



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176

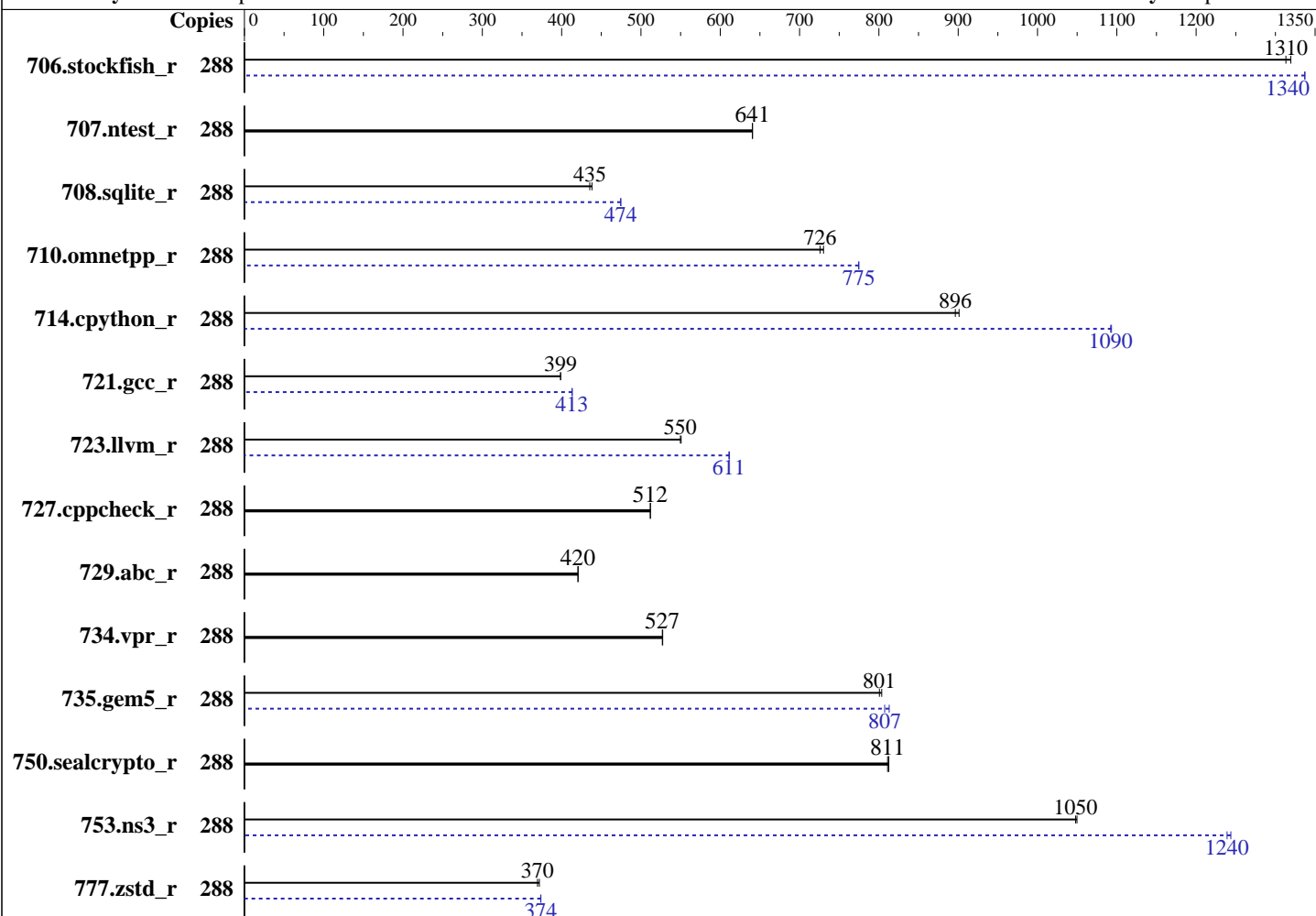
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: May-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026



Hardware

CPU Name: Intel Xeon 6990E+
 Max MHz: 3200
 Nominal: 2200
 Enabled: 288 cores, 1 chip
 Orderable: 1 chip
 Cache L1: 64 KB I + 32 KB D on chip per core
 L2: 288 MB I+D on chip per chip, 4 MB shared / 4 cores
 L3: 576 MB I+D on chip per chip
 Other: None
 Memory: 1152 GB (12 x 96 GB 2Rx4 PC5-8000B-R)
 Storage: 1 x 480 GB NVMe SSD
 Cooling: DLC
 Other: None

Software

OS: Red Hat Enterprise Linux 9.7
 Kernel 5.14.0-611.5.1.el9_7.x86_64
 Compiler: C/C++: Version 2026.0 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2026.0 of Intel Fortran Compiler for Linux
 Compiler Category: Vendor
 Firmware: Version 1.5 released Apr-2026
 File System: xfs
 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.



