# SPEC® CFP2006 Result

**ASUSTeK Computer Inc.**  
(Test Sponsor: Intel Corporation)  
ASUS F2A85-M PRO Motherboard (AMD A8-6600K APU with Radeon HD Graphics)

<table>
<thead>
<tr>
<th>SPECfp_rate2006 = 69.4</th>
<th>SPECfp_rate_base2006 = 68.6</th>
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</thead>
<tbody>
<tr>
<td>CPU2006 license: 13</td>
<td>Test date: Jul-2014</td>
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<tr>
<td>Test sponsor: Intel Corporation</td>
<td>Hardware Availability: Aug-2013</td>
</tr>
<tr>
<td>Tested by: Intel Corporation</td>
<td>Software Availability: Oct-2013</td>
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</tbody>
</table>

## Hardware

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>AMD A8-6600K</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td>AMD Turbo CORE technology up to 4.20 GHz</td>
</tr>
<tr>
<td>CPU MHz:</td>
<td>3900</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>
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<tr>
<td>Primary Cache:</td>
<td>128 KB L1 on chip per core, 64 KB L1 shared / 2 cores; 16 KB L2 on chip per core</td>
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<tr>
<td>Secondary Cache:</td>
<td>4 MB L4 on chip per core, 2 MB shared / 2 cores</td>
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</table>

## Software

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Operating System:</td>
<td>Microsoft Windows 8.1 Pro</td>
</tr>
<tr>
<td></td>
<td>6.3.9600 N/A Build 9600</td>
</tr>
<tr>
<td>Auto Parallel:</td>
<td>No</td>
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</table>

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Continued on next page
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SPEC CFP2006 Result
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SPECfp_rate2006 = 69.4
SPECfp_rate_base2006 = 68.6

Results Table

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</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.

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
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SPEC CFP2006 Result

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SPECfp_rate_base2006 = 68.6

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

Platform Notes

Sysinfo program C:\SPEC14.0/Docs/sysinfo  
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c  
running on Clt50465D8B92C5 Tue Jul 1 22:27:01 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 ~3900 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 : 3900  
Name          : AMD A8-6600K 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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### SPEC CFP2006 Result

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**CPU2006 license:** 13  
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#### Base Compiler Invocation (Continued)

Fortran benchmarks:
```fortran
ifort
```

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

#### Base Portability Flags

<table>
<thead>
<tr>
<th>410.bwaves</th>
<th>-DSPEC_CPU_P64</th>
</tr>
</thead>
<tbody>
<tr>
<td>416.gamesp</td>
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</tr>
<tr>
<td>433.milc</td>
<td>-DSPEC_CPU_P64</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>-DSPEC_CPU_P64</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>-DSPEC_CPU_P64</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>-DSPEC_CPU_P64 /names:lowercase /assume:underscore</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>-DSPEC_CPU_P64</td>
</tr>
<tr>
<td>444.namd</td>
<td>-DSPEC_CPU_P64 /TP</td>
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<tr>
<td>447.dealII</td>
<td>-DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -Qoption,cpp,--ms_incompat_treatment_of_commas_in_macros</td>
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<tr>
<td>450.soplex</td>
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<td>459.GemFDTD</td>
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<td>465.tonto</td>
<td>-DSPEC_CPU_P64</td>
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<tr>
<td>482.sphinx3</td>
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</table>

#### Base Optimization Flags

**C benchmarks:**
```c
/arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE
```

**C++ benchmarks:**
```c
/arch:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch -Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib -link /FORCE:MULTIPLE
```

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

**Benchmarks using both Fortran and C:**
```fortran
/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= -o -Qauto-ilp32 /F10000000000
    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 /F10000000000 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
    /F10000000000 shlw64M.lib
    -link /FORCE:MULTIPLE

Fortran benchmarks:
    410.bwaves: basepeak = yes

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| SPECfprate2006 | 69.4 |
| SPECfprate_base2006 | 68.6 |

CPU2006 license: 13  
Test date: Jul-2014

Test sponsor: Intel Corporation  
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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:

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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