



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Tyrone Systems

(Test Sponsor: Netweb Technologies India Ltd)

(Tyrone Camarero MDA200A3N-212)

(2.25 GHz, AMD EPYC 9965)

SPECspeed®2017_int_base = 16.0

SPECspeed®2017_int_peak = 16.2

CPU2017 License: 6042

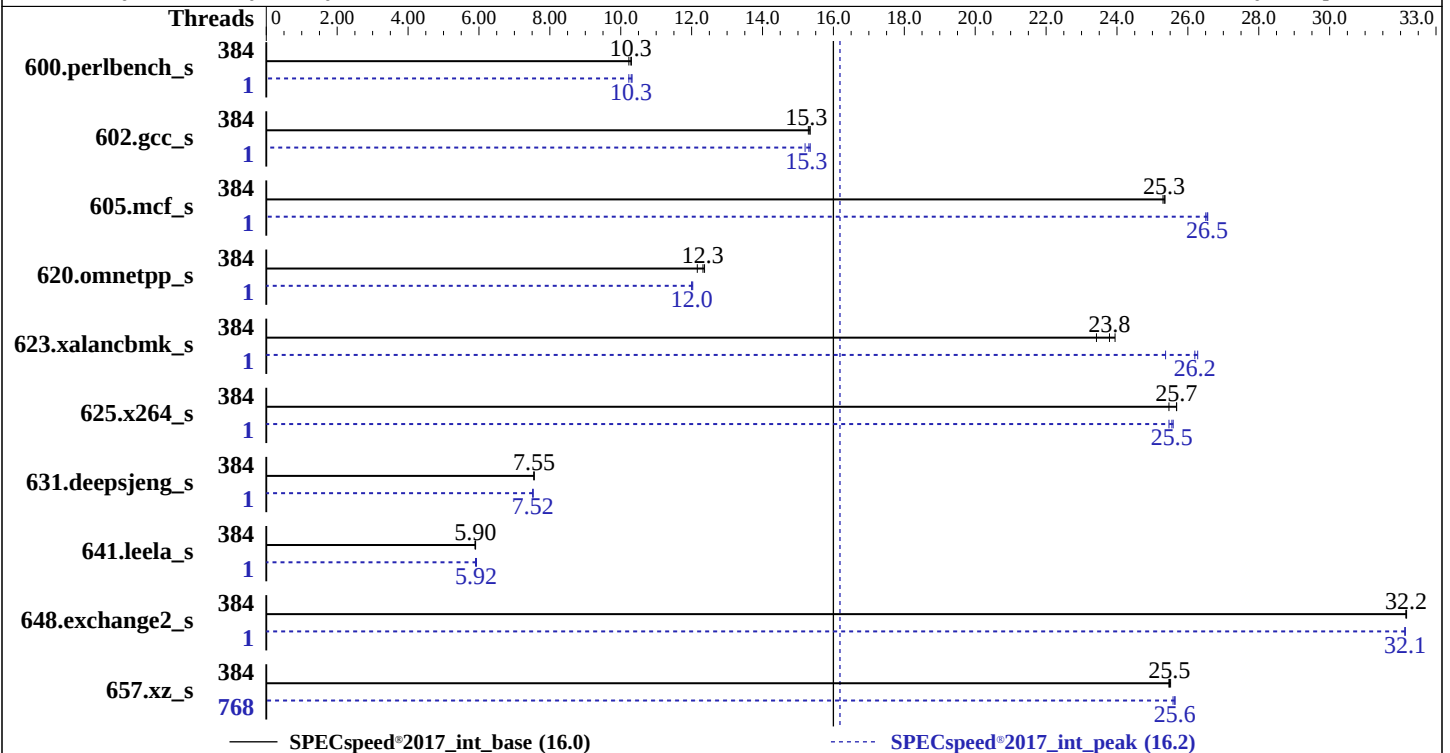
Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Oct-2025

Hardware Availability: Oct-2024

Software Availability: Sep-2025



Hardware

CPU Name: AMD EPYC 9965
Max MHz: 3700
Nominal: 2250
Enabled: 384 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: 384 MB I+D on chip per chip, 32 MB shared / 16 cores
Other: None
Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-5600B-R)
Storage: 1 x 1 TB NVMe
Other: CPU Cooling: Air

