SPEC CPU®2026 Integer Rate Result

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Supermicro

(Test Sponsor: Intel Corporation)

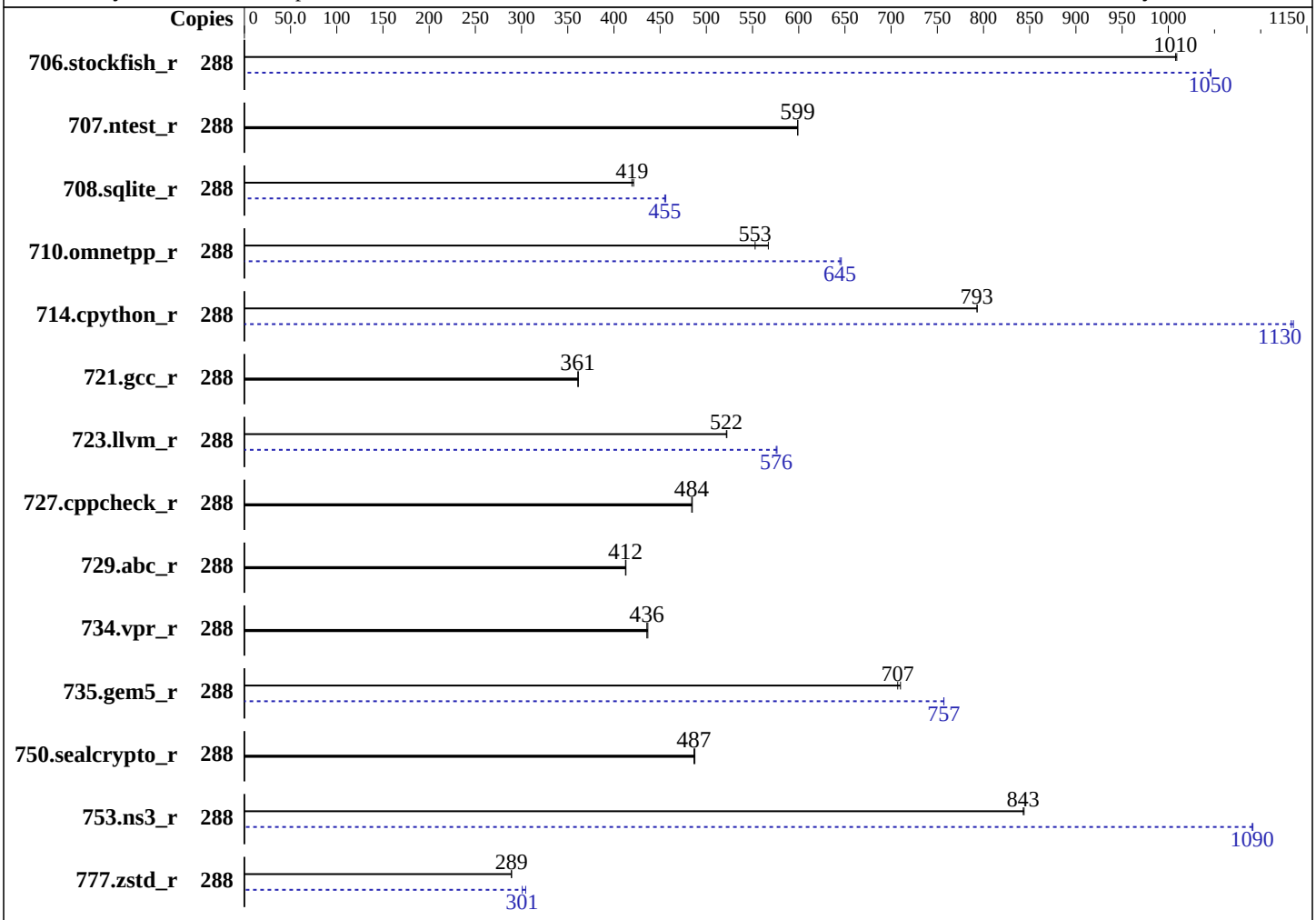
Hyper SuperServer SYS-222H-TN

SPECrate®2026_int_base = 534

SPECrate®2026_int_peak = 577

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

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



Hardware

CPU Name:	Intel Xeon 6780E
Max MHz:	3000
Nominal:	2200
Enabled:	288 cores, 2 chips
Orderable:	1,2 chips
Cache L1:	64 KB I + 32 KB D on chip per core
L2:	4 MB I+D on chip per core
L3:	108 MB I+D on chip per chip
Other:	None
Memory:	1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	1 x 900 GB M.2 NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	Ubuntu 24.04 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 Aug-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	288	**360**	**1010**	360	1010			288	347	1050	**347**	**1050**		
707.ntest_r	288	285	599	**285**	**599**			288	285	599	**285**	**599**		
708.sqlite_r	288	361	421	**363**	**419**			288	**334**	**455**	333	456		
710.omnetpp_r	288	**253**	**553**	247	567			288	217	646	**217**	**645**		
714.cpython_r	288	**174**	**793**	174	793			288	**122**	**1130**	122	1140		
721.gcc_r	288	**548**	**361**	547	362			288	**548**	**361**	547	362		
723.llvm_r	288	280	522	**280**	**522**			288	253	576	**254**	**576**		
727.cppcheck_r	288	**214**	**484**	213	485			288	**214**	**484**	213	485		
729.abc_r	288	320	413	**320**	**412**			288	320	413	**320**	**412**		
734.vpr_r	288	**305**	**436**	304	437			288	**305**	**436**	304	437		
735.gem5_r	288	198	710	**198**	**707**			288	185	757	**185**	**757**		
750.sealcrypto_r	288	317	488	**317**	**487**			288	317	488	**317**	**487**		
753.ns3_r	288	**209**	**843**	209	844			288	162	1090	**162**	**1090**		
777.zstd_r	288	**642**	**289**	641	289			288	609	304	**617**	**301**		

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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_new/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
KTI Prefetch set to Enabled
LLC Dead Line Alloc set to Disabled
BMC Configuration:
System Fan speed set to full speed

 Sysinfo program /root/cpu2026_new/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f
 running on smc-gnr-sp Thu Feb  5 05:25:49 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 (255.4-1ubuntu8.8)
 12. Failed units, from systemctl list-units --state=failed
 13. Services, from systemctl list-unit-files
```

(Continued on next page)

Platform Notes (Continued)

```
 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
    05:25:49 up 14:54,  4 users,  load average: 0.00, 8.64, 92.44
   USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   root             10.125.66.56     04:53    7:20m  0.00s  0.12s sshd: root@notty
   root             10.125.66.56     04:53    7:20m  0.00s  0.90s sshd: root@pts/0
   root             10.241.241.144   03:16    7:20m  0.00s  0.04s sshd: root@notty

