



# CFP2000 Result

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

SPECfp2000 = 1820  
SPECfp\_base2000 = 1663

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	67.0	2390	62.6	2557				
171.swim	3100	153	2024	144	2151				
172.mgrid	1800	123	1459	112	1614				
173.applu	2100	123	1714	106	1979				
177.mesa	1400	78.7	1778	73.7	1900				
178.galgel	2900	109	2668	99.1	2928				
179.art	2600	116	2250	85.6	3036				
183.earth	1300	94.6	1374	84.9	1530				
187.facerec	1900	86.6	2194	83.0	2288				
188.amp	2200	167	1318	158	1397				
189.lucas	2000	120	1674	108	1857				
191.fma3d	2100	151	1387	151	1389				
200.sixtrack	1100	150	735	142	774				
301.apsi	2600	184	1414	172	1512				

### 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)

```

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.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