CFP2000 Result

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Fujitsu Siemens Computers

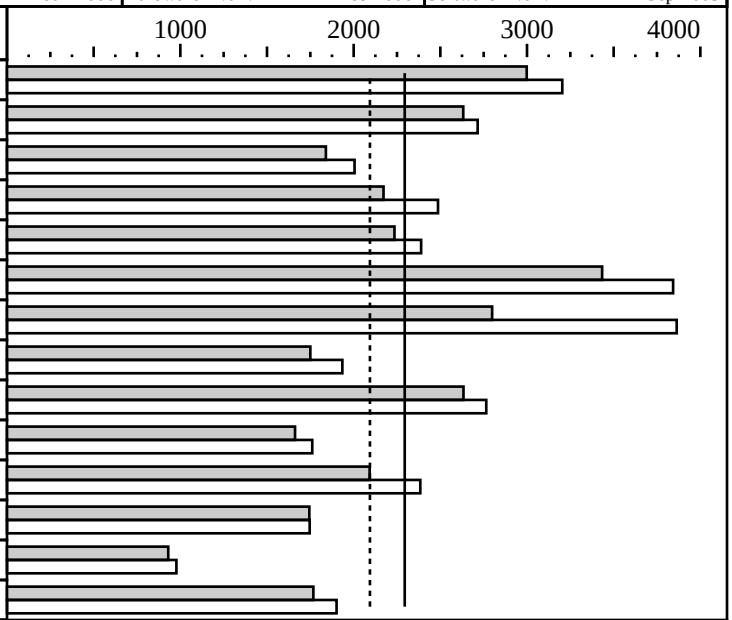
PRIMERGY BX630, AMD Opteron (TM) 254

SPECfp2000 = 2295

SPECfp_base2000 = 2094

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	53.4	2998	49.9	3204
171.swim	3100	118	2632	114	2715
172.mgrid	1800	97.8	1840	89.8	2005
173.applu	2100	96.7	2172	84.5	2487
177.mesa	1400	62.6	2235	58.6	2389
178.galgel	2900	84.5	3433	75.5	3843
179.art	2600	92.9	2799	67.3	3864
183.equake	1300	74.3	1750	67.2	1935
187.facerec	1900	72.1	2634	68.7	2765
188.ammp	2200	132	1662	125	1761
189.lucas	2000	95.6	2092	83.9	2384
191.fma3d	2100	120	1744	120	1746
200.sixtrack	1100	118	930	113	977
301.apsi	2600	147	1768	137	1901



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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