



# CINT2000 Result

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Hewlett-Packard Company  
ProLiant BL685c (AMD Opteron (TM) 8220)

SPECint\_rate2000 = 165  
SPECint\_rate\_base2000 = 145

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Nov-2006 Hardware Avail: Feb-2007 Software Avail: Oct-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	83.4	156	8	83.3	156
175.vpr	8	117	111	8	109	119
176.gcc	8	62.5	163	8	63.2	162
181.mcf	8	344	48.6	8	197	84.7
186.crafty	8	42.3	219	8	41.9	222
197.parser	8	151	110	8	116	145
252.eon	8	43.6	277	8	39.2	308
253.perlbnk	8	104	160	8	87.5	191
254.gap	8	65.9	155	8	65.1	157
255.vortex	8	76.7	230	8	69.6	253
256.bzip2	8	105	133	8	105	133
300.twolf	8	225	124	8	169	165

### Hardware

CPU: AMD Opteron (TM) 8220  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip  
 CPU(s) orderable: 2,4 chips  
 Parallel: No  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 32 GB (16x2 GB PC2-5300 CL5.0)  
 Disk Subsystem: 1x36 GB 10K SAS  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 3  
 SuSE kernel 2.6.5-7.244-smp  
 Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.5  
 AMD Core Math Library 3.5.0  
 File System: Linux/ext2  
 System State: Multi-user run level 3

## Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
Base tuning for C programs: -Ofast +FDO
Base tuning for C++ programs: -Ofast +FDO
Portability flags:
 186.crafty: -DLINUX_i386
 252.eon: -DHAS_ERRLIST -DSPEC_CPU2000_LP64
 253.perlbnk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
              -DSPEC_CPU2000_LP64
 254.gap: -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
           -DSYS_HAS_CALLOC_PROTO -DSPEC_CPU2000_LP64
 255.vortex: -DSPEC_CPU2000_LP64
Peak tuning:
 164.gzip: -O3 -ipa -WOPT:val=0 -OPT:unroll_size=0 +FDO
 175.vpr: -O3 -ipa -m32 +FDO
 176.gcc: -O3 -IPA:plimit=10000 -LNO:opt=0 -OPT:goto=off +FDO
 181.mcf: -O3 -ipa -IPA:field_reorder=on -m32 +FDO
 186.crafty: -Ofast -CG:local_fwd_sched=on -LNO:opt=0 -WOPT:val=0 +FDO
 197.parser: -O3 -ipa -m32 -IPA:ctype=on +FDO
 252.eon: -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off -IPA:plimit=4000
           -OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exceptions
```



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## Notes/Tuning Information (Continued)

```
-LNO:fu=10:full_unroll_outer=on -GRA:optimize_boundary=on +FDO
253.perlbnk: -O2 -ipa -OPT:Ofast:transform_to_memlib=off
              -fno-math-errno -IPA:plimit=10000 +FDO
254.gap:      -Ofast -IPA:min_hotness=5 -OPT:alias=disjoint -CG:movnti=1 +FDO
255.vortex:   -Ofast -OPT:goto=off +FDO
256.bzip2:    basepeak=true
300.twolf:    -O2 -CG:gcm=off:p2align_freq=100000
              -OPT:Ofast:unroll_times_max=8:unroll_size=256:alias=disjoint
              -WOPT:mem_opnds=on -m32 +FDO
```

### BIOS Configuration Notes

Node Interleaving Disabled

### Other Configuration Notes

Taskset utility used to bind process to CPU(s)