



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Ultra 40

SPECfp_rate2000 = 77.6
SPECfp_rate_base2000 = 72.9

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	67.2	111	4	61.6	121
171.swim	4	240	60.0	4	242	59.5
172.mgrid	4	156	53.5	4	156	53.6
173.applu	4	128	76.3	4	121	80.7
177.mesa	4	66.2	98.1	4	61.0	106
178.galgel	4	114	118	4	112	120
179.art	4	135	89.7	4	89.2	135
183.quake	4	115	52.5	4	104	57.7
187.facerec	4	87.5	101	4	88.1	100
188.amp	4	147	69.5	4	139	73.6
189.lucas	4	151	61.4	4	149	62.1
191.fma3d	4	154	63.2	4	154	63.3
200.sixtrack	4	125	40.8	4	120	42.6
301.apsi	4	167	72.4	4	161	75.1

Hardware

CPU: AMD Opteron (TM) 285
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 (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: SATA,250GB,7200 RPM
 Other Hardware: None

Software

Operating System: SuSE Linux 9.0 SLES 64 bit (SP3)
 Compiler: PathScale EKOPath(TM) Compiler Suite, Version 2.3
 AMD Core Mathematical Library (ACML), Version 3.0.0
 File System: ufs
 System State: Multi-user

Notes/Tuning Information

Compiler invocation:

```
C : pathcc
FC : pathf95
F77: pathf95
```

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 links with AMD Core Math Library
```

Baseline Optimization Flags:

```
C programs: -Ofast -WOPT:mem_opnds=on +FDO
```



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Ultra 40

SPECfp_rate2000 = 77.6

SPECfp_rate_base2000 = 72.9

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

Notes/Tuning Information (Continued)

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
 -IPA:linear=on:plimit=50000:callee_limit=5000
 -INLINE:aggressive=on

171.swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnw

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

179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32

183.quake: -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.amp: -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

Default BIOS settings was used.

taskset has been used to bind processes to CPUs