# CFP2000 Result

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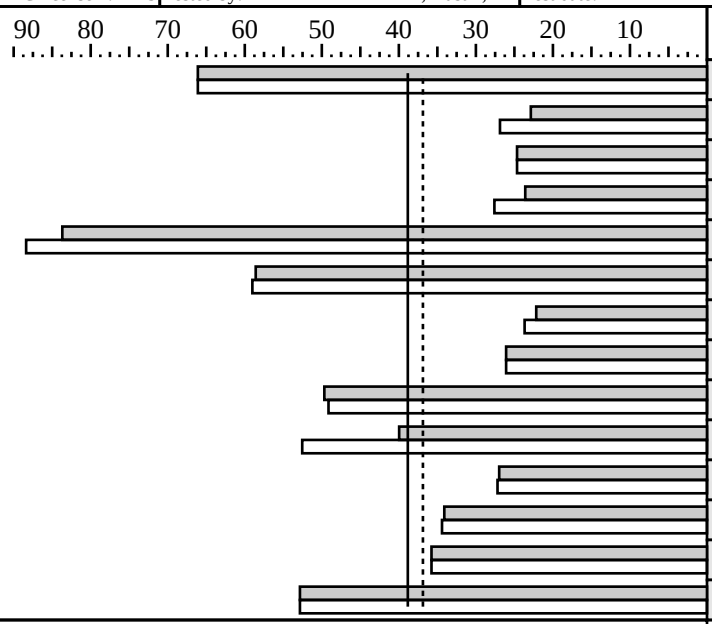
## Advanced Micro Devices

Pogo Linux, PerformanceWare 3566, AMD Opteron (TM) 852

SPECfp_rate2000 = 38.8

SPECfp_rate_base2000 = 36.9

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Jul-2005 | Hardware Avail: May-2005 | Software Avail: Jan-2005




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 4 | 112 | 66.1 | 4 | 112 | 66.1 |
| 171.swim | 4 | 629 | 22.9 | 4 | 535 | 26.9 |
| 172.mgrid | 4 | 339 | 24.7 | 4 | 339 | 24.7 |
| 173.applu | 4 | 413 | 23.6 | 4 | 353 | 27.6 |
| 177.mesa | 4 | 77.6 | 83.7 | 4 | 73.5 | 88.4 |
| 178.galgel | 4 | 230 | 58.6 | 4 | 228 | 59.0 |
| 179.art | 4 | 544 | 22.2 | 4 | 510 | 23.7 |
| 183.equake | 4 | 231 | 26.1 | 4 | 231 | 26.1 |
| 187.facerec | 4 | 177 | 49.7 | 4 | 179 | 49.1 |
| 188.ammp | 4 | 255 | 40.0 | 4 | 194 | 52.5 |
| 189.lucas | 4 | 344 | 27.0 | 4 | 341 | 27.2 |
| 191.fma3d | 4 | 286 | 34.1 | 4 | 283 | 34.4 |
| 200.sixtrack | 4 | 143 | 35.8 | 4 | 143 | 35.8 |
| 301.apsi | 4 | 228 | 52.8 | 4 | 228 | 52.8 |

### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 852 |
| CPU MHz: | 2600 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 4 chips, 1 core/chip |
| CPU(s) orderable: | 1-4 |
| Parallel: | No |
| Primary Cache: | 64KBI + 64KBD on chip |
| Secondary Cache: | 1024KB(I+D) on chip |
| L3 Cache: | N/A |
| Other Cache: | N/A |
| Memory: | 8x1024 MB PC3200 CL3 ECC Reg |
| Disk Subsystem: | SCSI, Seagate Cheetah Ultra320 ST336607LC, 10K rpm |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Microsoft Windows Server 2003 Enterprise Edition |
| Compiler: | Intel C++ 8.0 build 20040714Z, Intel Fortran 8.1 for IA32 build 20041019Z, PGI Fortran compiler 5.2-4 for Windows XP, AMD Core Math library Version 2.1 (ACML), Microsoft Visual Studio .NET 7.0.9466 (libraries), MicroQuill Smartheap Library 7.0 |
| File System: | NTFS |
| System State: | Default |

## Notes/Tuning Information

```
+FDO: PASS1=-Qprof_gen  PASS2=-Qprof_use
+ACML is linking with AMD Core Math Library V2.1
ONESTEP is set for all peak runs.
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran compiler.
The Intel C++ 8.0 and the Intel Fortran 8.1 compilers are setup in the following order:
   "c:program filesintel ortrancompiler80ia32 inifortvars.bat"
   "c:program filesintelcppcompiler80ia32 iniclvars.bat"
To make sure that the correct libraries are selected, the following link option is
added for the peak runs where Intel Fortran 8.1 compiler is used:
    LDOPT = -Fe$@ -link -LIBPATH:"c:program filesintel ortrancompiler80ia32lib"
 (denoted by +LIBPATH:INTEL8.1 in the optimization flags listed below)
Portability:
  178.galgel: -Mfixed
Baseline: C      : icl   -fast -arch:SSE2 -QaxW +FDO
Baseline: Fortran: pgf90 -fastsse -Mipa=fast,inline
```

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## Notes/Tuning Information (Continued)

```
Peak tuning:
168.wupwise:       pgf90 basepeak=yes
171.swim:         ifort -Qipo  -O3  -QaxN -QxW +FDO -Qunroll0     +LIBPATH:INTEL8.1
172.mgrid:         pgf90 basepeak=yes
173.applu:        ifort -Qipo  -O3  -QaxN -QxW +FDO -auto         +LIBPATH:INTEL8.1
177.mesa:          icl   -Qipo -arch:SSE2       +FDO -Qunroll1 -Qansi_alias
                       -Qoption,f,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
179.art:           icl   -Qipo             -Zp4 +FDO
183.equake:        icl   basepeak=yes
178.galgel:       pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML
187.facerec:      ifort -Qipo             -QxW +FDO -Qunroll3     +LIBPATH:INTEL8.1
                       -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
188.ammp:          icl   -Oa   -arch:SSE2  -Zp4      -Qansi_alias
189.lucas:        ifort -Qipo             -QxW      -Qunroll1     +LIBPATH:INTEL8.1
191.fma3d:        ifort -Qipo       -QaxN -QxW +FDO -Qansi-alias- +LIBPATH:INTEL8.1
200.sixtrack:      pgf90 basepeak=yes
301.apsi:          pgf90 basepeak=yes
Bios V2.33.1.1
All memory slots populated on CPU0 and CPU1.
Physical Address Extension (PAE) enabled
```