



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL365 Gen11

(2.40 GHz, AMD EPYC 9745)

SPECrate®2026_fp_base = 886

SPECrate®2026_fp_peak = 902

CPU2026 License: 3

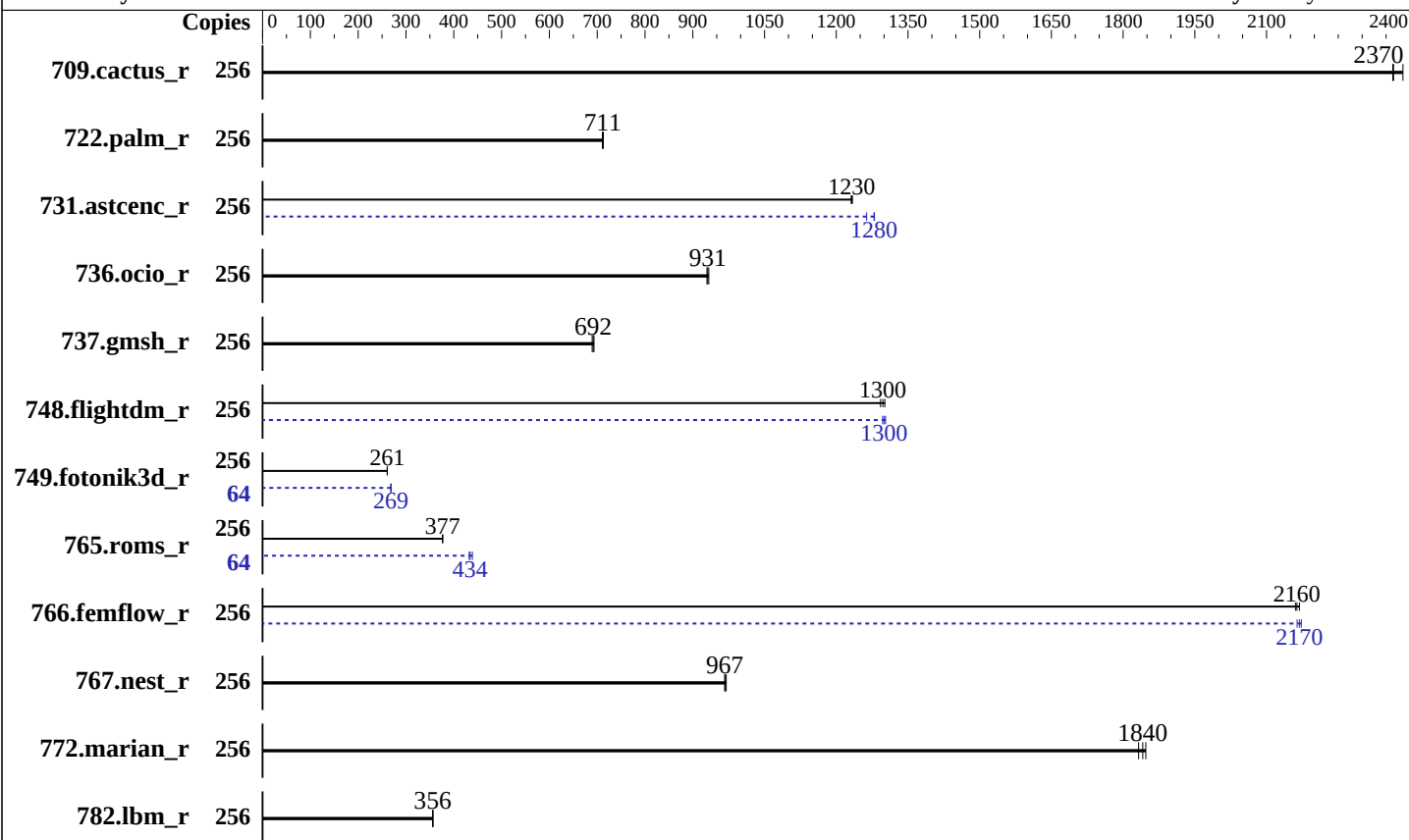
Test Sponsor: HPE

Tested by: HPE

Test Date: Sep-2026

Hardware Availability: Oct-2024

Software Availability: May-2026



Hardware

CPU Name: AMD EPYC 9745
Max MHz: 3700
Nominal: 2400
Enabled: 256 cores, 2 chips
Orderable: 1,2 Chips
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 1 MB I+D on chip per core
L3: 256 MB I+D on chip per chip,
32 MB shared / 16 cores
Other: None
Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
Storage: 1 x 1.6 TB NVMe SSD
Cooling: Air
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP7
Kernel 6.4.0-150700.53.6-default
Compiler: C/C++/Fortran: Version 5.2.0 of AOCC
Compiler Category: Vendor
Firmware: HPE BIOS Version v3.22 08/20/2026
released Aug-2026
File System: btrfs
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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	256	92.1	2390	<u>92.8</u>	<u>2370</u>	92.9	2360	256	92.1	2390	<u>92.8</u>	<u>2370</u>	92.9	2360
722.palm_r	256	475	711	<u>475</u>	<u>711</u>	474	713	256	475	711	<u>475</u>	<u>711</u>	474	713
731.astcenc_r	256	175	1230	174	1230	<u>174</u>	<u>1230</u>	256	<u>168</u>	<u>1280</u>	168	1280	170	1260
736.ocio_r	256	241	930	240	933	<u>241</u>	<u>931</u>	256	241	930	240	933	<u>241</u>	<u>931</u>
737.gmsh_r	256	170	689	<u>170</u>	<u>692</u>	169	693	256	170	689	<u>170</u>	<u>692</u>	169	693
748.flightdm_r	256	<u>141</u>	<u>1300</u>	141	1300	142	1290	256	141	1300	<u>141</u>	<u>1300</u>	141	1300
749.fotonik3d_r	256	<u>1134</u>	<u>261</u>	1134	261	1134	261	64	275	269	<u>275</u>	<u>269</u>	276	269
765.roms_r	256	<u>1070</u>	<u>377</u>	1070	377	1072	376	64	<u>232</u>	<u>434</u>	230	439	233	432
766.femflow_r	256	<u>174</u>	<u>2160</u>	174	2160	173	2170	256	174	2160	173	2170	<u>173</u>	<u>2170</u>
767.nest_r	256	<u>210</u>	<u>967</u>	210	967	209	970	256	<u>210</u>	<u>967</u>	210	967	209	970
772.marian_r	256	219	1850	<u>220</u>	<u>1840</u>	221	1830	256	219	1850	<u>220</u>	<u>1840</u>	221	1830
782.lbm_r	256	412	356	412	356	<u>412</u>	<u>356</u>	256	412	356	412	356	<u>412</u>	<u>356</u>

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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.

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Operating System Notes (Continued)

To disable address space layout randomization (ASLR) to reduce run-to-run variability, 'sysctl -w kernel.randomize_va_space=0' run as root.

To enable Transparent Hugepages (THP) for all allocations,

'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and

