



# SPEC CPU®2026 Floating Point Rate Result

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**Supermicro**  
(Test Sponsor: Intel Corporation)

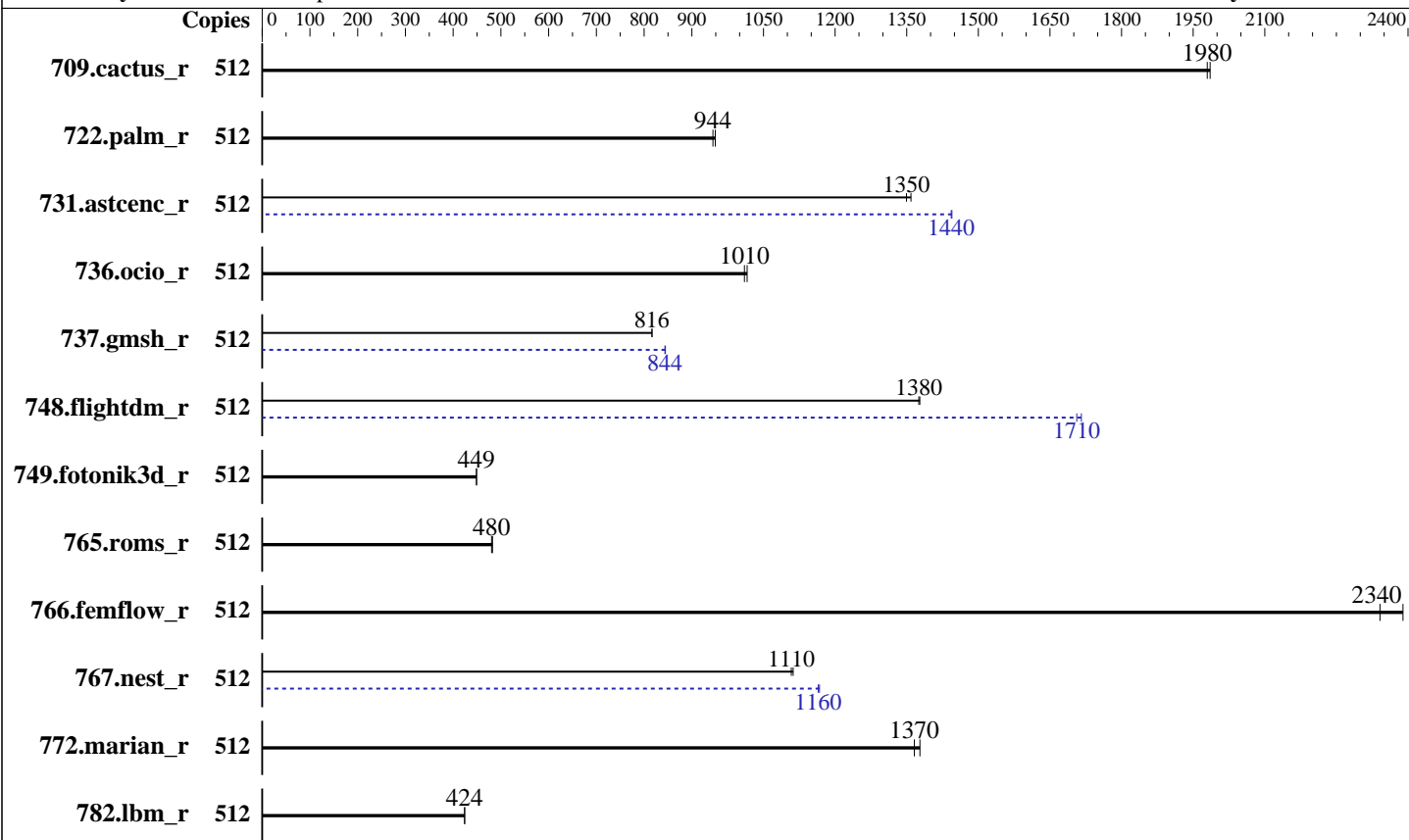
**SPECrate®2026\_fp\_base = 994**

**Hyper SuperServer SYS-222HA-TN**

**SPECrate®2026\_fp\_peak = 1020**

**CPU2026 License:** 13  
**Test Sponsor:** Intel Corporation  
**Tested by:** Intel Corporation

**Test Date:** Feb-2026  
**Hardware Availability:** Jun-2025  
**Software Availability:** Nov-2025



## Hardware

CPU Name: Intel Xeon 6980P  
 Max MHz: 3900  
 Nominal: 2000  
 Enabled: 256 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 64 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 504 MB I+D on chip per chip  
 Other: None  
 Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-88/56B-M)  
 Storage: 1 x 3.5 TB PCIe NVMe SSD  
 Cooling: Air  
 Other: None

