SPEC CPU®2026 Floating Point Rate Result

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Compal Electronics, Inc.

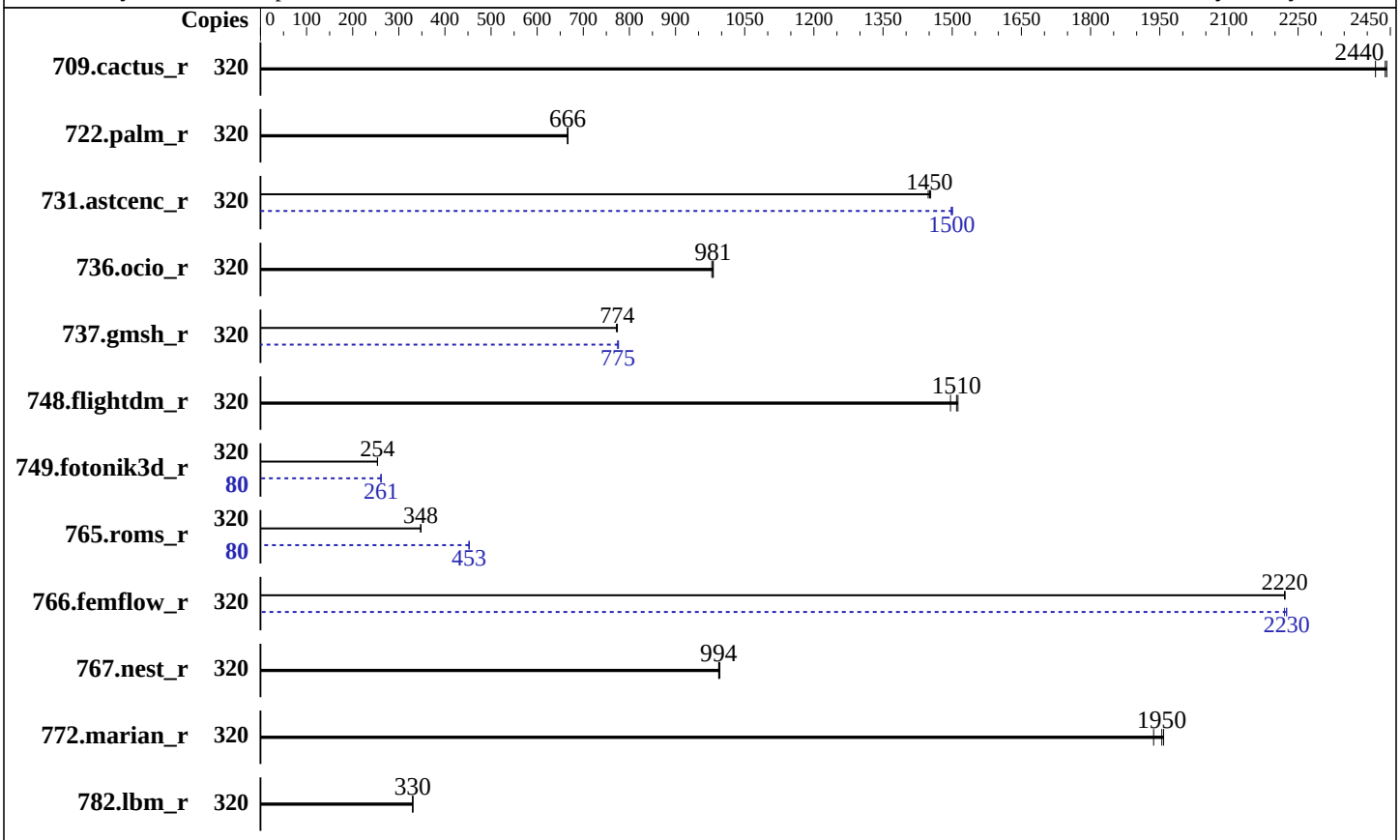
SR224-2A
AMD EPYC 9845

SPECrate®2026_fp_base = 914

SPECrate®2026_fp_peak = 939

CPU2026 License: 6857
Test Sponsor: Compal Electronics, Inc.
Tested by: Compal Electronics, Inc.

