CFP2000 Result

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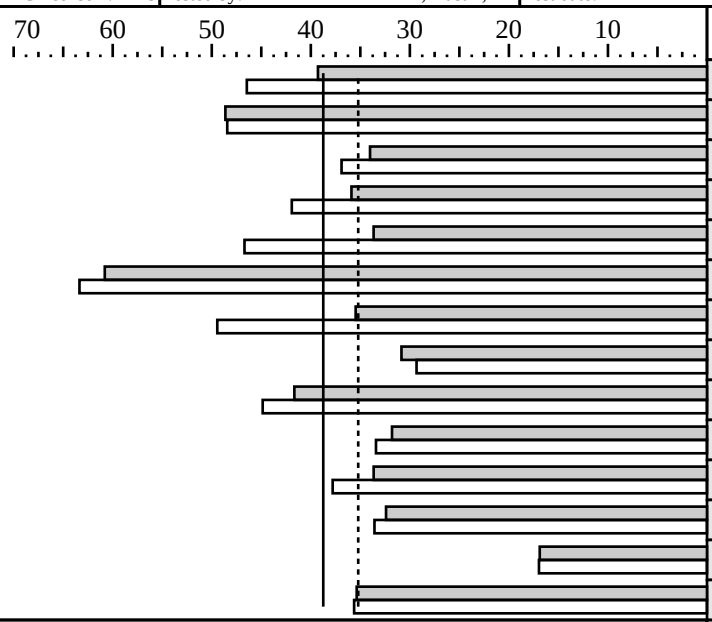
Advanced Micro Devices

Tyan Thunder K8QS Pro (S4882), AMD Opteron (TM) 850

SPECfp_rate2000 = 38.7

SPECfp_rate_base2000 = 35.2

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Aug-2004 | Hardware Avail: Jul-2004 | Software Avail: Aug-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	94.5	39.3	2	79.9	46.5
171.swim	2	148	48.6	2	148	48.4
172.mgrid	2	123	34.0	2	113	36.9
173.applu	2	136	35.9	2	116	41.9
177.mesa	2	96.5	33.7	2	69.6	46.7
178.galgel	2	111	60.8	2	106	63.4
179.art	2	170	35.5	2	122	49.4
183.equake	2	97.8	30.8	2	103	29.3
187.facerec	2	106	41.7	2	98.3	44.9
188.ammp	2	160	31.8	2	153	33.4
189.lucas	2	138	33.7	2	123	37.8
191.fma3d	2	150	32.4	2	145	33.6
200.sixtrack	2	151	16.9	2	150	17.0
301.apsi	2	171	35.4	2	169	35.6

Hardware

CPU:	AMD Opteron (TM) 850
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	4
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB(I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x512 MB PC3200 CL3.0 ECC Registered
Disk Subsystem:	SCSI, Seagate Cheetah ST336753LW Ultra 320, 15K rpm
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Sever 8 for AMD64 (SP3) SuSE kernel 2.4.21-143-numa
Compiler:	PathScale EKO Compiler Suite, Release 1.3
File System:	Linux/ext3
System State:	Multi-user SuSE Run level 3

Notes/Tuning Information

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Tested by Advanced Micro Devices

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML is linking with AMD Core Math Library

 Baseline optimization
   C programs:       -Ofast -WOPT:mem_opnds=on +FDO
   Fortran programs: -Ofast -LNO:fusion=2
 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 -TENV:X=4
   loader:    -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
              -INLINE:aggressive=on
```

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Notes/Tuning Information (Continued)

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171.swim:    -Ofast -LNO:fusion=2:prefetch=2
172.mgrid:   -O3 -LNO:fusion=2:blocking=off:prefetch=2
             -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
             -CG:gcm=off:cflow=off
173.applu:   -Ofast -CG:local_fwd_sched=on
             -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
             -OPT:ro=3 -TENV:X=3 -WOPT:val=2
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:  -Ofast -OPT:fast_complex -CG:load_exe=0:use_movlpd=on +ACML
179.art:     -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32 +FDO
183.equake:  -Ofast -WOPT:mem_opnds=on -CG:local_fwd_sched=on
187.facerec:  -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
              -LNO:fusion=2:prefetch=0 +FDO -IPA:plimit=1800
188.ammp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3 -LNO:prefetch=0 -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
           +FDO -IPA:pu_reorder=1
200.sixtrack:= -Ofast +FDO
301.apsi: -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
BIOS rev. 1.00
Taskset utility used to bind process to cpu(s)
All memory slots populated on CPU0 and CPU1
The tested system can be assembled using an SSI MEB footprint case, such as the CCSI RC0352 3U rackmount case,
and a Tyan recommended 650W EPS-12V power supply, such as the Enermax 660W power supply (PEG851AX-VH)
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