## Software

OS: Ubuntu 24.04.3 LTS  
 6.8.0-90-generic  
 Compiler: C/C++: Version 2025.3 of Intel oneAPI DPC++/C++ Compiler for Linux;  
 Fortran: Version 2025.3 of Intel Fortran Compiler for Linux  
 Compiler Category: Vendor  
 Firmware: Version 5.35 released Jul-2025  
 File System: ext4  
 System State: Run level 5 (Multiuser with networking)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: jemalloc memory allocator v5.3  
 Power Management: BIOS 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    | 512    | 221                | 1990               | <b><u>222</u></b> | <b><u>1980</u></b> |         |       | 512    | 221                | 1990               | <b><u>222</u></b> | <b><u>1980</u></b> |         |       |
| 722.palm_r      | 512    | 712                | 949                | <b><u>716</u></b> | <b><u>944</u></b>  |         |       | 512    | 712                | 949                | <b><u>716</u></b> | <b><u>944</u></b>  |         |       |
| 731.ascenc_r    | 512    | 316                | 1360               | <b><u>319</u></b> | <b><u>1350</u></b> |         |       | 512    | 298                | 1440               | <b><u>298</u></b> | <b><u>1440</u></b> |         |       |
| 736.ocio_r      | 512    | 441                | 1020               | <b><u>444</u></b> | <b><u>1010</u></b> |         |       | 512    | 441                | 1020               | <b><u>444</u></b> | <b><u>1010</u></b> |         |       |
| 737.gmsh_r      | 512    | <b><u>288</u></b>  | <b><u>816</u></b>  | 288               | 816                |         |       | 512    | 278                | 845                | <b><u>279</u></b> | <b><u>844</u></b>  |         |       |
| 748.flightdm_r  | 512    | 266                | 1380               | <b><u>267</u></b> | <b><u>1380</u></b> |         |       | 512    | <b><u>215</u></b>  | <b><u>1710</u></b> | 214               | 1720               |         |       |
| 749.fotonik3d_r | 512    | <b><u>1319</u></b> | <b><u>449</u></b>  | 1318              | 449                |         |       | 512    | <b><u>1319</u></b> | <b><u>449</u></b>  | 1318              | 449                |         |       |
| 765.roms_r      | 512    | <b><u>1678</u></b> | <b><u>480</u></b>  | 1672              | 482                |         |       | 512    | <b><u>1678</u></b> | <b><u>480</u></b>  | 1672              | 482                |         |       |
| 766.femflow_r   | 512    | <b><u>321</u></b>  | <b><u>2340</u></b> | 314               | 2390               |         |       | 512    | <b><u>321</u></b>  | <b><u>2340</u></b> | 314               | 2390               |         |       |
| 767.nest_r      | 512    | <b><u>366</u></b>  | <b><u>1110</u></b> | 365               | 1110               |         |       | 512    | <b><u>349</u></b>  | <b><u>1160</u></b> | 348               | 1170               |         |       |
| 772.marian_r    | 512    | <b><u>592</u></b>  | <b><u>1370</u></b> | 587               | 1380               |         |       | 512    | <b><u>592</u></b>  | <b><u>1370</u></b> | 587               | 1380               |         |       |
| 782.lbm_r       | 512    | 692                | 424                | <b><u>692</u></b> | <b><u>424</u></b>  |         |       | 512    | 692                | 424                | <b><u>692</u></b> | <b><u>424</u></b>  |         |       |

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
LD\_LIBRARY\_PATH = "/root/cpu2026-0.902.0/lib"  
MALLOC\_CONF = "retain:true"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using CentOS Stream 9.  
Transparent Huge Pages enabled by default  
Prior to runcpu invocation  
Filesystem page cache synced and cleared with:  
sync; echo 3> /proc/sys/vm/drop\_caches

(Continued on next page)



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### General Notes (Continued)

runcpu command invoked through numactl i.e.:  
numactl --interleave=all runcpu <etc>

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.

jemalloc, a general purpose malloc implementation  
built with the CentOS Stream 9, and the system compiler gcc 11.5.0  
sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

