



SPEC CPU®2026 Floating Point Speed Result

Copyright 2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS520QA-E13-RS8U
(2.25 GHz, AMD EPYC 9965)

SPECspeed®2026_fp_base = 14.8

SPECspeed®2026_fp_peak = 15.2

CPU2026 License: 9016

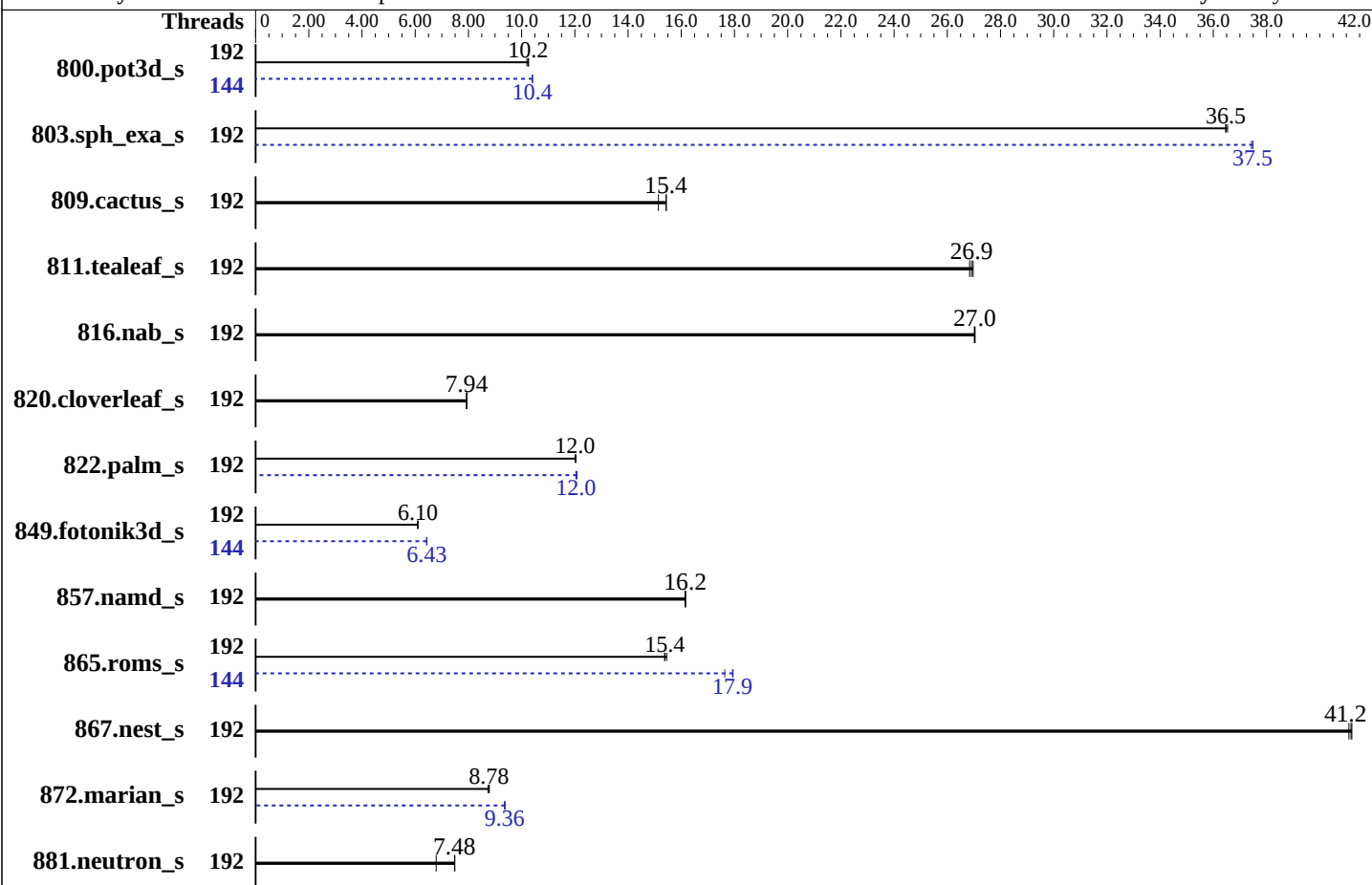
Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jul-2026

Hardware Availability: Jun-2025

Software Availability: May-2026



Hardware

CPU Name: AMD EPYC 9965
Max MHz: 3700
Nominal: 2250
Enabled: 192 cores, 1 chip
Orderable: 1 chip
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 1 MB I+D on chip per core
L3: 384 MB I+D on chip per chip,
32 MB shared / 16 cores
Other: None
Memory: 384 GB (12 x 32 GB 2Rx4 PC5-6400B-R)
Storage: 1 x 4.0 TB PCIe NVMe SSD
Cooling: Air
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP6 (x86_64)
Kernel 6.4.0-150600.21-default
Compiler: C/C++: Version 5.2.0 of AOCC
Fortran: Flang v22
Compiler Category: Vendor
Firmware: Version 0302 released Jun-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.



