



CFP2000 Result

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IBM Corporation
IBM System X 3655 (AMD Opteron (TM) 2210)

SPECfp2000 = 1665
SPECfp_base2000 = 1533

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	76.5	2090	67.3	2376	[Bar chart showing ratio 2376]			
171.swim	3100	135	2288	129	2404	[Bar chart showing ratio 2404]			
172.mgrid	1800	136	1321	119	1508	[Bar chart showing ratio 1508]			
173.applu	2100	130	1621	119	1767	[Bar chart showing ratio 1767]			
177.mesa	1400	97.0	1443	90.7	1543	[Bar chart showing ratio 1543]			
178.galgel	2900	117	2486	117	2486	[Bar chart showing ratio 2486]			
179.art	2600	120	2160	91.6	2838	[Bar chart showing ratio 2838]			
183.earthquake	1300	96.9	1341	90.1	1444	[Bar chart showing ratio 1444]			
187.facerec	1900	95.3	1994	91.6	2075	[Bar chart showing ratio 2075]			
188.amp	2200	198	1113	189	1165	[Bar chart showing ratio 1165]			
189.lucas	2000	113	1773	96.7	2068	[Bar chart showing ratio 2068]			
191.fma3d	2100	164	1284	165	1272	[Bar chart showing ratio 1272]			
200.sixtrack	1100	182	605	173	635	[Bar chart showing ratio 635]			
301.apsi	2600	213	1219	199	1307	[Bar chart showing ratio 1307]			

Hardware

CPU: AMD Opteron 2210
CPU MHz: 1800
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2
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: 8x2GB, 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.earthquake: -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

```