### Platform Notes

BIOS Configuration :  
Workload Profile set to Disabled  
Power Performance Tuning set to BIOS Controls EPB  
Energy Perf Bias CFG mode set to Extreme Performance  
Sub NUMA Clustering (SNC) set to Enabled  
KTI Prefetch set to Enabled  
Stale AtoS set to Disabled  
LLC Dead Line Alloc set to Disabled  
BMC Configuration:  
System Fan speed set to full speed

Sysinfo program /root/cpu2026-0.902.0/bin/sysinfo  
Rev: 069f95da7e7f5d81b2ce48a82150e54f  
running on smc-gnr-ap6-ubuntu Tue Feb 3 02:55:29 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

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## Platform Notes (Continued)

- 11. Systemd service manager version: systemd 255 (255.4-lubuntu8.12)
- 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 -srv
Linux 6.8.0-90-generic #91-Ubuntu SMP PREEMPT_DYNAMIC Tue Nov 18 14:14:30 UTC 2025 x86_64
-----
```

```
-----
2. w
02:55:29 up 3 days, 4:32, 3 users, load average: 221.08, 427.78, 468.85
USER      TTY      FROM          LOGIN@      IDLE        JCPU      PCPU      WHAT
root      pts/0    10.125.130.14 02:46      5:22m      0.00s     0.08s    sshd: root@notty
root      pts/0    10.125.130.14 02:46      5:22m      0.00s     0.07s    sshd: root@pts/0
-----
```

```
-----
3. Username
From environment variable $USER: root
-----
```

```
-----
4. ulimit -a
time(seconds)      unlimited
file(blocks)       unlimited
data(kbytes)       unlimited
stack(kbytes)      unlimited
coredump(blocks)   0
memory(kbytes)     unlimited
locked memory(kbytes) 198086480
process            6189882
nofiles            1024
vmemory(kbytes)    unlimited
locks              unlimited
rtprio            0
-----
```

```
-----
5. sysinfo process ancestry
-----
```

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## Platform Notes (Continued)

```

/sbin/init
tmux new -s spec
-bash
-bash
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 512 -c
ic2025.3-sapphirerapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=256 --define
physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak -o all fprate
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 512 --configfile
ic2025.3-sapphirerapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=256 --define
physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all
--nopower --runmode rate --tune base:peak --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.012/templogs/preenv.fprate.012.0.log --lognum 012.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /root/cpu2026-0.902.0

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6980P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x10003d0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi vmscape
cpu cores     : 128
siblings       : 256
2 physical ids (chips)
512 processors (hardware threads)
physical id 0: core ids 0-42,64-106,128-169
physical id 1: core ids 0-42,64-106,128-169
physical id 0: apicids 0-85,128-213,256-339
physical id 1: apicids 512-597,640-725,768-851
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):                512
On-line CPU(s) list:   0-511
Vendor ID:             GenuineIntel
BIOS Vendor ID:       Intel(R) Corporation

```

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```

Model name: Intel(R) Xeon(R) 6980P
BIOS Model name: Intel(R) Xeon(R) 6980P CPU @ 2.0GHz
BIOS CPU family: 179
CPU family: 6
Model: 173
Thread(s) per core: 2
Core(s) per socket: 128
Socket(s): 2
Stepping: 1
BogoMIPS: 4000.00
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni
pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt
tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm
3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3 intel_ppin cdp_l2
ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept
vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid cqm
rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb
intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1
xsavec cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
split_lock_detect user_shstk avx_vnni avx512_bf16 wbnoinvd dtherm ida
arat pln pts vnmi avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni
vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57
rdpid bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
serialize tsxldtrk pconfig arch_lbr ibt amx_bf16 avx512_fp16 amx_tile
amx_int8 flush_lld arch_capabilities ibpb_exit_to_user

Virtualization: VT-x
L1d cache: 12 MiB (256 instances)
L1i cache: 16 MiB (256 instances)
L2 cache: 512 MiB (256 instances)
L3 cache: 1008 MiB (2 instances)
NUMA node(s): 6
NUMA node0 CPU(s): 0-42,256-298
NUMA node1 CPU(s): 43-85,299-341
NUMA node2 CPU(s): 86-127,342-383
NUMA node3 CPU(s): 128-170,384-426
NUMA node4 CPU(s): 171-213,427-469
NUMA node5 CPU(s): 214-255,470-511
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

