CFP2000 Result

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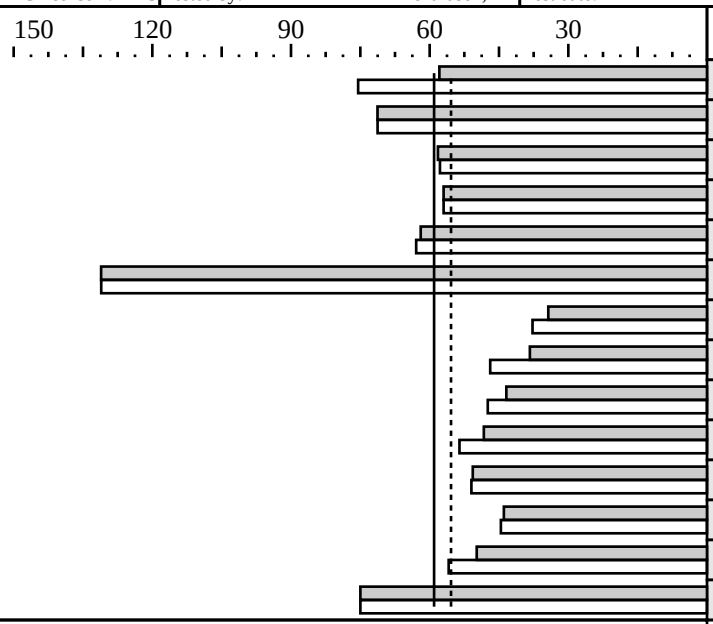
Hewlett-Packard Company

HP9000 Superdome 16-way (552MHz PA-8600)

SPECfp_rate2000 = 59.0

SPECfp_rate_base2000 = 55.4

SPEC license #: 3 | Tested by: HP Richardson, TX | Test date: Mar-2001 | Hardware Avail: May-2001 | Software Avail: Jul-2001



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	513	57.9	16	393	75.5
171.swim	16	807	71.3	16	807	71.3
172.mgrid	16	574	58.2	16	578	57.8
173.applu	16	684	57.0	16	684	57.0
177.mesa	16	420	61.9	16	413	62.9
178.galgel	16	411	131	16	411	131
179.art	16	1405	34.3	16	1278	37.7
183.equake	16	630	38.3	16	514	46.9
187.facerec	16	812	43.4	16	744	47.4
188.ammp	16	846	48.3	16	762	53.6
189.lucas	16	733	50.7	16	728	51.0
191.fma3d	16	887	43.9	16	874	44.6
200.sixtrack	16	410	49.8	16	365	55.9
301.apsi	16	644	75.0	16	644	75.0

Hardware

CPU:	PA-8600
CPU MHz:	552
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 1 core/chip
CPU(s) orderable:	2-16
Parallel:	No
Primary Cache:	0.5MBI + 1.0MBD on chip
Secondary Cache:	none
L3 Cache:	N/A
Other Cache:	N/A
Memory:	64GB
Disk Subsystem:	5x9GB Fiberchannel (striped) 1x9GB SCSI disk (root), 5x9GB FC disks (swap)
Other Hardware:	4 cells, 500MHz CEC

Software

Operating System:	HP-UX 11i Technical Computing OE
Compiler:	HP ANSI C 11.11.02 Fortran90 11.01.40
File System:	hfs
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags:
  178.galgel:  +source=fixed

Base Flags:
  f90: +O3 +Onofltacc -Wl,-a,archive -Wl,+FPD
  C:   +I/+P +O4 +Odataprefetch -Wl,-a,archive

Peak Flags:

  all:         -Wl,+FPD -Wl,-a,archive
  168.wupwise: +cat +O3 +Odataprefetch +Onofltacc
  171.swim:    +O3 +Onolimit +Oinline_budget=1000
  172.mgrid:   +O3 +Ocache_pad_common +Oloop_unroll=6
               +Oinline_budget=10
  173.applu:   basepeak=true
```

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Notes/Tuning Information (Continued)

```
  177.mesa:    +I/+P +Oall +Odataprefetch +Opromote_indirect_calls
  178.galgel:  +O3 +Oloop_unroll=2
  179.art:     +I/+P +Oall +Onodataprefetch +Onofltacc
               +Optrs_strongly_typed +Opromote_indirect_calls
  183.equake:  +O4 +Olibcalls +Odataprefetch +Optrs_strongly_typed
               +Opromote_indirect_calls
  187.facerec: +cat +O3 +Ofastaccess
  188.ammp:    +I/+P +Oall +Odataprefetch +Optrs_strongly_typed
               +Opromote_indirect_calls
  189.lucas:   +O3 +Onoinline
  191.fma3d:   +O3 +Onolimit
  200.sixtrack: +cat +O3 +Onolibcalls +Onolimit +Onoinline
                +Onodataprefetch
  301.apsi:    basepeak=true
  ONESTEP=true for 168.wupwise, 187.facerec, 200.sixtrack

System tunables:
vps_pagesize 4096, vps_ceiling 16384
dbc_min_pct 20, dbc_max_pct 20
maxdsiz 0x7b03a000, maxssiz 256000000
DataPrefetch enabled (boot time firmware tunable)
```