



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_base = 762

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

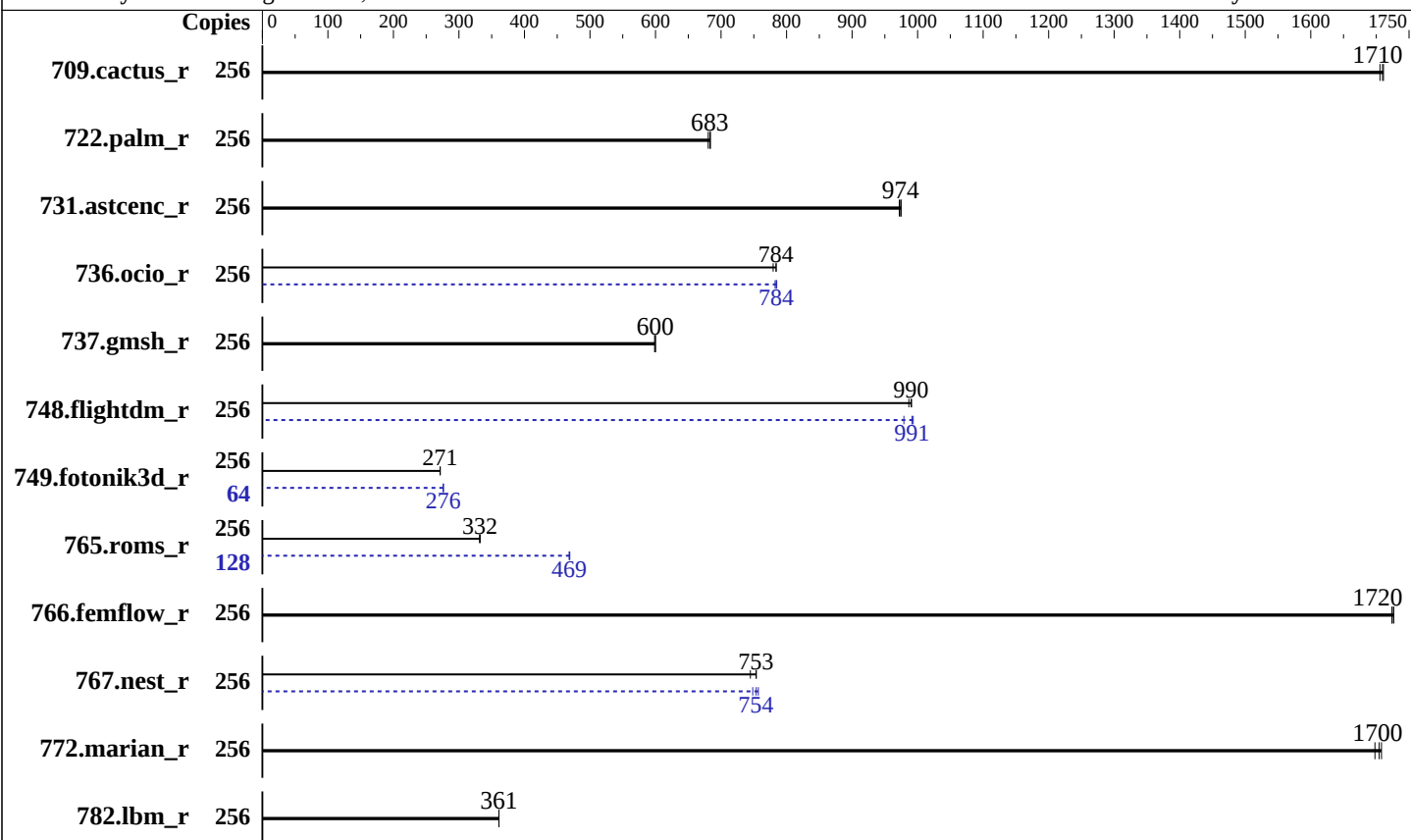
Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026



Hardware

CPU Name: AMD EPYC 9535
Max MHz: 4300
Nominal: 2400
Enabled: 128 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: 256 MB I+D on chip per chip, 16 MB shared / 4 cores
Other: None
Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
Storage: 1 x 4 TB NVME SSD
Cooling: Air
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP7 6.4.0-150700.51-default
Compiler: C/C++/Fortran: Version 5.1.0 of AOCC
Compiler Category: Vendor
Firmware: Version 01.14.00 released Dec-2025
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: None
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_base = 762