Test Date: Jul-2026
Hardware Availability: Jul-2025
Software Availability: May-2026



Hardware

CPU Name:	AMD EPYC 9845
Max MHz:	3700
Nominal:	2100
Enabled:	320 cores, 2 chips
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:	320 MB I+D on chip per chip, 32 MB shared / 16 cores
Other:	None
Memory:	3 TB (24 x 128 GB 2Rx4 PC5-6400B-R)
Storage:	1x3.84TB M.2 NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	SUSE Linux Enterprise Server 15 SP6 kernel version 6.4.0-150600.21-default
Compiler:	C/C++/Fortran: Version 5.2.0 of AOCC
Compiler Category:	Vendor
Firmware:	American Megatrends Version 10.28.00 released Jan-2026
File System:	btrfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc: jemalloc memory allocator library v5.3.1
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	320	112	2440	114	2420	**113**	**2440**	320	112	2440	114	2420	**113**	**2440**
722.palm_r	320	634	667	**634**	**666**	635	666	320	634	667	**634**	**666**	635	666
731.astcenc_r	320	186	1450	185	1450	**185**	**1450**	320	179	1500	**179**	**1500**	179	1500
736.ocio_r	320	286	979	285	982	**285**	**981**	320	286	979	285	982	**285**	**981**
737.gmsh_r	320	**190**	**774**	190	774	190	772	320	**189**	**775**	189	776	190	774
748.flightdm_r	320	**152**	**1510**	153	1500	151	1510	320	**152**	**1510**	153	1500	151	1510
749.fotonik3d_r	320	**1458**	**254**	1457	254	1458	254	80	**354**	**261**	354	262	354	261
765.roms_r	320	1450	347	**1450**	**348**	1449	348	80	**278**	**453**	279	452	278	453
766.femflow_r	320	211	2220	**211**	**2220**	211	2220	320	**211**	**2230**	211	2230	211	2220
767.nest_r	320	255	996	**255**	**994**	255	994	320	255	996	**255**	**994**	255	994
772.marian_r	320	261	1940	**259**	**1950**	258	1960	320	261	1940	**259**	**1950**	258	1960
782.lbm_r	320	**555**	**330**	556	330	555	330	320	**555**	**330**	556	330	555	330

SPECrate®2026_fp_base = 914

SPECrate®2026_fp_peak = 939

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>

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.
```

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Operating System Notes (Continued)

```
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 =
     "/cpu2026/amd_rate_aocc520_znver5_A_lib/lib:/cpu2026/amd_rate_aocc520_zn
     ver5_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
jemalloc: configured and built with GCC v15.2.0 in Ubuntu 24.04 (No options specified)
jemalloc 5.3.1 is available here:
https://github.com/jemalloc/jemalloc/releases/tag/5.3.1
```

Platform Notes

```
BIOS settings:
 TDP: 400
 Determinism Enable: Power
 PPT: 400
 NUMA Nodes Per Socket: NPS2
 SMT Control : Disable
 Power Profile Selection : High Performance Mode
 ACPI CST C2 Latency : 18
 DF Cstates: Disable
 DRAM Scrub Time: Disable
 Global C-state Control: Disable
 L1 Stream HW Prefetcher: Disable
 L2 Stream HW Prefetcher: Disable

 Sysinfo program /cpu2026/bin/sysinfo
 Rev: 779ab21020787073335a329f3a45e2cd
 running on localhost Wed Jul  8 10:01:05 2026

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

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
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 254 (254.10+suse.84.ge8d77af424)
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 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09) x86_64

------------------------------------------------------------
2. w
   10:01:05 up 3 min,  2 users,  load average: 0.25, 0.09, 0.03
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     pts/0    192.168.68.2     09:58   18.00s 12.07s 10.91s python3 ./run_amd_rate_aocc520_znver5_A1.py

