SPEC CPU®2026 Floating Point Speed Result

Quanta Cloud Technology

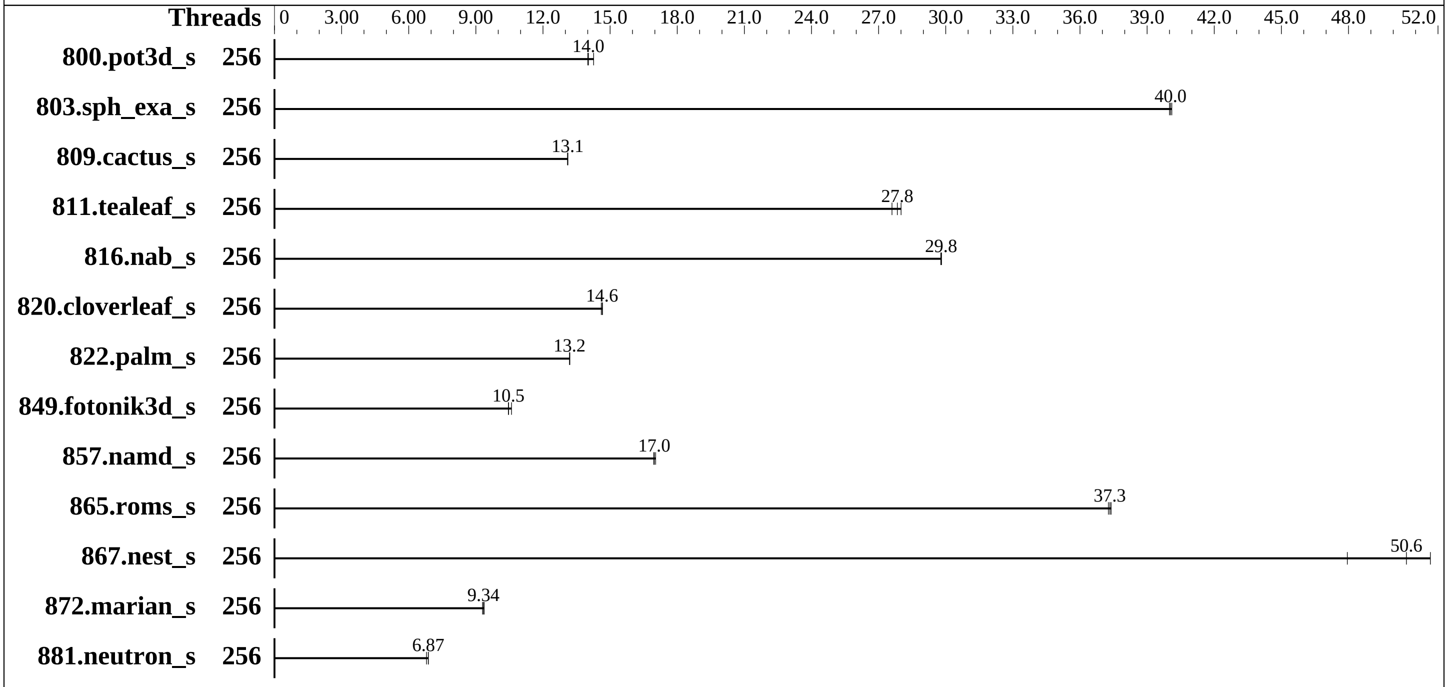
(Test Sponsor: Quanta Computer Inc.)

QuantaGrid D44N-1U
AMD EPYC 9755

SPECspeed®2026_fp_base = 18.3

SPECspeed®2026_fp_peak = Not Run

CPU2026 License:	9050	**Test Date:**	Jul-2026
Test Sponsor:	Quanta Computer Inc.	**Hardware Availability:**	Oct-2024
Tested by:	Quanta Computer Inc.	**Software Availability:**	Jul-2026