Software

OS: Ubuntu 24.04 LTS
kernel version 6.14.0-32-generic
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC
Parallel: Yes
Firmware: Version ES312AMS.205T5 released Sep-2025
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: None
Power Management: OS and BIOS 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
600.perlbench_s	384	174	10.2	<u>173</u>	<u>10.3</u>	172	10.3	<u>1</u>	<u>172</u>	<u>10.3</u>	172	10.3	174	10.2
602.gcc_s	384	260	15.3	<u>260</u>	<u>15.3</u>	260	15.3	<u>1</u>	<u>259</u>	<u>15.3</u>	<u>260</u>	<u>15.3</u>	262	15.2
605.mcf_s	384	186	25.4	<u>186</u>	<u>25.3</u>	187	25.3	<u>1</u>	<u>178</u>	<u>26.6</u>	<u>178</u>	<u>26.5</u>	178	26.5
620.omnetpp_s	384	134	12.2	132	12.4	<u>132</u>	<u>12.3</u>	<u>1</u>	<u>136</u>	<u>12.0</u>	136	12.0	136	12.0
623.xalancbmk_s	384	60.5	23.4	59.2	23.9	<u>59.6</u>	<u>23.8</u>	<u>1</u>	<u>55.9</u>	<u>25.4</u>	<u>53.9</u>	<u>26.3</u>	<u>54.1</u>	<u>26.2</u>
625.x264_s	384	68.7	25.7	69.3	25.5	<u>68.7</u>	<u>25.7</u>	<u>1</u>	<u>68.9</u>	<u>25.6</u>	<u>69.3</u>	<u>25.5</u>	<u>69.0</u>	<u>25.5</u>
631.deepsjeng_s	384	<u>190</u>	<u>7.55</u>	190	7.55	190	7.56	<u>1</u>	<u>191</u>	<u>7.52</u>	190	7.53	<u>191</u>	<u>7.52</u>
641.leela_s	384	289	5.90	290	5.89	<u>289</u>	<u>5.90</u>	<u>1</u>	<u>288</u>	<u>5.93</u>	<u>288</u>	<u>5.92</u>	289	5.90
648.exchange2_s	384	91.4	32.2	91.4	32.2	<u>91.4</u>	<u>32.2</u>	<u>1</u>	<u>91.5</u>	<u>32.1</u>	<u>91.5</u>	<u>32.1</u>	<u>91.5</u>	<u>32.1</u>
657.xz_s	384	242	25.5	<u>243</u>	<u>25.5</u>	243	25.5	<u>768</u>	<u>242</u>	<u>25.6</u>	<u>241</u>	<u>25.6</u>	<u>241</u>	<u>25.6</u>

SPECspeed®2017_int_base = 16.0

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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/>

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.
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.



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Environment Variables Notes

Environment variables set by runcpu before the start of the run:

GOMP_CPU_AFFINITY = "0-767"

LD_LIBRARY_PATH =

"/home/cpu2017/amd_speed_aocc500_znver5_A_lib/lib:/home/cpu2017/amd_speed_aocc500_znver5_A_lib/lib32:"

LIBOMP_NUM_HIDDEN_HELPER_THREADS = "0"

MALLOC_CONF = "retain:true"

OMP_DYNAMIC = "false"

OMP_SCHEDULE = "static"

OMP_STACKSIZE = "128M"

OMP_THREAD_LIMIT = "768"

Environment variables set by runcpu during the 600.perlbench_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 602.gcc_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 605.mcf_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 620.omnetpp_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 623.xalancbmk_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 625.x264_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 631.deepsjeng_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 641.leela_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 648.exchange2_s peak run:

GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 657.xz_s peak run:

GOMP_CPU_AFFINITY = "0-767"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

Platform Notes

BIOS Settings:

CTDP: 400

(Continued on next page)



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Platform Notes (Continued)

Determinism Slider set to Power

ACPI SRAT L3 Cache as NUMA Domain: enabled

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on amd-benchmark Fri Sep 26 14:52:50 2025

