ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)
ASUS A88X-PRO Motherboard (AMD A8 PRO-7600B with Radeon R7 Graphics)

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

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

CPU Name: AMD A8 PRO-7600B
CPU Characteristics: AMD Turbo CORE technology up to 3.80 GHz
CPU MHz: 3100
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

SPECfp_rate2006 = 47.3
SPECfp_rate_base2006 = 47.3
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L3 Cache: None  
Other Cache: None  
Memory: 8 GB (2 x 4 GB 2Rx4 PC3-17000U-14)  
Disk Subsystem: 160 GB Western Digital SATA HDD, 7200 RPM  
Other Hardware: None  

Results Table

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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

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| SPECfp_rate2006 | 47.7 |
| SPECfp_rate_base2006 | 47.3 |

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

Platform Notes

Sysinfo program C:\SPEC14.0/Docs/sysinfo  
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c  
running on CltE03F49B01DE1 Fri Nov 7 10:19:33 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 ~3100 Mhz  
BIOS Version: American Megatrends Inc. 1301, 6/24/2014  
Total Physical Memory: 7,105 MB

Trying 'wmic cpu get /value'  
DeviceID: CPU0  
L2CacheSize: 25359  
L3CacheSize: 0  
MaxClockSpeed: 3100  
Name: AMD A8 PRO-7600B R7, 10 Compute Cores 4C+6G  
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
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SPECfp_rate2006 = 47.7
SPECfp_rate_base2006 = 47.3

CPU2006 license: 13
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Tested by: Intel Corporation

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
343.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

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SPEC CFP2006 Result
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CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

 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.ml: 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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ASUSTeK Computer Inc.
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SPEC CFP2006 Result

SPECfp_rate2006 = 47.7
SPECfp_rate_base2006 = 47.3

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

Test date: Nov-2014
Hardware Availability: Jul-2014
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 other inquiries, please contact webmaster@spec.org.

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http://www.spec.org/