Hardware

CPU Name:	AMD EPYC 9755
Max MHz:	4100
Nominal:	2700
Enabled:	256 cores, 2 chips, 2 threads/core
Orderable:	1,2 chips
Cache L1:	32 KB I + 48 KB D on chip per core
L2:	1 MB I+D on chip per core
L3:	512 MB I+D on chip per chip, 32 MB shared / 8 cores
Other:	None
Memory:	2304 GB (24 x 96 GB 2Rx4 PC5-6400B-R)
Storage:	1 x3.84 TB NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	Ubuntu 24.04.3 LTS 6.8.0-136-generic
Compiler:	C/C++: Version 5.2.0 of AOCC Fortran: Flang v22
Compiler Category:	Vendor
Firmware:	Version 3B10 released Apr-2026
File System:	ext4
System State:	Run level 5 (graphical multi-user)
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other:	None
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage

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Results Table

	Base							Peak						
Benchmark	**Threads**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Threads**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
800.pot3d_s	256	47.2	14.3	**48.0**	**14.0**	48.1	14.0							
803.sph_exa_s	256	30.9	40.1	31.0	40.0	**30.9**	**40.0**							
809.cactus_s	256	**85.6**	**13.1**	85.7	13.1	85.6	13.1							
811.tealeaf_s	256	20.2	27.6	**20.0**	**27.8**	19.9	28.0							
816.nab_s	256	**37.8**	**29.8**	37.8	29.8	37.8	29.8							
820.cloverleaf_s	256	58.7	14.6	58.5	14.7	**58.5**	**14.6**							
822.palm_s	256	93.1	13.2	**93.1**	**13.2**	93.0	13.2							
849.fotonik3d_s	256	63.1	10.5	62.3	10.6	**63.1**	**10.5**							
857.namd_s	256	85.6	17.0	85.2	17.0	**85.5**	**17.0**							
865.roms_s	256	**29.2**	**37.3**	29.2	37.4	29.2	37.3							
867.nest_s	256	45.0	47.9	41.8	51.7	**42.7**	**50.6**							
872.marian_s	256	115	9.37	**116**	**9.34**	116	9.30							
881.neutron_s	256	120	6.79	119	6.88	**119**	**6.87**							

SPECspeed®2026_fp_base = 18.3

SPECspeed®2026_fp_peak = Not Run

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Notes

```
The AMD64 AOCC Compiler Suite is available at
http://developer.amd.com/amd-aocc/
Flang v22 is available at
https://flang.llvm.org/
```

Submit Notes

```
The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.
```

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size limit
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:
    numactl --physcpubind=0-15 runcpu <etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.
To free node-local memory and avoid remote memory usage,
```

(Continued on next page)

Operating System Notes (Continued)

```
'sysctl -w vm.zone_reclaim_mode=1' run as root.
To clear filesystem caches, 'sync; sysctl -w vm.drop_caches=3' run as root.
To disable address space layout randomization (ASLR) to reduce run-to-run
variability, 'sysctl -w kernel.randomize_va_space=0' run as root.

To enable Transparent Hugepages (THP) for all allocations,
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.

To disable Transparent Hugepages (THP) for 816.nab_s,865.roms_s=peak:
'echo never > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo never > /sys/kernel/mm/transparent_hugepage/defrag' run as root.
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
GOMP_CPU_AFFINITY = "0-511"
LD_LIBRARY_PATH =
     "/root/cpu2026/amd_speed_aocc520_znver5_A_lib/lib:/root/cpu2026/amd_spee
     d_aocc520_znver5_A_lib/lib32:/opt/AMD/aocc-compiler-5.2.0/ompd:/opt/AMD/
     aocc-compiler-5.2.0/lib:/opt/AMD/aocc-compiler-5.2.0/lib32:/usr/lib/x86_
     64-linux-gnu:/usr/lib64:/usr/lib32:/usr/lib:"
MALLOC_CONF = "retain:true"
OMP_THREAD_LIMIT = "512"
```

General Notes

```
Binaries were compiled on a system with an AMD EPYC 9754 CPU + 768 GiB Memory using Ubuntu 24.04
```

Platform Notes

```
 BIOS Configuration:
 ACPI CST C2 Latency set to 18
 NUMA nodes per socket set to NPS1
 Determinism Control is Manual
 Determinism Slider set to Power
 cTDP Control set to Manual
 cTDP set to 500
 PPT Control set to Manual
 PPT set to 500

 Sysinfo program /root/cpu2026/bin/sysinfo
 Rev: 779ab21020787073335a329f3a45e2cd
 running on quanta Fri Jul 31 12:27:12 2026
```

(Continued on next page)

Platform Notes (Continued)

```
SUT (System Under Test) info as seen by some common utilities.