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

------------------------------------------------------------
4. ulimit -a
  core file size          (blocks, -c) unlimited
  data seg size           (kbytes, -d) unlimited
  scheduling priority             (-e) 0
  file size               (blocks, -f) unlimited
```

(Continued on next page)

Platform Notes (Continued)

```
   pending signals                 (-i) 12381202
   max locked memory       (kbytes, -l) 2048
   max memory size         (kbytes, -m) unlimited
   open files                      (-n) 1024
   pipe size            (512 bytes, -p) 8
   POSIX message queues     (bytes, -q) 819200
   real-time priority              (-r) 0
   stack size              (kbytes, -s) unlimited
   cpu time               (seconds, -t) unlimited
   max user processes              (-u) 12381202
   virtual memory          (kbytes, -v) unlimited
   file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
 sshd: root [priv]
 sshd: root@pts/0
 -bash
 python3 ./run_amd_rate_aocc520_znver5_A1.py
 runcpu --config amd_rate_aocc520_znver5_A1.cfg --tune all --reportable --iterations 3 fprate
 runcpu --configfile amd_rate_aocc520_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
   --runmode rate --tune base:peak --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 = /cpu2026

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9845 160-Core Processor
    vendor_id       : AuthenticAMD
    cpu family      : 26
    model           : 17
    stepping        : 0
    microcode       : 0xb101054
    bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
    TLB size        : 192 4K pages
    cpu cores       : 160
    siblings        : 160
    2 physical ids (chips)
    320 processors (hardware threads)
    physical id 0: core ids 0-159
    physical id 1: core ids 0-159
    physical id 0: apicids 0-159
    physical id 1: apicids 256-415
  Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
```

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Platform Notes (Continued)

```
  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):                               320
  On-line CPU(s) list:                  0-319
  Vendor ID:                            AuthenticAMD
  BIOS Vendor ID:                       Advanced Micro Devices, Inc.
  Model name:                           AMD EPYC 9845 160-Core Processor
  BIOS Model name:                      AMD EPYC 9845 160-Core Processor             Unknown CPU @ 2.1GHz
  BIOS CPU family:                      107
  CPU family:                           26
  Model:                                17
  Thread(s) per core:                   1
  Core(s) per socket:                   160
  Socket(s):                            2
  Stepping:                             0
  Frequency boost:                      enabled
  CPU(s) scaling MHz:                   100%
  CPU max MHz:                          3718.0000
  CPU min MHz:                          1200.0000
  BogoMIPS:                             4193.71
  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 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 fsrm avx512_vp2intersect
```

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Platform Notes (Continued)

```
                                    flush_l1d debug_swap
  Virtualization:                   AMD-V
  L1d cache:                        15 MiB (320 instances)
  L1i cache:                        10 MiB (320 instances)
  L2 cache:                         320 MiB (320 instances)
  L3 cache:                         640 MiB (20 instances)
  NUMA node(s):                     4
  NUMA node0 CPU(s):                0-79
  NUMA node1 CPU(s):                80-159
  NUMA node2 CPU(s):                160-239
  NUMA node3 CPU(s):                240-319
  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
                                    disabled; RSB filling; PBRSB-eIBRS Not affected; BHI Not affected
  Vulnerability Srbds:                  Not affected
  Vulnerability Tsx async abort:        Not affected

From lscpu --cache:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL  SETS PHY-LINE COHERENCY-SIZE
     L1d       48K      15M   12 Data            1    64        1             64
     L1i       32K      10M    8 Instruction     1    64        1             64
     L2         1M     320M   16 Unified         2  1024        1             64
     L3        32M     640M   16 Unified         3 32768        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0-79
  node 0 size: 773546 MB
  node 0 free: 771888 MB
  node 1 cpus: 80-159
  node 1 size: 774084 MB
  node 1 free: 772010 MB
  node 2 cpus: 160-239
  node 2 size: 774122 MB
  node 2 free: 773596 MB
```

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Platform Notes (Continued)

