



CINT2000 Result

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Sun Microsystems
Sun Fire V210 (1336MHz)

SPECint2000 = 706
SPECint_base2000 = 621

SPEC license #: 6 Tested by: Sun Microsystems Test date: Jan-2005 Hardware Avail: Jan-2005 Software Avail: Jan-2005

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | |
|-------------|----------------|--------------|------------|---------|-------|--|
| 164.gzip | 1400 | 237 | 591 | 210 | 667 | |
| 175.vpr | 1400 | 261 | 536 | 257 | 545 | |
| 176.gcc | 1100 | 176 | 626 | 140 | 788 | |
| 181.mcf | 1800 | 583 | 309 | 344 | 524 | |
| 186.crafty | 1000 | 137 | 730 | 115 | 873 | |
| 197.parser | 1800 | 330 | 546 | 293 | 614 | |
| 252.eon | 1300 | 150 | 865 | 150 | 864 | |
| 253.perlbmk | 1800 | 266 | 678 | 241 | 748 | |
| 254.gap | 1100 | 204 | 539 | 184 | 597 | |
| 255.vortex | 1900 | 164 | 1157 | 156 | 1217 | |
| 256.bzip2 | 1500 | 271 | 553 | 262 | 572 | |
| 300.twolf | 3000 | 451 | 665 | 427 | 702 | |

Hardware

CPU: UltraSPARC IIIi
CPU MHz: 1336
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 1 core/chip
CPU(s) orderable: 1,2
Parallel: No
Primary Cache: 32KBI+64KBD on chip
Secondary Cache: 1MB(I+D) on chip
L3 Cache: None
Other Cache: None
Memory: 4GB 16-way interleaved
Disk Subsystem: 1 x 73GB
Other Hardware: None

Software

Operating System: Solaris 10
Compiler: Sun Studio 9
File System: ufs
System State: Multi-User

Notes/Tuning Information

Compiler invocation:

C: cc
CXX: CC

Integer base flags:

-fast -xipo=2 with ONESTEP=yes and feedback

Integer peak flags:

ONESTEP=yes and feedback for all benchmarks

164.gzip: -xO5 -xbuiltin=%all -xtarget=native -xalias_level=std
-xipo=2 -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100

175.vpr: -fast -xalias_level=std -xipo=2
-Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100,
-Qeps:do_spec_load=1 -lmopt -lm

176.gcc: -fast -xipo=2 -l12amm

181.mcf: -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
-W2,-Apf:l1list=3:noinnerl1list

186.crafty: -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
Feedback adds -xlinkopt in PASS2



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Notes/Tuning Information (Continued)

```

197.parser: -fast -xipo=2 -xalias_level=strong
            -Wc,-Qgsched-T6,-Qipa:valueprediction
252.eon:     -fast -xipo=2 -xalias_level=compatible -noex
            -Qoption cg -Qeps:enabled=1,-Qeps:ws=32
253.perlbnk: -xO5 -xtarget=native -xmalign=4s -xipo
            -Wc,-Qeps:enabled=1,-Qeps:ws=8 -xalias_level=std -xsafe=mem
            -Wc,-Qiselect-funcalign=32,-Qicache-chbab=1
            -Wc,-Qiselect-sw_pf_tbl_th=20,-Qeps:do_spec_load=1 -xprefetch=no
254.gap:    -fast -xipo=2 -xalias_level=strong -xvector -xprefetch_level=3 -W2,-Abcopy
255.vortex: -fast -xrestrict -xipo=2
            -W2,-crit,-Ainline:recursion=1:cs=500:irs=6000
            -Wc,-Qeps:enabled=1,-Qdepgraph-early_cross_call=1,
            -Qiselect-funcalign=32,-Qpeep-Sh0 -ll2amm
256.bzip2:  -fast -xipo=2 -xalias_level=strong -xrestrict
            -Wc,-Qeps:enabled=1 -xsafe=mem -Qeps:rp_filtering_margin=99
300.twolf:  -fast -xalias_level=strong -xsafe=mem -xipo=2
            -xprefetch=no%auto -Wc,-Qms_pipe+intdivusefp

```

Feedback is done as follows, unless otherwise noted:

```

fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache
PASS1:     -xprofile=collect:./feedback
PASS2:     -xprofile=use:./feedback

```

Portability:

```

176.gcc:   -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon:    -library=iostream
253.perlbnk: -DSPEC_CPU2000_SOLARIS
254.gap:    -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
            -DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO

```

Shell Environments:

```

Stack size set to unlimited via "ulimit -s unlimited"
MPSSHEAP=512K
MPSSSTACK=512K
LD_PRELOAD=mpss.so.1

```

Kernel Parameters (/etc/system):

```

autoup=900
tune_t_fsflushr=1

```