------------------------------------------------------------
Table of contents
------------------------------------------------------------
 1. uname -srvm
 2. w
 3. Username
 4. ulimit -a
 5. sysinfo process ancestry
 6. /proc/cpuinfo
 7. lscpu
 8. numactl --hardware
 9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.16)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.8.0-136-generic #136-Ubuntu SMP PREEMPT_DYNAMIC Wed Jul  1 21:53:05 UTC 2026 x86_64

------------------------------------------------------------
2. w
   12:27:12 up  2:22,  3 users,  load average: 164.57, 79.68, 55.74
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  root              192.168.118.1    10:54    2:22m  0.00s  0.02s sshd: root@notty
  root              192.168.118.1    10:54    2:22m  0.00s  3.22s sshd: root@pts/0
  root     tty1     -                10:04    2:22m  5.10s  3.85s python3
  ./run_amd_speed_aocc520_znver5_A1.py

------------------------------------------------------------
3. Username
  From environment variable $USER:  root
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
4. ulimit -a
  time(seconds)        unlimited
  file(blocks)         unlimited
  data(kbytes)         unlimited
  stack(kbytes)        unlimited
  coredump(blocks)     0
  memory(kbytes)       unlimited
  locked memory(kbytes) 2048
  process              9285512
  nofiles              1024
  vmemory(kbytes)      unlimited
  locks                unlimited
  rtprio               0

------------------------------------------------------------
5. sysinfo process ancestry
 /sbin/init
 /bin/login -f --
 -bash
 python3 ./run_amd_speed_aocc520_znver5_A1.py
 runcpu --config amd_speed_aocc520_znver5_A1.cfg --tune base --reportable --iterations 3 fpspeed
 runcpu --configfile amd_speed_aocc520_znver5_A1.cfg --tune base --reportable --iterations 3 --nopower
   --runmode speed --tune base --size test:train:refspeed fpspeed --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2026.002/templogs/preenv.fpspeed.002.0.log --lognum 002.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /root/cpu2026

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9755 128-Core Processor
    vendor_id       : AuthenticAMD
    cpu family      : 26
    model           : 2
    stepping        : 1
    microcode       : 0xb002162
    bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
    TLB size        : 192 4K pages
    cpu cores       : 128
    siblings        : 256
    2 physical ids (chips)
    512 processors (hardware threads)
    physical id 0: core ids 0-127
    physical id 1: core ids 0-127
    physical id 0: apicids 0-255
    physical id 1: apicids 256-511
```

(Continued on next page)

Platform Notes (Continued)

```
 Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
 virtualized systems.  Use the above data carefully.

