CFP2000 Result

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Fujitsu Siemens Computers

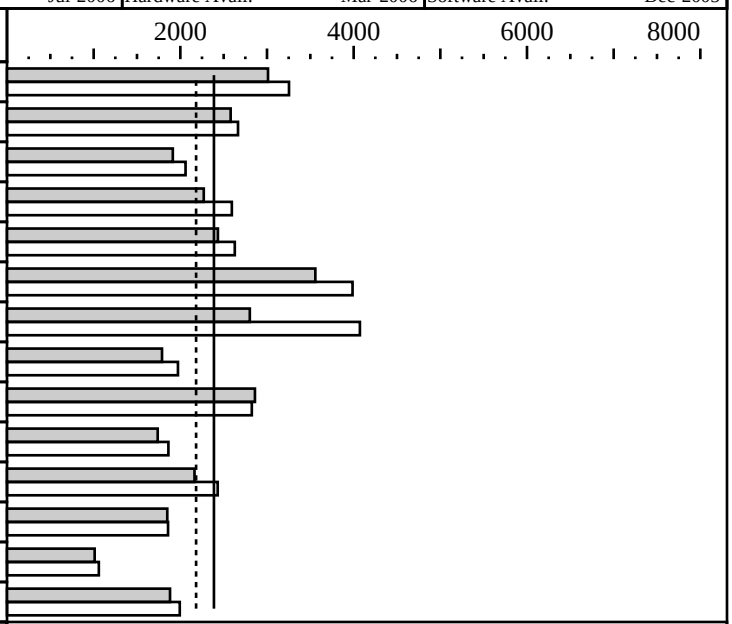
CELSIUS V830, Opteron (TM) 256, Linux 64-bit

SPECfp2000 = 2388

SPECfp_base2000 = 2182

SPEC license #: 22 | Tested by: Fujitsu Siemens Computers | Test date: Jul-2006 | Hardware Avail: Mar-2006 | Software Avail: Dec-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	53.1	3012	49.2	3254
171.swim	3100	120	2580	116	2666
172.mgrid	1800	94.1	1913	87.4	2060
173.applu	2100	92.5	2270	80.9	2594
177.mesa	1400	57.5	2434	53.3	2628
178.galgel	2900	81.5	3558	72.7	3987
179.art	2600	92.8	2802	63.9	4072
183.equake	1300	72.7	1789	65.9	1973
187.facerec	1900	66.4	2861	67.3	2825
188.ammp	2200	127	1739	118	1862
189.lucas	2000	92.4	2164	82.3	2431
191.fma3d	2100	114	1849	113	1858
200.sixtrack	1100	109	1011	104	1060
301.apsi	2600	138	1881	130	1993



Hardware

CPU:	AMD Opteron 256
CPU MHz:	3000
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:	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)

```
                -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
 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

BIOS default settings with
Node memory interleave disabled, SRAT enabled


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