



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

## IBM Corporation

IBM eServer OpenPower 720 (1650 MHz, 4CPU, Linux)

SPECfp2000 = 1966

SPECfp\_base2000 = 1865

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	72.0	2224	71.1	2251	
171.swim	3100	144	2160	143	2168	
172.mgrid	1800	102	1766	99.9	1802	
173.applu	2100	144	1458	143	1470	
177.mesa	1400	136	1026	126	1109	
178.galgel	2900	72.7	3991	53.2	5454	
179.art	2600	32.3	8061	29.1	8939	
183.quake	1300	44.3	2937	43.3	3003	
187.facerec	1900	103	1846	92.9	2046	
188.amp	2200	201	1093	200	1101	
189.lucas	2000	96.2	2078	94.2	2122	
191.fma3d	2100	166	1262	164	1284	
200.sixtrack	1100	147	749	148	745	
301.apsi	2600	201	1296	193	1348	

### Hardware

CPU: POWER5  
 CPU MHz: 1650  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)  
 CPU(s) orderable: 2,4  
 Parallel: No  
 Primary Cache: 64KBI+32KBD (on chip)/core  
 Secondary Cache: 1920KB unified (on chip)/chip  
 L3 Cache: 36MB unified (off chip)/DCM, 2 DCM/SUT  
 Other Cache: None  
 Memory: 16x1 GB  
 Disk Subsystem: 1X72GB SCSI, 15K RPM  
 Other Hardware: None

### Software

Operating System: SUSE LINUX Enterprise Server 9 for IBM POWER  
 Compiler: XL Fortran Enterprise Edition Version 9.1 for Linux  
 XL C/C++ Enterprise Edition Version 7.0 for Linux  
 Other Software: IBM ESSL for Linux, Version 4 Release 2  
 File System: ReiserFS  
 System State: Single-User

## Notes/Tuning Information

### Portability Flags

-qfixed used in: wupwise, swim, mgrid, applu, galgel, sixtrack, apsi  
 -qsuffix=f=f90 used in: galgel, facerec, lucas, fma3d

### Base Optimization Flags:

C:  
 -O5 -qpdf1/pdf2  
 Fortran:  
 -O5 -qpdf1/pdf2

### Floating Point Peak Flags

168.wupwise  
 -O5 -qarch=pwr3 -qtune=pwr3  
 171.swim  
 -O3 -qarch=pwr5 -qtune=pwr5 -qhot  
 172.mgrid



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

IBM Corporation

IBM eServer OpenPower 720 (1650 MHz, 4CPU, Linux)

SPECfp2000 = 1966

SPECfp\_base2000 = 1865

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

## Notes/Tuning Information (Continued)

```
-04 -qarch=pwr4 -qtune=pwr4
173.applu
-05 -q64 -qarch=pwr4 -qtune=pwr4
177.mesa: -qpdf1/pdf2
-04 -qarch=pwr4 -qtune=pwr4
178.galgel
-05 -qessl -lessl
"FC invoked as xlf_r"
179.art
-05 -qarch=pwr5 -qtune=pwr5
183.quake
-05 -qarch=pwr5 -qtune=pwr5
187.facerec: -qpdf1/pdf2
-03 -qarch=pwr5 -qtune=pwr5 -qhot
188.ammp
-03 -qarch=pwr4 -qtune=pwr4
189.lucas
-03 -qarch=pwr5 -qtune=pwr5
191.fma3d: -qpdf1/pdf2
-04 -qarch=pwr5 -qtune=pwr5
200.sixtrack
-03 -qarch=pwr5 -qtune=pwr5
301.apsi
-05 -qarch=pwr5 -qtune=pwr5 -qessl -lessl
"F77 invoked as xlf_r"
```

C: invoked as cc except where noted as xlc

Fortran 77 and 90: Fortran for Linux invoked as xlf90

ESSL: Engineering and Scientific Subroutine Library

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"

Stack size set to unlimited using the command "ulimit -s unlimite

Three cores were deconfigured using the Hardware Monitor Console

SMT was disabled at the Linux boot prompt, using the command

smt-enabled=off

Submitted\_by: Kevin Lu <kevinlu@us.ibm.com>

Submitted: Mon Oct 18 22:24:01 2004

Submission: cpu2000-20041018-03450.sub