



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL145 (AMD Opteron (TM) 250)

SPECfp2000 = 1701  
SPECfp\_base2000 = 1534

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Sep-2004 Hardware Avail: Sep-2004 Software Avail: Sep-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	94.6	1691	80.4	1989				
171.swim	3100	142	2183	143	2174				
172.mgrid	1800	120	1501	109	1647				
173.applu	2100	136	1544	116	1811				
177.mesa	1400	96.0	1458	69.9	2002				
178.galgel	2900	108	2676	104	2795				
179.art	2600	165	1574	115	2270				
183.earth	1300	95.3	1364	95.3	1364				
187.facerec	1900	106	1793	98.4	1932				
188.amp	2200	161	1363	154	1429				
189.lucas	2000	135	1476	118	1690				
191.fma3d	2100	151	1390	145	1444				
200.sixtrack	1100	152	725	152	725				
301.apsi	2600	169	1539	168	1549				

### Hardware

CPU: AMD Opteron (TM) 250  
CPU MHz: 2400  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
CPU(s) orderable: 1,2  
Parallel: No  
Primary Cache: 64KBI + 64KBD on chip  
Secondary Cache: 1024KB(I+D) on chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 4x2048MB PC2700 CL2.5  
Disk Subsystem: 1x40GB ATA100  
Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 8 for AMD64 (SP3)  
SuSE kernel 2.4.21-143-numa  
Compiler: PathScale EKO Compiler Suite, Release 1.3  
AMD Core Math Library 2.0  
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
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
               +FDO
               loader: -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
                       -INLINE:aggressive=on
  171.swim: -Ofast -LNO:fusion=2:prefetch=2
  172.mgrid: -O3 -LNO:fusion=2:blocking=off:prefetch=2
               -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
```



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## Notes/Tuning Information (Continued)

```

-OPT:ro=3 -TENV:X=3 -WOPT:val=2
177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel: -Ofast -OPT:fast_complex -CG:load_exe=0:use_movlpd=on +ACML
179.art: -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32 +FDO
183.equake: basepeak=yes
187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
-LNO:fusion=2:prefetch=0 +FDO -IPA:plimit=1800
188.ammmp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
-LNO:prefetch=0 -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -CG:prefetch=off:load_exe=2:local_fwd_sched
-TENV:X=4 -WOPT:retype_expr=on +FDO
191.fma3d: -O2 -ipa -WOPT:mem_opnds=on:retype_expr=on
-Qoption,f,-ip_ninl_max_total_stats=3500 +FDO ONESTEP=yes
200.sixtrack: -Ofast +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)