SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

Asus M4A89GTD-PRO (Phenom II X4 955)

$SPECfp®\_rate2006 =$ 65.3

$SPECfp\_rate\_base2006 =$ 64.4
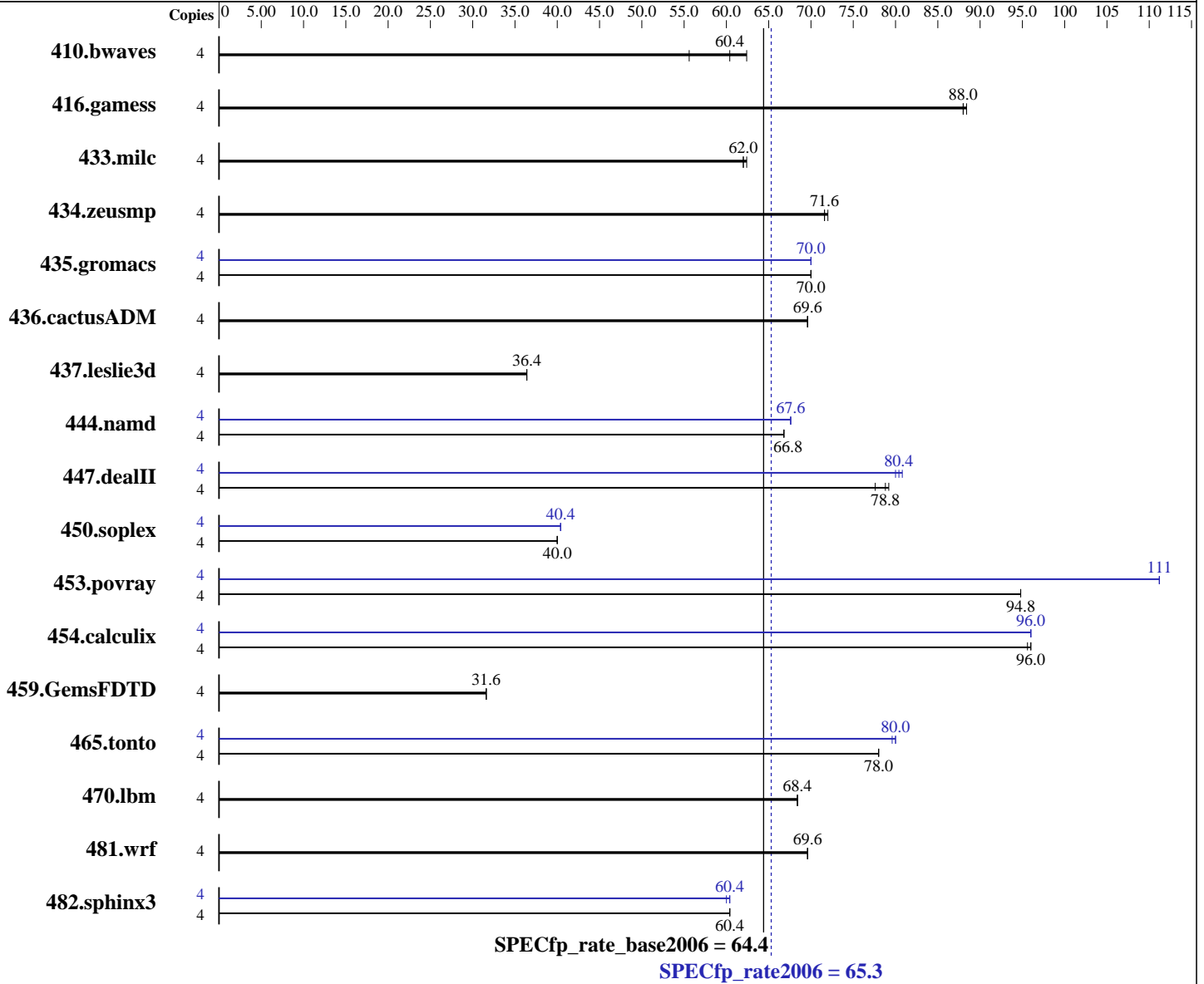
CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: May-2011
Hardware Availability: Mar-2010
Software Availability: Apr-2011