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Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
800.pot3d_s	192	66.0	10.2	65.6	10.3	<u>65.7</u>	<u>10.2</u>	144	<u>64.7</u>	<u>10.4</u>	64.7	10.4	64.7	10.4
803.sph_exa_s	192	33.9	36.5	34.0	36.5	<u>33.9</u>	<u>36.5</u>	192	33.1	37.4	<u>33.0</u>	<u>37.5</u>	33.0	37.5
809.cactus_s	192	74.1	15.1	72.7	15.4	<u>72.7</u>	<u>15.4</u>	192	74.1	15.1	72.7	15.4	<u>72.7</u>	<u>15.4</u>
811.tealeaf_s	192	20.8	26.8	20.7	27.0	<u>20.7</u>	<u>26.9</u>	192	20.8	26.8	20.7	27.0	<u>20.7</u>	<u>26.9</u>
816.nab_s	192	41.6	27.0	41.7	27.0	<u>41.7</u>	<u>27.0</u>	192	41.6	27.0	41.7	27.0	<u>41.7</u>	<u>27.0</u>
820.cloverleaf_s	192	108	7.93	108	7.94	<u>108</u>	<u>7.94</u>	192	108	7.93	108	7.94	<u>108</u>	<u>7.94</u>
822.palm_s	192	<u>102</u>	<u>12.0</u>	102	12.0	102	12.0	192	<u>102</u>	<u>12.0</u>	102	12.0	102	12.1
849.fotonik3d_s	192	108	6.09	108	6.10	<u>108</u>	<u>6.10</u>	144	<u>103</u>	<u>6.43</u>	103	6.43	103	6.44
857.namd_s	192	89.8	16.2	<u>89.9</u>	<u>16.2</u>	90.0	16.1	192	89.8	16.2	<u>89.9</u>	<u>16.2</u>	90.0	16.1
865.roms_s	192	70.9	15.4	70.5	15.5	<u>70.9</u>	<u>15.4</u>	144	<u>60.8</u>	<u>17.9</u>	61.8	17.6	60.7	17.9
867.nest_s	192	52.6	41.1	52.4	41.2	<u>52.5</u>	<u>41.2</u>	192	52.6	41.1	52.4	41.2	<u>52.5</u>	<u>41.2</u>
872.marian_s	192	<u>123</u>	<u>8.78</u>	124	8.74	123	8.78	192	<u>116</u>	<u>9.36</u>	116	9.36	115	9.38
881.neutron_s	192	<u>109</u>	<u>7.48</u>	109	7.49	120	6.79	192	<u>109</u>	<u>7.48</u>	109	7.49	120	6.79

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

Compiler Notes

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

Submit Notes

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

Operating System Notes

'ulimit -s unlimited' was used to set environment stack size limit
'ulimit -l 2097152' was used to set environment locked pages in memory limit
OS set to performance mode via cpupower frequency-set -g performance

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

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.

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Operating System Notes (Continued)

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.

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

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
GOMP_CPU_AFFINITY = "0-191"
LD_LIBRARY_PATH =
"/aocc520/amd_speed_aocc520_znver5_A_lib/lib:/aocc520/amd_speed_aocc520_
znver5_A_lib/lib32:"
MALLOC_CONF = "retain:true"
OMP_THREAD_LIMIT = "192"

General Notes

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

Platform Notes

BIOS Configuration:
SR-IOV Support = Disabled
SVM Mode = Disabled
APBDIS = 1
Determinism Control = Manual
DRAM Scrub time = Disabled
Engine Boost = Aggressive
TDP Control = Manual
TDP = 500
PPT Control = Manual
PPT = 500
SMT Control = Disable
BMC Configuration:
Fan mode = Full speed mode

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Platform Notes (Continued)

