



CFP2000 Result

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Fujitsu Siemens Computers
CELSIUS V810, Opteron (TM) 250, Linux 64-bit

SPECfp_rate2000 = 21.4
SPECfp_rate_base2000 = 19.8

SPEC license #: 22 | Tested by: Fujitsu Siemens Computers | Test date: Nov-2004 | Hardware Avail: Aug-2004 | Software Avail: Oct-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	93.2	19.9	1	79.9	23.2
171.swim	1	120	29.9	1	120	29.9
172.mgrid	1	111	18.9	1	100	20.8
173.applu	1	133	18.2	1	111	22.0
177.mesa	1	76.8	21.2	1	71.1	22.9
178.galgel	1	105	31.9	1	95.1	35.4
179.art	1	104	29.0	1	77.7	38.8
183.equake	1	82.0	18.4	1	83.9	18.0
187.facerec	1	94.6	23.3	1	93.0	23.7
188.amp	1	157	16.3	1	152	16.7
189.lucas	1	110	21.1	1	104	22.4
191.fma3d	1	147	16.6	1	139	17.5
200.sixtrack	1	162	7.87	1	152	8.40
301.apsi	1	165	18.2	1	163	18.5

Hardware

CPU: AMD Opteron (TM) 250
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 1 core/chip
CPU(s) orderable: 1,2
Parallel: No
Primary Cache: 64KBI + 64KBD on chip
Secondary Cache: 1024KB(I+D) on chip
L3 Cache: N/A
Other Cache: N/A
Memory: 4 x 512 MB PC3200 CL3-3-3 DDR SDRAM
Disk Subsystem: S-ATA 7200 rpm
Other Hardware: None

Software

Operating System: SuSE Linux 9.1 (AMD64) 2.6.4-52-default
Compiler: PathScale EKO Compiler Suite, Release 1.4
- (both for C and Fortran)
ACML (AMD Core Math Library) for AMD64, Version 2.1.0
- available from AMD
File System: Linux/Reiser
System State: Multi-user SuSE Run level 3

Notes/Tuning Information

Tested by Fujitsu Siemens Computers

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
+ACML: -lacml -lg2c
      for linking with ACML.
      ACML is AMD Core Math Library, Version 2.1.0;
      g2c is the Fortran Compatibility Library, required by ACML;
      it comes with GNU Fortran compiler in SuSE's distribution.
```

Portability Flags:
178.galgel: -fixedform

Baseline optimization flags:
C programs: -Ofast -WOPT:mem_opnds=on +FDO
Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex

Peak tuning:



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Notes/Tuning Information (Continued)

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168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3
             -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
             -TENV:X=4
    loader:   -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
             -INLINE:aggressive=on
171.swim:    -Ofast -LNO:fusion=2
172.mgrid:   -O3 -LNO:fusion=2:blocking=off
             -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
             -CG:gcm=off:cflow=off
173.applu:   -Ofast -CG:local_fwd_sched=on
             -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
             -OPT:ro=3 -TENV:X=3 -WOPT:val=2
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno
             -CG:local_fwd_sched=on +FDO
178.galgel:  -Ofast -OPT:fast_complex -CG:use_movlpd=on +ACML
179.art:     -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.quake:   -Ofast -WOPT:mem_opnds=on -CG:local_fwd_sched=on
187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3
             -CG:load_exe=0 -LNO:fusion=2 +FDO
    loader   -IPA:plimit=1800
188.ammp:    -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
             -fno-math-errno -TENV:X=4 -LNO:prefetch=0 +FDO
189.lucas:   -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 +FDO
191.fma3d:   -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
             -WOPT:mem_opnds=on:retype_expr=on +FDO
    loader   -IPA:pu_reorder=1
200.sixtrack: -Ofast -CG:load_exe=1 +FDO
301.apsi:    -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0

```

System tested with only 1 CPU present.

BIOS Version 1.05, default settings.

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