Benchmark	Copies	Result
410.bwaves	4	60.4
416.gamess	4	88.0
433.milc	4	62.0
434.zeusmp	4	71.6
435.gromacs	4 / 4	70.0 / 70.0
436.cactusADM	4	69.6
437.leslie3d	4	36.4
444.namd	4 / 4	67.6 / 66.8
447.dealII	4 / 4	80.4 / 78.8
450.soplex	4 / 4	40.4 / 40.0
453.povray	4 / 4	111 / 94.8
454.calculix	4 / 4	96.0 / 96.0
459.GemsFDTD	4	31.6
465.tonto	4 / 4	80.0 / 78.0
470.lbm	4	68.4
481.wrf	4	69.6
482.sphinx3	4 / 4	60.4 / 60.4

SPECfp_rate_base2006 = 64.4

SPECfp_rate2006 = 65.3

Hardware
CPU Name: AMD Phenom II X4 955
CPU Characteristics:
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1 chip
Primary Cache: 64 KB I + 64 KB D on chip per core
Secondary Cache: 512 KB I+D on chip per core

Continued on next page

Software
Operating System: Windows 7 Ultimate (64-bit)
Compiler: Intel C++ Compiler XE for Intel 64
Version 12.0.3.176 Build 20110309
Intel Visual Fortran Compiler XE for Intel 64
Version 12.0.3.176 Build 20110309
Microsoft Visual Studio 2008 Professional SP1
(for libraries)
Auto Parallel: No
File System: NTFS

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

Asus M4A89GTD-PRO (Phenom II X4 955)

$SPECfp\_rate2006 =$ 65.3

$SPECfp\_rate\_base2006 =$ 64.4

CPU2006 license: 13	**Test date:** May-2011
Test sponsor: Intel Corporation	**Hardware Availability:** Mar-2010
Tested by: Intel Corporation	**Software Availability:** Apr-2011

L3 Cache:	6 MB I+D on chip per chip	System State:	Default
Other Cache:	None	Base Pointers:	32/64-bit
Memory:	8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)	Peak Pointers:	32/64-bit
Disk Subsystem:	Seagate 1 TB SATA, 7200 RPM	Other Software:	SmartHeap Library Version 9.01 from
Other Hardware:	None		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	4	**898**	**60.4**	979	55.6	871	62.4	4	**898**	**60.4**	979	55.6	871	62.4
416.gamess	4	**889**	**88.0**	887	88.4	890	88.0	4	**889**	**88.0**	887	88.4	890	88.0
433.milc	4	590	62.4	592	62.0	**591**	**62.0**	4	590	62.4	592	62.0	**591**	**62.0**
434.zeusmp	4	507	72.0	508	71.6	**507**	**71.6**	4	507	72.0	508	71.6	**507**	**71.6**
435.gromacs	4	407	70.0	**407**	**70.0**	408	70.0	4	408	70.0	**408**	**70.0**	408	70.0
436.cactusADM	4	688	69.6	**687**	**69.6**	686	69.6	4	688	69.6	**687**	**69.6**	686	69.6
437.leslie3d	4	1032	36.4	1033	36.4	**1033**	**36.4**	4	1032	36.4	1033	36.4	**1033**	**36.4**
444.namd	4	480	66.8	480	66.8	**480**	**66.8**	4	474	67.6	**474**	**67.6**	474	67.6
447.dealII	4	577	79.2	**581**	**78.8**	591	77.6	4	565	80.8	572	80.0	**569**	**80.4**
450.soplex	4	835	40.0	**835**	**40.0**	835	40.0	4	**823**	**40.4**	823	40.4	822	40.4
453.povray	4	**225**	**94.8**	224	94.8	225	94.8	4	191	111	**191**	**111**	192	111
454.calculix	4	345	95.6	344	96.0	**344**	**96.0**	4	**344**	**96.0**	344	96.0	344	96.0
459.GemsFDTD	4	1348	31.6	1349	31.6	**1349**	**31.6**	4	1348	31.6	1349	31.6	**1349**	**31.6**
465.tonto	4	**505**	**78.0**	504	78.0	506	78.0	4	**493**	**80.0**	492	80.0	494	79.6
470.lbm	4	**805**	**68.4**	805	68.4	805	68.4	4	**805**	**68.4**	805	68.4	805	68.4
481.wrf	4	640	69.6	**641**	**69.6**	641	69.6	4	640	69.6	**641**	**69.6**	641	69.6
482.sphinx3	4	1292	60.4	1295	60.4	**1293**	**60.4**	4	**1295**	**60.4**	1296	60.0	1294	60.4

