



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

IBM Corporation
IBM System X 3655 (AMD Opteron (TM) 2218)

SPECfp2000 = 2248
SPECfp_base2000 = 2065

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	56.6	2824	50.0	3201	[Bar chart showing ratio bars for 168.wupwise]			
171.swim	3100	107	2910	98.2	3156	[Bar chart showing ratio bars for 171.swim]			
172.mgrid	1800	99.0	1818	88.3	2037	[Bar chart showing ratio bars for 172.mgrid]			
173.applu	2100	95.7	2195	87.3	2405	[Bar chart showing ratio bars for 173.applu]			
177.mesa	1400	67.9	2061	63.6	2200	[Bar chart showing ratio bars for 177.mesa]			
178.galgel	2900	85.3	3399	85.7	3383	[Bar chart showing ratio bars for 178.galgel]			
179.art	2600	94.0	2766	69.2	3756	[Bar chart showing ratio bars for 179.art]			
183.earth	1300	75.6	1720	69.7	1865	[Bar chart showing ratio bars for 183.earth]			
187.facerec	1900	70.7	2687	68.4	2779	[Bar chart showing ratio bars for 187.facerec]			
188.amp	2200	142	1550	136	1613	[Bar chart showing ratio bars for 188.amp]			
189.lucas	2000	90.8	2202	77.8	2569	[Bar chart showing ratio bars for 189.lucas]			
191.fma3d	2100	120	1752	121	1735	[Bar chart showing ratio bars for 191.fma3d]			
200.sixtrack	1100	127	869	121	911	[Bar chart showing ratio bars for 200.sixtrack]			
301.apsi	2600	155	1679	145	1797	[Bar chart showing ratio bars for 301.apsi]			

Hardware

CPU: AMD Opteron 2218
 CPU MHz: 2600
 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



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

IBM Corporation
IBM System X 3655 (AMD Opteron (TM) 2218)

SPECfp2000 = 2248
SPECfp_base2000 = 2065

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

Notes/Tuning Information (Continued)

```

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

```