------------------------------------------------------------
7. lscpu

From lscpu from util-linux 2.39.3:
  Architecture:                        x86_64
  CPU op-mode(s):                      32-bit, 64-bit
  Address sizes:                       46 bits physical, 57 bits virtual
  Byte Order:                          Little Endian
  CPU(s):                              512
  On-line CPU(s) list:                 0-511
  Vendor ID:                           AuthenticAMD
  BIOS Vendor ID:                      Advanced Micro Devices, Inc.
  Model name:                          AMD EPYC 9755 128-Core Processor
  BIOS Model name:                     AMD EPYC 9755 128-Core Processor                Unknown CPU @
                                       2.7GHz
  BIOS CPU family:                     107
  CPU family:                          26
  Model:                               2
  Thread(s) per core:                  2
  Core(s) per socket:                  128
  Socket(s):                           2
  Stepping:                            1
  Frequency boost:                     enabled
  CPU(s) scaling MHz:                  66%
  CPU max MHz:                         4121.1909
  CPU min MHz:                         1500.0000
  BogoMIPS:                            5391.60
  Flags:                               fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                                       pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt
                                       pdpe1gb rdtscp lm constant_tsc rep_good amd_lbr_v2 nopl
                                       nonstop_tsc cpuid extd_apicid aperfmperf rapl pni pclmulqdq
                                       monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes
                                       xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy
                                       abm sse4a misalignsse 3dnowprefetch osvw ibs skinit wdt tce
                                       topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb
                                       cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2 ibrs ibpb stibp
                                       ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms
                                       invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
                                       clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
                                       xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
                                       user_shstk avx_vnni avx512_bf16 clzero irperf xsaveerptr rdpru
                                       wbnoinvd amd_ppin cppc amd_ibpb_ret arat npt lbrv svm_lock
                                       nrip_save tsc_scale vmcb_clean flushbyasid decodeassists
                                       pausefilter pfthreshold avic v_vmsave_vmload vgif x2avic
```

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Platform Notes (Continued)

```
                                          v_spec_ctrl vnmi avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes
                                          vpclmulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid
                                          bus_lock_detect movdiri movdir64b overflow_recov succor smca fsrm
                                          avx512_vp2intersect flush_l1d sev sev_es debug_swap
                                          srso_user_kernel_no
  Virtualization:                         AMD-V
  L1d cache:                              12 MiB (256 instances)
  L1i cache:                              8 MiB (256 instances)
  L2 cache:                               256 MiB (256 instances)
  L3 cache:                               1 GiB (32 instances)
  NUMA node(s):                           2
  NUMA node0 CPU(s):                      0-127,256-383
  NUMA node1 CPU(s):                      128-255,384-511
  Vulnerability Gather data sampling:     Not affected
  Vulnerability Indirect target selection: Not affected
  Vulnerability Itlb multihit:            Not affected
  Vulnerability L1tf:                     Not affected
  Vulnerability Mds:                      Not affected
  Vulnerability Meltdown:                 Not affected
  Vulnerability Mmio stale data:          Not affected
  Vulnerability Reg file data sampling:   Not affected
  Vulnerability Retbleed:                 Not affected
  Vulnerability Spec rstack overflow:     Not affected
  Vulnerability Spec store bypass:        Mitigation; Speculative Store Bypass disabled via prctl
  Vulnerability Spectre v1:               Mitigation; usercopy/swapgs barriers and __user pointer
                                          sanitization
  Vulnerability Spectre v2:               Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP
                                          always-on; PBRSB-eIBRS Not affected; BHI Not affected
  Vulnerability Srbds:                    Not affected
  Vulnerability Tsa:                      Not affected
  Vulnerability Tsx async abort:          Not affected
  Vulnerability Vmscape:                  Not affected

From lscpu --cache:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL  SETS PHY-LINE COHERENCY-SIZE
     L1d       48K      12M   12 Data            1    64        1             64
     L1i       32K       8M    8 Instruction     1    64        1             64
     L2         1M     256M   16 Unified         2  1024        1             64
     L3        32M       1G   16 Unified         3 32768        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0-127,256-383
  node 0 size: 1160488 MB
  node 0 free: 1155338 MB
```

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Platform Notes (Continued)

```
    node 1 cpus: 128-255,384-511
    node 1 size: 1161029 MB
    node 1 free: 1152098 MB
    node distances:
    node   0   1
      0:  10  32
      1:  32  10

  ------------------------------------------------------------
  9. /proc/meminfo
     MemTotal:       2377234900 kB

  ------------------------------------------------------------
  10. who -r
    run-level 5 Jul 31 10:04

  ------------------------------------------------------------
  11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.16)
    Default Target  Status
    graphical       running