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP , Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
706.stockfish_r	288	275	1320	<u>276</u>	<u>1310</u>			288	271	1340	<u>271</u>	<u>1340</u>		
707.ntest_r	288	266	641	<u>266</u>	<u>641</u>			288	266	641	<u>266</u>	<u>641</u>		
708.sqlite_r	288	347	438	<u>349</u>	<u>435</u>			288	320	475	<u>321</u>	<u>474</u>		
710.omnetpp_r	288	192	730	<u>193</u>	<u>726</u>			288	<u>181</u>	<u>775</u>	181	775		
714.cpython_r	288	153	901	<u>154</u>	<u>896</u>			288	126	1090	<u>126</u>	<u>1090</u>		
721.gcc_r	288	<u>496</u>	<u>399</u>	496	399			288	<u>478</u>	<u>413</u>	478	413		
723.llvm_r	288	265	551	<u>266</u>	<u>550</u>			288	239	612	<u>239</u>	<u>611</u>		
727.cppcheck_r	288	202	512	<u>202</u>	<u>512</u>			288	202	512	<u>202</u>	<u>512</u>		
729.abc_r	288	314	421	<u>314</u>	<u>420</u>			288	314	421	<u>314</u>	<u>420</u>		
734.vpr_r	288	<u>252</u>	<u>527</u>	252	527			288	<u>252</u>	<u>527</u>	252	527		
735.gem5_r	288	<u>175</u>	<u>801</u>	175	804			288	<u>174</u>	<u>807</u>	173	813		
750.sealcrypto_r	288	<u>190</u>	<u>811</u>	190	813			288	<u>190</u>	<u>811</u>	190	813		
753.ns3_r	288	168	1050	<u>168</u>	<u>1050</u>			288	142	1240	<u>142</u>	<u>1240</u>		
777.zstd_r	288	<u>502</u>	<u>370</u>	499	372			288	496	374	<u>496</u>	<u>374</u>		

SPECrate®2026_int_base = **628**

SPECrate®2026_int_peak = **660**

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 = "/home/cpu2026/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)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

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 settings:
Workload Profile = HPC
KTI Prefetch = Enable
Stale AtoS = Disable
LLC Dead Line Alloc = Disable

Sysinfo program /home/cpu2026/bin/sysinfo
Rev: 779ab21020787073335a329f3a45e2cd
running on Fri May 8 17:24:42 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 252 (252-55.e19)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent_hugepage

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

- 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 5.14.0-611.5.1.el9_7.x86_64 #1 SMP PREEMPT_DYNAMIC Fri Oct 17 14:16:35 EDT 2025 x86_64
```

```
2. w
17:24:42 up 2:50, 1 user, load average: 0.05, 0.12, 0.20
USER      TTY      LOGIN@  IDLE   JCPU   PCPU WHAT
root      tty1    14:34   7.00s  1.83s  0.01s -bash
```

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

```
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size              (blocks, -c) 0
data seg size                (kbytes, -d) unlimited
scheduling priority         (-e) 0
file size                    (blocks, -f) unlimited
pending signals              (-i) 4640255
max locked memory            (kbytes, -l) 64
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) 4640255
virtual memory                (kbytes, -v) unlimited
file locks                    (-x) unlimited
```

```
5. sysinfo process ancestry
/usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
login -- root
-bash
```

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

```
-bash
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 288 -c
ic2026.0-clearwaterforest-cpu2026-1.0.1-rate-20260429.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 --reportable --action validate --define default-platform-flags --copies 288 --configfile
ic2026.0-clearwaterforest-cpu2026-1.0.1-rate-20260429.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/CPU2026.001/temlogs/preenv.intrate.001.0.log --lognum 001.0
--from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2026
```

