CFP2000 Result

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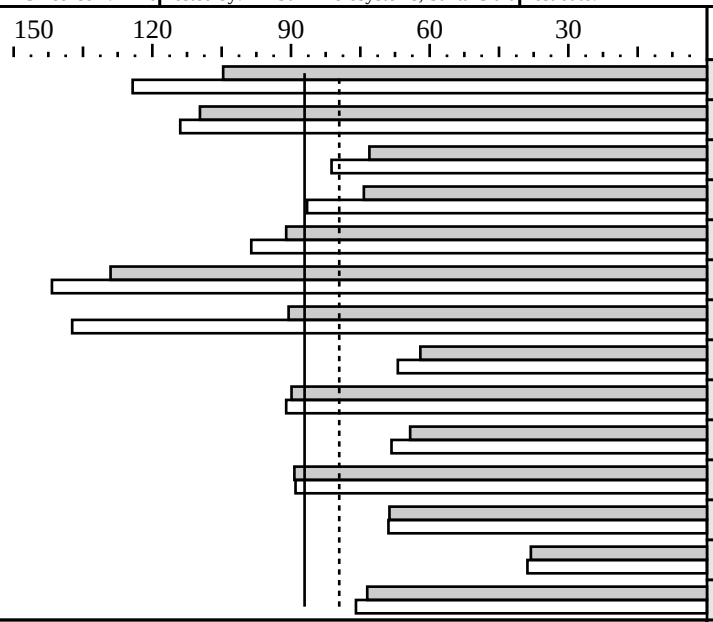
Sun Microsystems
Sun Fire V40z

SPECfp_rate2000 = 87.1

SPECfp_rate_base2000 = 79.6

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Feb-2005 | Hardware Avail: Apr-2005 | Software Avail: Jan-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	70.9	105	4	59.7	124
171.swim	4	131	110	4	126	114
172.mgrid	4	114	73.0	4	103	81.2
173.applu	4	131	74.2	4	113	86.5
177.mesa	4	71.4	91.0	4	65.9	98.6
178.galgel	4	104	129	4	94.9	142
179.art	4	133	90.5	4	87.8	137
183.equake	4	97.3	62.0	4	90.2	66.9
187.facerec	4	98.1	89.9	4	96.8	91.0
188.ammp	4	159	64.2	4	150	68.3
189.lucas	4	104	89.3	4	104	89.0
191.fma3d	4	142	68.7	4	141	68.9
200.sixtrack	4	134	38.1	4	131	38.8
301.apsi	4	164	73.5	4	159	75.9

Hardware

CPU:	AMD Opteron (TM) 852
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	1,2,4
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16GB (8x2GB, PC3200 CL3 DDR)
Disk Subsystem:	SCSI, 73GB, 10K RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 9
Compiler:	PathScale EKOPath Compiler Suite, Release 2.0 AMD Core Math Library V2.5.1
File System:	Linux/ext3
System State:	Multi-user, Run level 3

Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
+ACML  -L/opt/acml2.5.1/pathscale64/lib -lacml,
       means linking with AMD Core Math Library V2.5.1

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

Portability Flags:
  178.galgel: -fixedform

Peak Tuning:
168.wupwise  : -Ofast -LNO:prefetch_ahead=5:prefetch=3
               -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
```

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Notes/Tuning Information (Continued)

```
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
               RM_SOURCES=lapak.f90
179.art      : -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.equake   : -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.ammp     : -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

Default BIOS setting was used.
```