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

    The config file option 'submit' was used.
    The start command with the /affinity switch was used to bind processes to cores

General Notes

    Tested systems can be used with Shin-G ATX case,
    PC Power and Cooling 1200W power supply

Base Compiler Invocation

    C benchmarks:
        icl -Qvc9 -Qstd=c99

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

Asus M4A89GTD-PRO (Phenom II X4 955)

$SPECfp\_rate2006 =$ 65.3

$SPECfp\_rate\_base2006 =$ 64.4

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

Test date: May-2011
Hardware Availability: Mar-2010
Software Availability: Apr-2011

Base Compiler Invocation (Continued)

C++ benchmarks:
```
icl -Qvc9
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc9 -Qstd=c99 ifort
```

Base Portability Flags

```
410.bwaves: -DSPEC_CPU_P64 -names:lowercase
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
 450.soplex: -DSPEC_CPU_P64
 453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
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:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F1000000000          -link /FORCE:MULTIPLE
```

C++ benchmarks:
```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F1000000000 shlW64M.lib       -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000
          -link /FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:
```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F1000000000          -link /FORCE:MULTIPLE
```

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

Asus M4A89GTD-PRO (Phenom II X4 955)

$SPECfp_rate2006 = $ 65.3

$SPECfp_rate_base2006 = $ 64.4

CPU2006 license: 13		**Test date:**	May-2011
Test sponsor:	Intel Corporation	**Hardware Availability:**	Mar-2010
Tested by:	Intel Corporation	**Software Availability:**	Apr-2011

Peak Compiler Invocation

C benchmarks:
    icl -Qvc9 -Qstd=c99

C++ benchmarks:
    icl -Qvc9

Fortran benchmarks:
    ifort

Benchmarks using both Fortran and C:
    icl -Qvc9 -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: /arch:SSE3 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
            -Qauto-ilp32 /F1000000000   -link /FORCE:MULTIPLE

C++ benchmarks:

    444.namd: /arch:SSE3(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: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
            -Qscalar-rep- -Qauto-ilp32 /F1000000000 shlW64M.lib
                    -link /FORCE:MULTIPLE

    450.soplex: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qauto-ilp32 /F1000000000 shlW64M.lib
                    -link /FORCE:MULTIPLE

    453.povray: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32
            /F1000000000 shlW64M.lib   -link /FORCE:MULTIPLE

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

Asus M4A89GTD-PRO (Phenom II X4 955)

$SPECfp_rate2006 = $ 65.3

$SPECfp_rate_base2006 = $ 64.4

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

Test date: May-2011
Hardware Availability: Mar-2010
Software Availability: Apr-2011

Peak Optimization Flags (Continued)

Fortran benchmarks:

    410.bwaves: basepeak = yes

    416.gamess: basepeak = yes

    434.zeusmp: basepeak = yes

    437.leslie3d: basepeak = yes

    459.GemsFDTD: basepeak = yes

```
    465.tonto: /arch:SSE3(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: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32
                 /F1000000000           -link /FORCE:MULTIPLE
```

    436.cactusADM: basepeak = yes

```
    454.calculix: /arch:SSE3 -Qipo -O3 -Qprec-div- -Qauto-ilp32
                  /F1000000000           -link /FORCE:MULTIPLE
```

    481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 21:19:26 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 July 2011.