SPEC CPU®2026 Floating Point Rate Result

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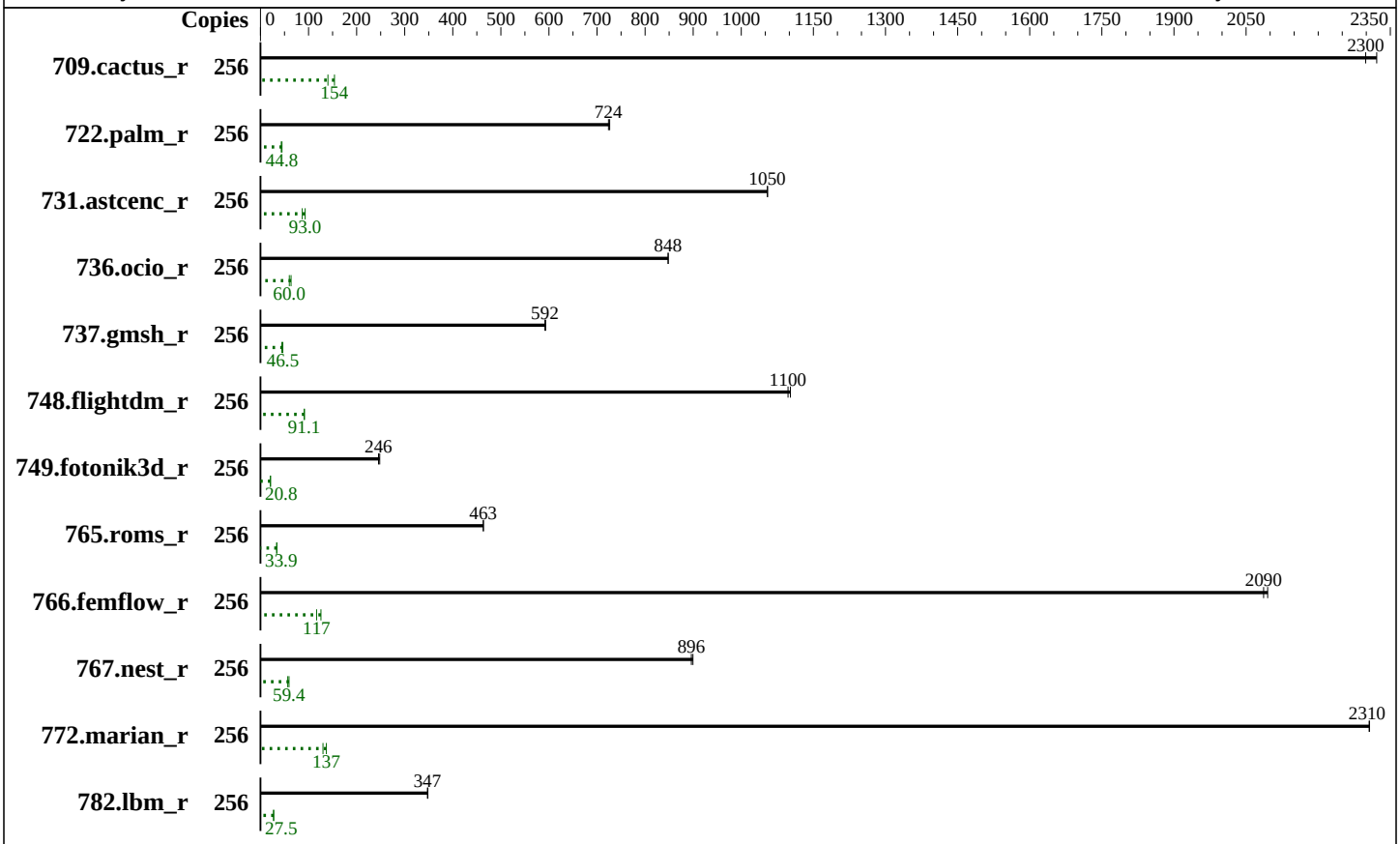
Dell Inc.

