# CFP2000 Result

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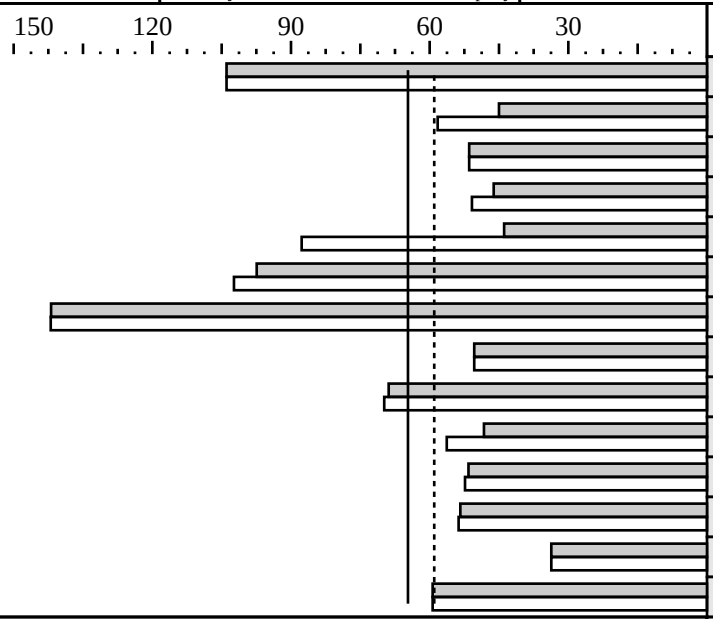
## Hewlett-Packard Company

## ProLiant BL35p (AMD Opteron (TM) 280)

SPECfp_rate2000 = 64.7

SPECfp_rate_base2000 = 59.0

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




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 4 | 71.4 | 104 | 4 | 71.4 | 104 |
| 171.swim | 4 | 320 | 45.0 | 4 | 247 | 58.3 |
| 172.mgrid | 4 | 162 | 51.5 | 4 | 162 | 51.5 |
| 173.applu | 4 | 211 | 46.1 | 4 | 192 | 50.9 |
| 177.mesa | 4 | 148 | 43.9 | 4 | 74.1 | 87.7 |
| 178.galgel | 4 | 138 | 97.4 | 4 | 131 | 102 |
| 179.art | 4 | 85.0 | 142 | 4 | 85.0 | 142 |
| 183.equake | 4 | 120 | 50.4 | 4 | 120 | 50.4 |
| 187.facerec | 4 | 128 | 68.9 | 4 | 126 | 69.8 |
| 188.ammp | 4 | 212 | 48.3 | 4 | 181 | 56.3 |
| 189.lucas | 4 | 180 | 51.6 | 4 | 177 | 52.4 |
| 191.fma3d | 4 | 183 | 53.4 | 4 | 181 | 53.7 |
| 200.sixtrack | 4 | 152 | 33.7 | 4 | 152 | 33.7 |
| 301.apsi | 4 | 203 | 59.4 | 4 | 203 | 59.4 |

### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 280 |
| CPU MHz: | 2400 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 2 chips, 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: | 4x2048MB 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)<br>Intel Fortran Compiler for 32-bit applications, (Version 9.0 build 20060120Z)<br>PGI Fortran compiler 6.0-4 for Windows XP (32-bit)<br>PGI C compiler 6.0-4 for Windows XP (32-bit)<br>Microsoft Visual Studio .NET 7.0.9466 (for libraries)<br>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)

```
 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.ammp:         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.
```