



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

CPU2017 License: 001176

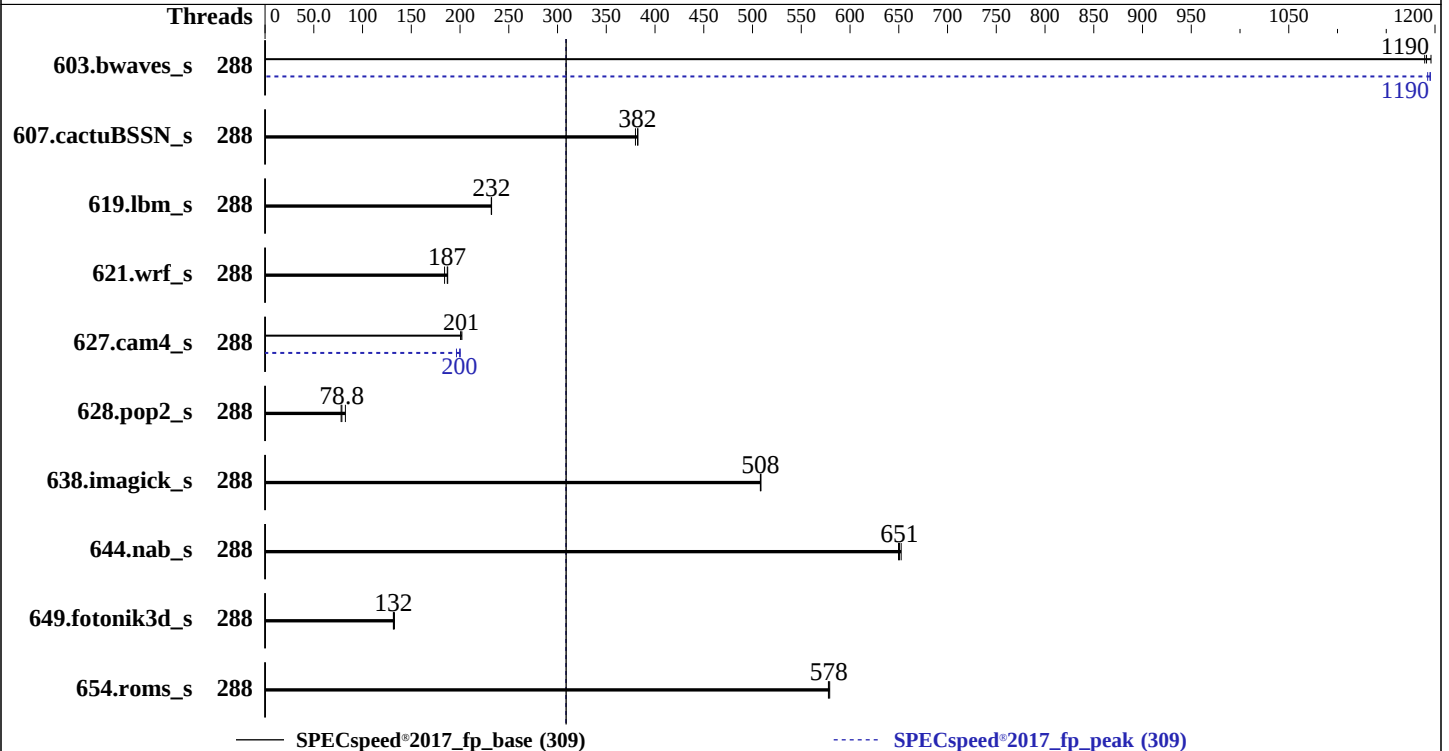
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Apr-2025

Hardware Availability: Sep-2024

Software Availability: Jun-2024



Hardware

CPU Name: Intel Xeon 6766E
Max MHz: 2700
Nominal: 1900
Enabled: 288 cores, 2 chips
Orderable: 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 300 GB SAS3 HDD, 10000 RPM
Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP6
Kernel 6.4.0-150600.21-default
Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;
Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;
Parallel: Yes
Firmware: Version 1.2 released Feb-2025
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.



