# CFP2000 Result

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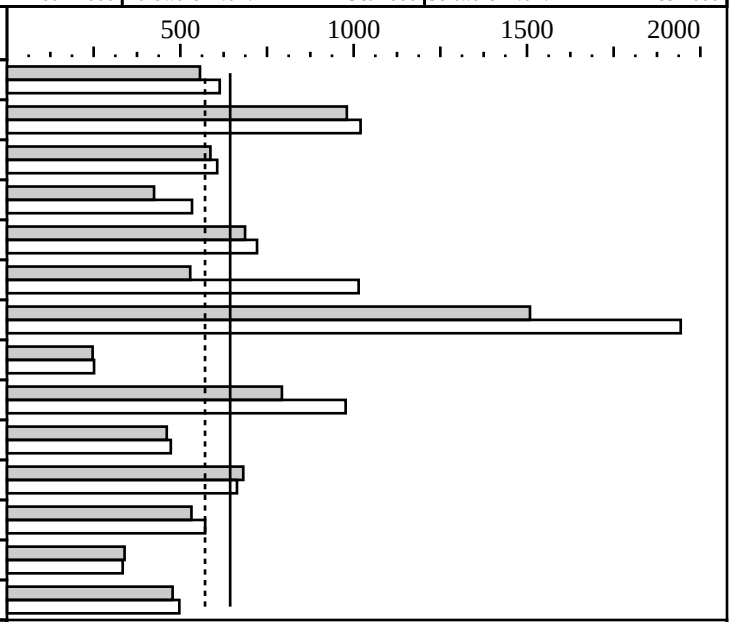
## Alpha Processor, Inc.
## API UP2000 833 MHz

SPECfp2000 = 644

SPECfp_base2000 = 571

SPEC license #: 537 | Tested by: API | Test date: Jun-2000 | Hardware Avail: Oct-2000 | Software Avail: Feb-2000

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|---|---|---|---|---|---|
| 168.wupwise | 1600 | 287 | 557 | 261 | 614 |
| 171.swim | 3100 | 316 | 980 | 304 | 1020 |
| 172.mgrid | 1800 | 307 | 587 | 297 | 606 |
| 173.applu | 2100 | 495 | 424 | 393 | 534 |
| 177.mesa | 1400 | 204 | 687 | 194 | 721 |
| 178.galgel | 2900 | 549 | 529 | 286 | 1014 |
| 179.art | 2600 | 172 | 1509 | 134 | 1943 |
| 183.equake | 1300 | 526 | 247 | 518 | 251 |
| 187.facerec | 1900 | 240 | 793 | 194 | 977 |
| 188.ammp | 2200 | 477 | 461 | 466 | 473 |
| 189.lucas | 2000 | 293 | 682 | 301 | 663 |
| 191.fma3d | 2100 | 395 | 532 | 367 | 572 |
| 200.sixtrack | 1100 | 324 | 339 | 330 | 334 |
| 301.apsi | 2600 | 544 | 478 | 523 | 497 |




### Hardware

| | |
|---|---|
| CPU: | Alpha 21264A |
| CPU MHz: | 833 |
| FPU: | Integrated |
| CPU(s) enabled: | 1 core, 1 chip, 1 core/chip |
| CPU(s) orderable: | 1 to 2 |
| Parallel: | No |
| Primary Cache: | 64KB(I)+64KB(D) on chip |
| Secondary Cache: | 8MB off chip |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 512 MB (8x64MB) |
| Disk Subsystem: | 1x9GB |
| Other Hardware: | Ethernet |

### Software

| | |
|---|---|
| Operating System: | Tru64 UNIX V4.0F<br>UNIX V4.0F Patch Kit 1 |
| Compiler: | Compaq C X6.2-259-449AT<br>Compaq Fortran V5.3<br>/usr/bin/f77: fort (not fort90)<br>KAP Fortran V4.2<br>KAP C 4.0 |
| File System: | ufs |
| System State: | Multi-user |

## Notes/Tuning Information

```
Tested by Alpha Processor, Inc.
 Baseline   C: cc   -arch ev6 -fast -O4 ONESTEP
      Fortran: kf90 -arch ev6 -O5 -fkapargs='-ur=-1' ONESTEP

 Peak: -v -g3 -arch ev6 -non_shared ONESTEP plus:
    168.wupwise: f77 -fast -O4 -pipeline -unroll 2
       171.swim: f90 -fast -O5 -transform_loops
      172.mgrid: kf77 -O5 -transform_loops -tune ev6 -unroll 8
      173.applu: f77 -fast -O5 -transform_loops -unroll 14
       177.mesa: cc -fast -O4
     178.galgel: kf90 -O4 -unroll 2 -ldxml
                 RM_SOURCES = lapak.f90
        179.art: kcc -fast -O4 -ckapargs='-arl=4 -ur=4' -unroll 10
     183.equake: kcc -fast -ckapargs='-arl=4' -xtaso_short
    187.facerec: f90 -fast -O4
       188.ammp: cc -fast -O4 -xtaso_short
      189.lucas: kf90 -fast -O5 -fkapargs='-ur=1' -unroll 1
```

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## Notes/Tuning Information (Continued)

```
      191.fma3d: kf90 -O4
   200.sixtrack: f90 -fast -O5 -transform_loops
       301.apsi: kf90 -O5 -transform_loops -unroll 8 -fkapargs='-ur=1'

Portability: galgel: -fixed

Information on UNIX V4.0F Patch Kit 1 is available at
http://ftp1.service.digital.com/public/unix/v4.0f/
```