CFP2000 Result

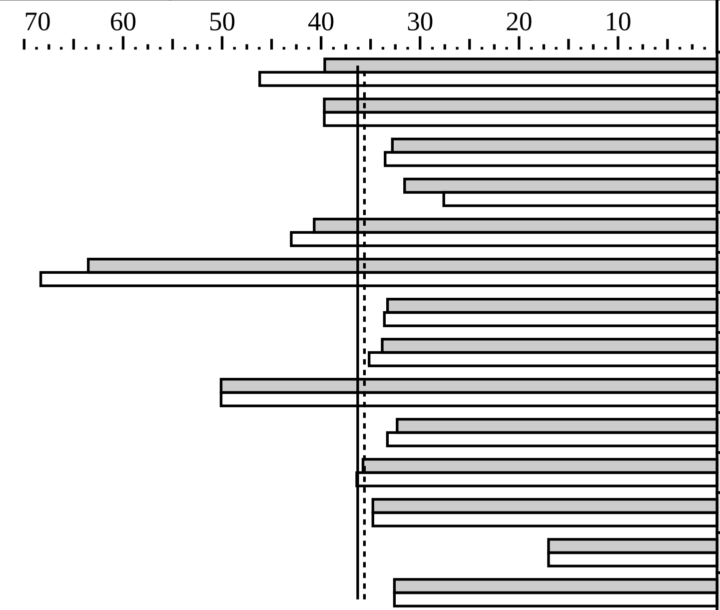
Advanced Micro Devices

Tyan Thunder K8W (S2885), AMD Opteron (TM) 250

SPECfp_rate2000 = 36.3

SPECfp_rate_base2000 = 35.6

SPEC license #: 49	Tested by: AMD, Austin, TX	Test date: Apr-2004	Hardware Avail: May-2004	Software Avail: Apr-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	93.7	39.6	2	80.3	46.2
171.swim	2	181	39.7	2	181	39.7
172.mgrid	2	127	32.8	2	125	33.5
173.applu	2	154	31.6	2	176	27.6
177.mesa	2	79.8	40.7	2	75.5	43.0
178.galgel	2	106	63.5	2	98.5	68.3
179.art	2	181	33.3	2	179	33.6
183.equake	2	89.2	33.8	2	85.8	35.1
187.facerec	2	88.0	50.1	2	88.0	50.1
188.ammp	2	158	32.3	2	153	33.3
189.lucas	2	130	35.8	2	127	36.4
191.fma3d	2	140	34.8	2	140	34.8
200.sixtrack	2	150	17.0	2	150	17.0
301.apsi	2	185	32.6	2	185	32.6

Hardware

CPU:	AMD Opteron (TM) 250
CPU MHz:	2400
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:	4x512 MB PC3200 DDR SDRAM ECC Registered CL3.0
Disk Subsystem:	SCSI, Ultra 320, 15k rpm
Other Hardware:	None

Software

Operating System:	SuSE Linux 8.0 SLES 64 bit (SP3) SuSE NUMA kernel 2.4.21-143
Compiler:	PGI Fortran 5.1-3 SuSE gcc33 optional compiler (from SLES8 SP3) AMD Core Math Library (Version 1.5) for AMD64
File System:	Linux/ext3
System State:	Multi-user SuSE Run level 3

Notes/Tuning Information

```
+FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities
+ACML is linking with AMD Core Math Library
pgf90 is the PGI Fortran compiler
gcc is the SuSE optional gcc 3.3 compiler (from SLES8 SP3)
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:    pgf90 -fastsse -Mipa=fast -Minline=levels:2
  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:     pgf90 -fastsse -O3 -mp RM_SOURCES=lapak.f90 +ACML
  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
  Taskset utility used to bind processes to CPU(s)
  BIOS rev.: 1.01
```