## SPEC® CFP2006 Result

**ASUSTeK Computer Inc.**

*(Test Sponsor: Intel Corporation)*

**ASUS A88X-PRO Motherboard (AMD A10-7700K APU with Radeon R7 Graphics)*

| SPECfp®_rate2006 = 68.6 | SPECfp_rate_base2006 = 68.0 |

**CPU2006 license:** 13

**Test sponsor:** Intel Corporation

**Tested by:** Intel Corporation

**Test date:** Jul-2014

**Hardware Availability:** Jan-2014

**Software Availability:** Oct-2013

---

### Hardware

**CPU Name:** AMD A10-7700K

**CPU Characteristics:** AMD Turbo CORE technology up to 3.80 GHz

**CPU MHz:** 3400

**FPU:** Integrated

**CPU(s) enabled:** 4 cores, 1 chip, 4 cores/chip

**CPU(s) orderable:** 1 chip

**Primary Cache:** 192 KB I on chip per chip, 96 KB I shared / 2 cores; 16 KB D on chip per core

**Secondary Cache:** 4 MB I+D on chip per chip, 2 MB shared / 2 cores

---

### Software

**Operating System:** Microsoft Windows 8.1 Pro 6.3.9600 N/A Build 9600

**Compiler:**
- C/C++: Version 14.0.1.139 of Intel C++ Studio XE for Windows;
- Fortran: Version 14.0.1.139 of Intel Fortran Studio XE for Windows;
- Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1

**Auto Parallel:** No

---

Continued on next page
ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)  
ASUS A88X-PRO Motherboard (AMD A10-7700K APU with  
Radeon R7 Graphics)  

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>bwaves</td>
<td>4</td>
<td>749</td>
<td>72.4</td>
<td>759</td>
<td>71.6</td>
<td>751</td>
<td>72.4</td>
</tr>
<tr>
<td>gamess</td>
<td>4</td>
<td>888</td>
<td>88.4</td>
<td>890</td>
<td>88.0</td>
<td>885</td>
<td>88.4</td>
</tr>
<tr>
<td>milc</td>
<td>4</td>
<td>587</td>
<td>62.4</td>
<td>595</td>
<td>61.6</td>
<td>588</td>
<td>62.4</td>
</tr>
<tr>
<td>zeusmp</td>
<td>4</td>
<td>516</td>
<td>70.8</td>
<td>518</td>
<td>70.4</td>
<td>515</td>
<td>70.8</td>
</tr>
<tr>
<td>gromacs</td>
<td>4</td>
<td>448</td>
<td>63.6</td>
<td>452</td>
<td>63.2</td>
<td>446</td>
<td>64.0</td>
</tr>
<tr>
<td>cactusADM</td>
<td>4</td>
<td>676</td>
<td>70.8</td>
<td>678</td>
<td>70.4</td>
<td>680</td>
<td>70.4</td>
</tr>
<tr>
<td>leslie3d</td>
<td>4</td>
<td>837</td>
<td>44.8</td>
<td>835</td>
<td>45.2</td>
<td>847</td>
<td>44.4</td>
</tr>
<tr>
<td>namd</td>
<td>4</td>
<td>583</td>
<td>55.2</td>
<td>583</td>
<td>55.2</td>
<td>582</td>
<td>55.2</td>
</tr>
<tr>
<td>dealII</td>
<td>4</td>
<td>458</td>
<td>100</td>
<td>484</td>
<td>94.8</td>
<td>462</td>
<td>98.8</td>
</tr>
<tr>
<td>soplex</td>
<td>4</td>
<td>777</td>
<td>42.8</td>
<td>772</td>
<td>43.2</td>
<td>776</td>
<td>43.2</td>
</tr>
<tr>
<td>povray</td>
<td>4</td>
<td>220</td>
<td>96.8</td>
<td>216</td>
<td>98.4</td>
<td>221</td>
<td>96.0</td>
</tr>
<tr>
<td>calculix</td>
<td>4</td>
<td>327</td>
<td>101</td>
<td>320</td>
<td>103</td>
<td>314</td>
<td>105</td>
</tr>
<tr>
<td>GemsFDTD</td>
<td>4</td>
<td>1137</td>
<td>37.2</td>
<td>1125</td>
<td>37.6</td>
<td>1094</td>
<td>38.8</td>
</tr>
<tr>
<td>tonto</td>
<td>4</td>
<td>556</td>
<td>70.8</td>
<td>551</td>
<td>71.2</td>
<td>559</td>
<td>70.4</td>
</tr>
<tr>
<td>lbm</td>
<td>4</td>
<td>607</td>
<td>90.4</td>
<td>603</td>
<td>91.2</td>
<td>598</td>
<td>92.0</td>
</tr>
<tr>
<td>wrf</td>
<td>4</td>
<td>586</td>
<td>76.4</td>
<td>582</td>
<td>76.8</td>
<td>574</td>
<td>77.6</td>
</tr>
<tr>
<td>sphinx3</td>
<td>4</td>
<td>1375</td>
<td>56.8</td>
<td>1380</td>
<td>56.4</td>
<td>1283</td>
<td>60.8</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 14.0 was set up to generate 64-bit binaries with the command: 
"ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.
## SPEC CFP2006 Result

