**SPEC® CFP2006 Result**

**ASUSTeK Computer Inc.**
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with Radeon R7 Graphics)

**SPECfp®2006 = 36.2**
**SPECfp_base2006 = 35.0**

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Operating System: Microsoft Windows 7 Ultimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: AMD A10 PRO-7800B</td>
<td>6.1.7601 Service Pack 1 Build 7601</td>
</tr>
<tr>
<td>CPU Characteristics: AMD Turbo CORE technology up to 3.90 GHz</td>
<td>Compiler: C/C++: Version 16.0.0.110 of Intel C++ Studio XE for Windows;</td>
</tr>
<tr>
<td>CPU MHz: 3500</td>
<td>Fortran: Version 16.0.0.110 of Intel Fortran</td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td>Studio XE for Windows; Libraries: Version 18.00.30723 of Microsoft</td>
</tr>
<tr>
<td>CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip</td>
<td>Visual Studio 2013</td>
</tr>
<tr>
<td>CPU(s) orderable: 1 chip</td>
<td>Auto Parallel: Yes</td>
</tr>
<tr>
<td>Primary Cache: 192 KB I on chip per chip, 96 KB I shared / 2 cores; 16 KB D on chip per core</td>
<td></td>
</tr>
<tr>
<td>Secondary Cache: 4 MB I+D on chip per chip, 2 MB shared / 2 cores</td>
<td></td>
</tr>
</tbody>
</table>

**Software**

<table>
<thead>
<tr>
<th>CPU2006 license: 13</th>
<th>Test date: Jul-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor: Intel Corporation</td>
<td>Hardware Availability: Jul-2014</td>
</tr>
<tr>
<td>Tested by: Intel Corporation</td>
<td>Software Availability: Aug-2015</td>
</tr>
</tbody>
</table>

**410.bwaves**
**416.gamess**
**433.milc**
**434.zeusmp**
**435.gromacs**
**436.cactusADM**
**437.leslie3d**
**444.namd**
**447.dealII**
**450.soplex**
**453.povray**
**454.calculix**
**459.GemsFDTD**
**465.tonto**
**470.lbm**
**481.wrf**
**482.sphinx3**

**SPECfp_base2006 = 35.0**
**SPECfp2006 = 36.2**

Continued on next page
# SPEC CFP2006 Result

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)  
ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with Radeon R7 Graphics)  

**SPECfp2006** = 36.2  
**SPECfp_base2006** = 35.0

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>195</td>
<td>69.7</td>
<td>190</td>
<td>71.4</td>
</tr>
<tr>
<td>416.gamess</td>
<td>798</td>
<td>24.5</td>
<td>800</td>
<td>24.5</td>
</tr>
<tr>
<td>433.milc</td>
<td>291</td>
<td>31.5</td>
<td>291</td>
<td>31.5</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>176</td>
<td>51.9</td>
<td>175</td>
<td>52.1</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>299</td>
<td>23.9</td>
<td>300</td>
<td>23.8</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>171</td>
<td>70.1</td>
<td>169</td>
<td>70.6</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>254</td>
<td>37.0</td>
<td>256</td>
<td>36.7</td>
</tr>
<tr>
<td>444.namd</td>
<td>418</td>
<td>19.2</td>
<td>421</td>
<td>19.0</td>
</tr>
<tr>
<td>447.dealII</td>
<td>253</td>
<td>45.2</td>
<td>253</td>
<td>45.3</td>
</tr>
<tr>
<td>450.soplex</td>
<td>422</td>
<td>19.8</td>
<td>424</td>
<td>19.7</td>
</tr>
<tr>
<td>453.povray</td>
<td>181</td>
<td>29.4</td>
<td>181</td>
<td>29.5</td>
</tr>
<tr>
<td>454.calcix</td>
<td>251</td>
<td>32.9</td>
<td>251</td>
<td>32.9</td>
</tr>
<tr>
<td>459.GemsFDTD</td>
<td>332</td>
<td>32.0</td>
<td>342</td>
<td>31.1</td>
</tr>
<tr>
<td>465.tonto</td>
<td>446</td>
<td>22.1</td>
<td>446</td>
<td>22.1</td>
</tr>
<tr>
<td>470.lbm</td>
<td>153</td>
<td>90.1</td>
<td>155</td>
<td>88.5</td>
</tr>
<tr>
<td>481.wrf</td>
<td>281</td>
<td>39.8</td>
<td>279</td>
<td>40.0</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>804</td>
<td>24.2</td>
<td>806</td>
<td>24.2</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 CltE03P49ACBFDE Sat Jul 2 10:32:52 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
ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with
Radeon R7 Graphics)

SPECfp2006 = 36.2
SPECfp_base2006 = 35.0

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

Platform Notes (Continued)

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

Trying 'systeminfo'
OS Name : Microsoft Windows 7 Ultimate
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}: AMD64 Family 21 Model 48 Stepping 1 AuthenticAMD ~3500 Mhz
BIOS Version : American Megatrends Inc. 2502, 12/11/2015
Total Physical Memory: 7,108 MB

Trying 'wmic cpu get /value'
DeviceID : CPU0
L2CacheSize : 25359
L3CacheSize : 0
MaxClockSpeed : 3500
Name : AMD A10 PRO-7800B R7, 12 Compute Cores 4C+8G
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

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

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with Radeon R7 Graphics)

SPECfp2006 = 36.2
SPECfp_base2006 = 35.0

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

Test date: Jul-2016
Hardware Availability: Jul-2014
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.game5: -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
459.GemsFDTD: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
465.tonto: -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
   /arch:AVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
   -Qopt-prefetch /F1000000000

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

Fortran benchmarks:
   /arch:AVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
   -Qopt-prefetch /F1000000000

Continued on next page
## SPEC CFP2006 Result

ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)  
ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with Radeon R7 Graphics)

<table>
<thead>
<tr>
<th>SPECfp2006</th>
<th>36.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_base2006</td>
<td>35.0</td>
</tr>
</tbody>
</table>

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

### Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
```
/arch:AVX -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: /arch:AVX(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
ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)  
ASUS A88X-PRO Motherboard (AMD A10 PRO-7800B with Radeon R7 Graphics)  

| SPECfp2006 | 36.2 |
| SPECfp_base2006 | 35.0 |

**CPU2006 license:** 13  
**Test sponsor:** Intel Corporation  
**Tested by:** Intel Corporation  
**Test date:** Jul-2016  
**Hardware Availability:** Jul-2014  
**Software Availability:** Aug-2015

### Peak Optimization Flags (Continued)

**Fortran benchmarks:**

- 410. bwaves: basepeak = yes
- 416. gammed: /arch:AVX — Qprof_gen(pass 2) — Qprof_use(pass 2)  
  - Qipo — O3 — Qprec-div— — Qunroll14 — Qansi-alias  
  — /F1000000000  
- 434. zeusmp: basepeak = yes
- 437. leslie3d: basepeak = yes
- 459. GemFDTD: basepeak = yes
- 465. tonto: /arch:AVX — Qprof_gen(pass 1) — Qprof_use(pass 2)  
  - Qipo — O3 — Qprec-div— — Qunroll14 — Qauto — Qineline-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:

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other 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.

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Sep 20 15:06:57 2016 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 20 September 2016.