CFP2000 Result

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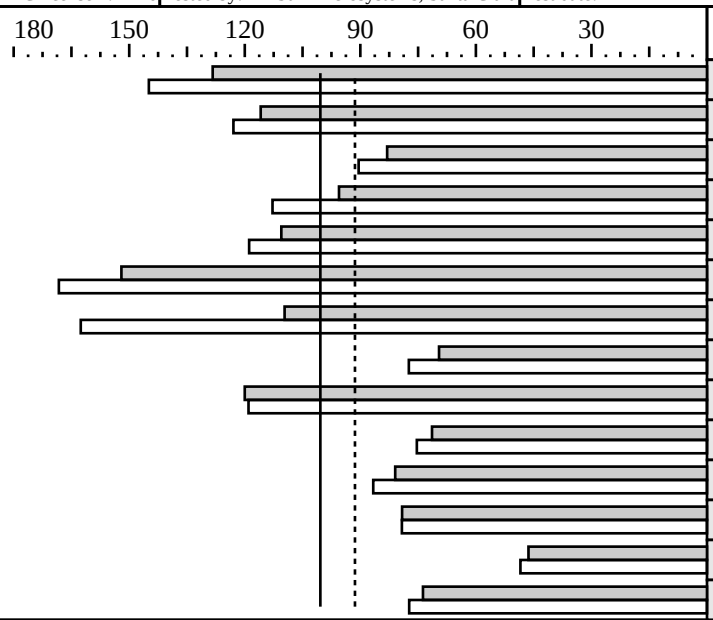
Sun Microsystems
Sun Fire V40z

SPECfp_rate2000 = 100

SPECfp_rate_base2000 = 91.4

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Mar-2006 | Hardware Avail: May-2006 | Software Avail: Nov-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	57.9	128	4	51.2	145
171.swim	4	124	116	4	117	123
172.mgrid	4	101	83.0	4	92.3	90.4
173.applu	4	102	95.5	4	86.4	113
177.mesa	4	58.8	111	4	54.6	119
178.galgel	4	88.5	152	4	80.0	168
179.art	4	110	110	4	74.2	163
183.equake	4	86.7	69.6	4	77.9	77.4
187.facerec	4	73.5	120	4	74.1	119
188.ammp	4	143	71.4	4	136	75.3
189.lucas	4	115	80.9	4	107	86.6
191.fma3d	4	123	79.2	4	123	79.2
200.sixtrack	4	110	46.3	4	105	48.4
301.apsi	4	164	73.7	4	156	77.3

Hardware

CPU:	AMD Opteron (TM) 856
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	2,4 (order by # of chips)
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:	16GB (8x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
Disk Subsystem:	2x72GB,SCSI,10K RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 9 SP3 (x86_64)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Version 2.3 AMD Core Mathematical Library (ACML), Version 2.7.0
File System:	Linux/ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
GENERAL:
+FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
+ACML  means -L<acml2.7.0-install-dir>/pathscale64/lib -lacml,
       which causes linking with AMD Core Math Library V2.7.0

Baseline optimization
  C programs:       -Ofast -WOPT:mem_opnds=on +FDO
  Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +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
               -IPA:linear=on:plimit=50000:callee_limit=5000
               -INLINE:aggressive=on
 171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
```

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Notes/Tuning Information (Continued)

```
 172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_arith=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 +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

taskset utility used to bind CPU(s) to processes.
Default BIOS setting was used
Half memory slots populated on all CPU(s) in dual-channel configuration.
```