



CFP2000 Result

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IBM Corporation

IBM System X 3755 (AMD Opteron (TM) 8220 SE)

SPECfp2000 = 2172

SPECfp_base2000 = 1975

SPEC license #: 11 Tested by: IBM Corporation Test date: Aug-2006 Hardware Avail: Aug-2006 Software Avail: Mar-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	57.0	2806	52.3	3060	[Bar chart showing ratio 3060]			
171.swim	3100	115	2692	104	2969	[Bar chart showing ratio 2969]			
172.mgrid	1800	110	1640	91.8	1960	[Bar chart showing ratio 1960]			
173.applu	2100	102	2066	89.7	2342	[Bar chart showing ratio 2342]			
177.mesa	1400	64.1	2185	60.1	2331	[Bar chart showing ratio 2331]			
178.galgel	2900	87.3	3323	86.9	3337	[Bar chart showing ratio 3337]			
179.art	2600	110	2361	79.1	3286	[Bar chart showing ratio 3286]			
183.earth	1300	89.4	1455	80.4	1617	[Bar chart showing ratio 1617]			
187.facerec	1900	75.5	2516	73.6	2583	[Bar chart showing ratio 2583]			
188.amp	2200	141	1561	135	1628	[Bar chart showing ratio 1628]			
189.lucas	2000	97.3	2055	82.9	2411	[Bar chart showing ratio 2411]			
191.fma3d	2100	125	1685	127	1660	[Bar chart showing ratio 1660]			
200.sixtrack	1100	119	927	113	974	[Bar chart showing ratio 974]			
301.apsi	2600	152	1712	142	1837	[Bar chart showing ratio 1837]			

Hardware

CPU: AMD Opteron 8220 SE
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip
CPU(s) orderable: 1,2,3,4
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: 16x2GB, PC2-5300
Disk Subsystem: SAS, 73GB 15K RPM
Other Hardware: None

Software

Operating System: SuSE Linux 9.0 SP3 SLES 64 bit Kernel 2.6.5-7.244-smp
Compiler: PathScale EKO Compiler Suite, Release 2.4
PathScale EKOPATH(TM) Compiler Suite, Release 2.4
File System: Linux/reiserfs
System State: Multi-user, run level 3

Notes/Tuning Information

+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata

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 -IPA:linear=on -LNO:prefetch Ahead=5:prefetch=3
-OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
171.swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
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



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Notes/Tuning Information (Continued)

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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 +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 -IPA:plimit=1500 -LNO:fusion=2
              -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 +FDO
188.amp:      -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
              -GRA:optimize_boundary=on -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:early_intrinsics=on
              -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:     -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

```