### SPEC® CFP2006 Result

**ASUSTeK Computer Inc.**
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A10-7850K with Radeon R7 Graphics)

<table>
<thead>
<tr>
<th>SPECfp_rate2006 = 71.2</th>
<th>SPECfp_rate_base2006 = 70.5</th>
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<td><strong>CPU2006 license:</strong> 13</td>
<td><strong>Test date:</strong> Mar-2016</td>
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<td><strong>Hardware Availability:</strong> Jan-2014</td>
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<td><strong>Software Availability:</strong> Aug-2015</td>
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<th>Benchmark</th>
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</table>

### Hardware
- **CPU Name:** AMD A10-7850K
- **CPU Characteristics:** AMD Turbo CORE technology up to 4.00 GHz
- **CPU MHz:** 3700
- **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 7 Enterprise 6.1.7601 Service Pack 1 Build 7601
- **Compiler:** C/C++: Version 16.0.0.110 of Intel C++ Studio XE for Windows;
  Fortran: Version 16.0.0.110 of Intel Fortran Studio XE for Windows;
- **Auto Parallel:** No

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Continued on next page

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Standard Performance Evaluation Corporation
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http://www.spec.org/
ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)  
ASUS A88X-PRO Motherboard (AMD A10-7850K with 
Radeon R7 Graphics)

**SPEC fp_rate2006 = 71.2**  
**SPEC fp_rate_base2006 = 70.5**

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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 16.0 was set up to generate 64-bit binaries with the command:

```
psexevrs.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 Clt1C872C5BF572 Sat Mar 19 19:07:09 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
## Platform Notes (Continued)

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

```plaintext
Trying 'systeminfo'
OS Name       : Microsoft Windows 7 Enterprise
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 ~3700 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 : 3700
Name          : AMD A10-7850K Radeon 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 (peak): "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.

Binaries compiled on a system with 1x Intel Xeon E5-2699 v3 CPU + 64GB memory using Windows 8.1 Enterprise 64-bit

## Base Compiler Invocation

C benchmarks:
```
icl -Qvc12 -Qstd=c99
```
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SPECfp_rate_base2006 = 70.5

CPU2006 license: 13
Test sponsor: Intel Corporation
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Base Compiler Invocation (Continued)

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.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
    -DSPEC_CPU_BOOST_CONFIG_MSC_VER -DSPEC_NEED_ALGORITHM
450.soplex: -DSPEC_CPU_P64 -DSPEC_GETLINE_TEST
453.povray: -DSPEC_CPU_P64
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

Continued on next page
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Test sponsor: Intel Corporation
Tested by: Intel Corporation

CPU2006 license: 13
Test date: Mar-2016
Hardware Availability: Jan-2014
Software Availability: Aug-2015

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
/ARCH:AVX -Qipo -O3 -Qprec-div -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

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 -Qauto-ilp32 /F1000000000 shlW64M.lib
-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

Continued on next page
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| SPECfp_rate2006 | 71.2 |
| SPECfp_rate_base2006 | 70.5 |

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

**Test date:** Mar-2016

**Hardware Availability:** Jan-2014

**Software Availability:** Aug-2015

### Peak Optimization Flags (Continued)

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
- 416.gamesp: 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 /F10000000000
- 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 other inquiries, please contact webmaster@spec.org.

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