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	256	128	1710	129	1710	<u>128</u>	<u>1710</u>	256	128	1710	129	1710	<u>128</u>	<u>1710</u>
722.palm_r	256	497	680	494	684	<u>495</u>	<u>683</u>	256	497	680	494	684	<u>495</u>	<u>683</u>
731.astcenc_r	256	221	975	<u>221</u>	<u>974</u>	221	972	256	221	975	<u>221</u>	<u>974</u>	221	972
736.ocio_r	256	286	784	287	780	<u>286</u>	<u>784</u>	256	286	783	<u>286</u>	<u>784</u>	285	785
737.gmsh_r	256	196	599	<u>196</u>	<u>600</u>	196	600	256	196	599	<u>196</u>	<u>600</u>	196	600
748.flightdm_r	256	185	991	<u>185</u>	<u>990</u>	186	987	256	187	979	185	993	<u>185</u>	<u>991</u>
749.fotonik3d_r	256	<u>1091</u>	<u>271</u>	1091	271	1090	271	64	268	276	268	276	<u>268</u>	<u>276</u>
765.roms_r	256	1215	332	<u>1215</u>	<u>332</u>	1214	332	128	<u>430</u>	<u>469</u>	430	469	430	468
766.femflow_r	256	218	1720	217	1730	<u>218</u>	<u>1720</u>	256	218	1720	217	1730	<u>218</u>	<u>1720</u>
767.nest_r	256	269	754	273	745	<u>269</u>	<u>753</u>	256	268	757	<u>269</u>	<u>754</u>	271	748
772.marian_r	256	238	1700	237	1710	<u>237</u>	<u>1700</u>	256	238	1700	237	1710	<u>237</u>	<u>1700</u>
782.lbm_r	256	<u>406</u>	<u>361</u>	406	361	406	361	256	<u>406</u>	<u>361</u>	406	361	406	361

SPECrate®2026_fp_base = 762

SPECrate®2026_fp_peak = 785

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.

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

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 =  
    "/home/CPU2026/amd_rate_aocc510_znver5_B_lib/lib:/home/CPU2026/amd_rate_  
    aocc510_znver5_B_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

Platform Notes

BIOS configuration:

NUMA nodes per socket = NPS4

Determinism Slider = Power

cTDP Control = Manual

cTDP = 500

Package Power Limit Control = Manual

Package Power Limit = 500

Sysinfo program /home/CPU2026/bin/sysinfo

Rev: 779ab21020787073335a329f3a45e2cd

running on localhost Sat Aug 1 01:48:13 2026

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

Table of contents

-
1. uname -srv
 2. w
 3. Username
 4. ulimit -a
 5. sysinfo process ancestry
 6. /proc/cpuinfo

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

```
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent_hugepage
19. /sys/kernel/mm/transparent_hugepage/khugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS
```

```
-----
1. uname -srvm
```

```
Linux 6.4.0-150700.51-default #1 SMP PREEMPT_DYNAMIC Wed Apr 30 21:35:43 UTC 2025 (6930611) x86_64
```

```
-----
2. w
```

```
01:48:14 up 5:24, 1 user, load average: 108.59, 212.31, 234.13
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
root      tty1      -             20:23    5:22m 11.22s 10.13s python3 ./run_amd_rate_aocc510_znver5_B1.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
pending signals         (-i) 6190083
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
```

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

stack size	(kbytes, -s) unlimited
cpu time	(seconds, -t) unlimited
max user processes	(-u) 6190083
virtual memory	(kbytes, -v) unlimited
file locks	(-x) unlimited

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
login -- root
-bash
python3 ./run_amd_rate_aocc510_znver5_B1.py
runcpu --config amd_rate_aocc510_znver5_B1.cfg --tune all --reportable --iterations 3 fprate
runcpu --configfile amd_rate_aocc510_znver5_B1.cfg --tune all --reportable --iterations 3 --nopower
--runmode rate --tune base:peak --size test:train:refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.039/templogs/preenv.fprate.039.0.log --lognum 039.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/CPU2026
```

6. /proc/cpuinfo

