



# CFP2000 Result

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IBM Corporation  
IBM eServer i5 520 (1650 MHz, 1 CPU)

SPECfp2000 = 2138  
SPECfp\_base2000 = 2034

SPEC license #: 11 | Tested by: IBM | Test date: Jun-2004 | Hardware Avail: Aug-2004 | Software Avail: Oct-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	80.6	1984	61.0	2625
171.swim	3100	140	2213	140	2213
172.mgrid	1800	83.9	2144	83.9	2144
173.applu	2100	130	1611	128	1646
177.mesa	1400	136	1033	136	1033
178.galgel	2900	66.3	4372	51.0	5685
179.art	2600	30.2	8598	30.2	8598
183.earthquake	1300	30.2	4303	30.2	4303
187.facerec	1900	92.2	2060	92.2	2060
188.amp	2200	185	1188	183	1204
189.lucas	2000	79.4	2519	78.8	2537
191.fma3d	2100	156	1350	156	1350
200.sixtrack	1100	150	733	145	759
301.apsi	2600	193	1345	179	1451

### Hardware

CPU: POWER5  
 CPU MHz: 1650  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)  
 CPU(s) orderable: 2  
 Parallel: No  
 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: 8x4 GB  
 Disk Subsystem: 1x36GB SCSI, 15K RPM  
 Other Hardware:

### Software

Operating System: AIX 5L V5.3  
 Compiler: XL C/C++ Enterprise Edition Version 7.0 for AIX  
 XL Fortran Enterprise Edition V9.1 for AIX  
 Other Software: IBM Engineering and Scientific Subroutine Library for AIX, Version 4 Release 2  
 File System: AIX/JFS2  
 System State: Multi-User

## Notes/Tuning Information

### Portability Flags

-qfixed used in: 168.wupwise, 171.swim, 172.mgrid, 173.applu,  
 178.galgel, 200.sixtrack, 301.apsi  
 -qsuffix=f=f90 used in: 178.galgel, 187.facerec, 189.lucas, 191.fma3d

### Base Optimization Flags:

C: -qpdf1/pdf2 -O5 -blpdata -qalign=natural  
 Fortran: -qpdf1/pdf2 -O5 -blpdata -lmass

### Peak Optimization Flags

168.wupwise: -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass  
 F77 = xlf  
 171.swim: basepeak = 1  
 172.mgrid: basepeak = 1  
 173.applu: -O5 -blpdata -lmass



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## Notes/Tuning Information (Continued)

```

177.mesa:      basepeak = 1
178.galgel:    -O5 -blpdata -qessl -lessl
179.art:       basepeak = 1
183.earthquake: basepeak = 1
187.facerec:   basepeak = 1
188.ammp:      -qpdf1/pdf2
               -O5 -blpdata -qalign=natural -D_ILS_MACROS
189.lucas:     -O5 -blpdata -lmass
191.fma3d:     basepeak = 1
200.sixtrack:  fdpr -quiet -R3
               -O3 -qhot -qarch=pwr5 -qtune=pwr5 -qfdpr
301.apsi:      -O5 -lmass -qessl -lessl -blpdata -qsave

```

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"

ulimits set to unlimited.

Large page mode was set as follows:

```

vmo -r -o lgpg_regions=400 -o lgpg_size=16777216
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
reboot -q

```

One core was deconfigured and SMT disabled at the open-firmware prompt, using the command

```
boot -s cpu=1 -s smt_off
```

This result was measured on model IBM eServer p5 520.

Model i5 520 and model p5 520 are electronically equivalent.