



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS F2A85-M PRO motherboard (AMD A6-6400K APU with Radeon HD Graphics)

SPECfp®_rate2006 = 36.1

SPECfp_rate_base2006 = 35.6

CPU2006 license: 13

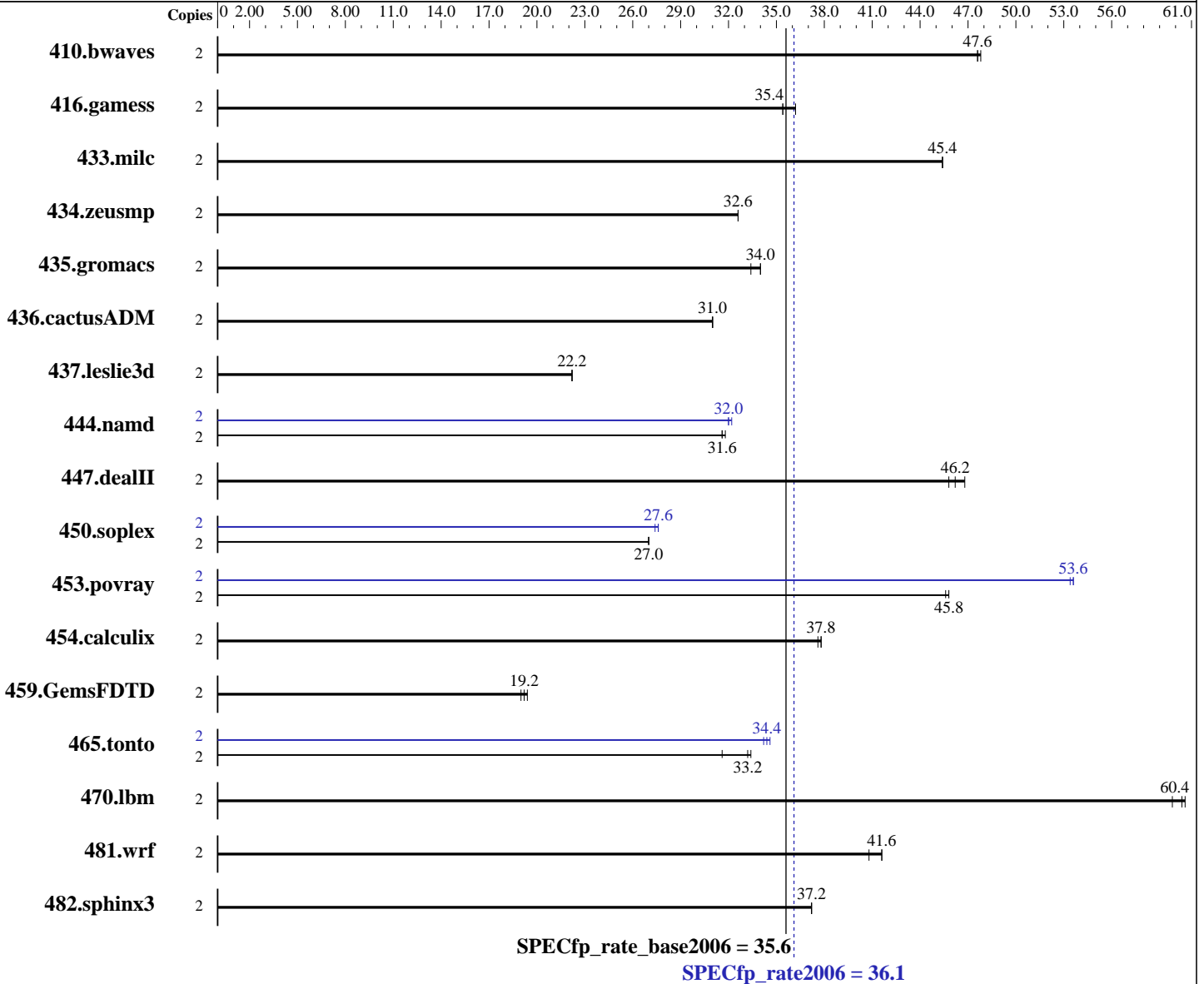
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jun-2013

Software Availability: Apr-2013



Hardware

CPU Name: AMD A6-6400K
 CPU Characteristics: AMD Turbo CORE technology up to 4.10 GHz
 CPU MHz: 3900
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 64 KB I on chip per chip; 16 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per chip