  ------------------------------------------------------------
  12. Services, from systemctl list-unit-files
    STATE            UNIT FILES
    enabled          apparmor blk-availability cloud-init-local console-setup cron dmesg e2scrub_reap finalrd
                     getty@ grub-common ipmievd keyboard-setup lvm2-monitor multipathd networkd-dispatcher
                     open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb systemd-networkd
                     systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd tuned
                     ua-reboot-cmds ubuntu-advantage vgauth
    enabled-runtime  netplan-ovs-cleanup rc-local systemd-fsck-root systemd-remount-fs
    disabled         ModemManager apport cloud-config cloud-final cloud-init console-getty debug-shell
                     gpu-manager grub-initrd-fallback iscsid nftables powertop rpcbind rsync serial-getty@
                     snapd ssh sysstat systemd-boot-check-no-failures systemd-confext systemd-network-generator
                     systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code
                     systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy
                     systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysext
                     systemd-time-wait-sync thermald udisks2 ufw unattended-upgrades upower
    generated        openipmi
    indirect         systemd-sysupdate systemd-sysupdate-reboot uuidd
    masked           cryptdisks cryptdisks-early hwclock multipath-tools-boot nfs-common screen-cleanup sudo
                     x11-common

  ------------------------------------------------------------
  13. Linux kernel boot-time arguments, from /proc/cmdline
    BOOT_IMAGE=/boot/vmlinuz-6.8.0-136-generic
    root=UUID=d680ea38-6dda-4ab8-88d3-4f36bc5baa6c
    ro
```

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Platform Notes (Continued)

```
  amd_iommu=on
  iommu=pt

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 290:
    current policy: frequency should be within 1.50 GHz and 2.70 GHz.
                    The governor "performance" may decide which speed to use
                    within this range.
    boost state support:
      Supported: yes
      Active: yes
      Boost States: 0
      Total States: 3
      Pstate-P0:  2700MHz

------------------------------------------------------------
15. tuned-adm active
  Current active profile: throughput-performance

------------------------------------------------------------
16. sysctl
  kernel.numa_balancing               1
  kernel.randomize_va_space           0
  vm.compaction_proactiveness        20
  vm.dirty_background_bytes           0
  vm.dirty_background_ratio          10
  vm.dirty_bytes                      0
  vm.dirty_expire_centisecs        3000
  vm.dirty_ratio                      8
  vm.dirty_writeback_centisecs      500
  vm.dirtytime_expire_seconds     43200
  vm.extfrag_threshold              500
  vm.min_unmapped_ratio               1
  vm.nr_hugepages                     0
  vm.nr_hugepages_mempolicy           0
  vm.nr_overcommit_hugepages          0
  vm.swappiness                       1
  vm.watermark_boost_factor       15000
  vm.watermark_scale_factor          10
  vm.zone_reclaim_mode                1

------------------------------------------------------------
17. /sys/kernel/mm/transparent_hugepage
  defrag          [always] defer defer+madvise madvise never
  enabled         [always] madvise never
  hpage_pmd_size  2097152
```

(Continued on next page)

Platform Notes (Continued)

```
  shmem_enabled   always within_size advise [never] deny force

------------------------------------------------------------
18. /sys/kernel/mm/transparent_hugepage/khugepaged
  alloc_sleep_millisecs   60000
  defrag                      1
  max_ptes_none             511
  max_ptes_shared           256
  max_ptes_swap              64
  pages_to_scan            4096
  scan_sleep_millisecs    10000

------------------------------------------------------------
19. OS release
  From /etc/*-release /etc/*-version
  os-release Ubuntu 24.04.3 LTS

------------------------------------------------------------
20. Disk information
SPEC is set to: /root/cpu2026
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/nvme0n1p2 ext4  3.5T   57G  3.3T   2% /

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         Quanta Cloud Technology Inc.
    Product:        QuantaGrid D44N-1U

------------------------------------------------------------
22. dmidecode
  Additional information from dmidecode 3.5 follows.  WARNING: Use caution when you interpret this section.
  The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately
  determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the
  "DMTF SMBIOS" standard.
  Memory:
    8x Samsung M321RYGA0PB2-CCPEC 96 GB 2 rank 6400
    14x Samsung M321RYGA0PB2-CCPPC 96 GB 2 rank 6400
    2x Samsung M321RYGA0PB2-CCPWC 96 GB 2 rank 6400


