



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL35p (AMD Opteron (TM) 280)

SPECfp2000 = 1739
SPECfp_base2000 = 1594

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	64.2	2491	64.2	2491	[Bar chart showing ratio 2491]			
171.swim	3100	154	2008	146	2125	[Bar chart showing ratio 2125]			
172.mgrid	1800	122	1470	122	1470	[Bar chart showing ratio 1470]			
173.applu	2100	156	1343	142	1477	[Bar chart showing ratio 1477]			
177.mesa	1400	148	945	73.5	1906	[Bar chart showing ratio 1906]			
178.galgel	2900	110	2640	102	2846	[Bar chart showing ratio 2846]			
179.art	2600	66.0	3939	66.0	3942	[Bar chart showing ratio 3942]			
183.quake	1300	86.2	1508	86.2	1508	[Bar chart showing ratio 1508]			
187.facerec	1900	107	1782	105	1809	[Bar chart showing ratio 1809]			
188.amp	2200	201	1093	176	1253	[Bar chart showing ratio 1253]			
189.lucas	2000	121	1658	107	1872	[Bar chart showing ratio 1872]			
191.fma3d	2100	147	1428	144	1458	[Bar chart showing ratio 1458]			
200.sixtrack	1100	151	729	151	729	[Bar chart showing ratio 729]			
301.apsi	2600	187	1388	187	1388	[Bar chart showing ratio 1388]			

Hardware

CPU: AMD Opteron (TM) 280
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
 CPU(s) orderable: 1,2
 Parallel: No
 Primary Cache: 64KBI + 64KBD (on chip) per core
 Secondary Cache: 1024KB(I+D) (on chip) per core
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 2x2048MB PC3200 CL3.0
 Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI
 Other Hardware:

Software

Operating System: Windows Server 2003 Enterprise SP1
 Compiler: Intel C++ Compiler for 32-bit applications, (Version 9.0 Build 20060120Z)
 Intel Fortran Compiler for 32-bit applications, (Version 9.0 build 20060120Z)
 PGI Fortran compiler 6.0-4 for Windows XP (32-bit)
 PGI C compiler 6.0-4 for Windows XP (32-bit)
 Microsoft Visual Studio .NET 7.0.9466 (for libraries)
 AMD Core Math Library V3.0.0
 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 V3.0.0
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.equake:       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.amp:          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
/NUMPROC=1 flag was added to boot.ini to invoke uniprocessor environment.