



CFP2000 Result

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

SPECfp_rate2000 = 152
SPECfp_rate_base2000 = 138

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	8	64.1	232	8	64.1	232
171.swim	8	216	133	8	189	152
172.mgrid	8	130	129	8	130	129
173.applu	8	180	108	8	159	122
177.mesa	8	129	101	8	64.8	201
178.galgel	8	113	238	8	108	248
179.art	8	81.6	296	8	81.8	295
183.quake	8	107	112	8	107	112
187.facerec	8	113	156	8	120	147
188.amp	8	203	100	8	157	130
189.lucas	8	139	134	8	130	143
191.fma3d	8	156	125	8	144	135
200.sixtrack	8	140	72.9	8	140	72.9
301.apsi	8	174	139	8	174	139

Hardware

CPU: AMD Opteron (TM) 8220
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 8 cores, 4 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: 32 GB (16x2 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.