Sysinfo program /aocc520/bin/sysinfo
Rev: 779ab21020787073335a329f3a45e2cd
running on localhost Thu Jul 30 19:22:52 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 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. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage
18. /sys/kernel/mm/transparent_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS

1. uname -srvm
Linux 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09) x86_64

2. w
19:22:52 up 8:36, 3 users, load average: 35.56, 75.12, 109.34
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 - 10:47 1:52m 1.35s 0.26s python3
./run_amd_speed_aocc520_znver5_A1.py
root tty2 - 14:02 2:15m 0.05s 0.05s -bash
root tty3 - 17:08 2:14m 0.04s 0.04s -bash

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Platform Notes (Continued)

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) 1543880
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) 1543880
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
/bin/bash ./speed.sh
python3 ./run_amd_speed_aocc520_znver5_A1.py
runcpu --config amd_speed_aocc520_znver5_A1.cfg --tune all --reportable --iterations 3 fpspeed
runcpu --configfile amd_speed_aocc520_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
--runmode speed --tune base:peak --size test:train:refspeed fpspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.055/templogs/preenv.fpspeed.055.0.log --lognum 055.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /aocc520
```

6. /proc/cpuinfo

```
model name      : AMD EPYC 9965 192-Core Processor
vendor_id       : AuthenticAMD
cpu family      : 26
model           : 17
stepping        : 0
microcode       : 0xb101047
bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
```

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Platform Notes (Continued)

TLB size : 192 4K pages
cpu cores : 192
siblings : 192
1 physical ids (chips)
192 processors (hardware threads)
physical id 0: core ids 0-191
physical id 0: apicids 0-191

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):                      192
On-line CPU(s) list:        0-191
Vendor ID:                   AuthenticAMD
BIOS Vendor ID:              Advanced Micro Devices, Inc.
Model name:                  AMD EPYC 9965 192-Core Processor
BIOS Model name:             AMD EPYC 9965 192-Core Processor           Unknown CPU @ 2.2GHz
BIOS CPU family:             107
CPU family:                  26
Model:                       17
Thread(s) per core:          1
Core(s) per socket:          192
Socket(s):                   1
Stepping:                    0
Frequency boost:              enabled
CPU(s) scaling MHz:          63%
CPU max MHz:                 3700.1951
CPU min MHz:                 1500.0000
BogoMIPS:                    4493.22
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 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
```

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Platform Notes (Continued)

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
pftthreshold 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
L1d cache: 9 MiB (192 instances)
L1i cache: 6 MiB (192 instances)
L2 cache: 192 MiB (192 instances)
L3 cache: 384 MiB (12 instances)
NUMA node(s): 1
NUMA node0 CPU(s): 0-191
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; PBSRB-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	9M	12	Data	1	64	1	64
L1i	32K	6M	8	Instruction	1	64	1	64
L2	1M	192M	16	Unified	2	1024	1	64
L3	32M	384M	16	Unified	3	32768	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 1 nodes (0)
node 0 cpus: 0-191
node 0 size: 385996 MB
node 0 free: 384764 MB
node distances:
node 0

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Platform Notes (Continued)

0: 10

9. /proc/meminfo

MemTotal: 395260004 kB

10. who -r

run-level 3 Jul 30 10:47

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	YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvmmf-autoconnect postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
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 firewalld fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievdt issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts snmpd snmptrapd svnserve systemd-boot-check-no-failures systemd-conffext systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd tuned udisks2 vncserver@
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=bd4eeb48-8f2c-47c9-ae06-b7241b1d0eb7
splash=silent
mitigations=auto
quiet
security=apparmor
video=1024x768

14. cpupower frequency-info

analyzing CPU 31:

current policy: frequency should be within 1.50 GHz and 2.25 GHz.

The governor "performance" may decide which speed to use

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Platform Notes (Continued)

within this range.
boost state support:
Supported: yes
Active: yes

15. tuned-adm active

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

16. sysctl

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

17. /sys/kernel/mm/transparent_hugepage

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

18. /sys/kernel/mm/transparent_hugepage/khugepaged

alloc_sleep_millisecs	60000
defrag	1
max_ptes_none	511
max_ptes_shared	256
max_ptes_swap	64
pages_to_scan	4096

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Platform Notes (Continued)

scan_sleep_millisecs 10000

19. OS release

From /etc/*-release /etc/*-version

os-release SUSE Linux Enterprise Server 15 SP6

20. Disk information

SPEC is set to: /aocc520

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0n1p4	xfs	2.0T	550G	1.5T	27%	/

21. /sys/devices/virtual/dmi/id

Vendor: ASUSTeK COMPUTER INC.

