



CFP2000 Result

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Sun Microsystems
Sun Fire V40z

SPECfp2000 = 2020
SPECfp_base2000 = 1840

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	66.2	2415	57.1	2800	[Bar chart showing ratio 2800]			
171.swim	3100	123	2523	119	2604	[Bar chart showing ratio 2604]			
172.mgrid	1800	108	1661	96.7	1861	[Bar chart showing ratio 1861]			
173.applu	2100	122	1720	105	2006	[Bar chart showing ratio 2006]			
177.mesa	1400	71.5	1957	65.6	2134	[Bar chart showing ratio 2134]			
178.galgel	2900	98.7	2939	88.8	3265	[Bar chart showing ratio 3265]			
179.art	2600	113	2295	74.4	3495	[Bar chart showing ratio 3495]			
183.earth	1300	80.2	1621	74.6	1743	[Bar chart showing ratio 1743]			
187.facerec	1900	88.5	2146	85.3	2227	[Bar chart showing ratio 2227]			
188.amp	2200	151	1453	140	1568	[Bar chart showing ratio 1568]			
189.lucas	2000	98.1	2038	98.0	2042	[Bar chart showing ratio 2042]			
191.fma3d	2100	131	1598	131	1605	[Bar chart showing ratio 1605]			
200.sixtrack	1100	133	826	131	840	[Bar chart showing ratio 840]			
301.apsi	2600	160	1628	154	1689	[Bar chart showing ratio 1689]			

Hardware

CPU: AMD Opteron (TM) 852
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 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: 4GB (4x1GB, 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.quake    : -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. Only one CPU was present in the system.