



CFP2000 Result

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Advanced Micro Devices
ASUS SK8V Motherboard, AMD Opteron (TM) 150

SPECfp2000 = 1644
SPECfp_base2000 = 1591

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	91.2	1754	73.3	2182	
171.swim	3100	132	2355	132	2355	
172.mgrid	1800	122	1476	119	1507	
173.applu	2100	147	1425	145	1443	
177.mesa	1400	79.2	1769	76.5	1831	
178.galgel	2900	105	2762	97.5	2974	
179.art	2600	172	1511	168	1551	
183.earth	1300	83.2	1563	80.1	1624	
187.facerec	1900	86.5	2197	86.5	2197	
188.amp	2200	165	1333	161	1369	
189.lucas	2000	135	1482	133	1499	
191.fma3d	2100	135	1551	135	1551	
200.sixtrack	1100	149	736	149	736	
301.apsi	2600	195	1335	195	1335	

Hardware

CPU: AMD Opteron (TM) 150
CPU MHz: 2400
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: 2x512 MB PC3200 DDR SDRAM ECC Reg CL2
Disk Subsystem: IDE, Western Digital WD2000
Other Hardware: None

Software

Operating System: SuSE Linux 8.0 SLES 64 bit (SP3)
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)

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183.quake: gcc -O3 -funroll-all-loops -ffast-math -finline-limit=2000
187.facerec: basepeak=true
188.amp: 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

BIOS rev.: 1001

Memory used is Corsair CMX512R-3200C2.

Cas Latency manually set to 2.0 in BIOS