'echo always > /sys/kernel/mm/transparent_hugepage/defrag' and

'echo always > /sys/kernel/mm/transparent_hugepage/shmem_enabled' run as root.

Environment Variables Notes

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

LD_LIBRARY_PATH =

"/home/cpu2026/amd_rate_aocc520_znver5_A_lib/lib:/home/cpu2026/amd_rate_aocc520_znver5_A_lib/lib32:"

MALLOC_CONF = "retain:true"

General Notes

Binaries were compiled on a system with 2x AMD EPYC Venice256 CPU + 2TiB

Memory using Ubuntu 24.04

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 Configurations : Parameters are selected in the order shown below

Workload Profile set to General Throughput Compute

Determinism Control set to Manual

Performance Determinism set to Power Deterministic

Memory Patrol Scrubbing set to Disabled

ACPI CST C2 Latency set to 18 microseconds

Thermal Configuration set to Maximum Cooling

NUMA memory domains per socket set to Four memory domains per socket

AMD SMT Option set to Disabled

Workload Profile set to Custom

Power Regulator set to OS Control Mode

L2 HW Prefetcher set to Disabled

Sysinfo program /home/cpu2026/bin/sysinfo

Rev: 779ab21020787073335a329f3a45e2cd

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Platform Notes (Continued)

running on localhost Tue Sep 15 13:30:00 2026

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

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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 (254.27+suse.167.g130293e510)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

1. uname -srvm

Linux 6.4.0-150700.53.6-default #1 SMP PREEMPT_DYNAMIC Tue Jul 1 14:54:47 UTC 2025 (8ab7501) x86_64

2. w

13:30:00 up 2 min, 4 users, load average: 0.39, 0.25, 0.10
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

3. Username

From environment variable \$USER: root

4. ulimit -a

core file size (blocks, -c) 0

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Platform Notes (Continued)

data seg size	(kbytes, -d)	unlimited
scheduling priority	(-e)	0
file size	(blocks, -f)	unlimited
pending signals	(-i)	6190724
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)	6190724
virtual memory	(kbytes, -v)	unlimited
file locks	(-x)	unlimited

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@notty
/bin/bash $SPEC/run_fprate_sh.sh
sudo ./run_fprate.py
python3 ./run_fprate.py
runcpu --config amd_rate_aocc520_znver5_A1.cfg --tune all --reportable --iterations 3 fprate
runcpu --configfile amd_rate_aocc520_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
--runmode rate --tune base:peak --size test:train:refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.001/temlogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2026
```

6. /proc/cpuinfo

