



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL585 (AMD Opteron (TM) 875)

SPECfp\_rate2000 = 129  
SPECfp\_rate\_base2000 = 117

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	92.1	161	8	74.1	200
171.swim	8	262	110	8	263	109
172.mgrid	8	172	97.0	8	166	100
173.applu	8	164	119	8	144	136
177.mesa	8	99.0	131	8	76.4	170
178.galgel	8	137	197	8	131	205
179.art	8	171	141	8	118	205
183.equake	8	136	88.5	8	124	97.1
187.facerec	8	128	138	8	122	144
188.amp	8	186	110	8	174	117
189.lucas	8	164	114	8	164	113
191.fma3d	8	189	103	8	184	106
200.sixtrack	8	175	58.2	8	155	65.7
301.apsi	8	191	126	8	191	126

### Hardware

CPU: AMD Opteron (TM) 875  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip  
 CPU(s) orderable: 2,4  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD on chip  
 Secondary Cache: 1024KB(I+D) on chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 16x2048MB PC3200 CL3.0  
 Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 1  
 SuSE kernel 2.6.5-7.139-smp  
 Compiler: PathScale EKO Compiler Suite, Release 2.0  
 AMD Core Math Library 2.5.1  
 File System: Linux/ext2  
 System State: Multi-user run level 3

## Notes/Tuning Information

+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 +FDO  
 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  
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local\_fwd\_sched=on +FDO



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## Notes/Tuning Information (Continued)

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178.galgel: -Ofast -OPT:fast_complex -CG:use_movlpd=on +ACML
179.art: -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32 +FDO
183.quake: -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=1800 +FDO
188.ammp: -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

```