------------------------------------------------------------
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       American Megatrends International, LLC.
   BIOS Version:      3B10.QCT301
   BIOS Date:         04/29/2026
   BIOS Revision:     5.35
```

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Platform Notes (Continued)

```
    Firmware Revision: 5.7
```

Compiler Version Notes

```
==============================================================================
C       | 811.tealeaf_s(base) 816.nab_s(base) 881.neutron_s(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.2.0-Build#2035 2026_04_10)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.2.0-4925-2035/bin
------------------------------------------------------------------------------

==============================================================================
C++     | 803.sph_exa_s(base) 857.namd_s(base) 867.nest_s(base)
        | 872.marian_s(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.2.0-Build#2035 2026_04_10)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.2.0-4925-2035/bin
------------------------------------------------------------------------------

==============================================================================
C++, C  | 809.cactus_s(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.2.0-Build#2035 2026_04_10)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.2.0-4925-2035/bin
------------------------------------------------------------------------------

==============================================================================
Fortran | 800.pot3d_s(base) 820.cloverleaf_s(base) 822.palm_s(base)
        | 849.fotonik3d_s(base) 865.roms_s(base)
------------------------------------------------------------------------------
flang version 22.1.0-rc2 (https://github.com/llvm/llvm-project
  a47b42eb9f9b302167b4fc413e6c92798d65dd0b)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/llvm/llvm-22.1.0-rc2/install/bin
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
`clang`

C++ benchmarks:
`clang++`

Fortran benchmarks:
`flang-22`

Benchmarks using both C and C++:
`clang++ clang`

Base Portability Flags

800.pot3d_s: -DSPEC_LP64
803.sph_exa_s: -DSPEC_LP64
809.cactus_s: -DSPEC_LP64
811.tealeaf_s: -DSPEC_LP64
816.nab_s: -DSPEC_LP64
820.cloverleaf_s: -DSPEC_LP64
822.palm_s: -DSPEC_LP64
849.fotonik3d_s: -DSPEC_LP64
857.namd_s: -DSPEC_LP64
865.roms_s: -DSPEC_LP64
867.nest_s: -fno-finite-math-only -DSPEC_LP64
872.marian_s: -DSPEC_LP64
881.neutron_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
```
-m64 -std=c18 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math -fremap-arrays -fstrip-mining
-fstruct-layout=7 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=50 -zopt
-mrecip=none -fopenmp -DSPEC_OPENMP -lamdalloc -lamdlibm
-fopenmp=libomp -lomp
```

C++ benchmarks:
```
-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -flto -march=znver5
```

(Continued on next page)

Base Optimization Flags (Continued)

C++ benchmarks (continued):
-fveclib=AMDLIBM -ffast-math -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -fopenmp -DSPEC_OPENMP
-pthread -lamdalloc -lamdlibm -fopenmp=libomp -lomp

Fortran benchmarks:
-m64 -std=f2018 -O3 -flto -march=znver5 -fveclib=AMDLIBM
-ffast-math -funroll-loops -DSPEC_OPENMP -fopenmp
-fdo-concurrent-to-openmp=host -lamdalloc -lamdlibm -fopenmp=libomp
-lomp

Benchmarks using both C and C++:
-m64 -std=c++17 -std=c18 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math -fremap-arrays -fstrip-mining
-fstruct-layout=7 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=50 -zopt
-mllvm -unroll-threshold=100 -mllvm -loop-unswitch-threshold=200000
-mrecip=none -fopenmp -DSPEC_OPENMP -pthread -lamdalloc -lamdlibm
-fopenmp=libomp -lomp

Base Other Flags

C benchmarks:
-Wno-return-type -Wno-unused-command-line-argument

Benchmarks using both C and C++:
-Wno-return-type -Wno-unused-command-line-argument

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-08-11.00.html
http://www.spec.org/cpu2026/results/flags/Quanta-Computer-Inc-amd-speccpu-setting-v1.1_AMD_Turin.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-08-11.00.xml
http://www.spec.org/cpu2026/results/flags/Quanta-Computer-Inc-amd-speccpu-setting-v1.1_AMD_Turin.xml

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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