SPEC® CFP2006 Result
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Acer Incorporated

Gateway GT110 F2 (Xeon E3-1220L)

$SPECfp^{®}2006 =$ 45.7

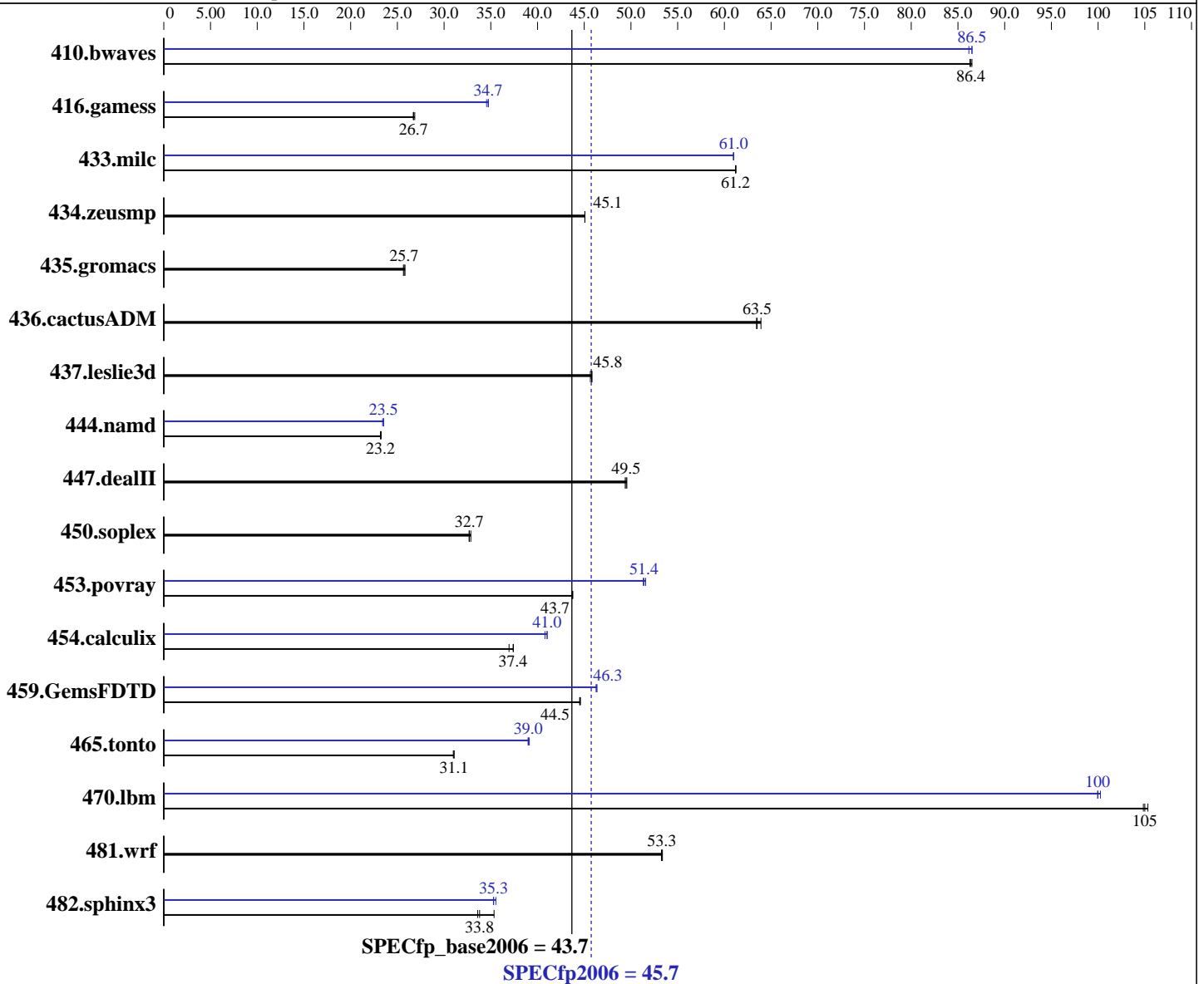SPECfp_base2006 =   43.7

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Mar-2011
Hardware Availability: Apr-2011
Software Availability: Jan-2011

Benchmark		
410.bwaves	86.5	86.4
416.gamess	34.7	26.7
433.milc	61.0	61.2
434.zeusmp	45.1	
435.gromacs	25.7	
436.cactusADM	63.5	
437.leslie3d	45.8	
444.namd	23.5	23.2
447.dealII	49.5	
450.soplex	32.7	
453.povray	51.4	43.7
454.calculix	41.0	37.4
459.GemsFDTD	46.3	44.5
465.tonto	39.0	31.1
470.lbm	100	105
481.wrf	53.3	
482.sphinx3	35.3	33.8

SPECfp_base2006 = 43.7
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Hardware

CPU Name: Intel Xeon E3-1220L
CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP1 , Kernel 2.6.32.12-0.7-default
Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116
Auto Parallel: Yes
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 64-bit

