



CINT2000 Result

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Sun Microsystems
Sun Fire V240 (1.28GHz)

SPECint2000 = 704
SPECint_base2000 = 613

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	259	541	210	668	
175.vpr	1400	266	526	248	566	
176.gcc	1100	163	676	142	774	
181.mcf	1800	532	338	313	575	
186.crafty	1000	138	725	119	837	
197.parser	1800	336	535	295	610	
252.eon	1300	161	808	155	839	
253.perlbmk	1800	264	682	246	731	
254.gap	1100	208	528	186	592	
255.vortex	1900	179	1060	162	1170	
256.bzip2	1500	269	558	257	584	
300.twolf	3000	460	652	432	695	

Hardware

CPU: UltraSPARC IIIi
 CPU MHz: 1280
 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 36GB SEAGATE ST336607LSUN36G
 Other Hardware: None

Software

Operating System: Solaris 9 4/03
 Compiler: Sun ONE Studio 8
 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 -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



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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.perlbnk: -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.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=4M
MPSSSTACK=4M
LD_PRELOAD=mpss.so.1

```

Kernel Parameters (/etc/system):

```

autoup=900
tune_t_fsflushr=1

```

System Settings:

2nd CPU physically removed from the system