



# CFP2000 Result

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

SPECfp2000 = 2012  
SPECfp\_base2000 = 1860

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

| Benchmark    | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | 1000 2000 3000 4000  |  |  |  |
|--------------|----------------|--------------|------------|---------|-------|--|--|--|--|
| 168.wupwise  | 1600           | 81.8         | 1956       | 70.1    | 2281  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 171.swim     | 3100           | 116          | 2667       | 117     | 2660  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 172.mgrid    | 1800           | 102          | 1764       | 93.0    | 1936  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 173.applu    | 2100           | 119          | 1766       | 103     | 2039  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 177.mesa     | 1400           | 69.4         | 2019       | 63.7    | 2200  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 178.galgel   | 2900           | 93.9         | 3090       | 85.5    | 3393  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 179.art      | 2600           | 107          | 2430       | 78.0    | 3331  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 183.earth    | 1300           | 76.5         | 1700       | 76.5    | 1700  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 187.facerec  | 1900           | 88.9         | 2136       | 84.3    | 2255  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 188.amp      | 2200           | 144          | 1526       | 139     | 1584  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 189.lucas    | 2000           | 92.0         | 2173       | 92.1    | 2172  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 191.fma3d    | 2100           | 132          | 1592       | 127     | 1658  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 200.sixtrack | 1100           | 149          | 740        | 140     | 788   | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |
| 301.apsi     | 2600           | 153          | 1698       | 150     | 1732  | [Bar chart showing performance relative to 1000, 2000, 3000, 4000] |  |  |  |

### Hardware

CPU: AMD Opteron (TM) 252  
CPU MHz: 2600  
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 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

```