CFP2000 Result

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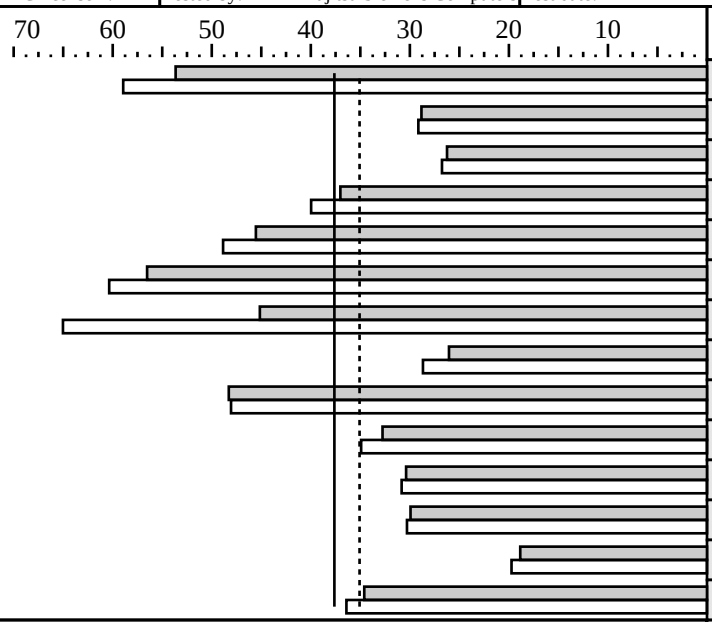
Fujitsu Siemens Computers

CELSIUS V830, Opteron (TM) 280, Linux 64-bit

SPECfp_rate2000 = 37.6

SPECfp_rate_base2000 = 35.1

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	69.2	53.6	2	63.0	58.9
171.swim	2	249	28.8	2	247	29.1
172.mgrid	2	159	26.2	2	156	26.8
173.applu	2	132	37.0	2	122	40.0
177.mesa	2	71.3	45.5	2	66.5	48.9
178.galgel	2	119	56.5	2	111	60.4
179.art	2	134	45.1	2	92.8	65.0
183.equake	2	116	26.0	2	105	28.7
187.facerec	2	91.3	48.3	2	91.7	48.1
188.ammp	2	156	32.8	2	146	34.9
189.lucas	2	153	30.4	2	151	30.8
191.fma3d	2	163	29.9	2	161	30.3
200.sixtrack	2	135	18.9	2	129	19.7
301.apsi	2	174	34.6	2	166	36.4

Hardware

CPU:	AMD Opteron 280
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/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:	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 RM_SOURCES=lapak.f90
  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
taskset has been used to bind processes to CPUs

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