PowerEdge R7725 (AMD EPYC 9755 128-Core Processor)

SPECrate®2026_fp_base =	860
SPECrate®2026_fp_energy_base =	61.6
SPECrate®2026_fp_peak =	860
SPECrate®2026_fp_energy_peak =	61.6

CPU2026 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Feb-2026
Hardware Availability: Nov-2024
Software Availability: Jan-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:	1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	250 GB on tmpfs
Cooling:	Air
Other:	None

Software

OS:	Ubuntu 24.04 LTS 6.8.0-87-generic
Compiler:	C/C++/Fortran: Version 5.1.0 of AOCC
Compiler Category:	Vendor
Firmware:	Version 1.5.3 released Oct-2025
File System:	tmpfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	None
Power Management:	BIOS and OS set to balanced performance

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Power

Max. Power (W): 1614.0
Idle Power (W): 166.58
Min. Temperature (C): 21.31
Elevation (m): 255
Line Standard: 220 V / 50 Hz / 1 phase / 3 wires
Provisioning: Line-powered

Power Settings

Management FW: Version 1.20.80.50 of IDRAC
Memory Mode: Normal

Power-Relevant Hardware

Power Supply: 1 x 3200 W (non-redundant)
Details: 3200W Titanium Power supply DPN J0KHH
Backplane: 8 x EDSFF E3.S NVMe
Other Storage: 1 x NVMe E3 Drive
Storage Model #s: NVMe CD8P E3.S 1.92TB
NICs Installed: 1 x Intel E610-XT2 @ 10 Gbps (Dell P/N FC0HK)
NICs Enabled (FW/OS): 2 / 1
NICs Connected/Speed: 1 @ 10 Gb
Other HW Model #s: 6 x performance fans

Power Analyzer

Power Analyzer: 192.168.0.5:8888
Hardware Vendor: Yokogawa Meters and Instruments Corporation
Model: YokogawaWT310E
Serial Number: T11733386
Input Connection: Default
Metrology Institute: Tescom
Calibration By: NIST
Calibration Label: T126623
Calibration Date: 13-Aug-2025
PTDaemon® Version: 1.11.4 (5bcc369b; 2026-01-19)
Setup Description: Connected to PSU1
Current Ranges Used: 5A, 10A
Voltage Range Used: 300V

Temperature Meter

Temperature Meter: 192.168.0.5:8889
Hardware Vendor: Digi International Inc.
Model: DigiWATCHPORT_H
Serial Number: W13370940
Input Connection: USB
PTDaemon Version: 1.11.4 (5bcc369b; 2026-01-19)
Setup Description: 25 mm in front of SUT main airflow intake

Base Results Table

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
709.cactus_r	256	**95.6**	**2300**	**121**	**154**	**1270**	**1380**	94.6	2320	133	140	1410	1570						
722.palm_r	256	**467**	**724**	**641**	**44.8**	**1370**	**1550**	465	726	663	43.3	1430	1570						
731.astcenc_r	256	204	1050	206	86.9	1010	1220	**204**	**1050**	**193**	**93.0**	**946**	**1020**						
736.ocio_r	256	264	848	295	63.6	1120	1340	**264**	**848**	**312**	**60.0**	**1180**	**1460**						
737.gmsh_r	256	**199**	**592**	**212**	**46.5**	**1070**	**1310**	198	593	221	44.5	1120	1370						
748.flightdm_r	256	**167**	**1100**	**169**	**91.1**	**1010**	**1050**	166	1100	168	91.4	1010	1040						
749.fotonik3d_r	256	1193	248	1220	20.8	1020	1190	**1205**	**246**	**1220**	**20.8**	**1010**	**1180**						
765.roms_r	256	869	464	1040	33.8	1200	1390	**870**	**463**	**1040**	**33.9**	**1190**	**1400**						
766.femflow_r	256	179	2090	253	126	1410	1580	**180**	**2090**	**273**	**117**	**1510**	**1590**						
767.nest_r	256	**227**	**896**	**285**	**59.4**	**1260**	**1500**	226	900	298	56.7	1320	1460						
772.marian_r	256	175	2310	261	130	1490	1610	**175**	**2310**	**248**	**137**	**1410**	**1590**						