```
model name      : AMD EPYC 9535 64-Core Processor
vendor_id       : AuthenticAMD
cpu family      : 26
model           : 2
stepping        : 1
microcode       : 0xb00215a
bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass srso
TLB size        : 192 4K pages
cpu cores       : 64
siblings        : 128
2 physical ids (chips)
256 processors (hardware threads)
physical id 0: core ids
0-3,8-11,16-19,24-27,32-35,40-43,48-51,56-59,64-67,72-75,80-83,88-91,96-99,104-107,112-115,120-123
physical id 1: core ids
0-3,8-11,16-19,24-27,32-35,40-43,48-51,56-59,64-67,72-75,80-83,88-91,96-99,104-107,112-115,120-123
physical id 0: apicids
0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,
240-247
physical id 1: apicids
256-263,272-279,288-295,304-311,320-327,336-343,352-359,368-375,384-391,400-407,416-423,432-439,448-455,4
64-471,480-487,496-503
```

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

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_base = 762

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

7. lscpu

From lscpu from util-linux 2.40.4:

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): 256
On-line CPU(s) list: 0-255
Vendor ID: AuthenticAMD
Model name: AMD EPYC 9535 64-Core Processor
CPU family: 26
Model: 2
Thread(s) per core: 2
Core(s) per socket: 64
Socket(s): 2
Stepping: 1
Frequency boost: enabled
CPU(s) scaling MHz: 103%
CPU max MHz: 2400.0000
CPU min MHz: 1500.0000
BogoMIPS: 4792.49

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 bpxt
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 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 debug_swap hv_inuse_wr_allowed srso_user_kernel_no
amd_lbr_pmc_freeze

Virtualization:

L1d cache: AMD-V
6 MiB (128 instances)
L1i cache: 4 MiB (128 instances)
L2 cache: 128 MiB (128 instances)

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

L3 cache: 512 MiB (32 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-15,128-143
NUMA node1 CPU(s): 16-31,144-159
NUMA node2 CPU(s): 32-47,160-175
NUMA node3 CPU(s): 48-63,176-191
NUMA node4 CPU(s): 64-79,192-207
NUMA node5 CPU(s): 80-95,208-223
NUMA node6 CPU(s): 96-111,224-239
NUMA node7 CPU(s): 112-127,240-255
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: Mitigation; IBPB on VMEXIT only
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
Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	6M	12	Data	1	64	1	64
L1i	32K	4M	8	Instruction	1	64	1	64
L2	1M	128M	16	Unified	2	1024	1	64
L3	16M	512M	16	Unified	3	16384	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: 0-15,128-143
node 0 size: 193010 MB
node 0 free: 191889 MB
node 1 cpus: 16-31,144-159
node 1 size: 193527 MB
node 1 free: 192405 MB
node 2 cpus: 32-47,160-175
node 2 size: 193527 MB
node 2 free: 192487 MB
node 3 cpus: 48-63,176-191

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

```
node 3 size: 193527 MB
node 3 free: 192488 MB
node 4 cpus: 64-79,192-207
node 4 size: 193527 MB
node 4 free: 192384 MB
node 5 cpus: 80-95,208-223
node 5 size: 193527 MB
node 5 free: 192463 MB
node 6 cpus: 96-111,224-239
node 6 size: 193527 MB
node 6 free: 192458 MB
node 7 cpus: 112-127,240-255
node 7 size: 193373 MB
node 7 free: 192303 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
 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: 1584689068 kB

10. who -r

run-level 3 Jul 31 20:23

11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)

Default Target	Status
multi-user	degraded

12. Failed units, from systemctl list-units --state=failed

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
* logrotate.service	loaded	failed	failed	Rotate log files

13. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

```
issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections
nvmf-autoconnect postfix purge-kernels rollback rsyslog smartd systemd-pstore
enabled-runtime systemd-remount-fs
disabled         autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
                  chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info
                  firewallld fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievdev issue-add-ssh-keys
                  kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd
                  serial-getty@ smartd_generate_opts snmpd snmptrapd sshd systemd-boot-check-no-failures
                  systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync
                  systemd-timesyncd tuned udisks2 vncserver@ wicked wickedd-auto4 wickedd-dhcp4
                  wickedd-dhcp6 wickedd-nanny
indirect         systemd-userdbd wickedd
```

