	<b>135</b>	103	133	<b>101</b>	<b>135</b>	<b>101</b>	<b>135</b>	103	133
416.gamess	<b>528</b>	<b>37.1</b>	527	37.1	529	37.0	<b>472</b>	<b>41.5</b>	473	41.4	472	41.5
433.milc	<b>117</b>	<b>78.7</b>	115	80.0	117	78.3	<b>117</b>	<b>78.7</b>	115	80.0	117	78.3
434.zeusmp	53.5	170	52.9	172	<b>53.4</b>	<b>170</b>	53.5	170	52.9	172	<b>53.4</b>	<b>170</b>
435.gromacs	<b>136</b>	<b>52.7</b>	135	52.9	136	52.7	<b>136</b>	<b>52.7</b>	135	52.9	136	52.7
436.cactusADM	<b>39.7</b>	<b>301</b>	39.3	304	40.0	299	<b>39.7</b>	<b>301</b>	39.3	304	40.0	299
437.leslie3d	105	89.4	104	90.3	<b>105</b>	<b>89.5</b>	105	89.4	104	90.3	<b>105</b>	<b>89.5</b>
444.namd	270	29.7	271	29.6	<b>271</b>	<b>29.6</b>	266	30.1	266	30.1	<b>266</b>	<b>30.1</b>
447.dealII	186	61.4	<b>189</b>	<b>60.6</b>	189	60.4	186	61.4	<b>189</b>	<b>60.6</b>	189	60.4
450.soplex	195	42.9	<b>198</b>	<b>42.1</b>	198	42.1	195	42.9	<b>198</b>	<b>42.1</b>	198	42.1
453.povray	95.3	55.8	96.9	54.9	<b>95.8</b>	<b>55.5</b>	81.2	65.5	<b>81.4</b>	<b>65.4</b>	81.6	65.2
454.calculix	137	60.3	138	59.8	<b>138</b>	<b>59.9</b>	137	60.3	138	59.8	<b>138</b>	<b>59.9</b>
459.GemsFDTD	149	71.3	<b>151</b>	<b>70.5</b>	151	70.5	149	71.3	<b>151</b>	<b>70.5</b>	151	70.5
465.tonto	215	45.7	216	45.6	<b>216</b>	<b>45.6</b>	192	51.1	<b>193</b>	<b>51.1</b>	193	51.0
470.lbm	84.4	163	<b>85.4</b>	<b>161</b>	85.4	161	84.4	163	<b>85.4</b>	<b>161</b>	85.4	161
481.wrf	105	106	<b>106</b>	<b>106</b>	106	105	105	106	<b>106</b>	<b>106</b>	106	105
482.sphinx3	267	73.0	<b>269</b>	<b>72.5</b>	269	72.3	267	73.0	<b>269</b>	<b>72.5</b>	269	72.3

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 CltF832E4885693 Wed May 4 15:32:49 2016

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp2006 = 77.9

ASUS Q170M-C motherboard (Intel Core i5-6500T)

SPECfp\_base2006 = 76.0

CPU2006 license: 13

Test date: May-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

## Platform Notes (Continued)

<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 ~2501 Mhz
BIOS Version  : American Megatrends Inc. 0704, 1/12/2016
Total Physical Memory: 8,070 MB
```

Trying 'wmic cpu get /value'

```
DeviceID      : CPU0
L2CacheSize   : 1024
L3CacheSize   : 6144
MaxClockSpeed : 2501
Name          : Intel(R) Core(TM) i5-6500T CPU @ 2.50GHz
NumberOfCores : 4
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

```
450.soplex (base): "getline_test" src.alt was used.
447.dealII (base): "max_prototype" src.alt was used.
447.dealII (base): "cxx11_make_pair" src.alt was used.
450.soplex (base): "getline_test" src.alt was used.
447.dealII (base): "max_prototype" src.alt was used.
447.dealII (base): "cxx11_make_pair" src.alt was used.

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
```



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp2006 = 77.9

ASUS Q170M-C motherboard (Intel Core i5-6500T)

SPECfp\_base2006 = 76.0

CPU2006 license: 13  
Test sponsor: Intel Corporation  
Tested by: Intel Corporation

Test date: May-2016  
Hardware Availability: Sep-2015  
Software Availability: Aug-2015

## Base Compiler Invocation

C benchmarks:  
icl -Qvc12 -Qstd=c99  
C++ benchmarks:  
icl -Qvc12  
Fortran benchmarks:  
ifort  
Benchmarks using both Fortran and C:  
icl -Qvc12 -Qstd=c99 ifort

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_P64  
416.gamess: -DSPEC\_CPU\_P64  
433.milc: -DSPEC\_CPU\_P64  
434.zeusmp: -DSPEC\_CPU\_P64  
435.gromacs: -DSPEC\_CPU\_P64  
436.cactusADM: -DSPEC\_CPU\_P64 -names:lowercase /assume:underscore  
437.leslie3d: -DSPEC\_CPU\_P64  
444.namd: -DSPEC\_CPU\_P64 /TP  
447.dealII: -DSPEC\_CPU\_P64 -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
-DSPEC\_CPU\_BOOST\_CONFIG\_MSC\_VER -DSPEC\_NEED\_ALGORITHM  
450.soplex: -DSPEC\_CPU\_P64 -DSPEC\_GETLINE\_TEST  
453.povray: -DSPEC\_CPU\_P64  
454.calculix: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_NOZMODIFIER -names:lowercase  
459.GemsFDTD: -DSPEC\_CPU\_P64  
465.tonto: -DSPEC\_CPU\_P64  
470.lbm: -DSPEC\_CPU\_P64  
481.wrf: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WINDOWS\_ICL  
482.sphinx3: -DSPEC\_CPU\_P64

## Base Optimization Flags

C benchmarks:  
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch /F1000000000  
C++ benchmarks:  
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch -Qcxx-features /F1000000000 shlW64M.lib  
-link /FORCE:MULTIPLE  
Fortran benchmarks:  
-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch /F1000000000

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp2006 = 77.9

ASUS Q170M-C motherboard (Intel Core i5-6500T)

SPECfp\_base2006 = 76.0

CPU2006 license: 13

Test date: May-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch /F1000000000

## Peak Compiler Invocation

C benchmarks:

icl -Qvc12 -Qstd=c99

C++ benchmarks:

icl -Qvc12

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc12 -Qstd=c99 ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -QxCORE-AVX2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw64M.lib  
-link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp2006 = 77.9

ASUS Q170M-C motherboard (Intel Core i5-6500T)

SPECfp\_base2006 = 76.0

CPU2006 license: 13

Test date: May-2016

Test sponsor: Intel Corporation

Hardware Availability: Sep-2015

Tested by: Intel Corporation

Software Availability: Aug-2015

## Peak Optimization Flags (Continued)

```
453.povray: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias /F1000000000
shlW64M.lib -link /FORCE:MULTIPLE
```

Fortran benchmarks:

410.bwaves: basepeak = yes

```
416.gamess: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias
-Qscalar-rep- /F1000000000
```

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

```
465.tonto: -QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-alloc
/F1000000000
```

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

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>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Jul 12 11:02:19 2016 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 12 July 2016.