# CINT2000 Result

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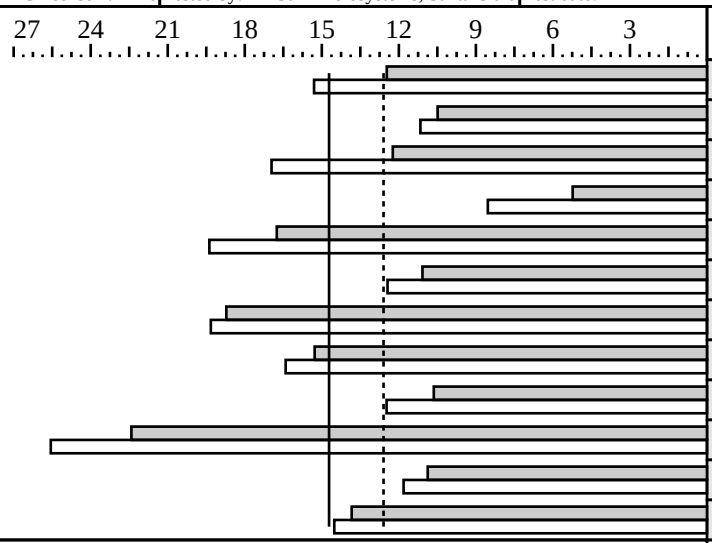
## Sun Microsystems
## Sun Fire V240 (1.28GHz)

SPECint_rate2000 = 14.7

SPECint_rate_base2000 = 12.6

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Sep-2003 | Hardware Avail: Jan-2004 | Software Avail: May-2003




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 164.gzip | 2 | 260 | 12.5 | 2 | 212 | 15.3 |
| 175.vpr | 2 | 310 | 10.5 | 2 | 291 | 11.2 |
| 176.gcc | 2 | 209 | 12.2 | 2 | 150 | 17.0 |
| 181.mcf | 2 | 798 | 5.23 | 2 | 489 | 8.53 |
| 186.crafty | 2 | 138 | 16.8 | 2 | 120 | 19.4 |
| 197.parser | 2 | 377 | 11.1 | 2 | 336 | 12.4 |
| 252.eon | 2 | 161 | 18.7 | 2 | 156 | 19.3 |
| 253.perlbmk | 2 | 273 | 15.3 | 2 | 255 | 16.4 |
| 254.gap | 2 | 240 | 10.6 | 2 | 205 | 12.5 |
| 255.vortex | 2 | 197 | 22.4 | 2 | 172 | 25.6 |
| 256.bzip2 | 2 | 320 | 10.9 | 2 | 295 | 11.8 |
| 300.twolf | 2 | 503 | 13.8 | 2 | 480 | 14.5 |

### Hardware

| | |
|---|---|
| CPU: | UltraSPARC IIIi |
| CPU MHz: | 1280 |
| FPU: | Integrated |
| CPU(s) enabled: | 2 cores, 2 chips, 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: | 8GB 16-way interleaved |
| Disk Subsystem: | 1 x 36GB SEAGATE ST336607LSUN36G |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Solaris 9 4/03 |
| Compiler: | Sun ONE Studio 8<br>Sun Performance Library 8 |
| File System: | ufs with ufs logging |
| 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 -lmopt -lm
 176.gcc:     -fast -xipo=2 -ll2amm
 181.mcf:     -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
              -W2,-Apf:llist=3:noinnerllist
 186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
```

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## Notes/Tuning Information (Continued)

```
                Feedback adds -xlinkopt in PASS2
 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.perlbmk:   -xO5 -xtarget=native -xipo -xalias_level=std -xsafe=mem
                -Wc,-Qeps:enabled=1,-Qeps:ws=8,-Qiselect-sw_pf_tbl_th=20,
                -Qiselect-funcalign=32,-Qicache-chbab=1
 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 -xalias_level=strong -xrestrict
                -Wc,-Qeps:enabled=1
 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.perlbmk:   -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=4M
  MPSSSTACK=4M
  LD_PRELOAD=mpss.so.1
Kernel Parameters (/etc/system):
 autoup=900
 tune_t_fsflushr=1
```