



CFP2000 Result

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Advanced Micro Devices
ASUS SK8N Motherboard, AMD Opteron (TM) 146

SPECfp2000 = 1300
SPECfp_base2000 = 1291

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	107	1495	107	1495	
171.swim	3100	148	2098	148	2098	
172.mgrid	1800	151	1189	155	1158	
173.applu	2100	182	1151	185	1136	
177.mesa	1400	93.1	1504	89.4	1566	
178.galgel	2900	126	2305	124	2343	
179.art	2600	190	1368	187	1391	
183.quake	1300	92.8	1401	90.5	1436	
187.facerec	1900	170	1120	169	1124	
188.amp	2200	194	1132	190	1160	
189.lucas	2000	161	1240	159	1258	
191.fma3d	2100	161	1308	161	1308	
200.sixtrack	1100	203	543	203	543	
301.apsi	2600	232	1122	232	1122	

Hardware

CPU: AMD Opteron (TM) 146
CPU MHz: 2000
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: 2x512MB PC3200 DDR ECC Registered SDRAM CL2.5
Disk Subsystem: IDE, Western Digital WD1200JB, 120 GB
Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server for AMD 64 8.0 Kernel 2.4.19-249 (SP2)
Compiler: PGI Fortran 5.0-2 and SuSE gcc33 optional compiler (20030312)
File System: Linux/Ext3
System State: Multi-user SuSE Run level 3

Notes/Tuning Information

+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: pgf90 -fastsse -Mipa=fast -O3
179.art: gcc -O3 -funroll-all-loops -ffast-math -finline-limit=1500 +FDO
183.quake: gcc -O3 -funroll-all-loops -ffast-math -finline-limit=2000



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Notes/Tuning Information (Continued)

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187.facerec:    pgf90 -fastsse -Mipa=fast -O3
188.ampp:      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
ECC on, ECC scrubbing off, ACPI disabled at boot time
with kernel option "acpi=off"
```