



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

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

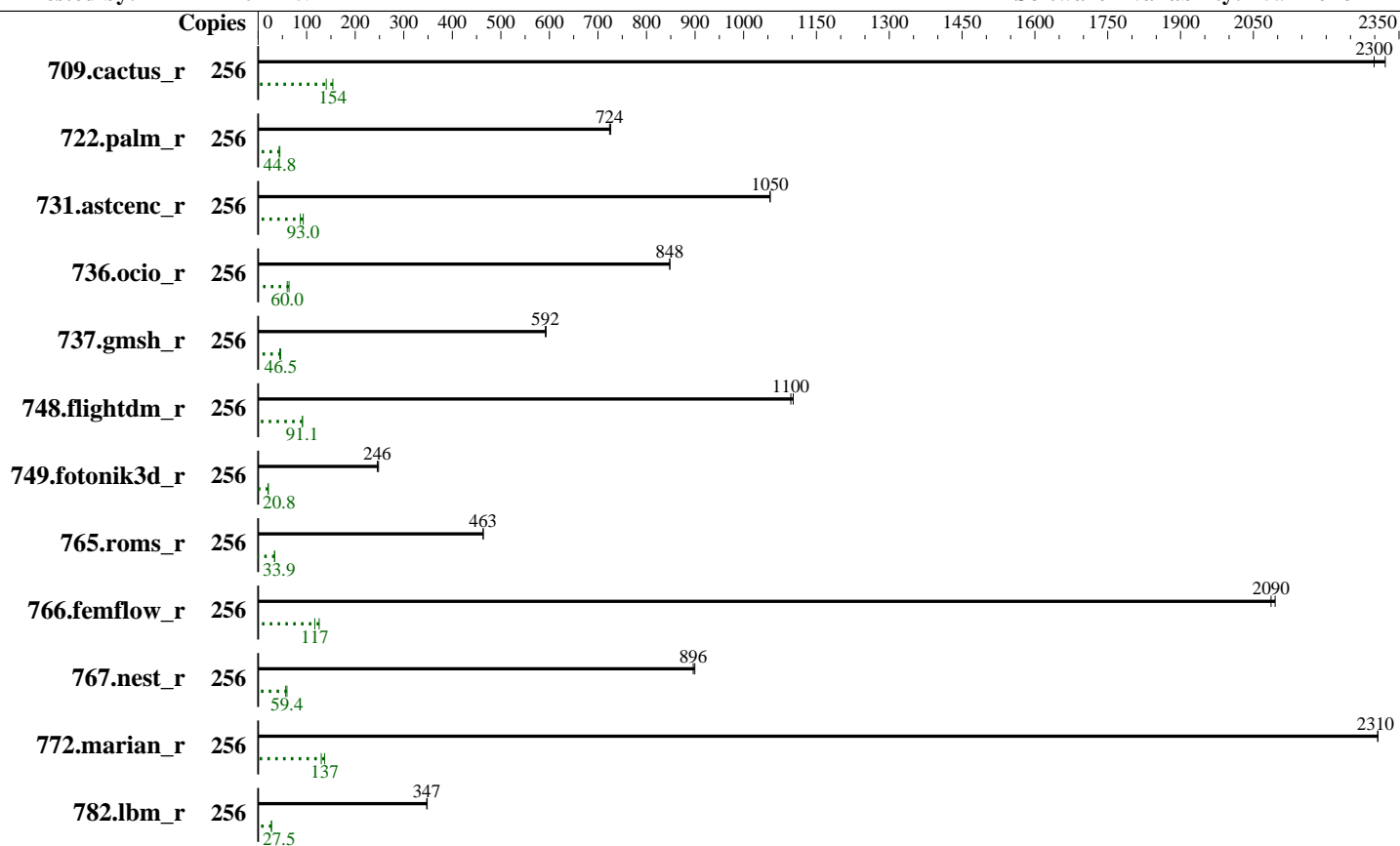
Test Sponsor: Dell Inc.

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 #: NVMe CD8P E3.S 1.92TB
NICs Installed: 1 x Intel E610-XT2 @ 10 Gbps (Dell P/N FCOHK)
NICs Enabled (FW/OS): 2 / 1
NICs Connected/Speed: 1 @ 10 Gb
Other HW Model #: 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.ascenc_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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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	<u>422</u>	<u>347</u>	<u>474</u>	<u>27.5</u>	<u>1120</u>	<u>1230</u>						

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

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>

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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

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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      tty2    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
```

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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-specpcpu.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
```

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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

```

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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 bmil 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 vnni
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_lld 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; PBRSE-eIBRS Not affected; BHI Not affected
Vulnerability Srbds: Not affected

```

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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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SPEC CPU®2026 Floating Point Rate Result

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 SPECrate®2026_fp_peak = 860
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CPU2026 License: 6573
 Test Sponsor: Dell Inc.
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Test Date: Feb-2026
 Hardware Availability: Nov-2024
 Software Availability: Jan-2026

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
```

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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 HMC94AHBRA277N 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)
-----
```

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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++

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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.ascenc_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

```

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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

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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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