



CFP2000 Result

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Compaq Computer Corporation AlphaServer ES40 Model 6/500

SPECfp2000 = 419
SPECfp_base2000 = 382

SPEC license #: 2 Tested by: Compaq NH Test date: Sep-2000 Hardware Avail: Apr-1999 Software Avail: Jul-2000

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | |
|----------------|----------------|--------------|------------|---------|-------|--|
| 168.wupwise | 1600 | 425 | 377 | 396 | 404 | |
| 171.swim | 3100 | 353 | 877 | 362 | 857 | |
| 172.mgrid | 1800 | 446 | 404 | 426 | 422 | |
| 173.applu | 2100 | 657 | 320 | 506 | 415 | |
| 177.mesa | 1400 | 333 | 421 | 320 | 438 | |
| 178.galgel | 2900 | 941 | 308 | 532 | 545 | |
| 179.art | 2600 | 341 | 762 | 286 | 910 | |
| 183.earthquake | 1300 | 701 | 185 | 705 | 184 | |
| 187.facerec | 1900 | 425 | 447 | 357 | 532 | |
| 188.ammpp | 2200 | 776 | 284 | 833 | 264 | |
| 189.lucas | 2000 | 372 | 538 | 384 | 521 | |
| 191.fma3d | 2100 | 546 | 385 | 518 | 406 | |
| 200.sixtrack | 1100 | 542 | 203 | 541 | 203 | |
| 301.apsi | 2600 | 758 | 343 | 737 | 353 | |

Hardware

CPU: Alpha 21264
CPU MHz: 500
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 1 core/chip
CPU(s) orderable: 1 to 4
Parallel: No
Primary Cache: 64KB(I)+64KB(D) on chip
Secondary Cache: 4MB off chip
L3 Cache: None
Other Cache: None
Memory: 16GB
Disk Subsystem: 1x18GB BD018122C0
Other Hardware: Ethernet

Software

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

Notes/Tuning Information

Baseline C: cc -arch ev6 -fast -O4 ONESTEP
Fortran: kf90 -arch ev6 -O5 -fkapargs='-ur=-1' ONESTEP

Peak: -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.earthquake: kcc -fast -ckapargs='-arl=4' -xtaso_short
187.facerec: f90 -fast -O4
188.ammpp: cc -fast -O4 -xtaso_short
189.lucas: kf90 -fast -O5 -fkapargs='-ur=1' -unroll 1
191.fma3d: kf90 -O4



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Notes/Tuning Information (Continued)

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

Portability: galgel: -fixed