



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant BL25p (AMD Opteron (TM) 252)

SPECfp\_rate2000 = 45.8  
SPECfp\_rate\_base2000 = 42.3

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	86.2	43.0	2	72.3	51.4
171.swim	2	117	61.3	2	117	61.2
172.mgrid	2	103	40.5	2	93.9	44.5
173.applu	2	121	40.3	2	104	46.8
177.mesa	2	70.2	46.3	2	63.6	51.0
178.galgel	2	95.2	70.7	2	86.2	78.0
179.art	2	111	54.1	2	83.0	72.6
183.equake	2	81.4	37.1	2	81.1	37.2
187.facerec	2	92.0	47.9	2	86.3	51.1
188.amp	2	146	35.0	2	141	36.1
189.lucas	2	92.7	50.0	2	93.2	49.8
191.fma3d	2	134	36.3	2	130	37.6
200.sixtrack	2	148	17.2	2	140	18.3
301.apsi	2	153	39.5	2	150	40.2

### Hardware

CPU: AMD Opteron (TM) 252  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 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: 8x2048MB PC3200 DDR 400  
 Disk Subsystem: 2x18.2GB SCSI  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 for AMD64  
 SuSE kernel 2.6.5-7.97-smp  
 Compiler: PathScale EKO Compiler Suite, Release 1.4  
 AMD Core Math Library 2.5.1  
 File System: Linux/ext3  
 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
               +FDO
  loader: -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
```



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## Notes/Tuning Information (Continued)

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-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:use_movlpad=on +ACML
179.art: -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32 +FDO
183.equake: -Ofast -WOPT:mem_opnds=on +FDO
Note: The configuration file contains peak optimization flags for 183.equake that are
not invoked due to a syntax error. The options invoked during compilation
are correctly described in the notes above.
187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
loader: -LNO:fusion=2 +FDO
188.ammp: -IPA:plimit=1800
-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 +FDO
loader: -IPA:pu_reorder=1
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

```