```
  node 3 cpus: 240-319
  node 3 size: 773575 MB
  node 3 free: 773051 MB
  node distances:
  node   0   1   2   3
    0:  10  12  32  32
    1:  12  10  32  32
    2:  32  32  10  12
    3:  32  32  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       3169617284 kB

------------------------------------------------------------
10. who -r
  run-level 3 Jul 8 09:57

------------------------------------------------------------
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
  Default Target  Status
  multi-user      running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          ModemManager NetworkManager NetworkManager-dispatcher YaST2-Firstboot YaST2-Second-Stage
                    apparmor appstream-sync-cache auditd bluetooth chronyd cron display-manager getty@
                   irqbalance issue-generator kbdsettings kdump kdump-early kdump-notify klog lvm2-monitor
                    nscd nvmefc-boot-connections nvmf-autoconnect postfix purge-kernels rollback rsyslog
                       smartd sshd systemd-pstore wpa_supplicant
  enabled-runtime  systemd-remount-fs
  disabled         NetworkManager-wait-online accounts-daemon autofs autoyast-initscripts blk-availability
                   bluetooth-mesh boot-sysctl ca-certificates chrony-wait console-getty cups cups-browsed
                   debug-shell dnsmasq ebtables exchange-bmc-os-info firewalld fsidd gpm grub2-once haveged
                    hwloc-dump-hwdata ipmi ipmievd issue-add-ssh-keys kexec-load lunmask man-db-create
                   multipathd nfs nfs-blkmap nmb ostree-remount rpcbind rpmconfigcheck rsyncd rtkit-daemon
                      serial-getty@ smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd
                   systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext
                   systemd-time-wait-sync systemd-timesyncd udisks2 update-system-flatpaks upower vncserver@
                     wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant@
  indirect           systemd-userdbd wickedd

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
  root=UUID=c2975461-237c-45df-8db4-1eb474e4f6c1
```

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Platform Notes (Continued)

```
   splash=silent
   mitigations=auto
   quiet
   security=apparmor
   crashkernel=384M,high
   crashkernel=72M,low
   amd_pstate=passive

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 25:
    current policy: frequency should be within 1.20 GHz and 3.72 GHz.
                    The governor "performance" may decide which speed to use
                    within this range.
    boost state support:
      Supported: yes
      Active: yes

------------------------------------------------------------
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
```

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Platform Notes (Continued)

```
------------------------------------------------------------
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
  pages_to_scan            4096
  scan_sleep_millisecs    10000

------------------------------------------------------------
18. OS release
  From /etc/*-release /etc/*-version
  os-release SUSE Linux Enterprise Server 15 SP6

------------------------------------------------------------
19. Disk information
SPEC is set to: /cpu2026
  Filesystem     Type   Size  Used Avail Use% Mounted on
  /dev/nvme0n1p2 btrfs  1.5T   51G  1.5T   4% /

------------------------------------------------------------
20. /sys/devices/virtual/dmi/id
    Vendor:         COMPAL
    Product:        COMPAL SERVER
    Product Family: COMPAL
    Serial:         7901567500001

------------------------------------------------------------
21. dmidecode
  Additional information from dmidecode 3.4 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 Micron Technology MTC40F2047S1RC64BB1 MXCC 128 GB 2 rank 6400


------------------------------------------------------------
22. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       American Megatrends International, LLC.
   BIOS Version:      10.28.00
   BIOS Date:         01/29/2026
   BIOS Revision:     5.35
```

Compiler Version Notes