```
model name      : AMD EPYC 9745 128-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 17
stepping       : 0
microcode      : 0xb101066
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass srs0
TLB size      : 192 4K pages
cpu cores      : 128
siblings       : 128
2 physical ids (chips)
256 processors (hardware threads)
physical id 0: core ids 0-127
```

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Platform Notes (Continued)

physical id 1: core ids 0-127

physical id 0: apicids 0-127

physical id 1: apicids 128-255

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 2.40.4:

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 9745 128-Core Processor
CPU family: 26
Model: 17
Thread(s) per core: 1
Core(s) per socket: 128
Socket(s): 2
Stepping: 0
Frequency boost: enabled
CPU(s) scaling MHz: 100%
CPU max MHz: 2400.0000
CPU min MHz: 1500.0000
BogoMIPS: 4792.91

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 aperfmpperf rapl pni pclmulqdq
monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes
xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy
abm sse4a misalignsse 3dnowprefetch osvw ibs skinit wdt tce
topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb
cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2 ibrs ibpb stibp
ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms
invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
user_shstk avx_vnni avx512_bf16 clzero irperf xsaveerptr rdpru
wbnoinvd amd_ppin cppc 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

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Platform Notes (Continued)

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:

AMD-V

L1d cache:

12 MiB (256 instances)

L1i cache:

8 MiB (256 instances)

L2 cache:

256 MiB (256 instances)

L3 cache:

512 MiB (16 instances)

NUMA node(s):

8

NUMA node0 CPU(s):

0-31

NUMA node1 CPU(s):

32-63

NUMA node2 CPU(s):

64-95

NUMA node3 CPU(s):

96-127

NUMA node4 CPU(s):

128-159

NUMA node5 CPU(s):

160-191

NUMA node6 CPU(s):

192-223

NUMA node7 CPU(s):

224-255

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:

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 disabled; 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	12M	12	Data	1	64	1	64
L1i	32K	8M	8	Instruction	1	64	1	64
L2	1M	256M	16	Unified	2	1024	1	64
L3	32M	512M	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)

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Platform Notes (Continued)

```
node 0 cpus: 0-31
node 0 size: 193211 MB
node 0 free: 192737 MB
node 1 cpus: 32-63
node 1 size: 193488 MB
node 1 free: 192978 MB
node 2 cpus: 64-95
node 2 size: 193527 MB
node 2 free: 193108 MB
node 3 cpus: 96-127
node 3 size: 193527 MB
node 3 free: 193037 MB
node 4 cpus: 128-159
node 4 size: 193527 MB
node 4 free: 193059 MB
node 5 cpus: 160-191
node 5 size: 193527 MB
node 5 free: 193086 MB
node 6 cpus: 192-223
node 6 size: 193527 MB
node 6 free: 193058 MB
node 7 cpus: 224-255
node 7 size: 193373 MB
node 7 free: 192928 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: 1584855736 kB

10. who -r

run-level 3 Sep 15 13:28

11. Systemd service manager version: systemd 254 (254.27+suse.167.g130293e510)

Default Target Status
multi-user running

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Platform Notes (Continued)

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvme-fc-autoconnect postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant systemd-remount-fs
enabled-runtime	
disabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs autostart-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell dnsmasq ebttables exchange-bmc-os-info firewalld fsidd gnome-remote-desktop gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievad issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb openvpn@ ostree-remount ostree-state-overlay@ rpcbind rpmconfigcheck rsyncd rtkit-daemon samba-bgqd serial-getty@ smartd-generate_opts smb snmpd snmptrapd speech-dispatcherd systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd tuned udisks2 update-system-flatpaks upower vncserver@ wpa_supplicant@ pcscd saned@ systemd-userdbd wickedd
indirect	

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

BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.53.6-default
root=UUID=d0ab7ebe-8d2b-4ca4-97d8-878a5337a104
splash=silent
mitigations=auto
quiet
security=apparmor

14. cpupower frequency-info

analyzing CPU 98:
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

15. sysctl

kernel.numa_balancing	0
kernel.randomize_va_space	0
vm.compaction_proactiveness	20
vm.dirty_background_bytes	0

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Platform Notes (Continued)

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

16. /sys/kernel/mm/transparent_hugepage
defrag [always] defer defer+madvice madvice never
enabled [always] madvice never
hpage_pmd_size 2097152
shmem_enabled [always] within_size advise never deny force

17. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs 60000
defrag 1
max_ptes_none 511
max_ptes_shared 256
max_ptes_swap 64
pages_to_scan 4096
scan_sleep_millisecs 10000

18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP7

19. Disk information
SPEC is set to: /home/cpu2026

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme1n1p2	btrfs	1.5T	35G	1.5T	3%	/home

20. /sys/devices/virtual/dmi/id
Vendor: HPE

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Platform Notes (Continued)

