



# CINT2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

IBM Corporation  
eServer 325, 2.4 GHz AMD Opteron (TM)

SPECint2000 = 1472  
SPECint\_base2000 = 1346

SPEC license #: 11 | Tested by: IBM, Research Triangle Park, NC | Test date: May-2004 | Hardware Avail: May-2004 | Software Avail: May-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	96.6	1449	96.6	1450	
175.vpr	1400	130	1074	128	1097	
176.gcc	1100	68.2	1612	68.2	1612	
181.mcf	1800	322	559	202	893	
186.crafty	1000	48.2	2075	48.2	2075	
197.parser	1800	158	1140	146	1233	
252.eon	1300	75.3	1727	66.8	1945	
253.perlbmk	1800	121	1488	116	1546	
254.gap	1100	76.9	1431	77.5	1420	
255.vortex	1900	102	1863	94.7	2006	
256.bzip2	1500	120	1251	121	1239	
300.twolf	3000	241	1243	181	1660	

### Hardware

CPU: AMD Opteron 250  
CPU MHz: 2400  
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: 4x512MB, DDR333  
Disk Subsystem: SCSI, 36GB 10K RPM  
Other Hardware: None

### Software

Operating System: SUSE Linux 8.0 SLES 64-bit Kernel 2.4.19-249 (SP2)  
Compiler: PathScale EKO Compiler Suite, Release 1.1  
File System: Linux/reiserfs  
System State: Multi-user, run level 3

## Notes/Tuning Information

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

Baseline optimization flags:

C programs: -O3 -ipa +FDO  
C++ programs: -Ofast +FDO

Portability Flags:

175.vpr: -DSPEC\_CPU2000  
181.mcf: -DWANT\_STDC\_PROTO  
186.crafty: -DLINUX\_i386 -DSPEC\_CPU2000  
252.eon: -DHAS\_ERRLIST -DFMAX\_IS\_DOUBLE -DSPEC\_CPU2000\_LP64 -DNDEBUG  
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  
300.twolf: -DSPEC\_CPU2000 -DHAVE\_SIGNED\_CHAR



# CINT2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

IBM Corporation  
eServer 325, 2.4 GHz AMD Opteron (TM)

SPECint2000 = 1472  
SPECint\_base2000 = 1346

SPEC license #: 11 | Tested by: IBM, Research Triangle Park, NC | Test date: May-2004 | Hardware Avail: May-2004 | Software Avail: May-2004

## Notes/Tuning Information (Continued)

### Peak Tuning:

```

164.gzip: -O3 -ipa -WOPT:val=0 -CG:p2align_freq=10000 +FDO
175.vpr: -O2 -ipa -OPT:alias=disjoint -LNO:prefetch Ahead=2 -CG:p2align_freq=500000
  -INLINE:aggressive=on -IPA:space=300:plimit=10000:callee_limit=5000:linear=on
  +FDO
186.crafty: basepeak = true
181.mcf: -O3 -static -OPT:Ofast -m32 +FDO
197.parser: -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon: -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off
  -OPT:unroll_times_max=16:treeheight=on -TENV:X=4:frame_pointer=off
  -fno-exceptions +FDO
253.perlbnk: -O3 -ipa -TENV:X=3 +FDO -IPA:min_hotness=5:plimit=20000
254.gap: -O3 -ipa +FDO -IPA:min_hotness=7
255.vortex: -Ofast -LNO:opt=0 -TENV:X=4
  -OPT:goto=off:unroll_analysis=off:unroll_size=0:unroll_times_max=8
  +FDO -IPA:min_hotness=14:space=500:plimit=3600
256.bzip2: -O3 -ipa -OPT:unroll_times=8:unroll_size=256 +FDO
300.twolf: -O2 -CG:gcm=off:p2align_freq=100000 -TENV:X=4 +FDO -m32
  -OPT:unroll_times=8:unroll_size=256:alias=disjoint:Ofast

```

### Notes

BIOS build level M1E127AUS, date, May-2004.