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

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1. uname -a
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10. who -r
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)
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. 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 -a
Linux amd-benchmark 6.14.0-32-generic #32~24.04.1-Ubuntu SMP PREEMPT_DYNAMIC Tue Sep 2 14:21:04 UTC 2
x86_64 x86_64 x86_64 GNU/Linux

2. w
14:52:50 up 1 min, 1 user, load average: 0.39, 0.20, 0.08
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
amd tty1 - 14:52 10.00s 0.09s 0.08s sudo su

3. Username
From environment variable \$USER: root
From the command 'logname': amd

4. ulimit -a
time(seconds) unlimited
file(blocks) unlimited
data(kbytes) unlimited
stack(kbytes) unlimited
coredump(blocks) 0

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Platform Notes (Continued)

```
memory(kbytes)      unlimited
locked memory(kbytes) 2097152
process             6187858
nofiles             1024
vmemory(kbytes)     unlimited
locks               unlimited
rtprio              0
```

```
-----
5. sysinfo process ancestry
/sbin/init splash
/bin/login -p --
-bash
sudo su
sudo su
su
bash
python3 ./run_amd_speed_aocc500_znver5_A1.py
/bin/bash ./amd_speed_aocc500_znver5_A1.sh
runcpu --config amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 intspeak
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
--runmode speed --tune base:peak --size test:train:refspeed intspeak --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.intspeak.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
```

```
-----
6. /proc/cpuinfo
model name      : AMD EPYC 9965 192-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 17
stepping       : 0
microcode      : 0xb101025
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass rsro
TLB size      : 192 4K pages
cpu cores      : 192
siblings       : 384
2 physical ids (chips)
768 processors (hardware threads)
physical id 0: core ids 0-191
physical id 1: core ids 0-191
physical id 0: apicids 0-383
physical id 1: apicids 512-895
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):	768
On-line CPU(s) list:	0-767
Vendor ID:	AuthenticAMD
BIOS Vendor ID:	Advanced Micro Devices, Inc.
Model name:	AMD EPYC 9965 192-Core Processor

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Platform Notes (Continued)

BIOS Model name:	AMD EPYC 9965 192-Core Processor	Unknown CPU @
BIOS CPU family:	2.2GHz	
CPU family:	107	
Model:	26	
Thread(s) per core:	17	
Core(s) per socket:	2	
Socket(s):	192	
Stepping:	2	
Frequency boost:	0	
CPU(s) scaling MHz:	enabled	
CPU max MHz:	49%	
CPU min MHz:	3701.0000	
BogoMIPS:	600.0000	
Flags:	4493.33	
	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 xtopology 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 vmxcall 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 cpc 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 fstrm avx512_vp2intersect flush_l1d debug_swap amd_lbr_pmc_freeze	
L1d cache:	18 MiB (384 instances)	
L1i cache:	12 MiB (384 instances)	
L2 cache:	384 MiB (384 instances)	
L3 cache:	768 MiB (24 instances)	
NUMA node(s):	2	
NUMA node0 CPU(s):	0-191,384-575	
NUMA node1 CPU(s):	192-383,576-767	
Vulnerability Gather data sampling:	Not affected	
Vulnerability Ghostwrite:	Not affected	
Vulnerability Indirect target selection:	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/swaps barriers and __user pointer sanitization	
Vulnerability Spectre v2:	Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP always-on; PBRsB-eIBRS Not affected; BHI Not affected	
Vulnerability Srbds:	Not affected	
Vulnerability Tsx async abort:	Not affected	

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Platform Notes (Continued)

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	18M	12	Data	1	64	1	64
L1i	32K	12M	8	Instruction	1	64	1	64
L2	1M	384M	16	Unified	2	1024	1	64
L3	32M	768M	16	Unified	3	32768	1	64

8. numactl --hardware

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

available: 2 nodes (0-1)

node 0 cpus: 0-191,384-575

node 0 size: 773325 MB

node 0 free: 769515 MB

node 1 cpus: 192-383,576-767

node 1 size: 773891 MB

node 1 free: 770870 MB

node distances:

node 0 1

0: 10 32

1: 32 10

9. /proc/meminfo

MemTotal: 1584350492 kB

10. who -r

run-level 3 Sep 26 14:52

11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)

Default Target Status

multi-user degraded

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

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
------	------	--------	-----	-------------

* NetworkManager-wait-online.service loaded failed failed Network Manager Wait Online

