



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 | 1000 2000 3000 4000 | | | |
|--------------|----------------|--------------|------------|---------|-------|---|--|--|--|
| 168.wupwise | 1600 | 53.4 | 2998 | 49.9 | 3204 | [Bar chart showing ratio vs reference time] | | | |
| 171.swim | 3100 | 118 | 2632 | 114 | 2715 | [Bar chart showing ratio vs reference time] | | | |
| 172.mgrid | 1800 | 97.8 | 1840 | 89.8 | 2005 | [Bar chart showing ratio vs reference time] | | | |
| 173.applu | 2100 | 96.7 | 2172 | 84.5 | 2487 | [Bar chart showing ratio vs reference time] | | | |
| 177.mesa | 1400 | 62.6 | 2235 | 58.6 | 2389 | [Bar chart showing ratio vs reference time] | | | |
| 178.galgel | 2900 | 84.5 | 3433 | 75.5 | 3843 | [Bar chart showing ratio vs reference time] | | | |
| 179.art | 2600 | 92.9 | 2799 | 67.3 | 3864 | [Bar chart showing ratio vs reference time] | | | |
| 183.earth | 1300 | 74.3 | 1750 | 67.2 | 1935 | [Bar chart showing ratio vs reference time] | | | |
| 187.facerec | 1900 | 72.1 | 2634 | 68.7 | 2765 | [Bar chart showing ratio vs reference time] | | | |
| 188.amp | 2200 | 132 | 1662 | 125 | 1761 | [Bar chart showing ratio vs reference time] | | | |
| 189.lucas | 2000 | 95.6 | 2092 | 83.9 | 2384 | [Bar chart showing ratio vs reference time] | | | |
| 191.fma3d | 2100 | 120 | 1744 | 120 | 1746 | [Bar chart showing ratio vs reference time] | | | |
| 200.sixtrack | 1100 | 118 | 930 | 113 | 977 | [Bar chart showing ratio vs reference time] | | | |
| 301.apsi | 2600 | 147 | 1768 | 137 | 1901 | [Bar chart showing ratio vs reference time] | | | |

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)

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-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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