



# SPEC CPU®2017 Floating Point Speed Result

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## Supermicro

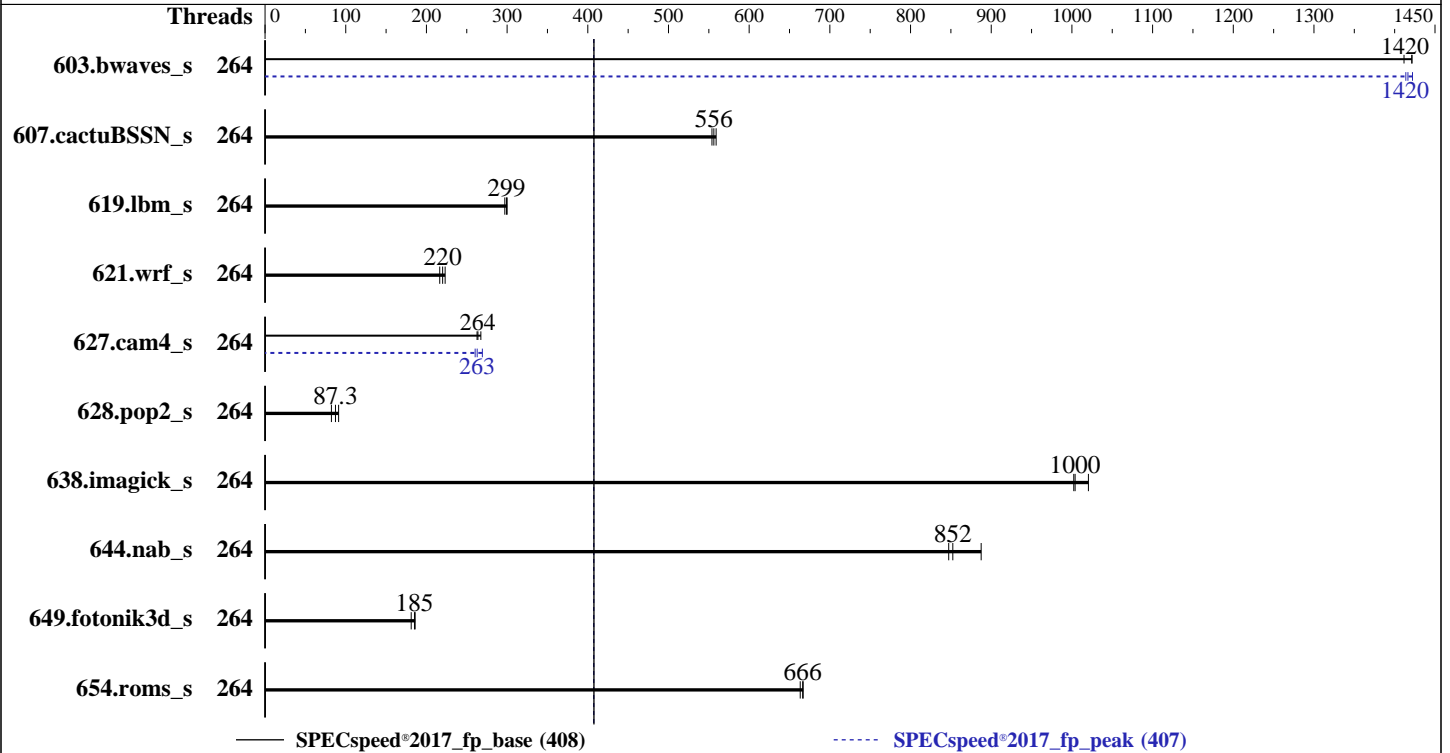
SuperServer SYS-112HA-TN  
(X14SBH-AP , Intel Xeon 6980E+)

SPECspeed®2017\_fp\_base = 408

SPECspeed®2017\_fp\_peak = 407

CPU2017 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 6980E+  
Max MHz: 3200  
Nominal: 2100  
Enabled: 264 cores, 1 chip  
Orderable: 1 chip  
Cache L1: 64 KB I + 32 KB D on chip per core  
L2: 264 MB I+D on chip per chip, 4 MB shared / 4 cores  
L3: 528 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  
Other: CPU Cooling: Air

