## SPEC® CFP2006 Result

ASUSTeK Computer Inc.  
(ASUS Z170MPLUS motherboard (Intel Core i5-6600))

**SPECfp®2006 =** 91.0  
**SPECfp_base2006 =** 88.8

### Hardware

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Core i5-6600</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.90 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>3300</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>4 cores, 1 chip, 4 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1 chip</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
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</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Microsoft Windows 10 Pro 10.0.10240 N/A Build 10240</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
</tr>
</tbody>
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Test date: Oct-2015  
Test sponsor: Intel Corporation  
Hardware Availability: Sep-2015  
Software Availability: Aug-2015

### Scores

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECfp®2006</th>
<th>SPECfp_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>416.gamess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>433.milc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>434.zeusmp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>435.gromacs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>436.cactusADM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>437.leslie3d</td>
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<tr>
<td>444.namd</td>
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<tr>
<td>447.dealII</td>
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<tr>
<td>450.soplex</td>
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<tr>
<td>453.povray</td>
<td></td>
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<tr>
<td>454.calculix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>459.GemsFDTD</td>
<td></td>
<td></td>
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<tr>
<td>465.tonto</td>
<td></td>
<td></td>
</tr>
<tr>
<td>470.lbm</td>
<td></td>
<td></td>
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<tr>
<td>481.wrf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>482.sphinx3</td>
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</tr>
</tbody>
</table>

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Continued on next page
## SPEC CFP2006 Result

**ASUSTeK Computer Inc.**  
(Test Sponsor: Intel Corporation)

ASUS Z170MPLUS motherboard (Intel Core i5-6600)

**SPECfp2006 = 91.0**  
**SPECfp_base2006 = 88.8**

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

<table>
<thead>
<tr>
<th>L3 Cache:</th>
<th>6 MB I+D on chip per chip</th>
<th><strong>File System:</strong></th>
<th>NTFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Cache:</td>
<td>None</td>
<td><strong>System State:</strong></td>
<td>Default</td>
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<tr>
<td>Memory:</td>
<td>8 GB (2 x 4 GB 2Rx4 PC4-2133P-U)</td>
<td><strong>Base Pointers:</strong></td>
<td>32/64-bit</td>
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<tr>
<td>Disk Subsystem:</td>
<td>1 TB Seagate SATA HDD, 7200 RPM</td>
<td><strong>Peak Pointers:</strong></td>
<td>32/64-bit</td>
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<tr>
<td>Other Hardware:</td>
<td>None</td>
<td><strong>Other Software:</strong></td>
<td>SmartHeap Library Version 11.0 from <a href="http://www.microquill.com/">http://www.microquill.com/</a></td>
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</table>

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
<tr>
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<td>102</td>
<td>134</td>
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<td>83.3</td>
<td>109</td>
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<td>68.3</td>
<td>105</td>
<td>68.3</td>
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<td>215</td>
<td>90.6</td>
<td>215</td>
<td>90.6</td>
</tr>
</tbody>
</table>

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  

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

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

ASUS Z170MPLUS motherboard (Intel Core i5-6600)

SPECfp2006 = 91.0
SPECfp_base2006 = 88.8

CPU2006 license: 13
Test sponsor: Intel Corporation
Test date: Oct-2015
Tested by: Intel Corporation
Hardware Availability: Sep-2015
Software Availability: Aug-2015

Platform Notes (Continued)

http://www.spec.org/cpu2006/Docs/config.html#sysinfo

Trying 'systeminfo'
OS Name : Microsoft Windows 10 Pro
OS Version : 10.0.10240 N/A Build 10240
System Manufacturer: System manufacturer
System Model : System Product Name
Processor(s) : 1 Processor(s) Installed.
[01]: Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~3301 Mhz
BIOS Version : American Megatrends Inc. 0408, 8/28/2015
Total Physical Memory: 8,084 MB

Trying 'wmic cpu get /value'
DeviceID : CPU0
L2CacheSize : 1024
L3CacheSize : 6144
MaxClockSpeed : 3301
Name : Intel(R) Core(TM) i5-6600 CPU @ 3.30GHz
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
ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)  
ASUS Z170MPLUS motherboard (Intel Core i5-66000)  

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Tested by: Intel Corporation  
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

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
- -QxCORE-AVX2 -Qipo -O3 -Qprec-div -Qparallel -Qansi-alias
- -Qopt-prefetch /F100000000

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.mlcl: 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 -Qopt-prefetch /F1000000000 shlW64M.lib
  447.dealII: basepeak = yes
  450.soplex: basepeak = yes

Continued on next page
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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 l) -Qprof_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll14 -Qansi-alias /F1000000000  
shlw64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes
416.gamess: -QxCORE-AVX2(pass 2) -Qprof_gen(pass l) -Qprof_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll14 -Qansi-alias /F1000000000

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: -QxCORE-AVX2(pass 2) -Qprof_gen(pass l) -Qprof_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll14 -Qauto -Qinline-calloc /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

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

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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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