# CFP2000 Result

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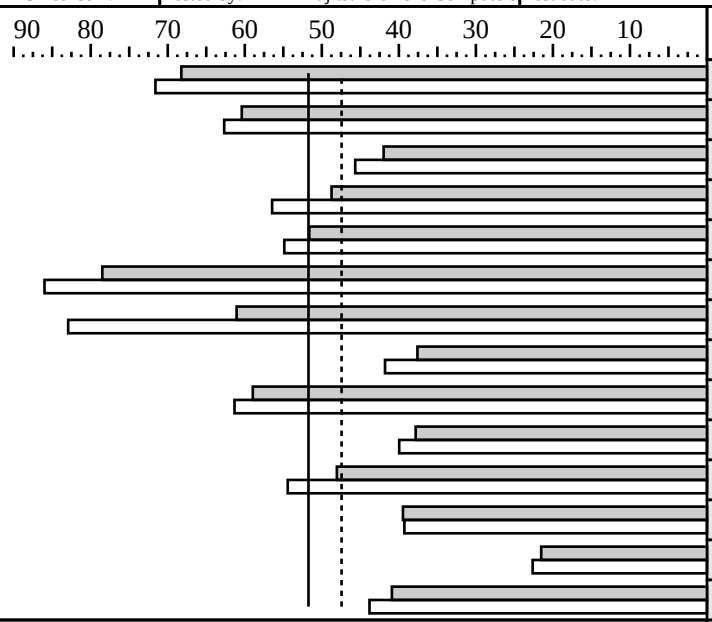
## Fujitsu Siemens Computers

PRIMERGY BX630, AMD Opteron (TM) 254

SPECfp_rate2000 = 51.7

SPECfp_rate_base2000 = 47.4

SPEC license #: 22 | Tested by: Fujitsu Siemens Computers | Test date: Jan-2006 | Hardware Avail: Feb-2006 | Software Avail: Sep-2005




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 2 | 54.4 | 68.2 | 2 | 51.8 | 71.6 |
| 171.swim | 2 | 119 | 60.4 | 2 | 115 | 62.7 |
| 172.mgrid | 2 | 99.5 | 42.0 | 2 | 91.5 | 45.7 |
| 173.applu | 2 | 100.0 | 48.7 | 2 | 86.3 | 56.4 |
| 177.mesa | 2 | 62.9 | 51.6 | 2 | 59.2 | 54.9 |
| 178.galgel | 2 | 85.7 | 78.5 | 2 | 78.2 | 86.0 |
| 179.art | 2 | 98.8 | 61.1 | 2 | 72.7 | 82.9 |
| 183.equake | 2 | 80.2 | 37.6 | 2 | 72.2 | 41.8 |
| 187.facerec | 2 | 74.8 | 59.0 | 2 | 71.9 | 61.3 |
| 188.ammp | 2 | 135 | 37.8 | 2 | 128 | 40.0 |
| 189.lucas | 2 | 96.6 | 48.0 | 2 | 85.3 | 54.4 |
| 191.fma3d | 2 | 123 | 39.5 | 2 | 124 | 39.3 |
| 200.sixtrack | 2 | 119 | 21.5 | 2 | 113 | 22.6 |
| 301.apsi | 2 | 147 | 40.9 | 2 | 138 | 43.8 |

### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 254 processor (2.80 GHz) |
| CPU MHz: | 2800 |
| FPU: | Integrated |
| CPU(s) enabled: | 2 cores, 2 chips, 1 core/chip |
| CPU(s) orderable: | 1,2 |
| Parallel: | No |
| Primary Cache: | 64KBI + 64KBD on chip, per core |
| Secondary Cache: | 1024KB (I+D) on chip, per core |
| L3 Cache: | N/A |
| Other Cache: | N/A |
| Memory: | 8x2048MB DDR-RAM PC3200R CL3-3-3 |
| Disk Subsystem: | Western Digital WD2500 (SATA, 7.2krpm) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | SuSE Linux Enterprise Server 9 (x86_64) SP 2<br>SuSE Kernel 2.6.5-7.191-smp |
| Compiler: | PathScale EKOPath(TM) Compiler Suite, Release 2.2.1 (for C and Fortran)<br>AMD Core Mathematical Library (ACML), Version 2.6.0 |
| File System: | Linux/reiserfs |
| System State: | Multi-user run level 3 |

## Notes/Tuning Information

```
GENERAL
+FDO:  PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library

Portability flags
   178.galgel: -fixedform

Base tuning flags
   for Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
   for C programs:       -Ofast -WOPT:mem_opnds=on +FDO

Peak tuning flags
   168.wupwise:  -Ofast -LNO:prefetch_ahead=5:prefetch=3
                 -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
                -IPA:linear=on:plimit=50000:callee_limit=5000 -INLINE:aggressive=on
   171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
   172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
```

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## Notes/Tuning Information (Continued)

```
                -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
                -WOPT:mem_opnds=on:aggstr=0
   173.applu:   -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
                -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
   177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
                -WOPT:mem_opnds=on +FDO
   178.galgel:  -Ofast -OPT:fast_complex=on +ACML +FDO
   179.art:     -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
   183.equake:  -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
   187.facerec: -Ofast -LNO:fusion=2
                -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
   188.ammp:    -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
                -fno-math-errno -TENV:X=4 +FDO
   189.lucas:   -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256
                -WOPT:mem_opnds=on +FDO
   191.fma3d:   -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
                -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
   200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
                -fno-math-errno -CG:load_exe=1 +FDO
   301.apsi:    -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2


MYMASK=‘printf ’0x%x’ $((1<<$SPECUSERNUM))‘; /usr/bin/taskset $MYMASK $command:
Taskset utility used to bind process to CPU(s)

BIOS settings: Memory timing=1T
               DRAM Bank Interleave=AUTO

This result was measured with 64-bit binaries using the 64-bit version of
the operating system.

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http://www.fujitsu-siemens.com/countries
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