### 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;  
Parallel: Yes  
Firmware: Version 1.5b released May-2026  
File System: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other: jemalloc memory allocator V5.0.1  
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



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## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	264	41.8	1410	41.5	1420	<b><u>41.5</u></b>	<b><u>1420</u></b>	264	41.7	1410	41.5	1420	<b><u>41.7</u></b>	<b><u>1420</u></b>
607.cactuBSSN_s	264	29.8	559	<b><u>30.0</u></b>	<b><u>556</u></b>	30.1	554	264	29.8	559	<b><u>30.0</u></b>	<b><u>556</u></b>	30.1	554
619.lbm_s	264	<b><u>17.5</u></b>	<b><u>299</u></b>	17.5	300	17.6	297	264	<b><u>17.5</u></b>	<b><u>299</u></b>	17.5	300	17.6	297
621.wrf_s	264	59.3	223	<b><u>60.1</u></b>	<b><u>220</u></b>	61.1	217	264	59.3	223	<b><u>60.1</u></b>	<b><u>220</u></b>	61.1	217
627.cam4_s	264	33.1	267	<b><u>33.6</u></b>	<b><u>264</u></b>	33.7	263	264	<b><u>33.7</u></b>	<b><u>263</u></b>	34.0	260	32.9	269
628.pop2_s	264	<b><u>136</u></b>	<b><u>87.3</u></b>	144	82.2	130	91.2	264	<b><u>136</u></b>	<b><u>87.3</u></b>	144	82.2	130	91.2
638.imagick_s	264	<b><u>14.4</u></b>	<b><u>1000</u></b>	14.4	1000	14.1	1020	264	<b><u>14.4</u></b>	<b><u>1000</u></b>	14.4	1000	14.1	1020
644.nab_s	264	20.6	847	<b><u>20.5</u></b>	<b><u>852</u></b>	19.7	888	264	20.6	847	<b><u>20.5</u></b>	<b><u>852</u></b>	19.7	888
649.fotonik3d_s	264	<b><u>49.2</u></b>	<b><u>185</u></b>	49.0	186	50.3	181	264	<b><u>49.2</u></b>	<b><u>185</u></b>	49.0	186	50.3	181
654.roms_s	264	<b><u>23.6</u></b>	<b><u>666</u></b>	23.7	663	23.6	667	264	<b><u>23.6</u></b>	<b><u>666</u></b>	23.7	663	23.6	667

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

## 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:  
KMP\_AFFINITY = "granularity=fine,compact,1,0"  
LD\_LIBRARY\_PATH = "/home/cpu2017/lib/intel64"  
MALLOCONF = "retain:true"  
OMP\_STACKSIZE = "192M"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM  
memory using Redhat Enterprise Linux 8.0  
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

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 RedHat Enterprise 7.5, and the system compiler gcc 4.8.5  
sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

## Platform Notes

BIOS settings:  
Workload Profile = HPC

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### Platform Notes (Continued)

KTI Prefetch = Enable  
Stale AtoS = Disable  
LLC Dead Line Alloc = Disable

Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on 135-179-165.engtw Tue May 26 14:14:50 2026

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

-----  
Table of contents  
-----

1. uname -a
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
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 -a  
Linux 135-179-165.engtw 5.14.0-611.5.1.e19\_7.x86\_64 #1 SMP PREEMPT\_DYNAMIC Fri Oct 17 14:16:35 EDT 2025  
x86\_64 x86\_64 x86\_64 GNU/Linux  
-----

-----  
2. w  
14:14:50 up 22:33, 1 user, load average: 5.20, 5.58, 3.32  
USER TTY LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 Mon15 22:31m 1.03s 0.00s -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  
-----