------------------------------------------------------------
 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) 132038924
   process              4125905
   nofiles              1024
   vmemory(kbytes)      unlimited
   locks                unlimited
   rtprio               0

------------------------------------------------------------
 5. sysinfo process ancestry
  /sbin/init
  tmux new -s spec
```

(Continued on next page)

Platform Notes (Continued)

```
  -bash
  -bash
  runcpu --nobuild --action validate --define default-platform-flags --copies 288 -c
    ic2025.3-sierraforest-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=288 --define
    physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak -o all
     intrate
  runcpu --nobuild --action validate --define default-platform-flags --copies 288 --configfile
    ic2025.3-sierraforest-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=288 --define
    physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak
    --output_format all --nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv
    --note-preenv --logfile $SPEC/tmp/CPU2026.009/templogs/preenv.intrate.009.0.log --lognum 009.0
     --from_runcpu 2
  specperl $SPEC/bin/sysinfo
 $SPEC = /root/cpu2026_new

------------------------------------------------------------
 6. /proc/cpuinfo
     model name      : Intel(R) Xeon(R) 6780E
     vendor_id       : GenuineIntel
     cpu family      : 6
     model           : 175
     stepping        : 3
     microcode       : 0x3000382
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi vmscape
     cpu cores       : 144
     siblings        : 144
     2 physical ids (chips)
     288 processors (hardware threads)
     physical id 0: core ids 0-143
     physical id 1: core ids 0-143
     physical id 0: apicids
    0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72
    ,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,1
    32,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,180,182,18
    4,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222,224,226,228,230,232,234,236
    ,238,240,242,244,246,248,250,252,254,256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286
     physical id 1: apicids
    512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,554,556,558,560,562,5
    64,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606,608,610,612,614,61
    6,618,620,622,624,626,628,630,632,634,636,638,640,642,644,646,648,650,652,654,656,658,660,662,664,666,668
    ,670,672,674,676,678,680,682,684,686,688,690,692,694,696,698,700,702,704,706,708,710,712,714,716,718,720,
    722,724,726,728,730,732,734,736,738,740,742,744,746,748,750,752,754,756,758,760,762,764,766,768,770,772,7
     74,776,778,780,782,784,786,788,790,792,794,796,798
  Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
   virtualized systems.  Use the above data carefully.