```
==============================================================================
C       | 782.lbm_r(base, peak)
------------------------------------------------------------------------------
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++     | 731.astcenc_r(base, peak) 736.ocio_r(base, peak)
        | 748.flightdm_r(base, peak) 766.femflow_r(base, peak)
        | 767.nest_r(base, peak) 772.marian_r(base, peak)
------------------------------------------------------------------------------
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  | 709.cactus_r(base, peak) 737.gmsh_r(base, peak)
------------------------------------------------------------------------------
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 | 722.palm_r(base, peak) 749.fotonik3d_r(base, peak) 765.roms_r(base,
        | peak)
------------------------------------------------------------------------------
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
------------------------------------------------------------------------------
```

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

736.ocio_r: -fno-finite-math-only
737.gmsh_r: -fno-fast-math
748.flightdm_r: -fno-reciprocal-math
767.nest_r: -fno-finite-math-only

Base Optimization Flags

C benchmarks:
-std=c18 -no-pie -Wl,-mllvm -Wl,-inline-threshold=1500 -fstrip-mining
-O3 -march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt
-ffast-math -fremap-arrays -mllvm -inline-threshold=1500 -ljemalloc
-lamdlibm

C++ benchmarks:
-std=c++17 -no-pie -Wl,-mllvm -Wl,-inline-threshold=1500 -O3
-march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt -ffast-math
-fvirtual-function-elimination -fvisibility=hidden
-mllvm -inline-threshold=1500 -ljemalloc -lamdlibm

Fortran benchmarks:
-std=f2008 -no-pie -O3 -march=znver5 -fveclib=AMDLIBM -flto
-fno-PIE -fno-plt -ffast-math -mllvm -fuse-tile-inner-loop -ljemalloc
-lamdlibm

Benchmarks using both C and C++:
-std=c++17 -std=c18 -no-pie -Wl,-mllvm -Wl,-inline-threshold=1500 -O3
-march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt -ffast-math
-fremap-arrays -mllvm -inline-threshold=1500
-fvirtual-function-elimination -fvisibility=hidden -ljemalloc
-lamdlibm

Peak Compiler Invocation

C benchmarks:
`clang`

C++ benchmarks:
`clang++`

Fortran benchmarks:
`flang`

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

Peak Portability Flags

736.ocio_r: `-fno-finite-math-only`
737.gmsh_r: `-fno-fast-math`
748.flightdm_r: `-fno-reciprocal-math`
767.nest_r: `-fno-finite-math-only`

Peak Optimization Flags

C benchmarks:

782.lbm_r: `basepeak = yes`

C++ benchmarks:

731.astcenc_r: `-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 -O3 -march=znver5`
`-fveclib=AMDLIBM -flto -fno-PIE -fno-plt -ffast-math`
`-mllvm -unroll-threshold=100`
`-mllvm -loop-unswitch-threshold=200000`
`-mllvm -reduce-array-computations=3 -zopt -ljemalloc`
`-lamdlibm`

736.ocio_r: `basepeak = yes`

748.flightdm_r: `basepeak = yes`

(Continued on next page)

Peak Optimization Flags (Continued)

766.femflow_r: `-std=c++17 -no-pie -Wl,-mllvm -Wl,-inline-threshold=1500 -O3 -march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt -ffast-math -fvirtual-function-elimination -fvisibility=hidden -mllvm -inline-threshold=1500 -ljemalloc -lamdlibm`

767.nest_r: `basepeak = yes`

772.marian_r: `basepeak = yes`

Fortran benchmarks:

722.palm_r: `basepeak = yes`

749.fotonik3d_r: `-std=f2008 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6 -Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt -ffast-math -Ofast -Mrecursive -mllvm -reduce-array-computations=3 -fepilog-vectorization-of-inductions -zopt -ljemalloc -lamdlibm`

765.roms_r: `Same as 749.fotonik3d_r`

Benchmarks using both C and C++:

709.cactus_r: `basepeak = yes`

737.gmsh_r: `-std=c++17 -std=c18 -no-pie -Wl,-mllvm -Wl,-inline-threshold=1500 -O3 -march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt -ffast-math -fremap-arrays -mllvm -inline-threshold=1500 -fvirtual-function-elimination -fvisibility=hidden -ljemalloc -lamdlibm`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2026/results/flags/Compal-Platform-Flags-Linux-AMD_V1.6.html
http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-08-11.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2026/results/flags/Compal-Platform-Flags-Linux-AMD_V1.6.xml
http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-08-11.xml

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

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