CFP2000 Result

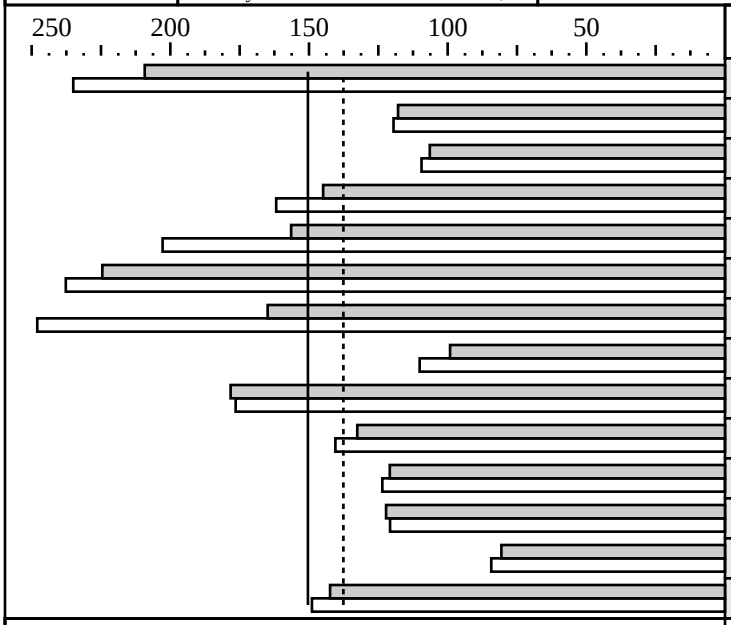
Advanced Micro Devices

TYAN Thunder K8QSD Pro (S4882-D), AMD Opteron(TM) 885

SPECfp_rate2000 = 150

SPECfp_rate_base2000 = 138

SPEC license #: 49 | Tested by: AMD Austin, TX | Test date: Feb-2006 | Hardware Avail: Mar-2006 | Software Avail: Jan-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	71.0	209	8	63.2	235
171.swim	8	244	118	8	241	120
172.mgrid	8	157	106	8	153	109
173.applu	8	134	145	8	120	162
177.mesa	8	83.0	156	8	64.1	203
178.galgel	8	120	224	8	113	238
179.art	8	146	165	8	97.3	248
183.equake	8	122	99.2	8	110	110
187.facerec	8	98.9	178	8	99.9	176
188.ammp	8	154	133	8	145	141
189.lucas	8	154	121	8	150	124
191.fma3d	8	159	122	8	161	121
200.sixtrack	8	127	80.6	8	121	84.3
301.apsi	8	169	142	8	162	149

Hardware

CPU:	AMD Opteron(TM) 885
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1-4
Parallel:	No
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x512MB, DDR400 CL2 ECC Reg
Disk Subsystem:	SCSI, 80 GB
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 SP2 (64-bit)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.3
File System:	Linux/ReiserFS
System State:	Multi-user, runlevel 3

Notes/Tuning Information

```
  +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
  +ACML  means -L<acml2.7.0-install-dir>/pathscale64/lib -lacml,
         which causes linking with AMD Core Math Library V2.7.0

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

 Peak Tuning:
  168.wupwise:  -Ofast -LNO:prefetch_ahead=5:prefetch=3
                -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
                -IPA:linear=on:plimit=50000:callee_limit=5000
                -INLINE:aggressive=on
  171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
```

Notes/Tuning Information (Continued)

```
172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_arith=3:unroll_size=200
              -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
              -WOPT:mem_opnds=on:aggstr=0
173.applu:    -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
              -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on -WOPT:mem_opnds=on +FDO
178.galgel:   -Ofast -OPT:fast_complex=on +ACML +FDO
               RM_SOURCES=lapak.f90
179.art:      -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake:   -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec:  -Ofast -LNO:fusion=2
              -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188.ammp:     -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
              -fno-math-errno -TENV:X=4 +FDO
189.lucas:    -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=on +FDO
191.fma3d:    -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
              -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
              -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:     -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

OCZ (OCZ4001024ELERDC-K) memory in Dual Channel configuration
2x512 DIMMS per CPU
BIOS rev 4882_Rev E 1.05
The system under test can be built using a SSI MEB case and
a Zippy Technology Corp. PSL-6701P 12V 700W power supply.
Disabled ECC Scrub Redirect, ECC Multibit Error Detection,
and DRAM ECC Scrub CTL. Enabled Speculative TLB Reload
Taskset utility used to bind CPU(s) to processes
```