



CFP2000 Result

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Fujitsu Siemens Computers
CELSIUS V830, Opteron (TM) 254, Linux 64-bit

SPECfp2000 = 2306
SPECfp_base2000 = 2094

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

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | 1000 2000 3000 4000 | | | |
|--------------|----------------|--------------|------------|---------|-------|--------------------------------|--|--|--|
| 168.wupwise | 1600 | 56.6 | 2825 | 48.9 | 3270 | [Bar chart showing ratio 3270] | | | |
| 171.swim | 3100 | 122 | 2549 | 118 | 2636 | [Bar chart showing ratio 2636] | | | |
| 172.mgrid | 1800 | 97.5 | 1846 | 89.6 | 2008 | [Bar chart showing ratio 2008] | | | |
| 173.applu | 2100 | 95.9 | 2191 | 84.3 | 2491 | [Bar chart showing ratio 2491] | | | |
| 177.mesa | 1400 | 61.4 | 2279 | 57.2 | 2449 | [Bar chart showing ratio 2449] | | | |
| 178.galgel | 2900 | 84.6 | 3427 | 75.2 | 3856 | [Bar chart showing ratio 3856] | | | |
| 179.art | 2600 | 95.6 | 2719 | 65.7 | 3960 | [Bar chart showing ratio 3960] | | | |
| 183.quake | 1300 | 73.8 | 1763 | 67.3 | 1933 | [Bar chart showing ratio 1933] | | | |
| 187.facerec | 1900 | 68.7 | 2764 | 69.7 | 2724 | [Bar chart showing ratio 2724] | | | |
| 188.amp | 2200 | 134 | 1644 | 125 | 1762 | [Bar chart showing ratio 1762] | | | |
| 189.lucas | 2000 | 94.0 | 2128 | 83.2 | 2405 | [Bar chart showing ratio 2405] | | | |
| 191.fma3d | 2100 | 120 | 1756 | 118 | 1776 | [Bar chart showing ratio 1776] | | | |
| 200.sixtrack | 1100 | 116 | 945 | 111 | 990 | [Bar chart showing ratio 990] | | | |
| 301.apsi | 2600 | 146 | 1785 | 137 | 1899 | [Bar chart showing ratio 1899] | | | |

Hardware

CPU: AMD Opteron 254
 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)
 Secondary Cache: 1024KB(I+D) (on chip)
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 4 x 512 MB PC3200 CL3-3-3 DDR SDRAM
 Disk Subsystem: SCSI U320
 Other Hardware: None

Software

Operating System: SLES 9 with SP3 (AMD64) - kernel 2.6.5-7.244-smp
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3 (for C and Fortran)
 AMD Core Mathematical Library (ACML), Version 3.0.0
 File System: Linux/ReiserFS
 System State: Multi-User SuSE Run Level 3

Notes/Tuning Information

Portability flags:

178.galgel: -fixedform

Feedback Optimization:

+FDO: PASS1=-fb_create fbdata PASS2=-fb_opt fbdata

AMD Core Math Library

+ACML means -L<acml-install-dir>/pathscale64/lib -lacml, which causes linking with AMD Core Math Library

Baseline Optimization Flags:

C programs: -Ofast -WOPT:mem_opnds=on +FDO

Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=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



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Notes/Tuning Information (Continued)

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-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
          -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:prefetch=3
          +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 RM_SOURCES=lapak.f90
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.earthquake: -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 default settings with
Node memory interleave disabled, SRAT enabled
taskset has been used to bind processes to CPUs

For information about Fujitsu Siemens Computers in your country please see:
<http://www.fujitsu-siemens.com/countries>