Product: RS520QA-E13-RS8U

Product Family: Server

Serial: /psn/

22. 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:

12X Samsung M321R4GA3PB2-CCPKC 32 GB 2 rank 6400

23. BIOS

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

BIOS Vendor: American Megatrends Inc.

BIOS Version: 0302

BIOS Date: 06/26/2025

BIOS Revision: 3.2

Compiler Version Notes

```
=====  
C      | 811.tealeaf_s(base, peak) 816.nab_s(base, peak) 881.neutron_s(base,  
      | peak)  
=====
```

AMD clang version 17.0.6 (CLANG: AOCC_5.2.0-Build#2035 2026_04_10)

Target: x86_64-unknown-linux-gnu

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SPEC CPU®2026 Floating Point Speed Result

Copyright 2026 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS520QA-E13-RS8U
(2.25 GHz, AMD EPYC 9965)

SPECspeed®2026_fp_base = 14.8

SPECspeed®2026_fp_peak = 15.2

CPU2026 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jul-2026

Hardware Availability: Jun-2025

Software Availability: May-2026

Compiler Version Notes (Continued)

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.2.0-4925-2035/bin

```
=====  
C++      | 803.sph_exa_s(base, peak) 857.namd_s(base, peak) 867.nest_s(base,  
          | peak) 872.marian_s(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   | 809.cactus_s(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  | 800.pot3d_s(base, peak) 820.cloverleaf_s(base, peak)  
          | 822.palm_s(base, peak) 849.fotonik3d_s(base, peak) 865.roms_s(base,  
          | peak)  
=====
```

flang version 22.1.0-rc2 (<https://github.com/llvm/llvm-project>

a47b42eb9f9b302167b4fc413e6c92798d65dd0b)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/llvm/llvm-22.1.0-rc2/install/bin

Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang-22

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Base Compiler Invocation (Continued)

Benchmarks using both C and C++:

clang++ clang

Base Portability Flags

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

Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -fopenmp -DSPEC_OPENMP
-pthread -lamdalloc -lamdlibm -fopenmp=libomp -lomp

Fortran benchmarks:

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

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Base Optimization Flags (Continued)

Fortran benchmarks (continued):

-lomp

Benchmarks using both C and C++:

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

Base Other Flags

C benchmarks:

-Wno-return-type -Wno-unused-command-line-argument

Benchmarks using both C and C++:

-Wno-return-type -Wno-unused-command-line-argument

Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang-22

Benchmarks using both C and C++:

clang++ clang

Peak Portability Flags

Same as Base Portability Flags



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Peak Optimization Flags

C benchmarks:

811.tealeaf_s: basepeak = yes

816.nab_s: basepeak = yes

881.neutron_s: basepeak = yes

C++ benchmarks:

803.sph_exa_s: -m64 -std=c++17
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-fprofile-instr-generate(pass 1)
-fprofile-instr-use(pass 2) -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math
-mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=100 -fopenmp -DSPEC_OPENMP
-pthread -lamdalloc -lamdlibm -fopenmp=libomp -lomp

857.namd_s: basepeak = yes

867.nest_s: basepeak = yes

872.marian_s: Same as 803.sph_exa_s

Fortran benchmarks:

800.pot3d_s: -m64 -std=f2018 -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math -funroll-loops
-DSPEC_OPENMP -fopenmp -fdo-concurrent-to-openmp=host
-lamdalloc -lamdlibm -fopenmp=libomp -lomp

820.cloverleaf_s: basepeak = yes

822.palm_s: Same as 800.pot3d_s

849.fotonik3d_s: Same as 800.pot3d_s

865.roms_s: Same as 800.pot3d_s

Benchmarks using both C and C++:

809.cactus_s: basepeak = yes



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Test Date: Jul-2026

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Software Availability: May-2026

Peak Other Flags

C benchmarks:

-Wno-return-type -Wno-unused-command-line-argument

Benchmarks using both C and C++:

-Wno-return-type -Wno-unused-command-line-argument

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-08-11.00.html>

<http://www.spec.org/cpu2026/results/flags/ASUSTekPlatform-Settings-AMD-K15-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.2026-08-11.00.xml>

<http://www.spec.org/cpu2026/results/flags/ASUSTekPlatform-Settings-AMD-K15-V1.1.xml>

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