



CFP2000 Result

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Hewlett-Packard Company
ProLiant ML570 G4 (3.4GHz, Intel Xeon processor 7140M)

SPECfp2000 = **2118**
SPECfp_base2000 = **2004**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	51.0	3138	51.0	3138	
171.swim	3100	131	2366	117	2653	
172.mgrid	1800	107	1689	106	1698	
173.applu	2100	120	1745	111	1889	
177.mesa	1400	81.0	1728	73.8	1896	
178.galgel	2900	80.4	3608	80.4	3608	
179.art	2600	39.2	6630	39.2	6630	
183.earth	1300	64.0	2032	49.7	2614	
187.facerec	1900	75.9	2504	59.3	3202	
188.amp	2200	154	1433	154	1433	
189.lucas	2000	119	1679	118	1692	
191.fma3d	2100	133	1584	133	1584	
200.sixtrack	1100	164	672	164	672	
301.apsi	2600	182	1427	187	1392	

Hardware

CPU: Intel Xeon processor 7140M (800MHz system bus)
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (Hyper-Threading Technology disabled)
 CPU(s) orderable: 1,2,4 chips
 Parallel: No
 Primary Cache: 12 K I micro-ops + 16 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core
 L3 Cache: 16 MB on chip per chip
 Other Cache: N/A
 Memory: 32 GB (16x2048MB PC2-3200 dual-rank)
 Disk Subsystem: 1x36 GB 10 K SAS
 Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9.0 for AMD64/EM64T, SP 3 Kernel 2.6.5-7.244-default
 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: Default

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)

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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.amm: 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
Hyper-Threading Technology disabled