Product: ProLiant DL365 Gen11

Product Family: ProLiant

Serial: DL365G11-008

21. 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:

10x Hynix HMC94AHBRA480N 64 GB 2 rank 6400

1x Hynix HMC94AHBRA487N 64 GB 2 rank 6400

1x Micron MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400

12x Micron MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400

22. BIOS

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

BIOS Vendor: HPE

BIOS Version: 3.22

BIOS Date: 08/20/2026

BIOS Revision: 3.22

Firmware Revision: 1.79

Compiler Version Notes

C | 782.lbm_r(base, peak)

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

Target: x86_64-unknown-linux-gnu

Thread model: posix

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

C++ | 731.astcenc_r(base, peak) 736.ocio_r(base, peak)

| 748.flightdm_r(base, peak) 766.femflow_r(base, peak)

| 767.nest_r(base, peak) 772.marian_r(base, peak)

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

Target: x86_64-unknown-linux-gnu

Thread model: posix

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

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SPEC CPU®2026 Floating Point Rate Result

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(Test Sponsor: HPE)

ProLiant DL365 Gen11

(2.40 GHz, AMD EPYC 9745)

SPECrate®2026_fp_base = 886

SPECrate®2026_fp_peak = 902

CPU2026 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Sep-2026

Hardware Availability: Oct-2024

Software Availability: May-2026

Compiler Version Notes (Continued)

=====
C++, C | 709.cactus_r(base, peak) 737.gmsh_r(base, peak)
=====

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

Target: x86_64-unknown-linux-gnu

Thread model: posix

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

=====
Fortran | 722.palm_r(base, peak) 749.fotonik3d_r(base, peak) 765.roms_r(base, peak)
=====

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

Target: x86_64-unknown-linux-gnu

Thread model: posix

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

Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

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



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Software Availability: May-2026

Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both C and C++:

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

Base Other Flags

C benchmarks:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

C++ benchmarks:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

Fortran benchmarks:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

Benchmarks using both C and C++:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

Peak Compiler Invocation

C benchmarks:

clang

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Tested by: HPE

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Software Availability: May-2026

Peak Compiler Invocation (Continued)

C++ benchmarks:

clang++

Fortran benchmarks:

flang

Benchmarks using both C and C++:

clang++ clang

Peak Portability Flags

736.ocio_r: -fno-finite-math-only

737.gmsl_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.ascenc_r: -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

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

-Wl,-mllvm -Wl,-x86-use-vzeroupper=false

-Wl,-mllvm -Wl,-extra-inliner -O3 -march=znver5

-fveclib=AMDLIB -flto -fno-PIE -fno-plt -ffast-math

-mllvm -unroll-threshold=100

-mllvm -loop-unswitch-threshold=200000

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

-lamdlibm

736.ocio_r: basepeak = yes

748.flightdm_r: -std=c++17 -no-pie -Wl,-mllvm -Wl,-inline-threshold=1500

-O3 -march=znver5 -fveclib=AMDLIB -flto -fno-PIE

-fno-plt -ffast-math -fvirtual-function-elimination

-fvisibility=hidden -mllvm -inline-threshold=1500

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Peak Optimization Flags (Continued)

748.flightdm_r (continued):

-lamdalloc -lamdlibm

766.femflow_r: Same as 748.flightdm_r

767.nest_r: basepeak = yes

772.marian_r: basepeak = yes

Fortran benchmarks:

722.palm_r: basepeak = yes

749.fotonik3d_r: -std=f2008 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3

-march=znver5 -fveclib=AMDLIBM -flto -fno-PIE -fno-plt

-ffast-math -Ofast -Mrecursive

-mllvm -reduce-array-computations=3

-fepilog-vectorization-of-inductions -zopt -lamdalloc

-lamdlibm

765.roms_r: Same as 749.fotonik3d_r

Benchmarks using both C and C++:

709.cactus_r: basepeak = yes

737.gmsh_r: basepeak = yes

Peak Other Flags

C benchmarks:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

C++ benchmarks:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

Fortran benchmarks:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib

Benchmarks using both C and C++:

-L/work/cpu2026/v101/aocc52/rate/amd_rate_aocc520_znver5_A_lib/lib



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

<http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-10-07.00.html>

<http://www.spec.org/cpu2026/results/flags/HPE-Platform-Flags-AMD-Turin-rev1.12.html>

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

<http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-10-07.00.xml>

<http://www.spec.org/cpu2026/results/flags/HPE-Platform-Flags-AMD-Turin-rev1.12.xml>

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Tested with SPEC CPU®2026 v1.0.1 on 2026-09-15 04:00:00-0400.

Report generated on 2026-10-07 10:41:57 by CPU2026 PDF formatter (unknown).

Originally published on 2026-10-06.