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

ASUS A88X-PRO Motherboard (AMD A10-7700K APU with Radeon R7 Graphics)

<table>
<thead>
<tr>
<th>SPECfp_rate2006 = 68.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_rate_base2006 = 68.0</td>
</tr>
</tbody>
</table>

- **CPU2006 license:** 13
- **Test sponsor:** Intel Corporation
- **Test date:** Jul-2014
- **Tested by:** Intel Corporation
- **Tested by:** Intel Corporation

## Platform Notes

Sysinfo program C:\SPEC14.0/Docs/sysinfo

$Rev: 6775$ $Date:: 2011-08-16#$ \8787f7622badcf24e01c368b1db4377c

running on CltD850E6BC6EA4 Tue Jul 1 22:37:04 2014

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 8.1 Pro

**OS Version:** 6.3.9600 N/A Build 9600

**System Manufacturer:** System manufacturer

**System Model:** System Product Name

**Processor(s):** 1 Processor(s) Installed.

- [01]: AMD64 Family 21 Model 48 Stepping 1 AuthenticAMD ~3400 Mhz

**BIOS Version:** American Megatrends Inc. 0703, 12/30/2013

**Total Physical Memory:** 7,106 MB

Trying 'wmic cpu get /value'

**DeviceID:** CPU0

**L2CacheSize:** 4096

**L3CacheSize:** 0

**MaxClockSpeed:** 3400

**Name:** AMD A10-7700K APU with Radeon(TM) R7 Graphics

**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

Binaries compiled on a system with 1x Intel Core i7-860 CPU + 8GB memory using Windows 7 Enterprise 64-bit

## Base Compiler Invocation

**C benchmarks:**

```
icl -Qvc10 -Qstd=c99
```

**C++ benchmarks:**

```
icl -Qvc10
```

Continued on next page
SPEC CFP2006 Result

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10-7700K APU with Radeon R7 Graphics)

SPECfp_rate2006 = 68.6
SPECfp_rate_base2006 = 68.0

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

Test date: Jul-2014
Hardware Availability: Jan-2014
Software Availability: Oct-2013

Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
   icl -Qvc10 -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
   -Qoption,cpp,--ms_incompat_treatment_of_commas_in_macros
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_NEED_INVHYP -DNEED_INVHYP
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:
   /arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
   -Qauto-1lp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
   /arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
   -Qcxx-features -Qauto-1lp32 /F1000000000 shlw64M.lib
   -link /FORCE:MULTIPLE

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

Benchmarks using both Fortran and C:
   /arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
   -Qauto-1lp32 /F1000000000 -link /FORCE:MULTIPLE
SPEC CFP2006 Result

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10-7700K APU with Radeon R7 Graphics)

SPECfp_rate2006 = 68.6
SPECfp_rate_base2006 = 68.0

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

Test date: Jul-2014
Hardware Availability: Jan-2014
Software Availability: Oct-2013

Peak Compiler Invocation

C benchmarks:
  icl -Qvc10 -Qstd=c99

C++ benchmarks:
  icl -Qvc10

Fortran benchmarks:
  ifort

Benchmarks using both Fortran and C:
  icl -Qvc10 -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 -Qauto-ilp32 /F1000000000 shlw64M.lib -link /FORCE:MULTIPLE
  447.dealII: basepeak = yes
  450.soplex: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qauto-ilp32 /F1000000000 shlw64M.lib -link /FORCE:MULTIPLE
  453.povray: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div -Qopt-prefetch -Qauto-ilp32 /F1000000000 shlw64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
  410.bwaves: basepeak = yes

Continued on next page
ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10-7700K APU with Radeon R7 Graphics)

SPEC CFP2006 Result

SPECfp_rate2006 = 68.6
SPECfp_rate_base2006 = 68.0

CPU2006 license: 13
Test date: Jul-2014
Test sponsor: Intel Corporation
Hardware Availability: Jan-2014
Tested by: Intel Corporation
Software Availability: Oct-2013

Peak Optimization Flags (Continued)

416.gamess: basepeak = yes
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: /arch:AVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
          -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000
          -link /FORCE:MULTIPLE

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 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.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Aug 12 15:10:45 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 July 2014.