



CFP2000 Result

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Advanced Micro Devices
ASUS M2N-LR/SATA, AMD `Opteron (TM) 1220SE

SPECfp_rate2000 = 45.9
SPECfp_rate_base2000 = 41.8

SPEC license #: 49 Tested by: AMD Austin, TX Test date: Jul-2006 Hardware Avail: Sep-2006 Software Avail: Jan-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	57.3	64.8	2	51.8	71.7
171.swim	2	202	35.7	2	194	37.1
172.mgrid	2	124	33.8	2	116	36.0
173.applu	2	109	44.6	2	96.5	50.5
177.mesa	2	66.1	49.1	2	56.9	57.0
178.galgel	2	99.0	67.9	2	90.4	74.4
179.art	2	114	53.1	2	74.9	80.5
183.quake	2	94.3	32.0	2	84.1	35.9
187.facerec	2	74.7	59.0	2	74.9	58.9
188.amp	2	136	37.6	2	127	40.2
189.lucas	2	132	35.2	2	129	35.8
191.fma3d	2	131	37.3	2	130	37.5
200.sixtrack	2	116	22.0	2	111	23.0
301.apsi	2	151	39.9	2	143	42.1

Hardware

CPU: AMD Opteron (TM) 1220SE
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
CPU(s) orderable: 1
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: 2x1024MB, DDR2-800 CL3
Disk Subsystem: IDE, 120GB
Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 9 SP3 (64-bit)
Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3
File System: Linux/ext3
System State: Multi-user, run level 3

Notes/Tuning Information

+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: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
           RM_SOURCES=lapak.f90
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.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

```

The tested system can be assembled using a standard ATX case and an Antec True 550 watt EPS12V Power Supply.
Half memory slots populated in dual channel configuration.
taskset utility used to bind CPU(s) to processes.