Continued on next page

Software

Operating System: Microsoft Windows 7 Ultimate
 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 13.1.1.171 of Intel C++ Studio XE for Windows;
 Fortran: Version 13.1.1.171 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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS F2A85-M PRO motherboard (AMD A6-6400K APU with Radeon HD Graphics)

SPECfp_rate2006 = 36.1

SPECfp_rate_base2006 = 35.6

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jun-2013

Software Availability: Apr-2013

L3 Cache: None
Other Cache: None
Memory: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11)
Disk Subsystem: 250 GB 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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	571	47.6	568	47.8	570	47.6	2	571	47.6	568	47.8	570	47.6
416.gamess	2	1105	35.4	1105	35.4	1084	36.2	2	1105	35.4	1105	35.4	1084	36.2
433.milc	2	405	45.4	405	45.4	404	45.4	2	405	45.4	405	45.4	404	45.4
434.zeusmp	2	559	32.6	559	32.6	560	32.6	2	559	32.6	559	32.6	560	32.6
435.gromacs	2	421	34.0	421	34.0	427	33.4	2	421	34.0	421	34.0	427	33.4
436.cactusADM	2	771	31.0	770	31.0	770	31.0	2	771	31.0	770	31.0	770	31.0
437.leslie3d	2	849	22.2	848	22.2	849	22.2	2	849	22.2	848	22.2	849	22.2
444.namd	2	506	31.8	507	31.6	506	31.6	2	500	32.0	500	32.2	500	32.0
447.dealII	2	499	45.8	494	46.2	490	46.8	2	499	45.8	494	46.2	490	46.8
450.soplex	2	617	27.0	616	27.0	618	27.0	2	606	27.6	608	27.4	605	27.6
453.povray	2	233	45.6	232	45.8	232	45.8	2	199	53.6	199	53.4	199	53.6
454.calculix	2	439	37.6	436	37.8	436	37.8	2	439	37.6	436	37.8	436	37.8
459.GemsFDTD	2	1112	19.0	1099	19.4	1106	19.2	2	1112	19.0	1099	19.4	1106	19.2
465.tonto	2	622	31.6	589	33.4	593	33.2	2	570	34.6	576	34.2	574	34.4
470.lbm	2	453	60.6	455	60.4	460	59.8	2	453	60.6	455	60.4	460	59.8
481.wrf	2	546	40.8	538	41.6	538	41.6	2	546	40.8	538	41.6	538	41.6
482.sphinx3	2	1050	37.2	1050	37.2	1050	37.2	2	1050	37.2	1050	37.2	1050	37.2

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 13.1 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

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS F2A85-M PRO motherboard (AMD A6-6400K APU with Radeon HD Graphics)

SPECfp_rate2006 = 36.1

SPECfp_rate_base2006 = 35.6

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jun-2013

Software Availability: Apr-2013

Platform Notes

Sysinfo program C:\SPEC13.1\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt3085A9AEE4F6 Tue Oct 8 21:17:17 2013

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 7 Ultimate
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 19 Stepping 1 AuthenticAMD ~3900 Mhz
BIOS Version : American Megatrends Inc. 6105, 5/8/2013
Total Physical Memory: 3,111 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0
L2CacheSize : 1024
L3CacheSize : 0
MaxClockSpeed : 3900
Name : AMD A6-6400K APU with Radeon(tm) HD Graphics
NumberOfCores : 1
NumberOfLogicalProcessors: 2

(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
Micron MT8JTF25664AZ-1G6 Series Memory DIMMs

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

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS F2A85-M PRO motherboard (AMD A6-6400K APU with Radeon HD Graphics)

SPECfp_rate2006 = 36.1

SPECfp_rate_base2006 = 35.6

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jun-2013

Software Availability: Apr-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-ilp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS F2A85-M PRO motherboard (AMD A6-6400K APU with Radeon HD Graphics)

SPECfp_rate2006 = 36.1

SPECfp_rate_base2006 = 35.6

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jun-2013

Software Availability: Apr-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.dealIII: 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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

ASUS F2A85-M PRO motherboard (AMD A6-6400K APU with Radeon HD Graphics)

SPECfp_rate2006 = 36.1

SPECfp_rate_base2006 = 35.6

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jun-2013

Software Availability: Apr-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 /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

<http://www.spec.org/cpu2006/flags/Intel-ic13.1-official-windows.20130924.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic13.1-official-windows.20130924.xml>

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 Fri Jul 25 00:52:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 July 2014.