



CFP2000 Result

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Hewlett-Packard Company
ProLiant DL145 G2 (AMD Opteron (TM) 275)

SPECfp_rate2000 = 21.1
SPECfp_rate_base2000 = 19.3

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Nov-2005 Hardware Avail: Sep-2005 Software Avail: Sep-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	67.0	27.7	1	62.6	29.7
171.swim	1	153	23.5	1	144	25.0
172.mgrid	1	123	16.9	1	112	18.7
173.applu	1	123	19.9	1	106	23.0
177.mesa	1	78.7	20.6	1	73.7	22.0
178.galgel	1	109	30.9	1	99.1	34.0
179.art	1	116	26.1	1	85.6	35.2
183.quake	1	94.6	15.9	1	84.9	17.8
187.facerec	1	86.6	25.5	1	83.0	26.5
188.amp	1	167	15.3	1	158	16.2
189.lucas	1	120	19.4	1	108	21.5
191.fma3d	1	151	16.1	1	151	16.1
200.sixtrack	1	150	8.52	1	142	8.98
301.apsi	1	184	16.4	1	172	17.5

Hardware

CPU: AMD Opteron (TM) 275
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 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: 4x2048MB PC3200 CL3.0
Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI
Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) SP 2
SuSE kernel 2.6.5-7.191-default
Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.2.1
AMD Core Math Library 2.5.1
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:    -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
 172.mgrid:   -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.quake: -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.ammmp: -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
Single-processor kernel was used