# CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

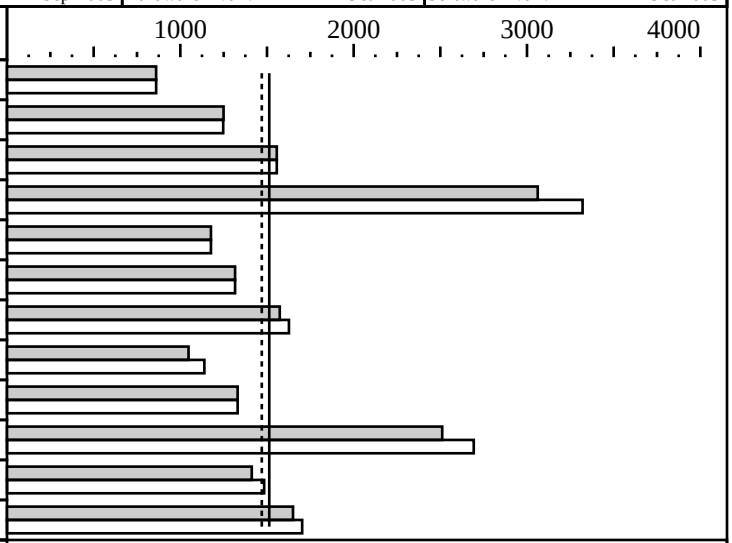
## IBM Corporation
## IBM System p5 520 (1900 MHz, 1 CPU)

SPECint2000 = 1513

SPECint_base2000 = 1470

SPEC license #: 11 | Tested by: IBM | Test date: Sep-2005 | Hardware Avail: Oct-2005 | Software Avail: Oct-2005

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|---|---|---|---|---|---|
| 164.gzip | 1400 | 163 | 860 | 163 | 860 |
| 175.vpr | 1400 | 112 | 1249 | 112 | 1247 |
| 176.gcc | 1100 | 70.7 | 1556 | 70.7 | 1556 |
| 181.mcf | 1800 | 58.8 | 3062 | 54.2 | 3321 |
| 186.crafty | 1000 | 85.0 | 1177 | 85.0 | 1177 |
| 197.parser | 1800 | 137 | 1316 | 137 | 1316 |
| 252.eon | 1300 | 82.6 | 1574 | 79.9 | 1627 |
| 253.perlbmk | 1800 | 172 | 1047 | 158 | 1139 |
| 254.gap | 1100 | 82.7 | 1331 | 82.7 | 1331 |
| 255.vortex | 1900 | 75.7 | 2511 | 70.6 | 2693 |
| 256.bzip2 | 1500 | 106 | 1412 | 101 | 1484 |
| 300.twolf | 3000 | 182 | 1650 | 176 | 1703 |




### Hardware

| | |
|---|---|
| CPU: | POWER5+ |
| CPU MHz: | 1900 |
| FPU: | Integrated |
| CPU(s) enabled: | 1 core, 1 chip, 2 cores/chip (SMT off) |
| CPU(s) orderable: | 2 |
| Parallel: | None |
| Primary Cache: | 64KBI+32KBD (on chip)/core |
| Secondary Cache: | 1920KB unified (on chip)/chip |
| L3 Cache: | 36MB unified (off-chip)/DCM, 1 DCM/SUT |
| Other Cache: | None |
| Memory: | 8x2GB |
| Disk Subsystem: | 1x73GB SCSI, 15K RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | AIX 5L V5.3 |
| Compiler: | XL C/C++ Enterprise Edition Version 8.0 for AIX |
| File System: | AIX/JFS2 |
| System State: | Multi-user |

## Notes/Tuning Information

```
Portability Flags:
  176.gcc:      -ma -DHOST_WORDS_BIG_ENDIAN
  186.crafty:   -DAIX
  252.eon:      srcalt=fmax_errno
  253.perlbmk:  -DSPEC_CPU2000_AIX
  254.gap:      -DSYS_IS_BSD -DSYS_STRING_H
                -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
  300.twolf:    -DHAVE_SIGNED_CHAR

Base Optimization Flags:
  C:    -qpdf1/pdf2
        -O5 -blpdata -D_ILS_MACROS
  C++:  -qpdf1/pdf2
        -O5 -lhmu -qalign=natural

Peak Optimization Flags
  164.gzip:     basepeak=1
  175.vpr:      -qpdf1/pdf2
                -O5 -lhmu -blpdata -D_ILS_MACROS
  176.gcc:      basepeak=1
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation



## Notes/Tuning Information (Continued)

```
  181.mcf:      -O5 -blpdata -qfdpr
                fdpr -q -O3
  186.crafty:   basepeak=1
  197.parser:   -qpdf1/pdf2
                -O5 -blpdata -D_ILS_MACROS
  252.eon:      -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -D_ILS_MACROS
  253.perlbmk:  -qpdf1/pdf2
                -O5 -lhmu -qalign=natural -blpdata -D_ILS_MACROS
  254.gap:      basepeak=1
  255.vortex:   -qpdf1/pdf2
                -O5 -lhmu -blpdata
  256.bzip2:    -O5 -blpdata -qfdpr -D_ILS_MACROS
                fdpr -q -O3
  300.twolf:    -O5 -blpdata -qfdpr -D_ILS_MACROS
                fdpr -q -O3


Approved alternate-source file 252.eon.fmax_errno.src.alt.tar.gz
was used with 252.eon for POSIX-compatibility.

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-03 Recommended Maintenance package.

SMT:  Acronym for "Simultaneous Multi-Threading". A processor technology that allows
      the simultaneous execution of multiple thread contexts within a single processor
      core. (Enabled by default)
DCM:  Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
SUT:  Acronym for "System Under Test"

Extended C:     IBM XL C for AIX invoked as cc
ANSI C89:       IBM XL C for AIX invoked as xlc
C++:            IBM XL C for AIX invoked as xlC

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=400 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    reboot -q
    export MEMORY_AFFINITY=MCM

The following config-file entry was used to assign each benchmark process to a core:
   submit = let "MYCPU=2*$SPECUSERNUM"; if (("$MYCPU > 3")) then let "MYCPU-=3"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
One core was deconfigured and SMT disabled at the open-firmware prompt, using the
command
            boot -s cpu=1 -s smt_off

Use flags-description file IBM-20051013-AIX.txt.
```