



CFP2000 Result

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Advanced Micro Devices
ASUS SK8N Motherboard, AMD Opteron (TM) 148

SPECfp_rate2000 = 17.6
SPECfp_rate_base2000 = 17.5

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	95.6	19.4	1	95.6	19.4
171.swim	1	138	26.2	1	138	26.2
172.mgrid	1	143	14.6	1	137	15.3
173.applu	1	156	15.6	1	154	15.8
177.mesa	1	87.3	18.6	1	84.3	19.3
178.galgel	1	108	31.1	1	108	31.1
179.art	1	177	17.0	1	176	17.1
183.quake	1	91.4	16.5	1	94.1	16.0
187.facerec	1	94.2	23.4	1	94.2	23.4
188.amp	1	169	15.1	1	169	15.1
189.lucas	1	131	17.7	1	130	17.9
191.fma3d	1	146	16.7	1	146	16.7
200.sixtrack	1	161	7.93	1	161	7.93
301.apsi	1	190	15.8	1	190	15.8

Hardware

CPU: AMD Opteron (TM) 148
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1
 Parallel: No
 Primary Cache: 64KBI + 64KBD on chip
 Secondary Cache: 1024KB(I+D) on chip
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 2 x 512MB PC3200 DDR SDRAM, ECC Registered
 Disk Subsystem: Western Digital WD2000, IDE
 Other Hardware: None

Software

Operating System: SuSE Linux 9.0 (AMD64) 2.4.21-102-default
 Compiler: PGI Fortran 5.1-0 and SuSE gcc 3.3.1 compiler (from SuSE Linux 9.0)
 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 5.1 compiler

gcc is the SuSE gcc 3.3.1 compiler

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)

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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.