SPEC CPU®2026 Integer Rate Result

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Supermicro
(Test Sponsor: Intel Corporation)

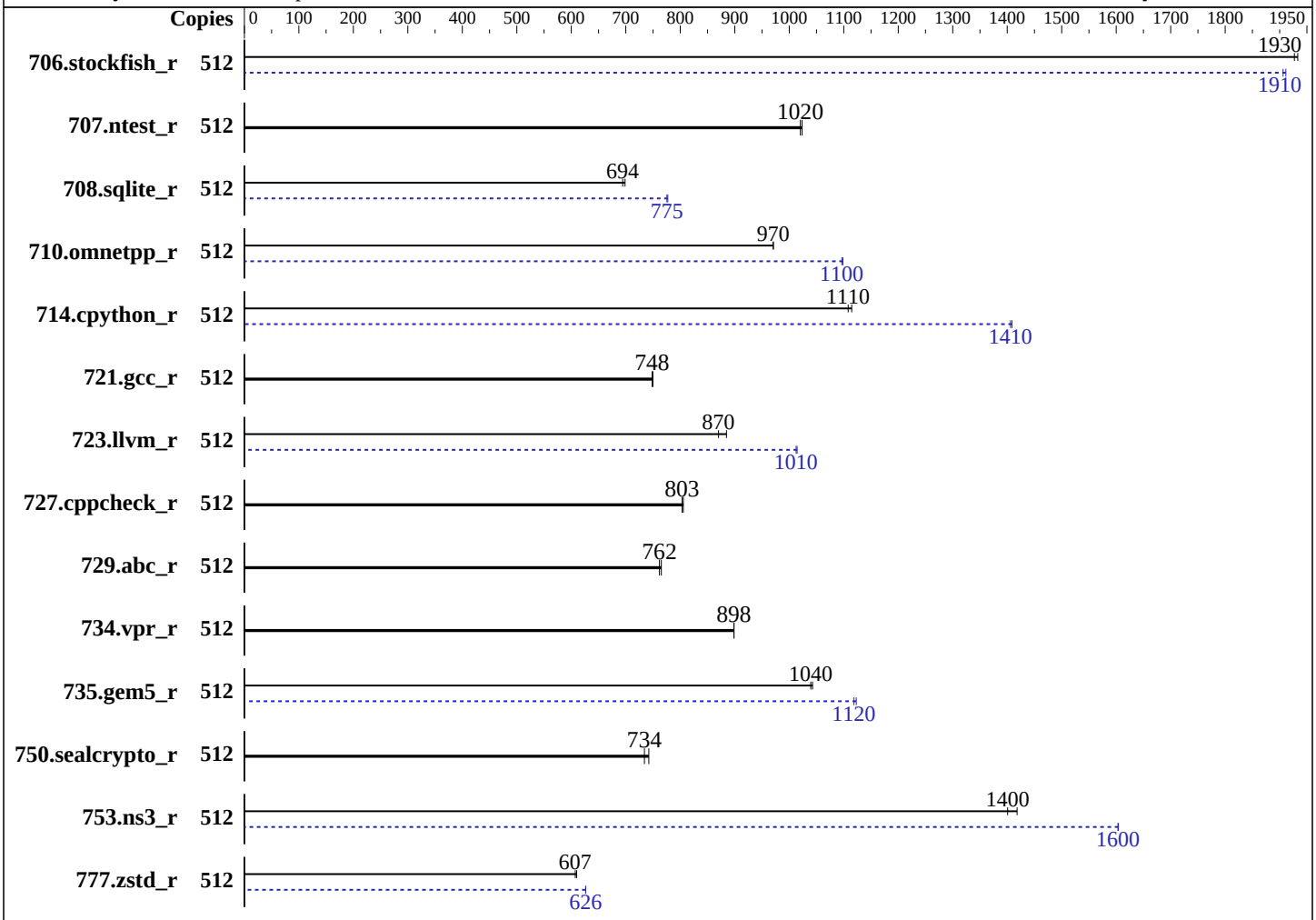
Hyper SuperServer SYS-222HA-TN

SPECrate®2026_int_base = 926

SPECrate®2026_int_peak = 984

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:	None
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
706.stockfish_r	512	**335**	**1930**	334	1930			512	**338**	**1910**	338	1910		
707.ntest_r	512	**297**	**1020**	296	1020			512	**297**	**1020**	296	1020		
708.sqlite_r	512	387	699	**389**	**694**			512	**349**	**775**	348	777		
710.omnetpp_r	512	**256**	**970**	256	971			512	**227**	**1100**	227	1100		
714.cpython_r	512	220	1110	**221**	**1110**			512	**174**	**1410**	174	1410		
721.gcc_r	512	**469**	**748**	468	750			512	**469**	**748**	468	750		
723.llvm_r	512	**298**	**870**	293	885			512	**256**	**1010**	256	1010		
727.cppcheck_r	512	228	806	**229**	**803**			512	228	806	**229**	**803**		
729.abc_r	512	**308**	**762**	307	765			512	**308**	**762**	307	765		
734.vpr_r	512	263	899	**263**	**898**			512	263	899	**263**	**898**		
735.gem5_r	512	239	1040	**240**	**1040**			512	**223**	**1120**	222	1120		
750.sealcrypto_r	512	**374**	**734**	370	742			512	**374**	**734**	370	742		
753.ns3_r	512	**224**	**1400**	221	1420			512	**196**	**1600**	196	1600		
777.zstd_r	512	**543**	**607**	541	610			512	**526**	**626**	526	626		

SPECrate®2026_int_base = 926

SPECrate®2026_int_peak = 984

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
```

(Continued on next page)

General Notes (Continued)

