



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant BL465c (AMD Opteron (TM) 2220)

SPECfp2000 = 2023  
SPECfp\_base2000 = 1833

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	55.8	2868	55.8	2868	
171.swim	3100	124	2502	120	2581	
172.mgrid	1800	105	1710	105	1710	
173.applu	2100	139	1509	122	1718	
177.mesa	1400	130	1076	63.9	2190	
178.galgel	2900	95.0	3054	87.7	3308	
179.art	2600	58.0	4483	58.0	4486	
183.quake	1300	76.5	1700	76.5	1700	
187.facerec	1900	91.5	2077	96.0	1980	
188.amp	2200	181	1213	149	1478	
189.lucas	2000	107	1863	90.7	2206	
191.fma3d	2100	127	1656	113	1852	
200.sixtrack	1100	130	845	130	845	
301.apsi	2600	164	1590	164	1590	

### Hardware

CPU: AMD Opteron (TM) 2220  
CPU MHz: 2800  
FPU: Integrated  
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
CPU(s) orderable: 1,2 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: 8 GB (4x2 GB PC2-5300P CL5.0)  
Disk Subsystem: 1x36 GB 10 K SAS  
Other Hardware:

### Software

Operating System: Windows Server 2003 Enterprise SP1  
Compiler: Intel C++ Compiler for 32-bit applications, (version 9.1 Build 20060927Z)  
Intel Fortran Compiler for 32-bit applications, (version 9.1 build 20060927Z)  
PGI Fortran compiler 6.0-8 for Windows XP (32-bit)  
PGI C compiler 6.0-8 for Windows XP (32-bit)  
Microsoft Visual Studio .NET 7.0.9466 (for libraries)  
AMD Core Math Library V3.5.0  
File System: NTFS  
System State: Default

## Notes/Tuning Information

```
+FDO: PASS1=-Qprof_gen PASS2=-Qprof_use (Intel compiler)
+FDO*: PASS1=-Mpfi PASS2=-Mpfo (PGI compiler)
+ACML is linking with AMD Core Math Library V3.5.0
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran compiler, pgcc is the PGI C compiler.
Base tuning for C programs:      pgcc -fastsse -Mipa=fast,inline
Base tuning for FORTRAN programs: pgf90 -fastsse -Mipa=fast,inline +FDO* ONESTEP=1
Portability flags:
  178.galgel: -Mfixed
Peak tuning:
168.wupwise:      pgf90 basepeak=yes
171.swim:         ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll0 ONESTEP=1
172.mgrid:       pgf90 basepeak=yes
173.applu:       ifort -Qipo -O3 -QaxN -QxW +FDO -auto ONESTEP=1
177.mesa:        icl -Qipo -arch:SSE2 +FDO -Qunroll1 -Qansi_alias ONESTEP=1
                  -Qoption,c,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
178.galgel:      pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML ONESTEP=1
```



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## Notes/Tuning Information (Continued)

```

179.art:          pgcc -fastsse -Mipa=fast,inline
183.quake:       icl basepeak=yes
187.facerec:     ifort -Qipo -QxW +FDO -Qunroll3 ONESTEP=1
                  -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
188.ampp:       icl -Oa -arch:SSE2 -Zp4 -Qansi_alias ONESTEP=1
189.lucas:      ifort -Qipo -QxW -Qunroll1 ONESTEP=1
191.fma3d:      ifort -Qipo -QaxN -QxW +FDO -Qansi-alias- ONESTEP=1
200.sixtrack:   pgf90 basepeak=yes
301.apsi:       pgf90 basepeak=yes

```

### BIOS Configuration Notes

Node Interleaving is Disabled

### Other Configuration Notes

The start /b /wait /affinity command is used to bind CPU(s) to processes.