



CFP2000 Result

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Fujitsu Siemens Computers
CELSIUS V830, Opteron (TM) 254, Linux 64-bit

SPECfp_rate2000 = 52.8
SPECfp_rate_base2000 = 48.2

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	56.9	65.3	2	50.5	73.6
171.swim	2	123	58.7	2	118	60.8
172.mgrid	2	98.2	42.5	2	90.6	46.1
173.applu	2	96.9	50.3	2	85.4	57.0
177.mesa	2	61.4	52.9	2	57.1	56.9
178.galgel	2	85.2	78.9	2	76.1	88.4
179.art	2	98.1	61.5	2	67.9	88.9
183.quake	2	75.6	39.9	2	68.9	43.8
187.facerec	2	69.8	63.1	2	70.9	62.2
188.amp	2	134	38.0	2	125	40.7
189.lucas	2	94.5	49.1	2	83.7	55.5
191.fma3d	2	121	40.4	2	120	40.6
200.sixtrack	2	116	21.9	2	111	22.9
301.apsi	2	146	41.2	2	137	43.9

Hardware

CPU: AMD Opteron 254
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)
Secondary Cache: 1024KB(I+D) (on chip)
L3 Cache: N/A
Other Cache: N/A
Memory: 8 x 512 MB PC3200 CL3-3-3 DDR SDRAM
Disk Subsystem: SCSI U320
Other Hardware: None

Software

Operating System: SLES 9 with SP3 (AMD64) - kernel 2.6.5-7.244-smp
Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3 (for C and Fortran)
AMD Core Mathematical Library (ACML), Version 3.0.0
File System: Linux/ReiserFS
System State: Multi-User SuSE Run Level 3

Notes/Tuning Information

Portability flags:
178.galgel: -fixedform

Feedback Optimization:
+FDO: PASS1=-fb_create fbdata PASS2=-fb_opt fbdata

AMD Core Math Library
+ACML means -L<acml-install-dir>/pathscale64/lib -lacml,
which causes linking with AMD Core Math Library

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



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Notes/Tuning Information (Continued)

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-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
          -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:prefetch=3
          +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 RM_SOURCES=lapak.f90
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.quake: -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

```

BIOS default settings with
Node memory interleave disabled, SRAT enabled
taskset has been used to bind processes to CPUs

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