



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL385 (AMD Opteron (TM) 275)

SPECfp2000 = 1878  
SPECfp\_base2000 = 1719

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	68.3	2341	58.3	2743	[Bar chart showing ratio 2743]			
171.swim	3100	132	2350	132	2343	[Bar chart showing ratio 2343]			
172.mgrid	1800	115	1564	106	1695	[Bar chart showing ratio 1695]			
173.applu	2100	115	1829	106	1980	[Bar chart showing ratio 1980]			
177.mesa	1400	80.4	1741	76.3	1835	[Bar chart showing ratio 1835]			
178.galgel	2900	102	2832	90.6	3200	[Bar chart showing ratio 3200]			
179.art	2600	113	2302	79.6	3268	[Bar chart showing ratio 3268]			
183.earth	1300	86.5	1502	80.7	1611	[Bar chart showing ratio 1611]			
187.facerec	1900	84.2	2256	80.9	2349	[Bar chart showing ratio 2349]			
188.amp	2200	170	1292	157	1398	[Bar chart showing ratio 1398]			
189.lucas	2000	104	1926	104	1924	[Bar chart showing ratio 1924]			
191.fma3d	2100	148	1417	143	1471	[Bar chart showing ratio 1471]			
200.sixtrack	1100	172	640	147	747	[Bar chart showing ratio 747]			
301.apsi	2600	181	1439	177	1472	[Bar chart showing ratio 1472]			

### 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 DDR CL3.0  
 Disk Subsystem: 1x36GB 15K Ultra320 SCSI  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 1  
 SuSE kernel 2.6.5-7.139-default  
 Compiler: PathScale EKO Compiler Suite, Release 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
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 -TENV:X=4
              -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
              -INLINE:aggressive=on
  171.swim: -Ofast -LNO:fusion=2
  172.mgrid: -O3 -LNO:fusion=2:blocking=off
              -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3 -CG:gcm=off:cflow=off
  173.applu: -Ofast -CG:local_fwd_sched=on
              -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
              -OPT:ro=3 -TENV:X=3 -WOPT:val=2
```



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## Notes/Tuning Information (Continued)

```

177.mesa:      -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:    -Ofast -OPT:fast_complex -CG:use_movlpd=on RM_SOURCES=lapak.f90 +ACML
179.art:       -O3 -OPT:ro=2:div_split=on:alias=tuned -fno-math-errno -m32 +FDO
183.earthquake: -Ofast -WOPT:mem_opnds=on -CG:local_fwd_sched=on -m32
187.facerec:   -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
               -LNO:fusion=2 -IPA:plimit=1500 +FDO
188.ammamp:    -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
               -fno-math-errno -TENV:X=4 -LNO:prefetch=0 +FDO
189.lucas:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 +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:  -Ofast -CG:load_exe=1 +FDO
301.apsi:      -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0

```

BIOS Configuration Notes  
Node Interleaving is Disabled

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