CFP2000 Result

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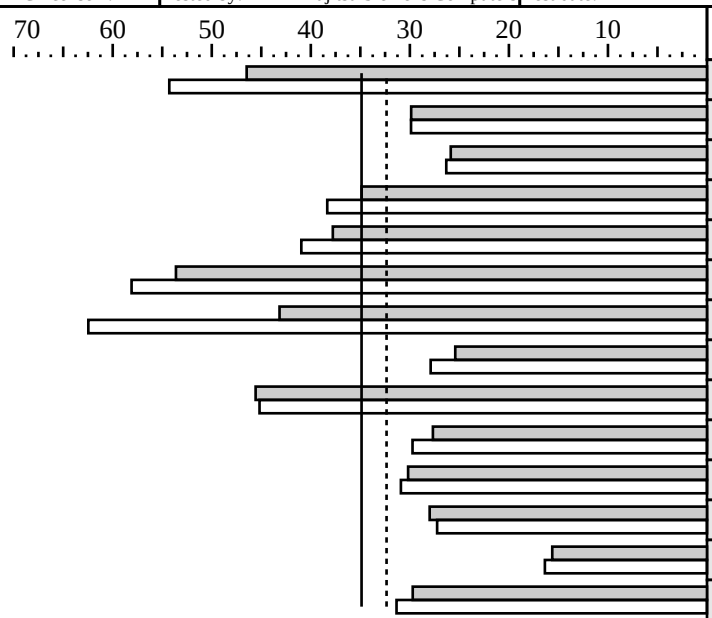
Fujitsu Siemens Computers

PRIMERGY RX220, AMD Opteron (TM) 270

SPECfp_rate2000 = 34.9

SPECfp_rate_base2000 = 32.4

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	79.9	46.5	2	68.4	54.3
171.swim	2	241	29.9	2	241	29.9
172.mgrid	2	161	25.9	2	159	26.3
173.applu	2	140	34.9	2	127	38.3
177.mesa	2	86.0	37.8	2	79.3	41.0
178.galgel	2	125	53.6	2	116	58.1
179.art	2	140	43.2	2	96.6	62.5
183.equake	2	119	25.4	2	108	27.9
187.facerec	2	96.7	45.6	2	97.6	45.2
188.ammp	2	184	27.7	2	172	29.7
189.lucas	2	154	30.2	2	150	30.9
191.fma3d	2	174	28.0	2	179	27.2
200.sixtrack	2	163	15.6	2	156	16.4
301.apsi	2	203	29.7	2	192	31.3

Hardware

CPU:	AMD Opteron (TM) 270 processor (2.00 GHz)
CPU MHz:	2000
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:	4x2048MB DDR-RAM PC3200R
Disk Subsystem:	Western Digital WD2500 (SATA, 7.2krpm)
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 (x86_64) SP 2 SuSE Kernel 2.6.5-7.191-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 run level 3

Notes/Tuning Information

```
GENERAL
+FDO:  PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library

Portability flags
   178.galgel: -fixedform

Base tuning flags
   for Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
   for C programs:       -Ofast -WOPT:mem_opnds=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
                -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
```

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Notes/Tuning Information (Continued)

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


MYMASK=‘printf ’0x%x’ $((1<<$SPECUSERNUM))‘; /usr/bin/taskset $MYMASK $command:
Taskset utility used to bind process to CPU(s)

BIOS settings: Memory timing=1T

This result was measured with 64-bit binaries using the 64-bit version of
the operating system.

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