# OMPL2001 Result

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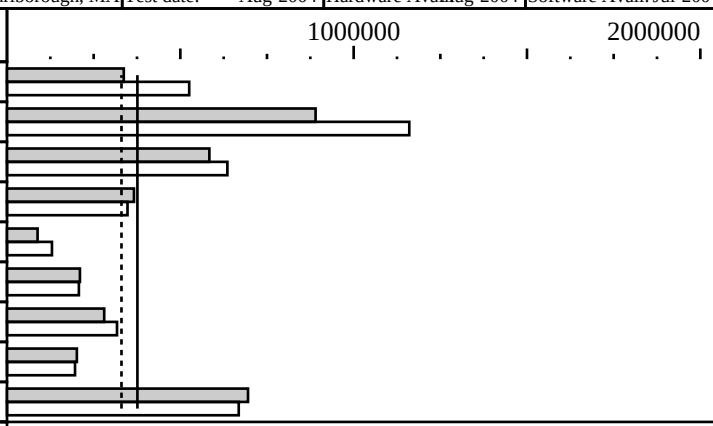
## Hewlett-Packard Company
## AlphaServer GS1280 7/1300

SPECompLpeak2001 = 376173

SPECompLbase2001 = 330239

SPEC license #1 HPG0009 | Tested by: Hewlett-Packard Company | Test site: Marlborough, MA | Test date: Aug-2004 | Hardware Avail: Aug-2004 | Software Avail: Jul-2004

| Benchmark | Reference Time | Base Runtime | Base Ratio | Peak Runtime | Peak Ratio |
|---|---|---|---|---|---|
| 311.wupwise_l | 9200 | 437 | 336838 | 280 | 525576 |
| 313.swim_l | 12500 | 225 | 890169 | 172 | 1160432 |
| 315.mgrid_l | 13500 | 370 | 583747 | 340 | 635698 |
| 317.applu_l | 13500 | 590 | 366290 | 621 | 347618 |
| 321.equake_l | 13000 | 2359 | 88170 | 1604 | 129685 |
| 325.apsi_l | 10500 | 799 | 210362 | 810 | 207344 |
| 327.gafort_l | 11000 | 628 | 280390 | 555 | 317340 |
| 329.fma3d_l | 23500 | 1866 | 201524 | 1916 | 196197 |
| 331.art_l | 25000 | 575 | 695233 | 598 | 668474 |




### Hardware

| | |
|---|---|
| CPU: | Alpha 21364 |
| CPU MHz: | 1300 |
| FPU: | Integrated |
| CPU(s) enabled: | 64 cores, 64 chips, 1 core/chip |
| CPU(s) orderable: | 2 to 64 |
| Primary Cache: | 64KB(I)+64KB(D) on chip |
| Secondary Cache: | 1.75MB on chip per core |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 2GB per core; 256MB RIMMs; 128GB total |
| Disk Subsystem: | 36GB Ultra 160 10KRPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| OpenMP Threads: | 64 |
| Parallel: | OpenMP |
| Operating System: | Tru64 UNIX V5.1B-1 + PK4 |
| Compiler: | HP Fortran V5.5A-3548-48D88<br>Compaq C V6.5-011-48C5K |
| File System: | UFS |
| System State: | Multi-user |

## Notes/Tuning Information

```
MP_STACK_SIZE=10000000
4Mb pages used (sysconfigtab)
no processor sets used

Tuning pseudo-switches:
   +BPD - Big page disable
   See the flags description or the configuration file
   for more details.

Base:
   Fortran: f90 -arch ev7 -fast -omp -O5
   C: cc -arch ev7 -fast -omp -O4
   alternate source purdue1 for 331.art_l
Peak:
All use  -arch host -omp ONESTEP
  Individual benchmark tuning:
   311.wupwise_l: f90 -arch host -omp -call_shared
       -inline all -unroll 12 -align commons
       +BPD

   313.swim_l: f90 -arch host -omp -fast -O5
       +BPD
   PTHREAD_CONFIG=feature=def-scs,d4-scs

   315.mgrid_l: f90 -arch host -omp -O5 -transform_loops
       -tune ev7 -unroll 8
```

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## Notes/Tuning Information (Continued)

```
        +BPD
    PTHREAD_CONFIG=feature=def-scs,d4-scs

    317.applu_l: f90 -arch host -omp -fast -O5 -unroll 14
    PTHREAD_CONFIG=feature=def-scs,d4-scs

    321.equake_l: cc -arch host -omp -fast -call_shared
        -O4 -ldensemalloc -assume restricted_pointers
        -inline speed -unroll 13
        +BPD
    PTHREAD_CONFIG=feature=def-scs,d4-scs

    325.apsi_l: f90 -arch host -omp -O5 -transform_loops
        -unroll 8
    PTHREAD_CONFIG=feature=def-scs,d4-scs

    327.gafort_l: f90 -arch host -omp -fast -O5
        -arch ev67 -tune ev67

    329.fma3d_l: f90 -arch host -omp -fast -O4
        -transform_loops
        +BPD
    PTHREAD_CONFIG=feature=def-scs,d4-scs

    331.art_l: cc -arch host -omp -assume whole_program
        -ldensemalloc -call_shared
        -assume restricted_pointers -fast -O4 -unroll 16
        -inline none
        +BPD
    alternate source purdue1

Information on UNIX V5.1B Patches can be found at
http://ftp1.service.digital.com/public/unix/v5.1/
```