



# CINT2000 Result

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**Fujitsu Siemens Computers**  
CELSIUS V810, Opteron (TM) 252, Linux 64-bit

SPECint2000 = **1759**  
SPECint\_base2000 = **1579**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	91.2	1535	91.2	1535	
175.vpr	1400	112	1252	109	1283	
176.gcc	1100	61.3	1795	61.1	1800	
181.mcf	1800	238	755	151	1190	
186.crafty	1000	45.5	2196	44.3	2257	
197.parser	1800	151	1195	124	1450	
252.eon	1300	55.0	2362	49.1	2646	
253.perlbmk	1800	103	1742	92.0	1957	
254.gap	1100	65.6	1676	64.7	1700	
255.vortex	1900	75.3	2522	68.6	2769	
256.bzip2	1500	105	1428	105	1428	
300.twolf	3000	212	1416	164	1831	

### Hardware

CPU: AMD Opteron (TM) 252  
CPU MHz: 2600  
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: S-ATA 7200 rpm  
Other Hardware: None

### Software

Operating System: SuSE Linux 9.1 (AMD64) 2.6.4-52-smp  
Compiler: PathScale EKOPath (TM) Compiler Suite, Release 2.0  
- (both for C and C++)  
File System: Linux/ReiserFS  
System State: Multi-user SuSE Run level 3

## Notes/Tuning Information

Tested by Fujitsu Siemens Computers

+FDO: PASS1= -fb\_create fbdata PASS2= -fb\_opt fbdata

### Portability Flags:

176.gcc: Approved srcalt 64bitgcc is used  
186.crafty: -DLINUX\_i386  
252.eon: -DHAS\_ERRLIST -DSPEC\_CPU2000\_LP64  
Approved srcalt fmax\_errno is used  
253.perlbmk: -DSPEC\_CPU2000\_LINUX\_I386 -DSPEC\_CPU2000\_NEED\_BOOL  
-DSPEC\_CPU2000\_GLIBC22 -DSPEC\_CPU2000\_LP64  
254.gap: -DSYS\_IS\_USG -DSYS\_HAS\_IOCTL\_PROTO -DSYS\_HAS\_TIME\_PROTO  
-DSYS\_HAS\_SIGNAL\_PROTO -DSYS\_HAS\_ANSI  
-DSYS\_HAS\_CALLOC\_PROTO -DSPEC\_CPU2000\_LP64  
255.vortex: -DSPEC\_CPU2000\_LP64

### Baseline optimization flags:

C programs: -Ofast +FDO  
C++ programs: -Ofast +FDO



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## Notes/Tuning Information (Continued)

Peak tuning:

```
164.gzip: -O3 -ipa -m3dnow -WOPT:val=0 +FDO
175.vpr: -O2 -ipa -OPT:alias=disjoint -CG:p2align_freq=500000
        -INLINE:aggressive=on
        -IPA:space=300:plimit=10000:callee_limit=5000:linear=on +FDO
176.gcc: -O3 -ipa -OPT:goto=off +FDO
181.mcf: -O3 -ipa -IPA:field_reorder=on -m32 +FDO
186.crafty: -O3 -OPT:goto=off +FDO
197.parser: -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon: -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off
        -OPT:treeheight=on -TENV:X=4:frame_pointer=off
        -fno-exceptions -LNO:fu=10:full_unroll_outer=on
        -IPA:plimit=4000 +FDO
253.perlbnk: -Ofast -OPT:transform_to_memlib=off -IPA:plimit=10000 +FDO
254.gap: -Ofast -WOPT:aggstr=0 +FDO
255.vortex: -Ofast -OPT:goto=off -IPA:plimit=1800 -CG:p2align=on +FDO
256.bzip2: basepeak = true
300.twolf: -O2 -CG:gcm=off:p2align_freq=100000
        -OPT:Ofast:unroll_times=8:unroll_size=256:alias=disjoint
        -WOPT:mem_opnds=on -m32 +FDO
```

System tested with only 1 CPU present.

BIOS Version 1.06, default settings.

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