



# CFP2000 Result

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**Hewlett-Packard Company**  
ProLiant BL460c (2.66GHz, Intel Xeon processor 5150)

SPECfp2000 = **2834**  
SPECfp\_base2000 = **2594**

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Oct-2006 Hardware Avail: Jun-2006 Software Avail: May-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	40.4	3964	40.4	3964
171.swim	3100	108	2858	105	2958
172.mgrid	1800	99.6	1808	77.7	2315
173.applu	2100	101	2078	74.6	2815
177.mesa	1400	50.5	2772	46.4	3018
178.galgel	2900	47.0	6176	47.0	6176
179.art	2600	24.8	10500	24.8	10500
183.quake	1300	57.9	2246	46.7	2786
187.facerec	1900	68.9	2756	50.9	3735
188.amp	2200	113	1953	113	1953
189.lucas	2000	96.0	2084	95.3	2099
191.fma3d	2100	104	2018	104	2018
200.sixtrack	1100	108	1019	108	1019
301.apsi	2600	165	1573	158	1644

### Hardware

CPU: Intel Xeon processor 5150 (2.66 GHz, 4 MB L2 shared, 1333 MHz bus)  
CPU MHz: 2660  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
CPU(s) orderable: 1,2 chips  
Parallel: No  
Primary Cache: 32 KB I + 32 KB D on chip per core  
Secondary Cache: 4 MB I+D on chip per chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 8 GB (8x1 GB PC2-5300F)  
Disk Subsystem: 2x72 GB 10 K SAS  
Other Hardware:

### Software

Operating System: RedHat Enterprise Linux 4.0 Advanced Server for AMD64/EM64T, Update 3 Kernel 2.6.9-34.EL  
Compiler: Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20060323)  
Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20060323)  
PathScale EKOPATH(TM) Compiler Suite, Release 2.4  
File System: ext2  
System State: Multi-user run level 3

## Notes/Tuning Information

```
+FDO: PASS1= -prof_gen PASS2=-prof_use (Intel Compiler)
+FDO: PASS1= -fb_create fbdata PASS2=-fb_opt fbdata (PathScale Compiler)
ifort is the Intel Fortran compiler, icc is the Intel C++ compiler; and
pathf95 is PathScale Fortran compiler, pathcc is the PathScale C compiler.
Base tuning for C programs: icc -fast -auto_ilp32 +FDO
Base tuning for FORTRAN programs: ifort -fast +FDO
Portability:
-DSPEC_CPU2000_LP64 applied to all benchmarks
178.galgel: -FI
Peak tuning:
168.wupwise: basepeak=1
171.swim: pathf95 -Ofast -LNO:fusion=2:simd=0 -WOPT:val=0 -march=em64t
172.mgrid: pathf95 -Ofast -CG:load_exe=0 -LNO:blocking=off:prefetch_ahead=5
-OPT:ro=3:unroll_size=256 -WOPT:mem_opnds=on -march=em64t
173.applu: pathf95 -O3 -ipa -CG:load_exe=0
-LNO:fission=1:fusion=2:blocking=off:full_unroll_size=9000
-OPT:IEEE_a=3:ro=3 -TENV:X=3 -march=em64t
```



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## Notes/Tuning Information (Continued)

```

177.mesa: pathcc -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
          -GRA:optimize_boundary=on -march=em64t +FDO
178.galgel: basepeak=1
179.art: basepeak=1
183.quake: icc -fast +FDO ONESTEP=yes -rcd -auto-ilp32
187.facerec: pathf95 -Ofast -IPA:plimit=1500 -LNO:fusion=2
            -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 -march=em64t +FDO
188.ammamp: basepeak=1
189.lucas: ifort -fast ONESTEP=yes
191.fma3d: basepeak=1
200.sixtrack: basepeak=1
301.apsi: pathf95 -Ofast -CG:load_exe=0 -LNO:opt=0:prefetch=1 -march=em64t

```

### BIOS Configuration Notes

Power Regulator set to Static High Performance Mode

### Other Configuration Notes

Single processor kernel used