SPEC® CFP2006 Result
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Supermicro
Motherboard X7DBT-INF

SPECfp®_rate2006 =   67.3
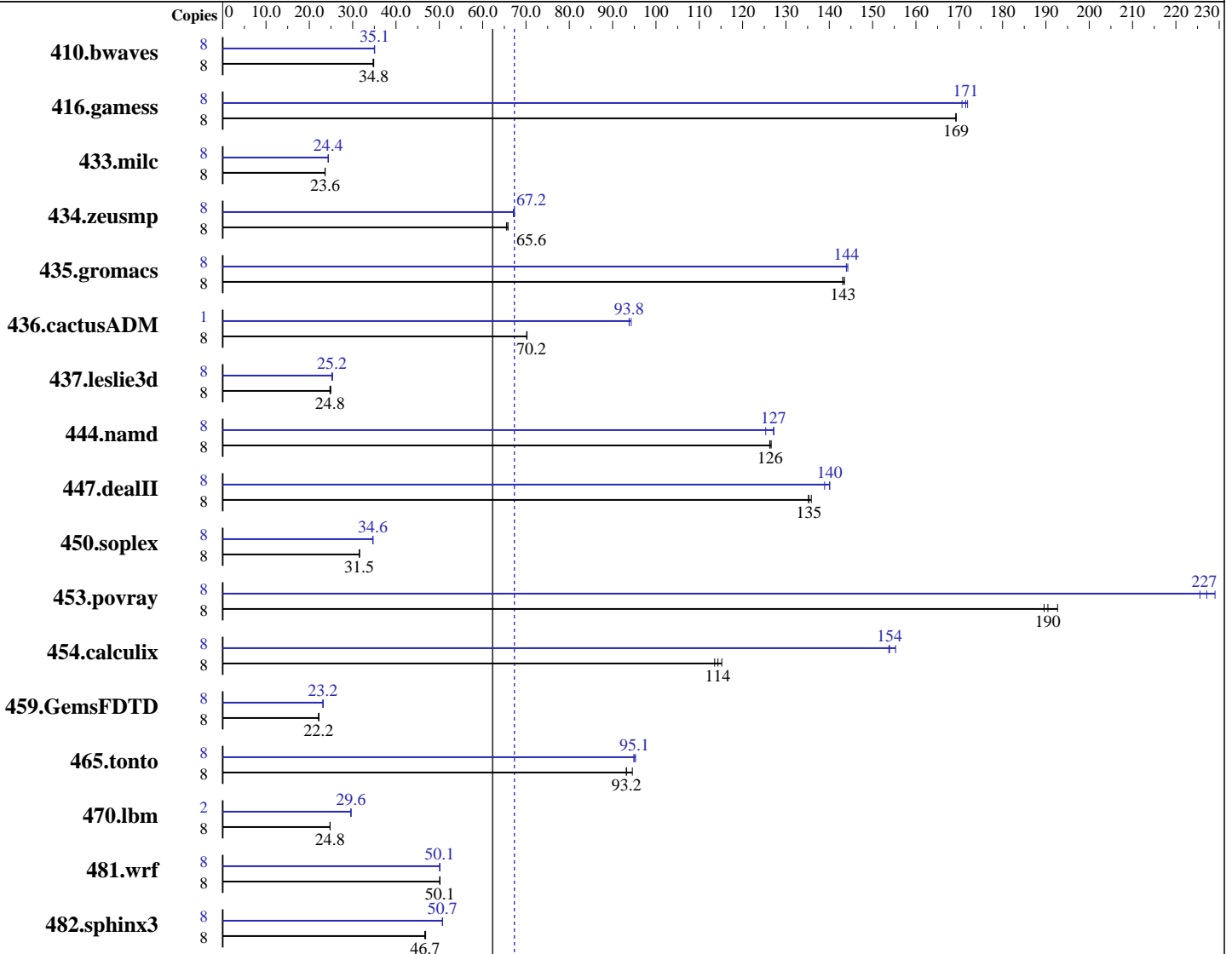
SPECfp_rate_base2006 = 62.3