Legend: LOAD -> Reflects whether the unit definition was properly loaded.

ACTIVE -> The high-level unit activation state, i.e. generalization of SUB.

SUB -> The low-level unit activation state, values depend on unit type.

1 loaded units listed.

13. Services, from systemctl list-unit-files

STATE	UNIT FILES
-------	------------

enabled	ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon anacron apparmor apport avahi-daemon bluetooth cloud-config-final cloud-init cloud-init-local collectd console-setup cron cups cups-browsed dmesg e2scrub_reap getty@ gnome-remote-desktop gpu-manager grub-common grub-initrd-fallback kerneloops keyboard-setup networkd-dispatcher openvpn power-profiles-daemon rsyslog secureboot-db setvtrgb snapd ssl-cert sssd switcheroo-control sysstat systemd-oom systemd-pstore systemd-resolved systemd-timesyncd thermald ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades wpa_supplicant
enabled-runtime	netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled	brltty console-getty debug-shell ipmievd nftables openvpn-client@ openvpn-server@ openvpn@ rsync rtkit-daemon serial-getty@ speech-dispatcherd ssh systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-networkd systemd-networkd-wait-online

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Platform Notes (Continued)

generated systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code
indirect systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy
masked systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysext
systemd-time-wait-sync upower wpa_supplicant-nl80211@ wpa_supplicant-wired@
wpa_supplicant@
openipmi speech-dispatcher
saned@ spice-vdagentd sssd-autofs sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
systemd-sysupdate systemd-sysupdate-reboot uuuid
alsa-utils cryptdisks cryptdisks-early hwclock saned sudo x11-common

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

BOOT_IMAGE=/vmlinuz-6.14.0-32-generic
root=UUID=4c4111a1-2027-4689-8cc8-4d6d365932ca
ro
quiet
splash
vt.handoff=7

15. cpupower frequency-info

analyzing CPU 655:
current policy: frequency should be within 1.80 GHz and 3.70 GHz.
The governor "performance" may decide which speed to use
within this range.
boost state support:
Supported: yes
Active: yes

16. 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

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

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Platform Notes (Continued)

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

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

20. Disk information
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p5 ext4 701G 7.9G 657G 2% /home

21. /sys/devices/virtual/dmi/id
Vendor: Tyrone Systems
Product: Tyrone Camarero MDA200A3N-212
Product Family: Camarero

22. 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 Samsung M321R8GA0PB0-CWMCJ 64 GB 2 rank 5600

23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: ES312AMS.205T5
BIOS Date: 09/02/2025
BIOS Revision: 5.35

Compiler Version Notes

=====

C	600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak)
	657.xz_s(base, peak)

AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin

=====

C++	620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak)
	641.leela_s(base, peak)

(Continued on next page)



SPEC CPU®2017 Integer Speed Result

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Tyrone Systems

(Test Sponsor: Netweb Technologies India Ltd)

(Tyrone Camarero MDA200A3N-212)

(2.25 GHz, AMD EPYC 9965)

SPECspeed®2017_int_base = 16.0

SPECspeed®2017_int_peak = 16.2

CPU2017 License: 6042

Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Oct-2025

Hardware Availability: Oct-2024

Software Availability: Sep-2025

Compiler Version Notes (Continued)

AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin

Fortran | 648.exchange2_s(base, peak)

AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin

Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

Base Portability Flags

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64

602.gcc_s: -DSPEC_LP64

605.mcf_s: -DSPEC_LP64

620.omnetpp_s: -DSPEC_LP64

623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64

625.x264_s: -DSPEC_LP64

631.deepsjeng_s: -DSPEC_LP64

641.leela_s: -DSPEC_LP64

648.exchange2_s: -DSPEC_LP64

657.xz_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

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

(Continued on next page)



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SPECspeed®2017_int_peak = 16.2

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Base Optimization Flags (Continued)

C benchmarks (continued):

