



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Supermicro

A+ Server AS -2126HS-TN
(H14DSH , AMD EPYC 9335)

SPECspeed®2017_int_base = 18.6

SPECspeed®2017_int_peak = 18.9

CPU2017 License: 001176

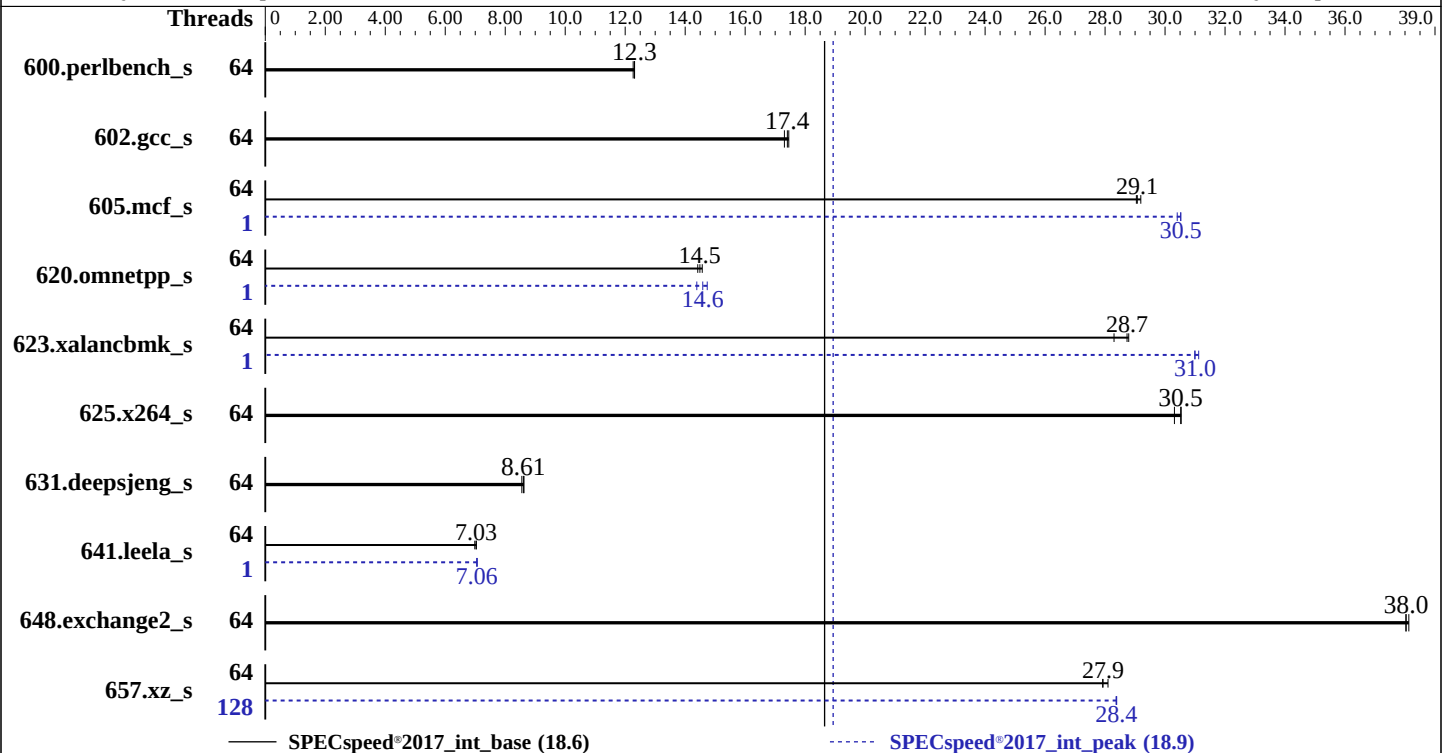
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: May-2026

Hardware Availability: Oct-2024

Software Availability: Apr-2026



Hardware

CPU Name: AMD EPYC 9335
Max MHz: 4400
Nominal: 3000
Enabled: 64 cores, 2 chips, 2 threads/core
Orderable: 2 chips
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 1 MB I+D on chip per core
L3: 128 MB I+D on chip per chip, 32 MB shared / 8 cores
Other: None
Memory: 2304 GB (24 x 96 GB 2Rx4 PC5-6400B-R)
Storage: 1 x 7.68 TB NVMe SSD
Other: CPU Cooling: Air