14. Linux kernel boot-time arguments, from /proc/cmdline

```
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default
root=UUID=b599d87c-474e-4c72-b781-36d0bcedf18d
splash=silent
mitigations=auto
quiet
security=apparmor
```

15. cpupower frequency-info

```
analyzing CPU 140:
  current policy: frequency should be within 1.50 GHz and 2.40 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.
  boost state support:
    Supported: yes
    Active: yes
```

16. tuned-adm active

```
It seems that tuned daemon is not running, preset profile is not activated.
Preset profile: throughput-performance
```

17. 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
```

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

```
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
```

18. /sys/kernel/mm/transparent_hugepage

```
defrag      [always] defer defer+madvice madvice never
enabled     [always] madvice never
hpage_pmd_size  2097152
shmem_enabled  always within_size advise [never] deny force
```

19. /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
```

20. OS release

```
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP7
```

21. Disk information

SPEC is set to: /home/CPU2026

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0n1p2	xfs	929G	74G	856G	8%	/

22. /sys/devices/virtual/dmi/id

```
Vendor:      Maginfra
Product:     QR8218-D3
Product Family: Not specified
Serial:      000000000
```

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_base = 762

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Platform Notes (Continued)

23. dmidecode

Additional information from dmidecode 3.6 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:

12x Samsung M321R8GA0PB2-CCPEC 64 GB 2 rank 6400

11x Samsung M321R8GA0PB2-CCPPC 64 GB 2 rank 6400

1x Samsung M321R8GA0PB2-CCPWC 64 GB 2 rank 6400

24. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: American Megatrends International, LLC.

BIOS Version: 01.14.00

BIOS Date: 12/25/2025

Compiler Version Notes

C | 782.lbm_r(base, peak)

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, 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_5.1.0-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, peak) 737.gmsh_r(base, peak)

AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)

Target: x86_64-unknown-linux-gnu

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Compiler Version Notes (Continued)

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/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_5.1.0-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++

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:

-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

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Base Optimization Flags (Continued)

C benchmarks (continued):

```
-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=2000000  
-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=2000000 -lamdlibm -lamdalloc -lflang
```

Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

SPECrate®2026_fp_base = 762

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Peak Compiler Invocation (Continued)

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: basepeak = yes

736.ocio_r: -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

-mllvm -reduce-array-computations=3 -zopt -lamdlibm

-lamdalloc -lflang

748.flightdm_r: Same as 736.ocio_r

766.femflow_r: basepeak = yes

767.nest_r: Same as 736.ocio_r

(Continued on next page)



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Maginfra Co., Ltd.

QR8218-D3 (AMD EPYC 9535)

SPECrate®2026_fp_base = 762

SPECrate®2026_fp_peak = 785

CPU2026 License: 9087

Test Sponsor: Maginfra Co., Ltd.

Tested by: Maginfra Co., Ltd.

Test Date: Jul-2026

Hardware Availability: Dec-2025

Software Availability: Jan-2026

Peak Optimization Flags (Continued)

772.marian_r: basepeak = yes

Fortran benchmarks:

722.palm_r: basepeak = yes

749.fotonik3d_r: -m64 -Mstandard

-Wl, -mllvm -Wl, -align-all-nofallthru-blocks=6

-Wl, -mllvm -Wl, -reduce-array-computations=3 -ffast-math

-Ofast -march=znver5 -fveclib=AMDLIBM -flto -Mrecursive

-mllvm -reduce-array-computations=3

-fepilog-vectorization-of-inductions -zopt -lamdlibm

-lamdalloc -lflang

765.roms_r: Same as 749.fotonik3d_r

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.2026-05-04.00.html>

<http://www.spec.org/cpu2026/results/flags/Maginfra-Platform-Settings-amd-V1.1.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.00.xml>

<http://www.spec.org/cpu2026/results/flags/Maginfra-Platform-Settings-amd-V1.1.xml>

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU®2026 v1.0.1 on 2026-08-01 01:48:13-0400.

Report generated on 2026-09-08 18:11:44 by CPU2026 PDF formatter (unknown).

Originally published on 2026-09-08.