```

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## Platform Notes (Continued)

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; RSB filling; PBRSE-eIBRS Not affected; BHI BHI\_DIS\_S  
 Vulnerability Srbds: Not affected  
 Vulnerability Tsx async abort: Not affected  
 Vulnerability Vmscape: Mitigation; IBPB before exit to userspace

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  | 64K      | 16M      | 16   | Instruction | 1     | 64     | 1        | 64             |
| L2   | 2M       | 512M     | 16   | Unified     | 2     | 2048   | 1        | 64             |
| L3   | 504M     | 1008M    | 16   | Unified     | 3     | 516096 | 1        | 64             |

8. `numactl --hardware`

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

```
available: 6 nodes (0-5)
node 0 cpus: 0-42,256-298
node 0 size: 257526 MB
node 0 free: 226342 MB
node 1 cpus: 43-85,299-341
node 1 size: 258018 MB
node 1 free: 228400 MB
node 2 cpus: 86-127,342-383
node 2 size: 257976 MB
node 2 free: 231309 MB
node 3 cpus: 128-170,384-426
node 3 size: 258018 MB
node 3 free: 231131 MB
node 4 cpus: 171-213,427-469
node 4 size: 258018 MB
node 4 free: 230549 MB
node 5 cpus: 214-255,470-511
node 5 size: 257991 MB
node 5 free: 231473 MB
node distances:
node  0  1  2  3  4  5
 0:  10 15 17 21 28 26
 1:  15 10 15 23 26 23
 2:  17 15 10 26 23 21
 3:  21 28 26 10 15 17
 4:  23 26 23 15 10 15
```

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## Platform Notes (Continued)

5: 26 23 21 17 15 10

9. /proc/meminfo  
MemTotal: 1584691864 kB

10. who -r  
run-level 5 Jan 30 22:23

11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.12)  
Default Target Status  
graphical degraded

12. Failed units, from systemctl list-units --state=failed  
UNIT LOAD ACTIVE SUB DESCRIPTION  
\* fwupd-refresh.service loaded failed failed Refresh fwupd metadata and update motd  
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 apparmor appport 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 keyboard-setup lvm2-monitor multipathd networkd-dispatcher nvme-fc-boot-connections nvme-autoconnect open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb snapd sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd thermald ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades vgauth  
enabled-runtime netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs  
disabled console-getty debug-shell ipmievd iscsid nftables rsync serial-getty@ ssh systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysext systemd-time-wait-sync upower  
generated openipmi  
indirect systemd-sysupdate systemd-sysupdate-reboot uidd  
masked cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

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

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## Platform Notes (Continued)

```
BOOT_IMAGE=/boot/vmlinuz-6.8.0-90-generic
root=UUID=1125c027-be85-444c-a0e0-9873f7e7f358
ro
```

```
-----
15. cpupower frequency-info
analyzing CPU 15:
  Unable to determine current policy
  boost state support:
    Supported: yes
    Active: yes
```

```
-----
16. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space     2
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                 20
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                   60
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           0
```

```
-----
17. /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
```

```
-----
18. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs 60000
defrag                 1
max_ptes_none          511
max_ptes_shared        256
```

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## Platform Notes (Continued)

```
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs  10000
```

-----  
19. OS release  
From /etc/\*-release /etc/\*-version  
os-release Ubuntu 24.04.3 LTS

-----  
20. Disk information  
SPEC is set to: /root/cpu2026-0.902.0  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/nvme1n1p2 ext4 3.5T 924G 2.4T 28% /

-----  
21. /sys/devices/virtual/dmi/id  
Vendor: Supermicro  
Product: SYS-222HA-TN  
Product Family: Family  
Serial: S928613X4614557

-----  
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:  
1x Micron Technology MTC40F2046S1HC88XDX WCCCC 64 GB 1 rank 8800  
2x Micron Technology MTC40F2046S1HC88XDX WFFFG 64 GB 1 rank 8800  
21x Micron Technology MTC40F2046S1HC88XDY WCCCC 64 GB 1 rank 8800

-----  
23. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: American Megatrends International, LLC.  
BIOS Version: 1.4  
BIOS Date: 07/24/2025  
BIOS Revision: 5.35

## Compiler Version Notes

=====  
C | 782.lbm\_r(base, peak)

(Continued on next page)



# SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

**Supermicro**  
(Test Sponsor: Intel Corporation)

SPECrate®2026\_fp\_base = 994

**Hyper SuperServer SYS-222HA-TN**

SPECrate®2026\_fp\_peak = 1020

**CPU2026 License:** 13  
**Test Sponsor:** Intel Corporation  
**Tested by:** Intel Corporation

**Test Date:** Feb-2026  
**Hardware Availability:** Jun-2025  
**Software Availability:** Nov-2025

## Compiler Version Notes (Continued)

-----  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2025.3.0 Build 20251010  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.  
-----

=====  
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)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2025.3.0 Build 20251010  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.  
-----

=====  
C++, C | 709.cactus\_r(base, peak) 737.gmsh\_r(base, peak)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2025.3.0 Build 20251010  
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-----

=====  
Fortran | 722.palm\_r(base, peak) 749.fotonik3d\_r(base, peak) 765.roms\_r(base,  
| peak)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version  
2025.3.0 Build 20251010  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.  
-----

## Base Compiler Invocation

C benchmarks:  
icx

C++ benchmarks:  
icpx

Fortran benchmarks:  
ifx

Benchmarks using both C and C++:  
icpx icx



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**Test Date:** Feb-2026  
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## Base Portability Flags

709.cactus\_r: -DSPEC\_LP64  
722.palm\_r: -DSPEC\_LP64  
731.ascenc\_r: -DSPEC\_LP64  
736.ocio\_r: -DSPEC\_LP64  
737.gmsh\_r: -DSPEC\_LP64 -fno-associative-math  
748.flightdm\_r: -DSPEC\_LP64  
749.fotonik3d\_r: -DSPEC\_LP64  
765.roms\_r: -DSPEC\_LP64  
766.femflow\_r: -DSPEC\_LP64  
767.nest\_r: -DSPEC\_LP64  
772.marian\_r: -DSPEC\_LP64  
782.lbm\_r: -DSPEC\_LP64

## Base Optimization Flags

### C benchmarks:

-m64 -std=c18 -Wl,-z,muldefs -xsaphirerapids  
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib  
-ljemalloc

### C++ benchmarks:

-m64 -std=c++17 -Wl,-z,muldefs -xsaphirerapids  
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib  
-ljemalloc

### Fortran benchmarks:

-m64 -stand f18 -Wl,-z,muldefs -xsaphirerapids  
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4 -nostandard-realloc-lhs  
-align array32byte -auto -L/usr/local/jemalloc-5.3.0/lib -ljemalloc

### Benchmarks using both C and C++:

-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xsaphirerapids  
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse  
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib  
-ljemalloc



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**Tested by:** Intel Corporation

**Test Date:** Feb-2026  
**Hardware Availability:** Jun-2025  
**Software Availability:** Nov-2025

## Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both C and C++:

icpx icx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

782.lbm\_r: basepeak = yes

C++ benchmarks:

731.astcenc\_r: -m64 -std=c++17 -Wl,-z,muldefs -fprofile-generate(pass 1)  
-fprofile-use=default.profdata(pass 2) -xHost(pass 1)  
-ffp-model=fast -xsapphirerapids(pass 2) -flto  
-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3  
-mfpmath=sse -funroll-loops  
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

736.ocio\_r: basepeak = yes

748.flightdm\_r: Same as 731.astcenc\_r

766.femflow\_r: basepeak = yes

767.nest\_r: Same as 731.astcenc\_r

772.marian\_r: basepeak = yes

(Continued on next page)



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**Test Date:** Feb-2026  
**Hardware Availability:** Jun-2025  
**Software Availability:** Nov-2025

## Peak Optimization Flags (Continued)

Fortran benchmarks:

722.palm\_r: basepeak = yes  
749.fotonik3d\_r: basepeak = yes  
765.roms\_r: basepeak = yes

Benchmarks using both C and C++:

709.cactus\_r: basepeak = yes  
  
737.gmsh\_r: -m64 -std=c++17 -std=c18 -Wl,-z,muldefs  
-fprofile-generate(pass 1)  
-fprofile-use=default.profdata(pass 2) -xHost(pass 1)  
-ffp-model=fast -xsapphirerapids(pass 2) -flto  
-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3  
-mfpmath=sse -funroll-loops  
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.html>  
<http://www.spec.org/cpu2026/results/flags/Intel-Platform-Settings-standard-v1.html>

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.xml>  
<http://www.spec.org/cpu2026/results/flags/Intel-Platform-Settings-standard-v1.xml>

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