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007

Benchmark	Copies	Rate
410.bwaves	8	35.1
410.bwaves	8	34.8
416.gamess	8	171
416.gamess	8	169
433.milc	8	24.4
433.milc	8	23.6
434.zeusmp	8	67.2
434.zeusmp	8	65.6
435.gromacs	8	144
435.gromacs	8	143
436.cactusADM	1	93.8
436.cactusADM	8	70.2
437.leslie3d	8	25.2
437.leslie3d	8	24.8
444.namd	8	127
444.namd	8	126
447.dealII	8	140
447.dealII	8	135
450.soplex	8	34.6
450.soplex	8	31.5
453.povray	8	227
453.povray	8	190
454.calculix	8	154
454.calculix	8	114
459.GemsFDTD	8	23.2
459.GemsFDTD	8	22.2
465.tonto	8	95.1
465.tonto	8	93.2
470.lbm	2	29.6
470.lbm	8	24.8
481.wrf	8	50.1
481.wrf	8	50.1
482.sphinx3	8	50.7
482.sphinx3	8	46.7

SPECfp_rate2006 = 67.3

SPECfp_rate_base2006 = 62.3

Hardware

CPU Name:	Intel Xeon X5365
CPU Characteristics:	Quad Core, 3.00GHz
CPU MHz:	3000
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 w/ SP1
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
Base Pointers:	64-bit
Peak Pointers:	32/64-bit

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L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8 X 2GB ECC PC2-5300, CL5, FBDIMM)
Disk Subsystem:	Western DigitalD WD1600YS-01SHB1 160GB SATA II, 7200RPM
Other Hardware:	None

Other Software: None

Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
410.bwaves	8	**3121**	**34.8**	3119	34.9	3133	34.7	8	**3101**	**35.1**	3101	35.1	3106	35.0
416.gamess	8	925	169	**926**	**169**	926	169	8	918	171	911	172	**913**	**171**
433.milc	8	3106	23.6	**3106**	**23.6**	3111	23.6	8	3019	24.3	3011	24.4	**3012**	**24.4**
434.zeusmp	8	1112	65.5	**1110**	**65.6**	1105	65.9	8	1081	67.4	**1083**	**67.2**	1085	67.1
435.gromacs	8	399	143	398	144	**399**	**143**	8	396	144	397	144	**397**	**144**
436.cactusADM	8	1361	70.2	1363	70.2	**1362**	**70.2**	1	127	94.3	127	93.8	**127**	**93.8**
437.leslie3d	8	3013	25.0	3037	24.8	**3033**	**24.8**	8	2986	25.2	**2983**	**25.2**	2965	25.4
444.namd	8	507	127	**508**	**126**	508	126	8	512	125	504	127	**505**	**127**
447.dealII	8	**676**	**135**	677	135	674	136	8	**653**	**140**	659	139	653	140
450.soplex	8	2113	31.6	2116	31.5	**2115**	**31.5**	8	**1926**	**34.6**	1922	34.7	1927	34.6
453.povray	8	224	190	221	193	**223**	**190**	8	**187**	**227**	189	226	186	229
454.calculix	8	581	114	**577**	**114**	573	115	8	425	155	429	154	**429**	**154**
459.GemsFDTD	8	**3831**	**22.2**	3833	22.1	3824	22.2	8	3667	23.1	3665	23.2	**3665**	**23.2**
465.tonto	8	845	93.2	833	94.5	**845**	**93.2**	8	826	95.3	**828**	**95.1**	830	94.9
470.lbm	8	**4435**	**24.8**	4434	24.8	4436	24.8	2	929	29.6	928	29.6	**928**	**29.6**
481.wrf	8	1782	50.1	**1782**	**50.1**	1784	50.1	8	1784	50.1	**1784**	**50.1**	1783	50.1
482.sphinx3	8	3328	46.8	3343	46.6	**3336**	**46.7**	8	3072	50.8	3076	50.7	**3073**	**50.7**

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

General Notes

Tested systems can be used with SC-808T-980 case,
To ensure system stability, a 550W (minimum) ATX power supply
[4-pin (+12V), 8-pin (+12V) and 24-pin are required]
Product description located as of
http://www.supermicro.com/products/motherboard/Xeon1333/5000P/X7DBT-INF.cfm
The system bus runs at 1333 MHz
BIOS Setting: Default
The taskset command was used with submit to bind benchmark copies to processors.
Except for 436.cactusADM peak runs which did not use submit.

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Base Compiler Invocation

C benchmarks:
```
icc
```

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
```

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

Fortran benchmarks:
```
-fast
```

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

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Hardware Availability: Nov-2007
Software Availability: Nov-2007

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

433.milc: `icc`

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

450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

Fortran benchmarks (except as noted below):
```
ifort
```

437.leslie3d: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

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
        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`

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Peak Optimization Flags (Continued)

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

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`

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

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

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 -auto-ilp32`

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$SPECfp\_rate2006 = 67.3$

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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.20090714.22.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.20090714.22.xml`

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

Tested with SPEC CPU2006 v1.0.1.
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