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### Platform Notes (Continued)

```

pending signals                (-i) 4640021
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) 4640021
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
-bash
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2026.0-lin-clearwaterforest-speed-20260429.cfg --define cores=264 --tune base,peak -o all --define
  smt-on --define drop_caches fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2026.0-lin-clearwaterforest-speed-20260429.cfg --define cores=264 --tune base,peak --output_format all
  --define smt-on --define drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpspeed
  --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.004/templogs/preenv.fpspeed.004.0.log --lognum 004.0
  --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6980E+
vendor_id      : GenuineIntel
cpu family     : 6
model          : 221
stepping       : 1
microcode      : 0x1000120
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi spectre_v2_user
cpu cores      : 264
siblings       : 264
1 physical ids (chips)
264 processors (hardware threads)
physical id 0: core ids 0-87,128-215,256-343
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
32,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,256,258,260,262,26
4,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312,314,316
,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,
370,372,374,376,378,380,382,384,386,388,390,392,394,396,398,400,402,404,406,408,410,412,414,416,418,420,4
22,424,426,428,430,512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,55
4,556,558,560,562,564,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606
,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,
660,662,664,666,668,670,672,674,676,678,680,682,684,686
Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
virtualized systems. Use the above data carefully.

```

7. lscpu

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## Platform Notes (Continued)

From lscpu from util-linux 2.37.4:

```

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):                264
On-line CPU(s) list:   0-263
Vendor ID:             GenuineIntel
BIOS Vendor ID:       Intel(R) Corporation
Model name:            Intel(R) Xeon(R) 6980E+
BIOS Model name:      Intel(R) Xeon(R) 6980E+
CPU family:            6
Model:                 221
Thread(s) per core:    1
Core(s) per socket:   264
Socket(s):             1
Stepping:              1
BogoMIPS:              4200.00
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
pse36 clflush dts acpi mmx fxsr 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 bmil 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:             8.3 MiB (264 instances)
L1i cache:             16.5 MiB (264 instances)
L2 cache:              264 MiB (66 instances)
L3 cache:              528 MiB (1 instance)
NUMA node(s):          3
NUMA node0 CPU(s):    0-87
NUMA node1 CPU(s):    88-175
NUMA node2 CPU(s):    176-263
Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Reg file data sampling: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec rstack overflow: 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; PBRSE-eIBRS Not affected; BHI BHI_DIS_S

```

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### Platform Notes (Continued)

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	8.3M	8	Data	1	64	1	64
L1i	64K	16.5M	8	Instruction	1	128	1	64
L2	4M	264M	16	Unified	2	4096	1	64
L3	528M	528M	16	Unified	3	540672	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: 0-87
node 0 size: 386041 MB
node 0 free: 384402 MB
node 1 cpus: 88-175
node 1 size: 387003 MB
node 1 free: 385468 MB
node 2 cpus: 176-263
node 2 size: 387023 MB
node 2 free: 378402 MB
node distances:
node    0    1    2
 0:   10   15   17
 1:   15   10   15
 2:   17   15   10

```

9. /proc/meminfo

MemTotal: 1187911072 kB

10. who -r

run-level 3 May 25 15:41

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 ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online
accounts-daemon atd auditd avahi-daemon bluetooth chronyd crond cups dbus-broker firewalld
gdm getty@ insights-client-boot irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt
lvn-memory-monitor lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname
nvme-fc-boot-connections ostree-remount qemu-guest-agent rhsmcertd rsyslog rtkit-daemon
selinux-autorelabel-mark smartd sshd sssd switcheroo-control systemd-boot-update
systemd-network-generator systemd-pstore tuned udisks2 upower vgauthd vmtoolsd
enabled-runtime systemd-remount-fs
disabled arp-ethers blk-availability brltty canberra-system-bootup canberra-system-shutdown
canberra-system-shutdown-reboot chrony-wait chronyd-restricted cni-dhcp console-getty
cpupower cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq iprdump iprinit
iprupdate iscsi-init iscsid iscsiui kpatch kvm_stat ledmon lvm-devices-import
man-db-restart-cache-update netavark-dhcp-proxy netavark-firewalld-reload nftables
nvme-autoconnect ostree-readonly-sysroot-migration ostree-state-overlay@ podman