```
-Wl,-allow-multiple-definition -Wl,-mllvm -Wl,-extra-inliner -O3  
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP  
-flto -fremap-arrays -fstrip-mining -fstruct-layout=7  
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp -lamdlibm  
-lflang -lamdalloc
```

C++ benchmarks:

```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5  
-fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP -flto  
-mllvm -loop-unswitch-threshold=200000  
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=100 -zopt  
-fvirtual-function-elimination -fvisibility=hidden -fopenmp=libomp  
-lomp -lamdlibm -lflang -lamdalloc-ext
```

Fortran benchmarks:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-enable-iv-split -Wl,-mllvm -Wl,-inline-recursion=4  
-Wl,-mllvm -Wl,-lsr-in-nested-loop -O3 -march=znver5 -fveclib=AMDLIBM  
-ffast-math -fopenmp -flto -mllvm -optimize-strided-mem-cost  
-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -fopenmp=libomp  
-lomp -lamdlibm -lflang -lamdalloc
```

Base Other Flags

C benchmarks:

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

C++ benchmarks:

```
-Wno-unused-command-line-argument
```

Fortran benchmarks:

```
-Wno-unused-command-line-argument
```

Peak Compiler Invocation

C benchmarks:

```
clang
```

(Continued on next page)



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SPECspeed®2017_int_peak = 16.2

CPU2017 License: 6042

Test Sponsor: Netweb Technologies India Ltd

Tested by: Tyrone Systems

Test Date: Oct-2025

Hardware Availability: Oct-2024

Software Availability: Sep-2025

Peak Compiler Invocation (Continued)

C++ benchmarks:

clang++

Fortran benchmarks:

flang

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

600.perlbench_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-allow-multiple-definition
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -flto
-DSPEC_OPENMP -fremap-arrays -fstrip-mining
-fstruct-layout=9 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp
-lamdlibm -lamdalloc -lflang

602.gcc_s: Same as 600.perlbench_s

605.mcf_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -flto
-DSPEC_OPENMP -fremap-arrays -fstrip-mining
-fstruct-layout=9 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp
-lamdlibm -lamdalloc -lflang

625.x264_s: Same as 600.perlbench_s

657.xz_s: Same as 600.perlbench_s

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Hardware Availability: Oct-2024

Software Availability: Sep-2025

Peak Optimization Flags (Continued)

C++ benchmarks:

620.omnetpp_s: -m64 -std=c++14

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

-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast

-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp

-flto -DSPEC_OPENMP -mllvm -reduce-array-computations=3

-mllvm -unroll-threshold=100 -zopt

-fvirtual-function-elimination -fvisibility=hidden

-fopenmp=libomp -lomp -lamdlibm -lamdalloc-ext -lflang

623.xalancbmk_s: -m64 -std=c++14

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

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

-Wl,-mllvm -Wl,-do-block-reorder=advanced -Ofast

-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp

-flto -DSPEC_OPENMP -mllvm -reduce-array-computations=3

-mllvm -unroll-threshold=100 -zopt

-fvirtual-function-elimination -fvisibility=hidden

-mllvm -do-block-reorder=advanced -fopenmp=libomp -lomp

-lamdlibm -lamdalloc-ext -lflang

631.deepsjeng_s: -m64 -std=c++14

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

-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast

-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp

-flto -DSPEC_OPENMP -mllvm -reduce-array-computations=3

-mllvm -unroll-threshold=100 -zopt

-fvirtual-function-elimination -fvisibility=hidden

-fopenmp=libomp -lomp -lamdlibm -lamdalloc -lflang

641.leela_s: Same as 631.deepsjeng_s

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

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

-Wl,-mllvm -Wl,-enable-iv-split -Wl,-mllvm -Wl,-inline-recursion=4

-Wl,-mllvm -Wl,-lsr-in-nested-loop -O3 -march=znver5 -fveclib=AMDLIBM

-ffast-math -fopenmp -flto -mllvm -optimize-strided-mem-cost

-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -fopenmp=libomp

-lomp -lamdlibm -lamdalloc -lflang



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CPU2017 License: 6042

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Software Availability: Sep-2025

Peak Other Flags

C benchmarks:

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

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

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

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.html>

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-Turin-revD.html>

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

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.xml>

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-Turin-revD.xml>

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