SPEC® CFP2006 Result
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Supermicro
(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor E5335, 2.00 GHz)

$SPECfp^{®}2006 =$ 16.9
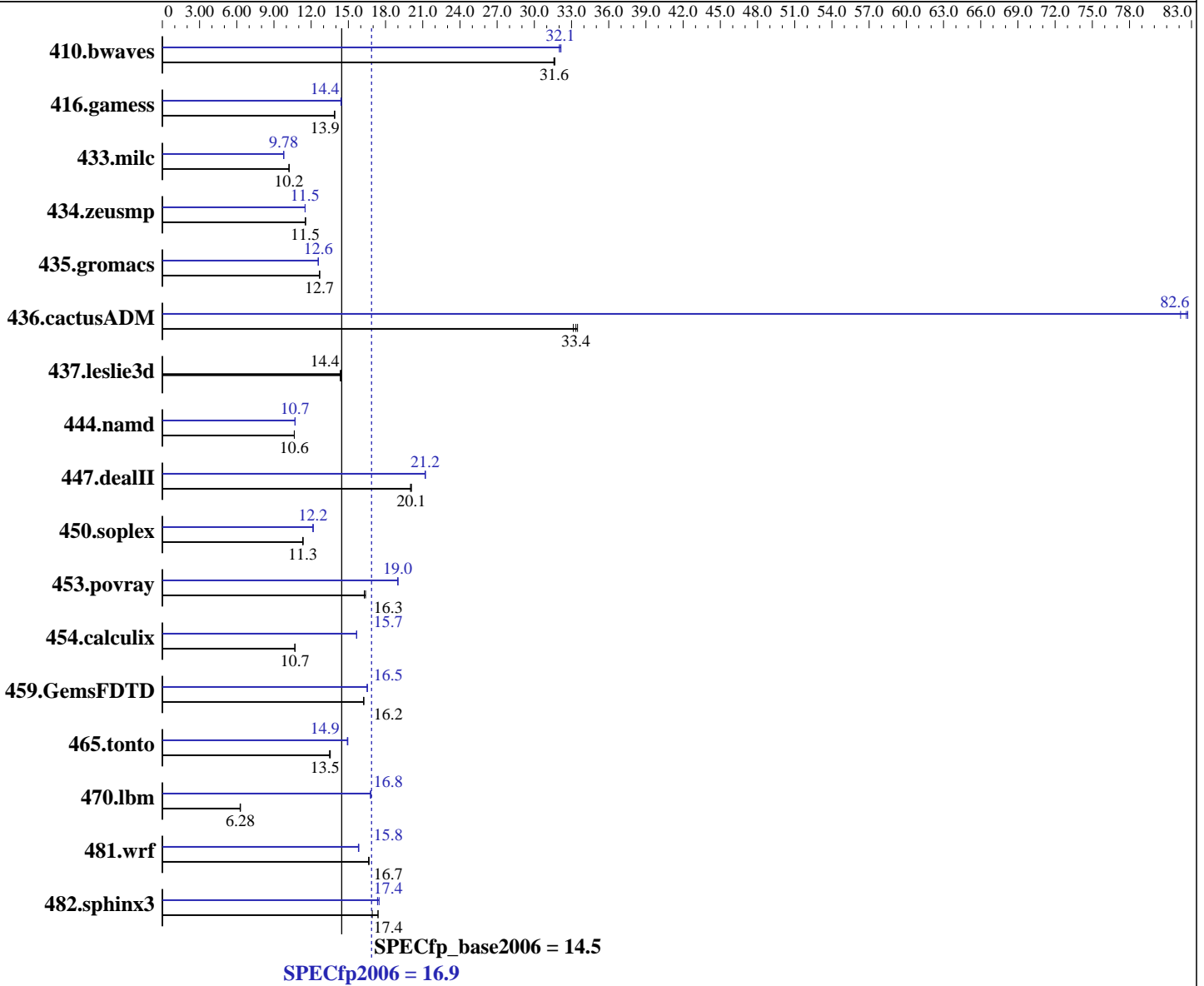
$SPECfp\_base2006 =$ 14.5

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

Test date: Aug-2007
Hardware Availability: Jul-2007
Software Availability: Nov-2007

Benchmark	Result (peak / base)
410.bwaves	32.1 / 31.6
416.gamess	14.4 / 13.9
433.milc	9.78 / 10.2
434.zeusmp	11.5 / 11.5
435.gromacs	12.6 / 12.7
436.cactusADM	82.6 / 33.4
437.leslie3d	14.4
444.namd	10.7 / 10.6
447.dealII	21.2 / 20.1
450.soplex	12.2 / 11.3
453.povray	19.0 / 16.3
454.calculix	15.7 / 10.7
459.GemsFDTD	16.5 / 16.2
465.tonto	14.9 / 13.5
470.lbm	16.8 / 6.28
481.wrf	15.8 / 16.7
482.sphinx3	17.4 / 17.4

