CFP2000 Result

Advanced Micro Devices

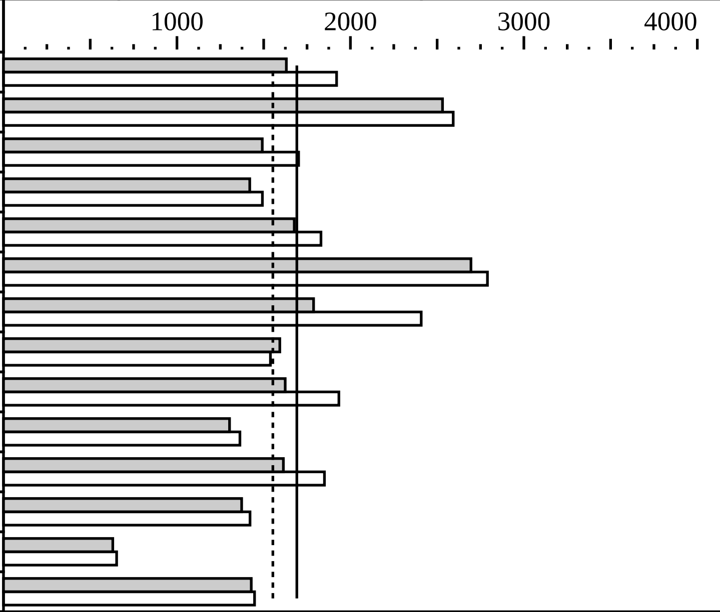
ASUS SK8N Motherboard, AMD Opteron (TM) Model 248

SPECfp2000 = 1691

SPECfp_base2000 = 1553

SPEC license #: 2323	Tested by: PathScale, Inc.	Test date: Apr-2004	Hardware Avail: Jan-2004	Software Avail: May-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	98.1	1631	83.3	1920
171.swim	3100	122	2531	120	2593
172.mgrid	1800	121	1492	106	1701
173.applu	2100	148	1420	141	1493
177.mesa	1400	83.5	1676	76.5	1830
178.galgel	2900	108	2695	104	2790
179.art	2600	145	1788	108	2408
183.equake	1300	81.6	1593	84.5	1539
187.facerec	1900	117	1624	98.3	1934
188.ammp	2200	169	1303	161	1363
189.lucas	2000	124	1614	108	1850
191.fma3d	2100	153	1373	148	1421
200.sixtrack	1100	175	630	169	652
301.apsi	2600	182	1428	180	1447



Hardware

CPU:	AMD Opteron 248
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:	4x512MB, DDR400, PC3200, Corsair, CL2
Disk Subsystem:	IDE, 80 GB
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 (AMD64) 2.4.21-102-default
Compiler:	PathScale EKO Compiler Suite, Release 1.0
File System:	Linux/ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by PathScale, Inc.

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata

 Baseline optimization
   C:         pathcc  -Ofast -WOPT:mem_opnds=on +FDO
   Fortran:   pathf90 -Ofast -LNO:fusion=2
 Portability Flags:
   178.galgel: -fixedform

Peak Tuning:
 168.wupwise: -Ofast -LNO:fusion=2:prefetch_ahead=5
              -OPT:unroll_times=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3 -TENV:X=4
   loader:    -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
              -INLINE:aggressive=on
 171.swim: -Ofast -OPT:ro=3 -LNO:fusion=2:prefetch=2
 172.mgrid: -O3 -LNO:fusion=2:blocking=off:ou_max=5:sclrze=off:prefetch=2
```

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Notes/Tuning Information (Continued)

```
            -OPT:Ofast:unroll_times=8:unroll_size=256:ro=3
            -CG:gcm=off:cflow=off -GRA:home=off
 173.applu: -O3 -ipa -OPT:IEEE_arith=1:ro=3:unroll_size=0
     -LNO:fusion=2:interchange=OFF:blocking=OFF:ou_prod_max=10:ou_max=5:prefetch=2
     -TENV:X=4 -WOPT:mem_opnds=on:retype_expr=on:val=0
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno +FDO
 178.galgel: -Ofast -OPT:treeheight=on:unroll_times=8:unroll_size=512:ro=3
             -CG:load_exe=0:use_movlpd=on
             -LNO:fusion=2:prefetch=0 +FDO
 179.art: -O3 -OPT:Ofast -fno-math-errno -m32 +FDO
 183.equake: -Ofast -OPT:unroll_size=0:alias=disjoint:treeheight=on
             -WOPT:val=0
     loader: -IPA:plimit=1125:small_pu=43
 187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
            -LNO:fusion=2:prefetch=0 -LANG:short_circuit_conditionals=on +FDO -IPA:plimit=1800
 188.ammp: -O3 -OPT:alias=disjoint:unroll_times=8:Ofast:ro=3 -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -CG:prefetch=off:load_exe=2:local_fwd_sched
           -TENV:X=4 -WOPT:retype_expr=on +FDO
 191.fma3d: -O2 -ipa -WOPT:mem_opnds=on:retype_expr=on -OPT:Ofast:IEEE_arith=3:ro=3
            -LANG:short_circuit_conditionals=on +FDO -IPA:pu_reorder=on
 200.sixtrack:= -Ofast -CG:prefetch=off +FDO
 301.apsi: -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0:blocking=off
   loader: -IPA:linear=on:plimit=525
```

Notes

a) Software availability date: PathScale EKO Compilers generate 64-bit code by default. The -m32 flag generates 32-bit code and is used as a peak flag for some codes above. This -m32 flag will be available and supported with PathScale EKO Compilers v1.0 in April, but will not be fully documented until May 2004.

b) The tested system can be assembled using an ATX case such as the Antec KS-282, a 480W power supply, and a AGP video card.

c) AMIBIOS version 08.00.09