------------------------------------------------------------
```

(Continued on next page)

Platform Notes (Continued)

```
 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, 48 bits virtual
   Byte Order:                              Little Endian
   CPU(s):                                  288
   On-line CPU(s) list:                     0-287
   Vendor ID:                               GenuineIntel
   BIOS Vendor ID:                          Intel(R) Corporation
   Model name:                              Intel(R) Xeon(R) 6780E
   BIOS Model name:                         Intel(R) Xeon(R) 6780E  CPU @ 2.2GHz
   BIOS CPU family:                         179
   CPU family:                              6
   Model:                                   175
   Thread(s) per core:                      1
   Core(s) per socket:                      144
   Socket(s):                               2
   Stepping:                                3
   BogoMIPS:                                4400.00
   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 rdseed adx smap clflushopt clwb intel_pt sha_ni xsaveopt xsavec
                                            xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
                                            split_lock_detect user_shstk avx_vnni lam wbnoinvd dtherm ida arat
                                            pln pts vnmi umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid
                                            bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
                                            serialize pconfig arch_lbr ibt flush_l1d arch_capabilities
                                            ibpb_exit_to_user
   Virtualization:                          VT-x
   L1d cache:                               9 MiB (288 instances)
   L1i cache:                               18 MiB (288 instances)
   L2 cache:                                288 MiB (72 instances)
   L3 cache:                                216 MiB (2 instances)
   NUMA node(s):                            2
   NUMA node0 CPU(s):                       0-143
   NUMA node1 CPU(s):                       144-287
   Vulnerability Gather data sampling:      Not affected
```

(Continued on next page)

Platform Notes (Continued)

```
   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
   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       32K       9M    8 Data            1     64        1             64
      L1i       64K      18M    8 Instruction     1    128        1             64
      L2         4M     288M   16 Unified         2   4096        1             64
      L3       108M     216M   12 Unified         3 147456        1             64

 ------------------------------------------------------------
 8. numactl --hardware
 NOTE: a numactl 'node' might or might not correspond to a physical chip.
   available: 2 nodes (0-1)
   node 0 cpus: 0-143
   node 0 size: 515566 MB
   node 0 free: 484784 MB
   node 1 cpus: 144-287
   node 1 size: 515987 MB
   node 1 free: 485892 MB
   node distances:
   node   0   1
     0:  10  21
     1:  21  10

 ------------------------------------------------------------
 9. /proc/meminfo
    MemTotal:       1056311404 kB

 ------------------------------------------------------------
 10. who -r
   run-level 5 Feb 4 14:33

 ------------------------------------------------------------
```

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Platform Notes (Continued)

```
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)
  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
  * systemd-networkd-wait-online.service loaded failed failed Wait for Network to be Configured
  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.
  2 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 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
  root=UUID=e15c24f4-c5fa-4691-a009-705a47ba067b
  ro

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 192:
    Unable to determine current policy
    boost state support:
      Supported: yes
```

(Continued on next page)

Platform Notes (Continued)

```
      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
  pages_to_scan            4096
  scan_sleep_millisecs    10000

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

------------------------------------------------------------
```

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Platform Notes (Continued)

```
 20. Disk information
 SPEC is set to: /root/cpu2026_new
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/nvme0n1p2 ext4  879G  293G  541G  36% /

 ------------------------------------------------------------
 21. /sys/devices/virtual/dmi/id
     Vendor:         Supermicro
     Product:        SYS-222H-TN
     Product Family: Family
     Serial:         S913244X4504458

 ------------------------------------------------------------
 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:
      14x Micron Technology MTC40F2046S1RC64BDY QSFF 64 GB 2 rank 6400
      2x Micron Technology MTC40F2046S1RC64BDY USFF 64 GB 2 rank 6400


 ------------------------------------------------------------
 23. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       American Megatrends International, LLC.
    BIOS Version:      1.4
    BIOS Date:         08/21/2025
    BIOS Revision:     5.35
```

Compiler Version Notes

```
==============================================================================
C       | 708.sqlite_r(base, peak) 714.cpython_r(base, peak) 777.zstd_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++     | 706.stockfish_r(base, peak) 707.ntest_r(base, peak)
        | 727.cppcheck_r(base, peak) 753.ns3_r(base, peak)
------------------------------------------------------------------------------
```

(Continued on next page)

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++, 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
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 -xsierraforest -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 -xsierraforest -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 -xsierraforest -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) -xCORE-AVX2(pass 1)
-ffp-model=fast -xsierraforest(pass 2) -flto -qopt-mem-layout-trans=4
-O3 -mfpmath=sse -funroll-loops
-L/opt/intel/oneapi/compiler/2025.3/lib -lqkmalloc
```

(Continued on next page)

Peak Optimization Flags (Continued)

C++ benchmarks:

706.stockfish_r: `-m64 -std=c++17 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xCORE-AVX2`(pass 1)
`-ffp-model=fast -xsierraforest`(pass 2) `-flto`
`-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) `-xCORE-AVX2`(pass 1)
`-ffp-model=fast -xsierraforest`(pass 2) `-flto`
`-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`

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.

Tested with SPEC CPU®2026 v0.902.0 on 2026-02-05 00:25:48-0500.
Report generated on 2026-05-11 16:38:59 by CPU2026 PS formatter (86729d3b).
Originally published on 2026-05-05.