Software

OS: Ubuntu 22.04.5 LTS
Kernel 5.15.0-177-generic
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC
Parallel: Yes
Firmware: Version 1.9 released Feb-2026
File System: ext4
System State: Run level 5 (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
600.perlbench_s	64	144	12.3	145	12.3	144	12.3	64	144	12.3	145	12.3	144	12.3
602.gcc_s	64	228	17.5	230	17.3	229	17.4	64	228	17.5	230	17.3	229	17.4
605.mcf_s	64	162	29.1	162	29.2	163	29.0	1	155	30.4	155	30.5	155	30.5
620.omnetpp_s	64	112	14.6	113	14.4	113	14.5	1	113	14.4	112	14.6	111	14.7
623.xalanchmk_s	64	49.2	28.8	49.3	28.7	50.1	28.3	1	45.5	31.1	45.7	31.0	45.7	31.0
625.x264_s	64	57.8	30.5	57.8	30.5	58.2	30.3	64	57.8	30.5	57.8	30.5	58.2	30.3
631.deepsjeng_s	64	166	8.63	168	8.55	167	8.61	64	166	8.63	168	8.55	167	8.61
641.leela_s	64	244	6.98	242	7.04	243	7.03	1	242	7.06	242	7.05	242	7.06
648.exchange2_s	64	77.3	38.0	77.1	38.1	77.3	38.0	64	77.3	38.0	77.1	38.1	77.3	38.0
657.xz_s	64	220	28.1	221	27.9	221	27.9	128	218	28.4	218	28.4	218	28.4

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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 = "0-127"

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 = "128"

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

GOMP_CPU_AFFINITY = "15"

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

GOMP_CPU_AFFINITY = "15"

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

GOMP_CPU_AFFINITY = "15"

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

GOMP_CPU_AFFINITY = "15"

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

GOMP_CPU_AFFINITY = "0-127"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 9D64 CPU + 500GiB Memory using Ubuntu 22.04

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:

NUMA Nodes Per Socket = NPS4

Determinism Control = Manual

Determinism Enable = Power

TDP control = Manual

TDP = 240

Package Power Limit Control = Manual

Package Power Limit = 240

TSME = Disabled

Memory Target Speed = DDR6400

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on smc Mon May 4 12:53:37 2026

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

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Platform Notes (Continued)

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3. Username
4. ulimit -a
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6. /proc/cpuinfo
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9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.20)
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 -a
Linux smc 5.15.0-177-generic #187-Ubuntu SMP Sat Apr 11 22:54:33 UTC 2026 x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
12:53:37 up 9:40, 2 users, load average: 8.79, 49.03, 77.97
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
smc       tty1      -              03:16    9:37m 10.29s  0.00s -bash
smc       pts/0    -              03:16    9:26m  1.16s 10.27s sudo su -
```

```
3. Username
From environment variable $USER: root
From the command 'logname':      smc
```

```
4. ulimit -a
time(seconds)      unlimited
file(blocks)       unlimited
data(kbytes)       unlimited
stack(kbytes)      unlimited
coredump(blocks)   0
memory(kbytes)     unlimited
locked memory(kbytes) 2097152
process            9287006
nofiles            1024
vmemory(kbytes)    unlimited
locks              unlimited
rtprio             0
```

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Platform Notes (Continued)

```
-----
5. sysinfo process ancestry
/bin/init
/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 intspeed
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
--runmode speed --tune base:peak --size test:train:refspeed intspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.intspeed.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017
```