Table continues on next page. Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

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Test Date: Feb-2026
Hardware Availability: Nov-2024
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Base Results Table (Continued)

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
782.lbm_r	256	421	348	480	27.2	1140	1250	**422**	**347**	**474**	**27.5**	**1120**	**1230**						
SPECrate®2026_fp_base =			**860**																
SPECrate®2026_fp_energy_base =					**61.6**														

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

Peak Results Table

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
709.cactus_r	256	**95.6**	**2300**	**121**	**154**	**1270**	**1380**	94.6	2320	133	140	1410	1570						
722.palm_r	256	**467**	**724**	**641**	**44.8**	**1370**	**1550**	465	726	663	43.3	1430	1570						
731.astcenc_r	256	204	1050	206	86.9	1010	1220	**204**	**1050**	**193**	**93.0**	**946**	**1020**						
736.ocio_r	256	264	848	295	63.6	1120	1340	**264**	**848**	**312**	**60.0**	**1180**	**1460**						
737.gmsh_r	256	**199**	**592**	**212**	**46.5**	**1070**	**1310**	198	593	221	44.5	1120	1370						
748.flightdm_r	256	**167**	**1100**	**169**	**91.1**	**1010**	**1050**	166	1100	168	91.4	1010	1040						
749.fotonik3d_r	256	1193	248	1220	20.8	1020	1190	**1205**	**246**	**1220**	**20.8**	**1010**	**1180**						
765.roms_r	256	869	464	1040	33.8	1200	1390	**870**	**463**	**1040**	**33.9**	**1190**	**1400**						
766.femflow_r	256	179	2090	253	126	1410	1580	**180**	**2090**	**273**	**117**	**1510**	**1590**						
767.nest_r	256	**227**	**896**	**285**	**59.4**	**1260**	**1500**	226	900	298	56.7	1320	1460						
772.marian_r	256	175	2310	261	130	1490	1610	**175**	**2310**	**248**	**137**	**1410**	**1590**						
782.lbm_r	256	421	348	480	27.2	1140	1250	**422**	**347**	**474**	**27.5**	**1120**	**1230**						
SPECrate®2026_fp_peak =			**860**																
SPECrate®2026_fp_energy_peak =					**61.6**														

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/
```

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 --interleave=all runcpu <etc>
```

(Continued on next page)

Operating System Notes (Continued)

```
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,
'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.
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
     "/mnt/ramdisk/cpu2026rc2/amd_rate_aocc510_znver5_A_lib/lib:/mnt/ramdisk/
     cpu2026rc2/amd_rate_aocc510_znver5_A_lib/lib32:"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries were compiled on a system with 2x AMD EPYC Venice256 CPU + 2TiB Memory using Ubuntu 24.04
 Benchmark run from a 250 GB ramdisk created with the cmd: "mount -t tmpfs -o size=250G tmpfs /mnt/ramdisk"
```

Platform Notes

```
 BIOS Settings:
             DRAM Refresh Delay : Performance
  DIMM Self Healing on -
     Uncorrectable Memory Error : Disabled

      Virtualization Technology : Disabled
          NUMA Nodes per Socket : 4
               Custom cTDP      : 450
                 System Profile : Custom
                       C-States : Enabled
            Memory Patrol Scrub : Disabled
     PCI ASPM L1 Link -
               Power Management : Enabled
```

(Continued on next page)