SPECfp_base2006 = 14.5
SPECfp2006 = 16.9

Hardware

CPU Name:	Intel Xeon E5335
CPU Characteristics:	Quad Core, 2.00 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

Continued on next page

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10 SP1 RC1, Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 Build 20070725
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3

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L3 Cache:	None	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	16 GB (8 * 2GB Samsung PC2-5300F, 2 rank, CL5-5-5, ECC)	Other Software:	Binutils 2.17.50.0.15
Disk Subsystem:	Seagate, SCSI, 73GB, 10Krpm, 1 disk only		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**430**	**31.6**	430	31.6	429	31.7	**423**	**32.1**	425	32.0	423	32.1
416.gamess	1410	13.9	1409	13.9	**1409**	**13.9**	1356	14.4	1360	14.4	**1358**	**14.4**
433.milc	897	10.2	899	10.2	**899**	**10.2**	**938**	**9.78**	937	9.79	938	9.78
434.zeusmp	789	11.5	788	11.5	**789**	**11.5**	790	11.5	**790**	**11.5**	790	11.5
435.gromacs	563	12.7	**563**	**12.7**	563	12.7	**568**	**12.6**	568	12.6	568	12.6
436.cactusADM	357	33.5	**358**	**33.4**	361	33.1	146	82.1	**145**	**82.6**	145	82.7
437.leslie3d	653	14.4	655	14.3	**653**	**14.4**	653	14.4	655	14.3	**653**	**14.4**
444.namd	754	10.6	**754**	**10.6**	753	10.6	750	10.7	**749**	**10.7**	749	10.7
447.dealII	570	20.1	572	20.0	**570**	**20.1**	**539**	**21.2**	540	21.2	539	21.2
450.soplex	734	11.4	**737**	**11.3**	737	11.3	**686**	**12.2**	687	12.1	685	12.2
453.povray	325	16.4	327	16.3	**326**	**16.3**	**280**	**19.0**	280	19.0	280	19.0
454.calculix	770	10.7	**771**	**10.7**	773	10.7	526	15.7	**526**	**15.7**	527	15.7
459.GemsFDTD	653	16.2	654	16.2	**653**	**16.2**	642	16.5	**642**	**16.5**	642	16.5
465.tonto	**728**	**13.5**	730	13.5	726	13.5	**659**	**14.9**	659	14.9	658	15.0
470.lbm	2181	6.30	2191	6.27	**2187**	**6.28**	818	16.8	**818**	**16.8**	817	16.8
481.wrf	670	16.7	**671**	**16.7**	672	16.6	**706**	**15.8**	705	15.8	707	15.8
482.sphinx3	1151	16.9	1120	17.4	**1121**	**17.4**	1123	17.4	1115	17.5	**1122**	**17.4**

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

General Notes

```
   Bios settings:
   Hardware Prefetcher:      Enabled
   Adjacent Sector Prefetch: Enabled
   All benchmarks compiled in 64-bit mode except
   450.soplex, 470.lbm and 482.sphinx3, for peak, are
   compiled in 32-bit mode
```

Base Compiler Invocation

C benchmarks:
    icc

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Base Compiler Invocation (Continued)

C++ benchmarks:
```
icpc
```

Fortran benchmarks:
```
ifort
```

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

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:
```
-fast -parallel
```

C++ benchmarks:
```
-fast -parallel
```

Fortran benchmarks:
```
-fast -parallel
```

Benchmarks using both Fortran and C:
```
-fast -parallel
```

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CPU2006 license: 13		**Test date:**	Aug-2007
Test sponsor:	Intel Corporation	**Hardware Availability:**	Jul-2007
Tested by:	Intel Corporation	**Software Availability:**	Nov-2007

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/include
```

    433.milc: `icc`

C++ benchmarks (except as noted below):
```
icpc
```

  450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/bin/icpc`
        `-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/lib`
        `-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/include`

Fortran benchmarks:
```
ifort
```

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

Peak 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`
    453.povray: `-DSPEC_CPU_LP64`
  454.calculix: `-DSPEC_CPU_LP64 -nofor_main`
459.GemsFDTD: `-DSPEC_CPU_LP64`
     465.tonto: `-DSPEC_CPU_LP64`
      481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

     433.milc: `-prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias`
          `-auto-ilp32`

     470.lbm: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2`
          `-scalar-rep- -prefetch -opt-malloc-options=3`

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Peak Optimization Flags (Continued)

482.sphinx3: `-fast -unroll2`

C++ benchmarks:

444.namd: `-prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32`

447.dealII: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen(pass 1) -prof-use(pass 2) -fast -opt-malloc-options=3`

453.povray: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `-fast -prefetch -parallel`

416.gamess: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `-prof-gen(pass 1) -prof-use(pass 2) -fast`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -prefetch -parallel`

465.tonto: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -prefetch -parallel -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -parallel -prefetch -auto-ilp32`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.33.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.33.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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