```
-----
6. /proc/cpuinfo
   model name      : Intel(R) Xeon(R) 6990E+
   vendor_id       : GenuineIntel
   cpu family      : 6
   model           : 221
   stepping        : 1
   microcode       : 0x1000120
   bugs            : spectre_v1 spectre_v2 spec_store_bypass swaps bhi spectre_v2_user
   cpu cores       : 288
   siblings        : 288
   1 physical ids (chips)
   288 processors (hardware threads)
   physical id 0: core ids 0-95,128-223,256-351
   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
   4,186,188,190,256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300
   ,302,304,306,308,310,312,314,316,318,320,322,324,326,328,330,332,334,336,338,340,342,344,346,348,350,352,
   354,356,358,360,362,364,366,368,370,372,374,376,378,380,382,384,386,388,390,392,394,396,398,400,402,404,4
   06,408,410,412,414,416,418,420,422,424,426,428,430,432,434,436,438,440,442,444,446,512,514,516,518,520,52
   2,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,554,556,558,560,562,564,566,568,570,572,574
   ,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606,608,610,612,614,616,618,620,622,624,626,
   628,630,632,634,636,638,640,642,644,646,648,650,652,654,656,658,660,662,664,666,668,670,672,674,676,678,6
   80,682,684,686,688,690,692,694,696,698,700,702
```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

7. lscpu

From lscpu from util-linux 2.37.4:

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

```

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) 6990E+
BIOS Model name:             Intel(R) Xeon(R) 6990E+
CPU family:                   6
Model:                        221
Thread(s) per core:          1
Core(s) per socket:          288
Socket(s):                    1
Stepping:                     1
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 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_lld arch_capabilities
Virtualization:               VT-x
L1d cache:                    9 MiB (288 instances)
L1i cache:                    18 MiB (288 instances)
L2 cache:                     288 MiB (72 instances)
L3 cache:                     576 MiB (1 instance)
NUMA node(s):                 3
NUMA node0 CPU(s):           0-95
NUMA node1 CPU(s):           96-191
NUMA node2 CPU(s):           192-287
Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: Not affected
Vulnerability Itlb multihit:  Not affected
Vulnerability L1tf:           Not affected

```

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:	Mitigation; Enhanced / Automatic IBRS; IBPB conditional; PRSB-eIBRS Not affected; BHI BHI_DIS_S
Vulnerability Srbds:	Not affected
Vulnerability Tsa:	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	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	576M	576M	16	Unified	3	589824	1	64

8. numactl --hardware

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

```

available: 3 nodes (0-2)
node 0 cpus: 0-95
node 0 size: 386086 MB
node 0 free: 376432 MB
node 1 cpus: 96-191
node 1 size: 387047 MB
node 1 free: 379465 MB
node 2 cpus: 192-287
node 2 size: 386975 MB
node 2 free: 349551 MB
node distances:
node    0    1    2
  0:   10   15   17
  1:   15   10   15
  2:   17   15   10

```

9. /proc/meminfo

MemTotal: 1187952444 kB

10. who -r

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

run-level 3 May 8 14:34

11. Systemd service manager version: systemd 252 (252-55.e19)
Default Target Status
multi-user running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online atd auditd bluetooth chronyd crond dbus-broker firewalld getty@ insights-client-boot irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname nvme-fc-boot-connections rhsmcertd rsyslog selinux-autorelabel-mark smartd sshd sssd systemd-boot-update systemd-network-generator systemd-pstore tas tuned udisks2
enabled-runtime	systemd-remount-fs
disabled	arp-ethers blk-availability chrony-wait chronyd-restricted cni-dhcp console-getty cpupower debug-shell dnf-system-upgrade iprdump iprinit iprupdate iscsi-init iscsid iscsiuiop kpatch kvm_stat ledmon lvm-devices-import man-db-restart-cache-update netavark-dhcp-proxy netavark-firewalld-reload nftables nvmmf-autoconnect podman podman-auto-update podman-clean-transient podman-kube@ podman-restart psacct rdisc rhcd rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable serial-getty@ sshd-keygen@ systemd-boot-check-no-failures systemd-sysex
indirect	iscsi sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate systemd-sysupdate-reboot

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=(hd1,gpt2)/vmlinuz-5.14.0-611.5.1.el9_7.x86_64
root=/dev/mapper/rhel_135--171--45-root
ro
crashkernel=1G-2G:192M,2G-64G:256M,64G-:512M
resume=/dev/mapper/rhel_135--171--45-swap
rd.lvm.lv=rhel_135-171-45/root
rd.lvm.lv=rhel_135-171-45/swap
rhgb
quiet

14. cpupower frequency-info
analyzing CPU 122:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP , Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

15. tuned-adm active
Current active profile: throughput-performance

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	40
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	10
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	Red Hat Enterprise Linux 9.7 (Plow)	
redhat-release	Red Hat Enterprise Linux release 9.7 (Plow)	

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Platform Notes (Continued)

system-release Red Hat Enterprise Linux release 9.7 (Plow)

20. Disk information

SPEC is set to: /home/cpu2026

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel_135--171--45-home	xfs	344G	31G	314G	9%	/home

21. /sys/devices/virtual/dmi/id

Vendor: PM_1768968004
 Product: PPM_1768968004
 Product Family: SMC B14
 Serial: PS_1768968004

22. 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:
12x SK Hynix HMC68G4AMBRB970N 96 GB 2 rank 8000

23. BIOS

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

BIOS Vendor: American Megatrends International, LLC.
 BIOS Version: 1.5
 BIOS Date: 04/22/2026
 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 2026.0.0 Build 20260331  
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.  
=====
```

```
C++   | 706.stockfish_r(base, peak) 707.ntest_r(base, peak)  
=====
```

