## SPEC® CFP2006 Result

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS F2A85-M PRO Motherboard (AMD A10-6800K APU with Radeon HD Graphics)

### SPECfp®_rate2006 = 70.9

**SPECfp_rate_base2006 = 70.0**

<table>
<thead>
<tr>
<th>Spec</th>
<th>Rate</th>
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<tbody>
<tr>
<td>410.bwaves</td>
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<tr>
<td>416.gamess</td>
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<td>436.cactusADM</td>
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<td>437.leslie3d</td>
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<td>444.namd</td>
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<td>482.sphinx3</td>
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</tr>
</tbody>
</table>

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

### 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

### Hardware

- **CPU Name:** AMD A10-6800K
- **CPU Characteristics:** AMD Turbo CORE technology up to 4.40 GHz
- **CPU MHz:** 4100
- **FPU:** Integrated
- **CPU(s) enabled:** 4 cores, 1 chip, 4 cores/chip
- **CPU(s) orderable:** 1 chip
- **Primary Cache:** 128 KB I on chip per chip, 64 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

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*Continued on next page*
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### SPECfp_rate_base2006  =  70.0

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<th>Test date:</th>
<th>Jul-2014</th>
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<tbody>
<tr>
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<td>Intel Corporation</td>
<td>Software Availability:</td>
<td>Oct-2013</td>
</tr>
</tbody>
</table>

- **CPU2006 license:** 13
- **Test sponsor:** Intel Corporation
- **Tested by:** Intel Corporation
- **L3 Cache:** None
- **Other Cache:** None
- **Memory:** 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)
- **Disk Subsystem:** 1 TB Seagate SATA 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 10.0 from http://www.microquill.com/

### Results Table

<table>
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<td>64.8</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.
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SPECfp_rate2006 = 70.9
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CPU2006 license: 13
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Platform Notes

Sysinfo program C:\SPEC14.0/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1dbf4377c running on Clt08606E747CCD Tue Jul 1 21:27:05 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 19 Stepping 1 AuthenticAMD ~4100 Mhz
BIOS Version : American Megatrends Inc. 6303, 8/13/2013
Total Physical Memory: 7,366 MB

Trying 'wmic cpu get /value'
DeviceID    : CPU0
L2CacheSize : 4096
L3CacheSize : 0
MaxClockSpeed: 4100
Name        : AMD A10-6800K APU with Radeon(tm) HD 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

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Base Compiler Invocation (Continued)  

ForTRAN benchmarks:  
ifort  

Benchmarks using both Fortran and C:  
  icl -Qvc10 -Qstd=c99 ifort  

Base Portability Flags  

-DSPEC_CPU_P64  
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.ibm  
481.wrf  
482.sphinx3  

Base Optimization Flags  

arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch  
  -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE  

C++ benchmarks:  
arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch  
  -Qc++-features -Qauto-ilp32 /F1000000000 shlw64.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-ilp32 /F1000000000 -link /FORCE:MULTIPLE  

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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

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### 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 /Fl1000000000 -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:


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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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