```
 Filesystem page cache synced and cleared with:
 sync; echo 3>       /proc/sys/vm/drop_caches
 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.
```

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 is set to full speed

 Sysinfo program /root/cpu2026-0.902.0/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f
 running on smc-gnr-ap6-ubuntu Mon Feb  2 21:39:17 2026

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

 ----------------------------------------------------------------
 Table of contents
 ----------------------------------------------------------------
  1. uname -srvm
  2. w
  3. Username
  4. ulimit -a
  5. sysinfo process ancestry
  6. /proc/cpuinfo
  7. lscpu
  8. numactl --hardware
  9. /proc/meminfo
 10. who -r
 11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.12)
```

(Continued on next page)

Platform Notes (Continued)

```
 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 -srvm
  Linux 6.8.0-90-generic #91-Ubuntu SMP PREEMPT_DYNAMIC Tue Nov 18 14:14:30 UTC 2025 x86_64

------------------------------------------------------------
2. w
   21:39:17 up 2 days, 23:16,  3 users,  load average: 0.01, 30.52, 53.45
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  root             10.241.241.138   21:07    6:39   0.00s  0.03s sshd: root@notty
  root             10.241.241.138   21:07    6:39   0.00s  0.15s 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
 /sbin/init
```

(Continued on next page)

Platform Notes (Continued)

```
 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 intrate
 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 intrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2026.011/templogs/preenv.intrate.011.0.log --lognum 011.0 --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
  Model name:                           Intel(R) Xeon(R) 6980P
```

(Continued on next page)

Platform Notes (Continued)

```
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
                                      xsaves 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_l1d 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
Vulnerability Reg file data sampling: Not affected
```

(Continued on next page)

Platform Notes (Continued)

```
   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;
                                           PBRSB-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: 245927 MB
   node 1 cpus: 43-85,299-341
   node 1 size: 258018 MB
   node 1 free: 247902 MB
   node 2 cpus: 86-127,342-383
   node 2 size: 257976 MB
   node 2 free: 248735 MB
   node 3 cpus: 128-170,384-426
   node 3 size: 258018 MB
   node 3 free: 249107 MB
   node 4 cpus: 171-213,427-469
   node 4 size: 258018 MB
   node 4 free: 248664 MB
   node 5 cpus: 214-255,470-511
   node 5 size: 257991 MB
   node 5 free: 249208 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
     5:  26  23  21  17  15  10
```

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Platform Notes (Continued)

```
------------------------------------------------------------
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 apport 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 nvmefc-boot-connections nvmf-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 uuidd
  masked           cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

------------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.8.0-90-generic
```

(Continued on next page)

Platform Notes (Continued)

```
  root=UUID=1125c027-be85-444c-a0e0-9873f7e7f358
  ro

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 273:
    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+madvise [madvise] never
  enabled         always [madvise] never
  hpage_pmd_size  2097152
  shmem_enabled   always within_size advise [never] deny force

------------------------------------------------------------
18. /sys/kernel/mm/transparent_hugepage/khugepaged
  alloc_sleep_millisecs   60000
  defrag                      1
  max_ptes_none             511
  max_ptes_shared           256
  max_ptes_swap              64
```

(Continued on next page)

Platform Notes (Continued)

```
    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  826G  2.5T  25% /

  ------------------------------------------------------------
  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       | 708.sqlite_r(base, peak) 714.cpython_r(base, peak) 777.zstd_r(base,
        | peak)
```

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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++    | 706.stockfish_r(base, peak) 707.ntest_r(base, peak)
       | 727.cppcheck_r(base, peak) 753.ns3_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 | 710.omnetpp_r(base, peak) 721.gcc_r(base, peak) 723.llvm_r(base,
       | peak) 729.abc_r(base, peak) 734.vpr_r(base, peak) 735.gem5_r(base,
       | peak) 750.sealcrypto_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.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Benchmarks using both C and C++:
icpx icx

Base Portability Flags

706.stockfish_r: -DSPEC_LP64
707.ntest_r: -DSPEC_LP64
708.sqlite_r: -DSPEC_LP64
710.omnetpp_r: -DSPEC_LP64
714.cpython_r: -DSPEC_LP64

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Base Portability Flags (Continued)

721.gcc_r: `-DSPEC_LP64`
723.llvm_r: `-DSPEC_LP64`
727.cppcheck_r: `-DSPEC_LP64`
729.abc_r: `-DSPEC_LP64`
734.vpr_r: `-DSPEC_LP64`
735.gem5_r: `-DSPEC_LP64`
750.sealcrypto_r: `-DSPEC_LP64`
753.ns3_r: `-DSPEC_LP64`
777.zstd_r: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
```
-m64 -std=c18 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc
```

C++ benchmarks:
```
-m64 -std=c++17 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc
```

Benchmarks using both C and C++:
```
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc
```

Peak Compiler Invocation

C benchmarks:
```
icx
```

C++ benchmarks:
```
icpx
```

Benchmarks using both C and C++:
```
icpx icx
```

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
-m64 -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/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc

C++ benchmarks:

706.stockfish_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/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc

707.ntest_r: basepeak = yes

727.cppcheck_r: basepeak = yes

753.ns3_r: Same as 706.stockfish_r

Benchmarks using both C and C++:

710.omnetpp_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/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc

721.gcc_r: basepeak = yes

723.llvm_r: Same as 710.omnetpp_r

729.abc_r: basepeak = yes

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Peak Optimization Flags (Continued)

734.vpr_r: `basepeak = yes`

735.gem5_r: `Same as 710.omnetpp_r`

750.sealcrypto_r: `basepeak = yes`

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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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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