Platform Notes (Continued)

```
Sysinfo program /mnt/ramdisk/cpu2026rc2/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on SLR7736-R7725 Fri Feb  6 19:40:25 2026

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 (255.4-1ubuntu8.8)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.8.0-87-generic #88-Ubuntu SMP PREEMPT_DYNAMIC Sat Oct 11 09:28:41 UTC 2025 x86_64

------------------------------------------------------------
2. w
   19:40:25 up  6:04,  3 users,  load average: 0.46, 11.22, 142.03
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root             192.168.0.6      19:35    6:04m  0.00s  0.11s sshd: root@notty
  root     tty2     -                16:32    3:04m  0.17s  0.04s -bash
  root     tty1     -                13:39   38.00s  3.45s  1.44s /bin/bash ./amd_rate_aocc510_znver5_A1.sh
```

(Continued on next page)

Platform Notes (Continued)

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

------------------------------------------------------------
4. ulimit -a
  time(seconds)        unlimited
  file(blocks)         unlimited
  data(kbytes)         unlimited
  stack(kbytes)        unlimited
  coredump(blocks)     0
  memory(kbytes)       unlimited
  locked memory(kbytes) 2097152
  process              6188453
  nofiles              1024
  vmemory(kbytes)      unlimited
  locks                unlimited
  rtprio               0

------------------------------------------------------------
5. sysinfo process ancestry
 /sbin/init
 /bin/login -p --
 -bash
 /bin/bash /home/DellFiles/bin/DELL_rate.sh
 /bin/bash /home/DellFiles/bin/dell-run-main.sh rate
 /bin/bash /home/DellFiles/bin/dell-run-main.sh rate
 /bin/bash /home/DellFiles/bin/AMD/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format
   html,pdf,txt
 python3 ./run_amd_rate_aocc510_znver5_A1.py
 /bin/bash ./amd_rate_aocc510_znver5_A1.sh
 runcpu --config amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 2 --define
   DL-VERS=7.0_T01 --output_format html,pdf,txt fprate
 runcpu --configfile amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 2 --define
   DL-VERS=7.0_T01 --output_format html,pdf,txt --runmode rate --tune base --size test:train:refrate fprate
   --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2026.001/templogs/preenv.fprate.001.0.log --lognum 001.0
   --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2026rc2

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9755 128-Core Processor
    vendor_id       : AuthenticAMD
```

(Continued on next page)

Platform Notes (Continued)

```
     cpu family      : 26
     model           : 2
     stepping        : 1
     microcode       : 0xb00215a
     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
   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:                        52 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:                       AMD
   Model name:                           AMD EPYC 9755 128-Core Processor
   BIOS Model name:                    AMD EPYC 9755 128-Core Processor                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
   CPU(s) scaling MHz:                   60%
   CPU max MHz:                          2700.0000
   CPU min MHz:                          1500.0000
   BogoMIPS:                             5392.51
   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
```

(Continued on next page)

Platform Notes (Continued)

```
                      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 cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2 ibrs
                       ibpb stibp ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2 smep
                       bmi2 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 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 avx512_vp2intersect
                                flush_l1d debug_swap
  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):                   8
  NUMA node0 CPU(s):              0-31,256-287
  NUMA node1 CPU(s):              32-63,288-319
  NUMA node2 CPU(s):              64-95,320-351
  NUMA node3 CPU(s):              96-127,352-383
  NUMA node4 CPU(s):              128-159,384-415
  NUMA node5 CPU(s):              160-191,416-447
  NUMA node6 CPU(s):              192-223,448-479
  NUMA node7 CPU(s):              224-255,480-511
  Vulnerability Gather data sampling:   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; RSB filling; PBRSB-eIBRS Not affected; BHI Not affected
  Vulnerability Srbds:                  Not affected
```

(Continued on next page)

Platform Notes (Continued)