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Compiler Version Notes (Continued)

| 727.cppcheck_r(base, peak) 753.ns3_r(base, peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2026.0.0 Build 20260331
Copyright (C) 1985-2026 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 2026.0.0 Build 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Benchmarks using both C and C++:
icpx icx

Base Optimization Flags

C benchmarks:
-m64 -std=c18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -fno-strict-aliasing
-L/opt/intel/oneapi/compiler/2026.0/lib -lqkmallo

C++ benchmarks:
-m64 -std=c++17 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/opt/intel/oneapi/compiler/2026.0/lib -lqkmallo

Benchmarks using both C and C++:
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP , Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):

```
-Wl,-plugin-opt=-inline-threshold=1500 -xclearwaterforest -O3
-ffp-model=fast -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-strict-aliasing
-L/opt/intel/oneapi/compiler/2026.0/lib -lqkmallo
```

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Benchmarks using both C and C++:

icpx icx

Peak Optimization Flags

C benchmarks:

```
-m64 -std=c18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1) -fprofile-use=default.profddata(pass 2)
-xCORE-AVX2(pass 1) -ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fno-strict-aliasing -L/opt/intel/oneapi/compiler/2026.0/lib -lqkmallo
```

C++ benchmarks:

```
706.stockfish_r: -m64 -std=c++17 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-L/opt/intel/oneapi/compiler/2026.0/lib -lqkmallo
```

707.ntest_r: basepeak = yes

727.cppcheck_r: basepeak = yes

753.ns3_r: Same as 706.stockfish_r

(Continued on next page)



SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Supermicro

Blade SBI-612BA-1NE34-LCC
(B14SBE-CPU-AP, Intel Xeon 6990E+)

SPECrate®2026_int_base = 628

SPECrate®2026_int_peak = 660

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026

Peak Optimization Flags (Continued)

Benchmarks using both C and C++:

```
710.omnetpp_r: -m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fno-strict-aliasing
-L/opt/intel/oneapi/compiler/2026.0/lib -lqkmalloc
```

```
721.gcc_r: -m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fno-strict-aliasing
-L/opt/intel/oneapi/compiler/2026.0/lib -lqkmalloc
```

723.llvm_r: Same as 721.gcc_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-ic2026-official-linux64-v1.1.html>
<http://www.spec.org/cpu2026/results/flags/Supermicro-Platform-Settings-V1.2-CWF-revC.html>

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.xml>
<http://www.spec.org/cpu2026/results/flags/Supermicro-Platform-Settings-V1.2-CWF-revC.xml>

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU®2026 v1.0.1 on 2026-05-08 05:24:41-0400.
Report generated on 2026-06-04 10:14:40 by CPU2026 PDF formatter (unknown).
Originally published on 2026-06-04.