## SPEC® CFP2006 Result

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

ASUS Z170MPLUS motherboard (Intel Core i7-6700)

**SPECfp®2006 = 94.0**

**SPECfp_base2006 = 91.7**

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### Hardware

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Core i7-6700</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td>Intel Turbo Boost Technology up to 4.00 GHz</td>
</tr>
<tr>
<td>CPU MHZ:</td>
<td>3400</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>4 cores, 1 chip, 4 cores/chip, 2 threads/core</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>
</tr>
</tbody>
</table>

---

### Software

<table>
<thead>
<tr>
<th>Description</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>
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<tr>
<td>Auto Parallel:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

Tested by: Intel Corporation

Test date: Oct-2015

Hardware Availability: Sep-2015

Software Availability: Aug-2015

---

### Benchmarks

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECfp_base2006</th>
<th>SPECfp2006</th>
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</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>137</td>
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<tr>
<td>416.gamess</td>
<td>48.7</td>
<td>93.4</td>
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<tr>
<td>433.milc</td>
<td>70.3</td>
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<tr>
<td>434.zeusmp</td>
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<tr>
<td>435.gromacs</td>
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<tr>
<td>436.cactusADM</td>
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<tr>
<td>437.leslie3d</td>
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<td>444.namd</td>
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<td>76.2</td>
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<td>447.dealII</td>
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<td>450.soplex</td>
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<tr>
<td>453.povray</td>
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<tr>
<td>454.calculix</td>
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<tr>
<td>459.GemsFDTD</td>
<td>74.7</td>
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<tr>
<td>465.tonto</td>
<td>65.7</td>
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<tr>
<td>470.lbm</td>
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<td></td>
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<tr>
<td>481.wrf</td>
<td>125</td>
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<tr>
<td>482.sphinx3</td>
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**SPECfp_base2006 = 91.7**

**SPECfp2006 = 94.0**

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Continued on next page
ASUSTeK Computer Inc.  
[Test Sponsor: Intel Corporation]  
ASUS Z170MPLUS motherboard (Intel Core i7-6700)  

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
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<th>Ratio</th>
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<td>101</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
running on DESKTOP-C8BQEO8 Thu Oct 15 18:23:46 2015
```

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 i7-6700)

SPECfp2006 = 94.0
SPECfp_base2006 = 91.7

CPU2006 license: 13
Test date: Oct-2015
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 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 ~3401 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   : 8192
MaxClockSpeed : 3401
Name          : Intel(R) Core(TM) i7-6700 CPU @ 3.40GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 8

(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
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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.game5s: -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 -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 -03 -Qprec-div -Qparallel -Qansi-alias  
    -Qopt-prefetch /F1000000000

C++ benchmarks:
    -QxCORE-AVX2 -Qipo -03 -Qprec-div -Qparallel -Qansi-alias  
    -Qopt-prefetch -Qcxx-features /F1000000000 shlW64M.lib  
    -link /FORCE:MULTIPLE

Fortran benchmarks:
    -QxCORE-AVX2 -Qipo -03 -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 /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
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CPU2006 license: 13
Test sponsor: Intel Corporation
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Tested by: Intel Corporation
Hardware Availability: Sep-2015
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 -Qunroll14 -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 -Qunroll12 -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 -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 other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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