```
  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: 8 nodes (0-7)
  node 0 cpus: 0-31,256-287
  node 0 size: 192729 MB
  node 0 free: 179109 MB
  node 1 cpus: 32-63,288-319
  node 1 size: 193510 MB
  node 1 free: 192800 MB
  node 2 cpus: 64-95,320-351
  node 2 size: 193510 MB
  node 2 free: 192834 MB
  node 3 cpus: 96-127,352-383
  node 3 size: 193450 MB
  node 3 free: 192709 MB
  node 4 cpus: 128-159,384-415
  node 4 size: 193510 MB
  node 4 free: 192797 MB
  node 5 cpus: 160-191,416-447
  node 5 size: 193510 MB
  node 5 free: 192718 MB
  node 6 cpus: 192-223,448-479
  node 6 size: 193510 MB
  node 6 free: 192782 MB
  node 7 cpus: 224-255,480-511
  node 7 size: 193459 MB
  node 7 free: 192502 MB
  node distances:
  node   0   1   2   3   4   5   6   7
    0:  10  12  12  12  32  32  32  32
    1:  12  10  12  12  32  32  32  32
    2:  12  12  10  12  32  32  32  32
    3:  12  12  12  10  32  32  32  32
    4:  32  32  32  32  10  12  12  12
```

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Platform Notes (Continued)

```
     5:  32  32  32  32  12  10  12  12
     6:  32  32  32  32  12  12  10  12
     7:  32  32  32  32  12  12  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1584323048 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 6 13:36

------------------------------------------------------------
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)
  Default Target  Status
  multi-user      running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          apparmor apport blk-availability cloud-config cloud-final cloud-init cloud-init-local
                   console-setup cron e2scrub_reap finalrd getty@ gpu-manager grub-common
                   grub-initrd-fallback keyboard-setup lm-sensors lvm2-monitor multipathd networkd-dispatcher
                   open-iscsi pollinate secureboot-db setvtrgb systemd-networkd systemd-networkd-wait-online
                   systemd-pstore systemd-resolved systemd-timesyncd thermald
  enabled-runtime  netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
  disabled         console-getty debug-shell iscsid serial-getty@ ssh 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 upower
  indirect         systemd-sysupdate systemd-sysupdate-reboot
  masked           cryptdisks cryptdisks-early hwclock multipath-tools-boot sudo x11-common

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.8.0-87-generic
  root=UUID=a7565640-059d-4a86-afc8-58cd1cadb778
  ro

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 280:
    current policy: frequency should be within 1.50 GHz and 2.70 GHz.
```

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Platform Notes (Continued)

```
                    The governor "schedutil" may decide which speed to use
                    within this range.
      boost state support:
        Supported: no
        Active: no
        Boost States: 0
        Total States: 3
        Pstate-P0:  2700MHz

 ------------------------------------------------------------
 15. 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

 ------------------------------------------------------------
 16. /sys/kernel/mm/transparent_hugepage
   defrag          [always] defer defer+madvise madvise never
   enabled         [always] madvise never
   hpage_pmd_size  2097152
   shmem_enabled   always within_size advise [never] deny force

 ------------------------------------------------------------
 17. /sys/kernel/mm/transparent_hugepage/khugepaged
   alloc_sleep_millisecs   60000
   defrag                      1
   max_ptes_none             511
   max_ptes_shared           256
   max_ptes_swap              64
```

(Continued on next page)

Platform Notes (Continued)

```
   pages_to_scan             4096
   scan_sleep_millisecs     10000

 ------------------------------------------------------------
 18. OS release
   From /etc/*-release /etc/*-version
   os-release Ubuntu 24.04 LTS

 ------------------------------------------------------------
 19. Disk information
 SPEC is set to: /mnt/ramdisk/cpu2026rc2
   Filesystem     Type   Size  Used Avail Use% Mounted on
   tmpfs          tmpfs  250G   11G  240G   5% /mnt/ramdisk