```
-----
6. /proc/cpuinfo
model name      : AMD EPYC 9335 32-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 2
stepping       : 1
microcode      : 0xb002161
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size      : 192 4K pages
cpu cores      : 32
siblings       : 64
2 physical ids (chips)
128 processors (hardware threads)
physical id 0: core ids 0-31
physical id 1: core ids 0-31
physical id 0: apicids 0-63
physical id 1: apicids 64-127
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 2.37.2:
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):                      128
On-line CPU(s) list:         0-127
Vendor ID:                   AuthenticAMD
Model name:                   AMD EPYC 9335 32-Core Processor
CPU family:                   26
Model:                       2
Thread(s) per core:          2
Core(s) per socket:          32
Socket(s):                    2
Stepping:                     1
Frequency boost:              enabled
CPU max MHz:                  4420.8979
CPU min MHz:                  1500.0000
```

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Platform Notes (Continued)

BogoMIPS: 5999.96
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 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 bpeext perfctr_llc mwaitx cpb cat_l3 cdp_l3 invpcid_single hw_pstate ssbd mba 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 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 v_spec_ctrl 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

Virtualization: AMD-V
L1d cache: 3 MiB (64 instances)
L1i cache: 2 MiB (64 instances)
L2 cache: 64 MiB (64 instances)
L3 cache: 256 MiB (8 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-7,64-71
NUMA node1 CPU(s): 8-15,72-79
NUMA node2 CPU(s): 16-23,80-87
NUMA node3 CPU(s): 24-31,88-95
NUMA node4 CPU(s): 32-39,96-103
NUMA node5 CPU(s): 40-47,104-111
NUMA node6 CPU(s): 48-55,112-119
NUMA node7 CPU(s): 56-63,120-127
Vulnerability Gather data sampling: 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: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP always-on; PBRSE-eIBRS Not affected; BHI Not affected
Vulnerability Srbds: Not affected
Vulnerability Tsa: Not affected
Vulnerability Tsx async abort: Not affected
Vulnerability Vmscape: Not affected

From lscpu --cache:
NAME ONE-SIZE ALL-SIZE WAYS TYPE LEVEL SETS PHY-LINE COHERENCY-SIZE
L1d 48K 3M 12 Data 1 64 1 64
L1i 32K 2M 8 Instruction 1 64 1 64

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Platform Notes (Continued)

L2	1M	64M	16 Unified	2 1024	1	64
L3	32M	256M	16 Unified	3 32768	1	64

8. numactl --hardware

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

available: 8 nodes (0-7)

node 0 cpus: 0-7,64-71

node 0 size: 289876 MB

node 0 free: 288835 MB

node 1 cpus: 8-15,72-79

node 1 size: 290299 MB

node 1 free: 289346 MB

node 2 cpus: 16-23,80-87

node 2 size: 290299 MB

node 2 free: 289112 MB

node 3 cpus: 24-31,88-95

node 3 size: 290252 MB

node 3 free: 289310 MB

node 4 cpus: 32-39,96-103

node 4 size: 290299 MB

node 4 free: 289164 MB

node 5 cpus: 40-47,104-111

node 5 size: 290299 MB

node 5 free: 289276 MB

node 6 cpus: 48-55,112-119

node 6 size: 290299 MB

node 6 free: 289314 MB

node 7 cpus: 56-63,120-127

node 7 size: 290241 MB

node 7 free: 288577 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: 2377593340 kB

10. who -r

run-level 5 May 4 03:15

11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.20)

Default Target Status

graphical degraded

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

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
* systemd-networkd-wait-online.service	loaded	failed	failed	Wait for Network to be Configured

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Platform Notes (Continued)

13. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager apparmor blk-availability cloud-config cloud-final cloud-init cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager grub-common grub-initrd-fallback irqbalance keyboard-setup lm-sensors lvm2-monitor lxd-agent multipathd networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb ssh systemd-networkd systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd thermald tuned ua-reboot-cmds ubuntu-advantage udisks2 ufw vgauth
enabled-runtime	netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled	console-getty debug-shell iscsid nftables rsync serial-getty@ systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-time-wait-sync upower
generated	apport
indirect	uuid
masked	cryptdisks cryptdisks-early hwclock lvm2 multipath-tools-boot rc rcS screen-cleanup sudo x11-common

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

BOOT_IMAGE=/vmlinuz-5.15.0-177-generic
root=/dev/mapper/ubuntu--vg-ubuntu--lv
ro
nomodeset

15. cpupower frequency-info

analyzing CPU 0:
current policy: frequency should be within 1.50 GHz and 3.00 GHz.
The governor "performance" may decide which speed to use within this range.
boost state support:
Supported: yes
Active: yes
Boost States: 0
Total States: 3
Pstate-P0: 3000MHz

16. tuned-adm active

Current active 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
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

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Platform Notes (Continued)

```
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 Ubuntu 22.04.5 LTS
-----
```

```
-----
21. Disk information
SPEC is set to: /home/cpu2017
   Filesystem              Type  Size  Used Avail Use% Mounted on
   /dev/mapper/ubuntu--vg-ubuntu--lv ext4  6.9T   18G   6.6T   1% /
-----
```

```
-----
22. /sys/devices/virtual/dmi/id
   Vendor:      Supermicro
   Product:     Super Server
   Product Family: SMC H14
   Serial:      0123456789
-----
```

```
-----
23. dmidecode
Additional information from dmidecode 3.3 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 MTC40F204WS1RC64BC1 UXCX 96 GB 2 rank 6400
-----
```

```
-----
24. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:      American Megatrends International, LLC.
   BIOS Version:     1.9
   BIOS Date:        02/05/2026
   BIOS Revision:    5.35
-----
```



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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#1377 2024_09_24)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin
=====

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

AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1377 2024_09_24)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin
=====

=====
Fortran | 648.exchange2_s(base, peak)
=====

AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1377 2024_09_24)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/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

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SPEC CPU®2017 Integer Speed Result

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A+ Server AS -2126HS-TN
(H14DSH , AMD EPYC 9335)

SPECspeed®2017_int_base = 18.6

SPECspeed®2017_int_peak = 18.9

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: May-2026

Hardware Availability: Oct-2024

Software Availability: Apr-2026

Base Portability Flags (Continued)

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
-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

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Base Other Flags (Continued)

Fortran benchmarks:
-Wno-unused-command-line-argument

Peak Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
flang

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

600.perlbench_s: basepeak = yes

602.gcc_s: basepeak = yes

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: basepeak = yes

657.xz_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3

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Tested by: Supermicro

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Software Availability: Apr-2026

Peak Optimization Flags (Continued)

657.xz_s (continued):

```
-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
```

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: basepeak = yes

641.leela_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
```

Fortran benchmarks:

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Peak Optimization Flags (Continued)

648.exchange2_s: basepeak = yes

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/Supermicro-Platform-Settings-V1.2-Turin-revH.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/Supermicro-Platform-Settings-V1.2-Turin-revH.xml>

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