



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL685c (AMD Opteron (TM) 8220)

SPECfp_rate2000 = 80.6
SPECfp_rate_base2000 = 73.4

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	59.9	124	4	59.9	124
171.swim	4	213	67.5	4	183	78.8
172.mgrid	4	125	66.7	4	125	66.7
173.applu	4	169	57.6	4	151	64.6
177.mesa	4	128	50.7	4	63.3	103
178.galgel	4	109	124	4	106	128
179.art	4	70.1	172	4	70.1	172
183.quake	4	94.6	63.8	4	94.6	63.8
187.facerec	4	103	85.6	4	108	81.5
188.amp	4	186	55.0	4	151	67.7
189.lucas	4	133	69.6	4	127	73.3
191.fma3d	4	148	65.6	4	136	71.7
200.sixtrack	4	130	39.2	4	130	39.2
301.apsi	4	170	70.9	4	170	70.9

Hardware

CPU: AMD Opteron (TM) 8220
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 2,4 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: 16 GB (8x2 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 20060816Z)
 Intel Fortran Compiler for 32-bit applications, (version 9.1 build 20060816Z)
 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)

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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.