```

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### Platform Notes (Continued)

```
indirect
podman-auto-update podman-clean-transient podman-kube@ podman-restart psacct ras-mc-ctl
rasdaemon rdisc rhcd rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable
serial-getty@ speech-dispatcherd sshd-keygen@ systemd-boot-check-no-failures
systemd-sysext tuned-ppd wpa_supplicant
iscsi spice-vdagentd 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=(hd0,gpt2)/vmlinuz-5.14.0-611.5.1.el9_7.x86_64
root=/dev/mapper/rhel_135--180--133-root
ro
resume=/dev/mapper/rhel_135--180--133-swap
rd.lvm.lv=rhel_135-180-133/root
rd.lvm.lv=rhel_135-180-133/swap
rhgb
quiet
crashkernel=1G-2G:192M,2G-64G:256M,64G-:512M
```

```
-----
14. cpupower frequency-info
analyzing CPU 248:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes
```

```
-----
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+madvice [madvice] never
enabled [always] madvice never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force
```

(Continued on next page)



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### Platform Notes (Continued)

```

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

```

```

20. Disk information
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel_135--180--133-home xfs 372G 43G 330G 12% /home

```

```

21. /sys/devices/virtual/dmi/id
Vendor: Supermicro
Product: Super Server
Product Family: Family
Serial: 0123456789

```

```

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 HMCGM4AMBRB970N 96 GB 2 rank 8000

```

```

23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.5b
BIOS Date: 05/04/2026
BIOS Revision: 5.35

```

### Compiler Version Notes

```

=====
C | 619.lbm_s(base, peak) 638.imagick_s(base, peak) 644.nab_s(base, peak)
=====

```

```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2026.0.0 Build 20260331
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=====

```

```

=====
C++, C, Fortran | 607.cactuBSSN_s(base, peak)
=====

```

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# SPEC CPU®2017 Floating Point Speed Result

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## Supermicro

SuperServer SYS-112HA-TN  
(X14SBH-AP, Intel Xeon 6980E+)

SPECspeed®2017\_fp\_base = 408

SPECspeed®2017\_fp\_peak = 407

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

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

## Compiler Version Notes (Continued)

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

=====  
Fortran | 603.bwaves\_s(base, peak) 649.fotonik3d\_s(base, peak) 654.roms\_s(base, peak)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2026.0.0 Build 20260331  
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-----

=====  
Fortran, C | 621.wrf\_s(base, peak) 627.cam4\_s(base, peak) 628.pop2\_s(base, peak)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2026.0.0 Build 20260331  
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2026.0.0 Build 20260331  
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-----

## Base Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

603.bwaves\_s: -DSPEC\_LP64  
607.cactuBSSN\_s: -DSPEC\_LP64  
619.lbm\_s: -DSPEC\_LP64  
621.wrf\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian  
627.cam4\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG  
628.pop2\_s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian  
-assume byterecl

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## Base Portability Flags (Continued)

638.imagick\_s: -DSPEC\_LP64  
644.nab\_s: -DSPEC\_LP64  
649.fotonik3d\_s: -DSPEC\_LP64  
654.roms\_s: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xclearwaterforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xclearwaterforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xclearwaterforest -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xclearwaterforest
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

## Peak Compiler Invocation

C benchmarks:

icx

Fortran benchmarks:

ifx

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## Supermicro

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**Tested by:** Supermicro

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

## Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

619.lbm\_s: basepeak = yes

638.imagick\_s: basepeak = yes

644.nab\_s: basepeak = yes

Fortran benchmarks:

603.bwaves\_s: -w -m64 -Wl,-z,muldefs -DSPEC\_OPENMP -xclearwaterforest  
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs  
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib  
-ljemalloc

649.fotonik3d\_s: basepeak = yes

654.roms\_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf\_s: basepeak = yes

627.cam4\_s: -w -m64 -std=c11 -Wl,-z,muldefs -xclearwaterforest  
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC\_OPENMP  
-Wno-implicit-int -nostandard-realloc-lhs  
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib  
-ljemalloc

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## Peak Optimization Flags (Continued)

628.pop2\_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN\_s: basepeak = yes

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

<http://www.spec.org/cpu2017/flags/Intel-ic2026-official-linux64.html>

<http://www.spec.org/cpu2017/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/cpu2017/flags/Intel-ic2026-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-CWF-revC.xml>

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

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