



CFP2000 Result

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Fujitsu Siemens Computers
CELSIUS V810, Opteron (TM) 252, Linux 64-bit

SPECfp_rate2000 = 23.7
SPECfp_rate_base2000 = 21.7

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

45 40 35 30 25 20 15 10 5							Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
							168.wupwise	1	65.7	28.2	1	54.7	34.0
							171.swim	1	122	29.4	1	120	30.0
							172.mgrid	1	106	19.8	1	93.9	22.2
							173.applu	1	122	20.0	1	104	23.5
							177.mesa	1	70.9	22.9	1	66.0	24.6
							178.galgel	1	98.0	34.3	1	90.8	37.0
							179.art	1	111	27.2	1	72.8	41.5
							183.quake	1	77.7	19.4	1	73.6	20.5
							187.facerec	1	86.4	25.5	1	85.0	25.9
							188.amp	1	150	17.0	1	139	18.4
							189.lucas	1	93.9	24.7	1	93.8	24.7
							191.fma3d	1	131	18.6	1	130	18.8
							200.sixtrack	1	132	9.68	1	129	9.86
							301.apsi	1	159	19.0	1	151	19.9

Hardware

CPU: AMD Opteron (TM) 252
 CPU MHz: 2600
 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-smp
 Compiler: PathScale EKOPath (TM) Compiler Suite, Release 2.0
 - (both for C and Fortran)
 ACML (AMD Core Math Library) for AMD64, Version 2.1
 - available from AMD
 File System: Linux/ReiserFS
 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 AMD Core Math Library, Version 2.1.0
(ACML requires g2c, the Fortran Compatibility Library;
g2c 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 +FDO

Peak tuning:
 168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3



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Notes/Tuning Information (Continued)

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-OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
-TENV:X=4
-IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
-INLINE:aggressive=on
171.swim: -Ofast -LNO:fusion=2 -m3dnow
172.mgrid: -O3 -LNO:fusion=2:blocking=off
-OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
-CG:gcm=off:cflow=off -m3dnow
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 +FDO +ACML
179.art: -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.earthquake: -Ofast -WOPT:mem_opnds=on -m32
187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3
-CG:load_exe=0 -LNO:fusion=2 -IPA:plimit=1500 +FDO
188.ammpp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
-fno-math-errno -TENV:X=4 +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 -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000 -fno-math-errno
-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 1.06, default settings.

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