



CFP2000 Result

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Hewlett-Packard Company
ProLiant DL145 G3 (AMD Opteron (TM) 2220SE)

SPECfp2000 = **2387**
SPECfp_base2000 = **2159**

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Nov-2006 Hardware Avail: Jan-2007 Software Avail: Sep-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	55.3	2891	47.3	3384	
171.swim	3100	104	2991	96.1	3225	
172.mgrid	1800	93.1	1934	84.2	2137	
173.applu	2100	91.7	2291	83.7	2509	
177.mesa	1400	64.2	2179	60.2	2327	
178.galgel	2900	82.1	3530	72.5	3998	
179.art	2600	90.8	2863	64.1	4054	
183.quake	1300	72.4	1796	66.6	1953	
187.facerec	1900	67.3	2823	65.6	2896	
188.amp	2200	137	1607	126	1749	
189.lucas	2000	89.7	2230	78.1	2560	
191.fma3d	2100	113	1855	115	1831	
200.sixtrack	1100	118	929	111	992	
301.apsi	2600	144	1805	136	1918	

Hardware

CPU: AMD Opteron (TM) 2220SE
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
CPU(s) orderable: 1,2 chips
Parallel: No
Primary Cache: 64 KB I + 64 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: N/A
Other Cache: N/A
Memory: 8 GB (4x2 GB PC2-5300P CL5.0)
Disk Subsystem: 1x250 GB SATA
Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) SP 3
SuSE kernel 2.6.5-7.244-default
Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.5
AMD Core Math Library 3.5.0
File System: Linux/ext2
System State: Multi-user run level 3

Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library
Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
Base tuning for 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:
 172.mgrid: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
              -Ofast -CG:gcm=off -OPT:IEEE_a=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
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
              -WOPT:mem_opnds=on +FDO
```



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Notes/Tuning Information (Continued)

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178.galgel: -Ofast -OPT:fast_complex-on RM_SOURCES=lapak.f90 +ACML +FDO
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake: -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

```

BIOS Configuration Notes
Node Interleaving is Disabled

Other Configuration Notes
Taskset utility used to bind process to CPU(s)
Single processor kernel used