



SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

SPECfp®_rate2006 = 38.1

Asus M4A89GTD-PRO (Phenom II X2 555)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 13

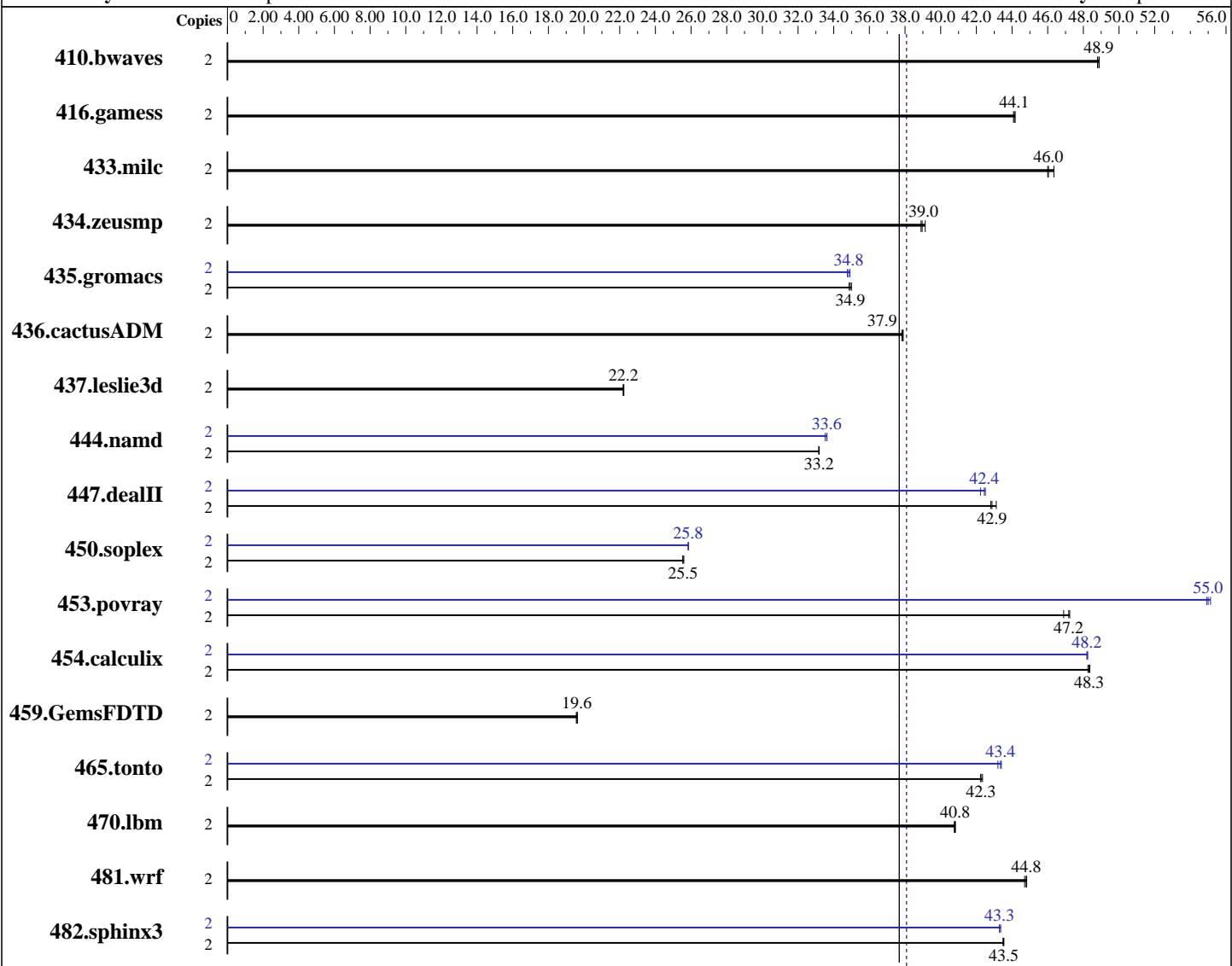
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2011

Hardware Availability: Apr-2010

Software Availability: Apr-2011



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Hardware

CPU Name: AMD Phenom II X2 555
 CPU Characteristics:
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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

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

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L3 Cache: 6 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)
 Disk Subsystem: Seagate 1 TB SATA, 7200 RPM
 Other Hardware: None

System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 9.01 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	556	48.9	557	48.8	556	48.9	2	556	48.9	557	48.8	556	48.9
416.gamess	2	887	44.1	888	44.1	886	44.2	2	887	44.1	888	44.1	886	44.2
433.milc	2	399	46.0	396	46.4	399	46.0	2	399	46.0	396	46.4	399	46.0
434.zeusmp	2	468	38.9	467	39.0	465	39.1	2	468	38.9	467	39.0	465	39.1
435.gromacs	2	410	34.9	408	35.0	409	34.9	2	409	34.9	411	34.8	410	34.8
436.cactusADM	2	631	37.9	632	37.8	631	37.9	2	631	37.9	632	37.8	631	37.9
437.leslie3d	2	846	22.2	846	22.2	847	22.2	2	846	22.2	846	22.2	847	22.2
444.namd	2	483	33.2	484	33.2	483	33.2	2	477	33.6	477	33.6	479	33.5
447.dealII	2	534	42.9	535	42.8	531	43.1	2	542	42.2	539	42.4	538	42.5
450.soplex	2	652	25.6	653	25.5	653	25.5	2	645	25.9	646	25.8	645	25.8
453.povray	2	227	46.9	225	47.2	226	47.2	2	194	54.9	193	55.1	193	55.0
454.calculix	2	341	48.3	341	48.4	342	48.3	2	342	48.2	342	48.2	342	48.2
459.GemsFDTD	2	1083	19.6	1084	19.6	1081	19.6	2	1083	19.6	1084	19.6	1081	19.6
465.tonto	2	466	42.2	466	42.3	465	42.3	2	455	43.2	454	43.4	453	43.4
470.lbm	2	673	40.8	674	40.8	674	40.8	2	673	40.8	674	40.8	674	40.8
481.wrf	2	498	44.8	499	44.8	500	44.7	2	498	44.8	499	44.8	500	44.7
482.sphinx3	2	895	43.5	895	43.5	896	43.5	2	900	43.3	899	43.4	900	43.3

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

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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.games: -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
/F100000000000           -link /FORCE:MULTIPLE
```

C++ benchmarks:

```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F100000000000 shlw64M.lib           -link /FORCE:MULTIPLE
```

Fortran benchmarks:

```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias /F100000000000
-link /FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:

```
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F100000000000           -link /FORCE:MULTIPLE
```



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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
```

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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>

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For other inquiries, please contact webmaster@spec.org.

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