



CFP2000 Result

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IBM Corporation

AMD Opteron LS21 for IBM BladeCenter (AMD Opteron (TM) 2212)

SPECfp2000 = 1814

SPECfp_base2000 = 1669

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	69.8	2292	62.2	2573	[Bar chart showing ratio 2573]			
171.swim	3100	124	2493	117	2656	[Bar chart showing ratio 2656]			
172.mgrid	1800	123	1460	109	1659	[Bar chart showing ratio 1659]			
173.applu	2100	119	1761	109	1932	[Bar chart showing ratio 1932]			
177.mesa	1400	89.4	1566	83.7	1674	[Bar chart showing ratio 1674]			
178.galgel	2900	106	2726	107	2720	[Bar chart showing ratio 2720]			
179.art	2600	113	2308	85.3	3048	[Bar chart showing ratio 3048]			
183.earthquake	1300	90.4	1439	83.7	1553	[Bar chart showing ratio 1553]			
187.facerec	1900	88.0	2159	84.9	2239	[Bar chart showing ratio 2239]			
188.ammmp	2200	181	1213	173	1270	[Bar chart showing ratio 1270]			
189.lucas	2000	103	1943	88.2	2268	[Bar chart showing ratio 2268]			
191.fma3d	2100	149	1407	152	1382	[Bar chart showing ratio 1382]			
200.sixtrack	1100	166	662	157	702	[Bar chart showing ratio 702]			
301.apsi	2600	197	1320	184	1416	[Bar chart showing ratio 1416]			

Hardware

CPU: AMD Opteron 2212
 CPU MHz: 2000
 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, 36GB 10K 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.ampp:     -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

```