# CFP2000 Result



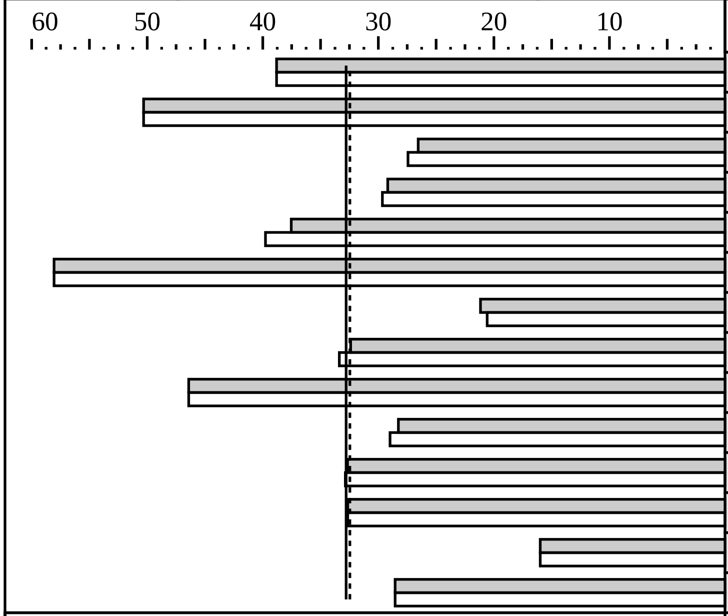
## Advanced Micro Devices

Rioworks HDAMA Motherboard, AMD Opteron (TM) 248

SPECfp_rate2000 = 32.8

SPECfp_rate_base2000 = 32.5

| SPEC license #: | 49 | Tested by: | AMD, Austin, TX | Test date: | Nov-2003 | Hardware Avail: | Nov-2003 | Software Avail: | Jul-2003 |
|---|---|---|---|---|---|---|---|---|---|




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 2 | 95.7 | 38.8 | 2 | 95.7 | 38.8 |
| 171.swim | 2 | 143 | 50.3 | 2 | 143 | 50.3 |
| 172.mgrid | 2 | 157 | 26.6 | 2 | 152 | 27.4 |
| 173.applu | 2 | 167 | 29.2 | 2 | 164 | 29.6 |
| 177.mesa | 2 | 86.5 | 37.5 | 2 | 81.7 | 39.8 |
| 178.galgel | 2 | 116 | 58.1 | 2 | 116 | 58.1 |
| 179.art | 2 | 285 | 21.2 | 2 | 293 | 20.6 |
| 183.equake | 2 | 93.1 | 32.4 | 2 | 90.4 | 33.4 |
| 187.facerec | 2 | 95.0 | 46.4 | 2 | 95.0 | 46.4 |
| 188.ammp | 2 | 181 | 28.3 | 2 | 176 | 29.0 |
| 189.lucas | 2 | 142 | 32.7 | 2 | 141 | 32.9 |
| 191.fma3d | 2 | 149 | 32.6 | 2 | 149 | 32.6 |
| 200.sixtrack | 2 | 160 | 16.0 | 2 | 160 | 16.0 |
| 301.apsi | 2 | 211 | 28.5 | 2 | 211 | 28.5 |

### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 248 |
| CPU MHz: | 2200 |
| FPU: | Integrated |
| CPU(s) enabled: | 2 cores, 2 chips, 1 core/chip |
| CPU(s) orderable: | 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: | 4 x 512MB PC3200 DDR SDRAM, ECC Registered |
| Disk Subsystem: | Seagate Cheetah ST336753LW SCSI, Ultra 320 |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | SuSE Linux 8.0 SLES 64 bit Kernel 2.4.19 (SP2) |
| Compiler: | PGI Fortran 5.1-0 and SuSE gcc33 optional compiler (from SLES8 SP2) |
| File System: | Linux/ext3 |
| System State: | Multi-user SuSE Run level 3 |

## Notes/Tuning Information

```
Tested by Advanced Micro Devices
  +FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities
  pgf90 is the PGI Fortran compiler
  gcc is the SuSE optional gcc 3.3 compiler (from SLES8 SP2)
  Portability:
                 PORTABILITY=-DSPEC_CPU2000_LP64 is applied to all the C benchmarks.
    178.galgel:     -Mfixed
  Baseline: C       gcc  -O3 -funroll-all-loops +FDO
  Baseline: Fortran pgf90 -fastsse  -Mipa=fast
  Peak tuning:
    168.wupwise:    basepeak=true
    171.swim:       basepeak=true
    172.mgrid:      pgf90 -fast -Mipa=fast
    173.applu:      pgf90 -fast -Mipa=fast
    177.mesa:       gcc -O3 -funroll-all-loops -finline-limit=2000 +FDO
    178.galgel:    basepeak=true
    179.art:        gcc -O3 -funroll-all-loops -ffast-math -finline-limit=1500 +FDO
```

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|---|---|---|---|---|

### Notes/Tuning Information (Continued)

```
    183.equake:     gcc -O3 -funroll-all-loops -ffast-math -finline-limit=2000
    187.facerec:    basepeak=true
    188.ammp:       gcc -O3 -funroll-all-loops -ffast-math -finline-limit=2000 +FDO
    189.lucas:      pgf90 -fastsse -Mipa=fast -Mnosmart
    191.fma3d:      basepeak=true
    200.sixtrack:   basepeak=true
    301.apsi:       basepeak=true
  ONESTEP is used for all base and peak runs
 The tested system can be assembled using an ATX case such as the Antec KS-282,
 a 480W power supply, and a PCI or AGP video card.
```