 ------------------------------------------------------------
 20. /sys/devices/virtual/dmi/id
     Vendor:          Dell Inc.
     Product:         PowerEdge R7725
     Product Family: PowerEdge
     Serial:          SLR7736

 ------------------------------------------------------------
 21. 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:
      24x 80AD000080AD HMCG94AHBRA277N 64 GB 2 rank 6400


 ------------------------------------------------------------
 22. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       Dell Inc.
    BIOS Version:      1.5.3
    BIOS Date:         10/29/2025
    BIOS Revision:     1.5
```

Compiler Version Notes

```
==============================================================================
C       | 782.lbm_r(base)
------------------------------------------------------------------------------
```

(Continued on next page)

Compiler Version Notes (Continued)

```
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------

==============================================================================
C++     | 731.astcenc_r(base) 736.ocio_r(base) 748.flightdm_r(base)
        | 766.femflow_r(base) 767.nest_r(base) 772.marian_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------

==============================================================================
C++, C  | 709.cactus_r(base) 737.gmsh_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------

==============================================================================
Fortran | 722.palm_r(base) 749.fotonik3d_r(base) 765.roms_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

(Continued on next page)

Base Compiler Invocation (Continued)

Fortran benchmarks:
flang

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

Base Portability Flags

709.cactus_r: -DSPEC_LP64
722.palm_r: -DSPEC_LP64
731.astcenc_r: -DSPEC_LP64
736.ocio_r: -fno-finite-math-only -DSPEC_LP64
737.gmsh_r: -fno-fast-math -DSPEC_LP64
748.flightdm_r: -fno-reciprocal-math -DSPEC_LP64
749.fotonik3d_r: -DSPEC_LP64
765.roms_r: -DSPEC_LP64
766.femflow_r: -DSPEC_LP64
767.nest_r: -fno-finite-math-only -DSPEC_LP64
772.marian_r: -DSPEC_LP64
782.lbm_r: -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
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-ffast-math -O3 -march=znver5 -fveclib=AMDLIBM -fno-PIE -no-pie
-flto -fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lamdalloc
-lflang

C++ benchmarks:
-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner
-ffast-math -O3 -march=znver5 -fveclib=AMDLIBM -flto
-mllvm -unroll-threshold=100 -mllvm -loop-unswitch-threshold=200000

(Continued on next page)

Base Optimization Flags (Continued)

C++ benchmarks (continued):
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lamdalloc
-lflang

Fortran benchmarks:
-m64 -Mstandard -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-enable-X86-prefetching
-Wl,-mllvm -Wl,-enable-aggressive-gather=true
-Wl,-mllvm -Wl,-enable-masked-gather-sequence=false -ffast-math -O3
-march=znver5 -fveclib=AMDLIBM -flto -Mrecursive -funroll-loops
-mllvm -lsr-in-nested-loop -mllvm -reduce-array-computations=3
-fepilog-vectorization-of-inductions -zopt -lamdlibm -lamdalloc
-lflang

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
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner
-ffast-math -O3 -march=znver5 -fveclib=AMDLIBM -fno-PIE -no-pie
-flto -fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000 -lamdlibm -lamdalloc -lflang

Peak Optimization Flags

C benchmarks:

782.lbm_r: basepeak = yes

C++ benchmarks:

731.astcenc_r: basepeak = yes

736.ocio_r: basepeak = yes

748.flightdm_r: basepeak = yes

766.femflow_r: basepeak = yes

(Continued on next page)

Peak Optimization Flags (Continued)

767.nest_r: `basepeak = yes`

772.marian_r: `basepeak = yes`

Fortran benchmarks:

722.palm_r: `basepeak = yes`

749.fotonik3d_r: `basepeak = yes`

765.roms_r: `basepeak = yes`

Benchmarks using both C and C++:

709.cactus_r: `basepeak = yes`

737.gmsh_r: `basepeak = yes`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.html`
`http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.xml`
`http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.xml`

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