CFP2000 Result

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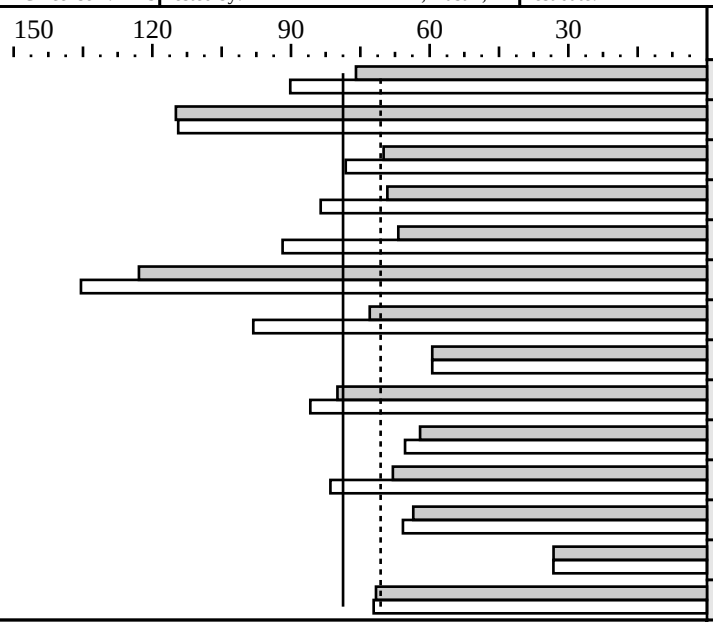
Advanced Micro Devices

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

SPECfp_rate2000 = 78.7

SPECfp_rate_base2000 = 70.6

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	97.8	75.9	4	82.3	90.2
171.swim	4	125	115	4	126	114
172.mgrid	4	119	70.0	4	107	78.2
173.applu	4	141	69.2	4	117	83.6
177.mesa	4	97.3	66.8	4	70.7	91.8
178.galgel	4	109	123	4	99.3	135
179.art	4	165	73.0	4	123	98.2
183.equake	4	101	59.4	4	101	59.4
187.facerec	4	110	80.0	4	103	85.8
188.ammp	4	164	62.1	4	156	65.3
189.lucas	4	137	68.0	4	114	81.5
191.fma3d	4	153	63.5	4	148	65.8
200.sixtrack	4	154	33.2	4	154	33.2
301.apsi	4	168	71.6	4	167	72.1

Hardware

CPU:	AMD Opteron (TM) 850
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	1-4
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB(I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16x512 MB PC3200 CL3.0 ECC Reg
Disk Subsystem:	SCSI, Seagate Cheetah ST336753LW, U320, 15K rpm
Other Hardware:	None

Software

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

Notes/Tuning Information

```
  +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
               -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
               -INLINE:aggressive=on
  171.swim:    -Ofast -LNO:fusion=2:prefetch=2
```

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Notes/Tuning Information (Continued)

```
 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:  basepeak = true
 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 CPU(s) to processes
 All memory slots populated on all CPU(s)
 The tested system can be assembled using an SSI MEB footprint case,
 such as the CCSI RC0352 3U rackmount case, and a Tyan recommended 660W EPS-12V
 power supply, such as the Enermax 660W power supply (PEG851AX-VH)
```