CFP2000 Result

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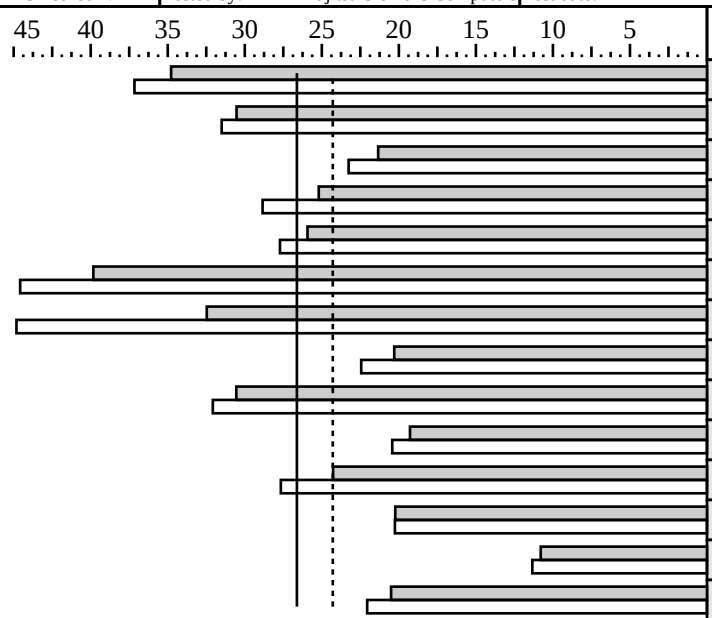
Fujitsu Siemens Computers

PRIMERGY BX630, AMD Opteron (TM) 254

SPECfp_rate2000 = 26.6

SPECfp_rate_base2000 = 24.3

SPEC license #: 22 | Tested by: Fujitsu Siemens Computers | Test date: Jan-2006 | Hardware Avail: Feb-2006 | Software Avail: Sep-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	53.4	34.8	1	49.9	37.2
171.swim	1	118	30.5	1	114	31.5
172.mgrid	1	97.8	21.3	1	89.8	23.3
173.applu	1	96.7	25.2	1	84.5	28.8
177.mesa	1	62.6	25.9	1	58.6	27.7
178.galgel	1	84.5	39.8	1	75.5	44.6
179.art	1	92.9	32.5	1	67.3	44.8
183.equake	1	74.3	20.3	1	67.2	22.4
187.facerec	1	72.1	30.5	1	68.7	32.1
188.ammp	1	132	19.3	1	125	20.4
189.lucas	1	95.6	24.3	1	83.9	27.7
191.fma3d	1	120	20.2	1	120	20.3
200.sixtrack	1	118	10.8	1	113	11.3
301.apsi	1	147	20.5	1	137	22.1

Hardware

CPU:	AMD Opteron (TM) 254 processor (2.80 GHz)
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1,2
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:	4x2048MB DDR-RAM PC3200R CL3-3-3
Disk Subsystem:	Western Digital WD2500 (SATA, 7.2krpm)
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 (x86_64) SP 2 SuSE Kernel 2.6.5-7.191-smp
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.2.1 (for C and Fortran) AMD Core Mathematical Library (ACML), Version 2.6.0
File System:	Linux/reiserfs
System State:	Multi-user run level 3

Notes/Tuning Information

```
GENERAL
+FDO:  PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library

Portability flags
   178.galgel: -fixedform

Base tuning flags
   for Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
   for C programs:       -Ofast -WOPT:mem_opnds=on +FDO

Peak tuning flags
   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
   172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
```

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Notes/Tuning Information (Continued)

```
                -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
   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


BIOS settings: Memory timing=1T
               DRAM Bank Interleave=AUTO

This result was measured with 64-bit binaries using the 64-bit version of
the operating system.

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