Continued on next page   **Continued on next page**

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L3 Cache:	3 MB I+D on chip per chip	Peak Pointers:	32/64-bit
Other Cache:	None	Other Software:	None
Memory:	16 GB (4 x 4 GB 2Rx8 PC3-10600E-9,ECC)		
Disk Subsystem:	1 x 640 GB SATA, 7200 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	157	86.5	**157**	**86.4**	158	86.3	157	86.5	158	86.2	**157**	**86.5**
416.gamess	729	26.9	733	26.7	**732**	**26.7**	**564**	**34.7**	567	34.6	564	34.7
433.milc	150	61.2	**150**	**61.2**	150	61.2	151	61.0	**150**	**61.0**	150	61.0
434.zeusmp	202	45.1	202	45.1	**202**	**45.1**	202	45.1	202	45.1	**202**	**45.1**
435.gromacs	278	25.7	277	25.8	**278**	**25.7**	278	25.7	277	25.8	**278**	**25.7**
436.cactusADM	**188**	**63.5**	187	63.9	188	63.4	**188**	**63.5**	187	63.9	188	63.4
437.leslie3d	205	45.8	**205**	**45.8**	206	45.7	205	45.8	**205**	**45.8**	206	45.7
444.namd	345	23.3	**346**	**23.2**	346	23.2	342	23.4	341	23.5	**341**	**23.5**
447.dealII	232	49.4	**231**	**49.5**	231	49.6	232	49.4	**231**	**49.5**	231	49.6
450.soplex	254	32.9	255	32.7	**255**	**32.7**	254	32.9	255	32.7	**255**	**32.7**
453.povray	**122**	**43.7**	122	43.7	122	43.8	**103**	**51.4**	104	51.3	103	51.6
454.calculix	220	37.4	**221**	**37.4**	223	37.0	201	41.0	**201**	**41.0**	202	40.8
459.GemsFDTD	238	44.6	**238**	**44.5**	238	44.5	229	46.3	**229**	**46.3**	229	46.4
465.tonto	318	31.0	317	31.1	**317**	**31.1**	**252**	**39.0**	252	39.0	251	39.1
470.lbm	130	105	**131**	**105**	131	105	137	100	137	100	**137**	**100**
481.wrf	210	53.3	**210**	**53.3**	209	53.4	210	53.3	**210**	**53.3**	209	53.4
482.sphinx3	**577**	**33.8**	580	33.6	551	35.3	**552**	**35.3**	552	35.3	548	35.5

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

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size
Large pages were disabled for this run
```

General Notes

```
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
Binaries compiled on RHEL5.5
This result was measured on the Gateway GT110 F2.
The Acer AT110 F2 is electronically equivalent.
```

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Base Compiler Invocation

C benchmarks:
```
icc   -m64
```

C++ benchmarks:
```
icpc  -m64
```

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
icc   -m64 ifort -m64
```

Base Portability Flags

```
    410.bwaves: -DSPEC_CPU_LP64
    416.gamess: -DSPEC_CPU_LP64
      433.milc: -DSPEC_CPU_LP64
    434.zeusmp: -DSPEC_CPU_LP64
   435.gromacs: -DSPEC_CPU_LP64 -nofor_main
 436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
   437.leslie3d: -DSPEC_CPU_LP64
      444.namd: -DSPEC_CPU_LP64
     447.dealII: -DSPEC_CPU_LP64
    450.soplex: -DSPEC_CPU_LP64
    453.povray: -DSPEC_CPU_LP64
   454.calculix: -DSPEC_CPU_LP64 -nofor_main
  459.GemsFDTD: -DSPEC_CPU_LP64
     465.tonto: -DSPEC_CPU_LP64
      470.lbm: -DSPEC_CPU_LP64
       481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
   482.sphinx3: -DSPEC_CPU_LP64
```

Base Optimization Flags

C benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias
```

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
```

Fortran benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias
```

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Peak Compiler Invocation

C benchmarks:
```
icc    -m64
```

C++ benchmarks:
```
icpc   -m64
```

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
icc    -m64 ifort -m64
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

433.milc: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32`
`-ansi-alias`

470.lbm: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -parallel`
`-ansi-alias -static -auto-ilp32`

482.sphinx3: `-xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias`
`-parallel`

C++ benchmarks:

444.namd: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias`
`-auto-ilp32`

447.dealII: `basepeak = yes`

450.soplex: `basepeak = yes`

453.povray: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias`
`-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

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Peak Optimization Flags (Continued)

Fortran benchmarks:

    410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
                -static

    416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
                -inline-level=0 -scalar-rep- -static

    434.zeusmp: basepeak = yes

    437.leslie3d: basepeak = yes

    459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
                -inline-level=0 -opt-prefetch -parallel
                -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

    465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
                -opt-malloc-options=3 -auto -unroll4
                -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

    435.gromacs: basepeak = yes

    436.cactusADM: basepeak = yes

    454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias
                -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

    481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.20110608.html
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html

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You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.20110608.xml
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml

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

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