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM, Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	288	49.3	1200	<u>49.5</u>	<u>1190</u>	49.6	1190	288	49.4	1200	<u>49.4</u>	<u>1190</u>	49.5	1190
607.cactuBSSN_s	288	43.6	382	43.9	380	<u>43.6</u>	<u>382</u>	288	43.6	382	43.9	380	<u>43.6</u>	<u>382</u>
619.lbm_s	288	22.5	232	<u>22.6</u>	<u>232</u>	22.6	232	288	22.5	232	<u>22.6</u>	<u>232</u>	22.6	232
621.wrf_s	288	71.8	184	70.6	187	<u>70.8</u>	<u>187</u>	288	71.8	184	70.6	187	<u>70.8</u>	<u>187</u>
627.cam4_s	288	43.9	202	44.2	201	<u>44.1</u>	<u>201</u>	288	44.3	200	45.1	196	<u>44.4</u>	<u>200</u>
628.pop2_s	288	144	82.4	<u>151</u>	<u>78.8</u>	152	78.0	288	144	82.4	<u>151</u>	<u>78.8</u>	152	78.0
638.imagick_s	288	28.4	509	<u>28.4</u>	<u>508</u>	28.4	508	288	28.4	509	<u>28.4</u>	<u>508</u>	28.4	508
644.nab_s	288	26.8	652	<u>26.9</u>	<u>651</u>	26.9	650	288	26.8	652	<u>26.9</u>	<u>651</u>	26.9	650
649.fotonik3d_s	288	68.7	133	<u>69.2</u>	<u>132</u>	69.3	132	288	68.7	133	<u>69.2</u>	<u>132</u>	69.3	132
654.roms_s	288	27.2	579	<u>27.2</u>	<u>578</u>	27.2	578	288	27.2	579	<u>27.2</u>	<u>578</u>	27.2	578

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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:/home/cpu2017/je5.0.1-64"
MALLOC_CONF = "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>



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Platform Notes

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

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Tue Apr 15 10:58:55 2025

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 254 (254.10+suse.84.ge8d77af424)
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 localhost 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)
x86_64 x86_64 x86_64 GNU/Linux

2. w
10:58:55 up 12:01, 1 user, load average: 3.33, 5.50, 3.46
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 - 22:59 11:58m 1.65s 0.02s -bash

3. Username
From environment variable \$USER: root

4. ulimit -a
core file size (blocks, -c) unlimited
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM, Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Apr-2025

Hardware Availability: Sep-2024

Software Availability: Jun-2024

Platform Notes (Continued)

file size	(blocks, -f)	unlimited
pending signals	(-i)	4125984
max locked memory	(kbytes, -l)	8192
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)	4125984
virtual memory	(kbytes, -v)	unlimited
file locks	(-x)	unlimited

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags -c
ic2024.1-lin-sierraforest-speed-20240308.cfg --define cores=288 --tune base,peak -o all --define smt-on
--define drop_caches fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
ic2024.1-lin-sierraforest-speed-20240308.cfg --define cores=288 --tune base,peak --output_format all
--define smt-on --define drop_caches --nopower --runmode speed --tune base:peak --size refspeak fpspeed
--nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.004/temlogs/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) 6766E
vendor_id       : GenuineIntel
cpu family      : 6
model           : 175
stepping        : 3
microcode       : 0x3000330
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
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
```

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Platform Notes (Continued)

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, 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) 6766E
BIOS Model name:	Intel(R) Xeon(R) 6766E CPU @ 1.9GHz
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:	3800.00
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
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
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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:	Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM, Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Platform Notes (Continued)

Vulnerability Srbds:
Vulnerability Tsx async abort:

PBRSE-eIBRS Not affected; BHI BHI_DIS_S
Not affected
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	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: 515541 MB
node 0 free: 455741 MB
node 1 cpus: 144-287
node 1 size: 515981 MB
node 1 free: 454797 MB
node distances:
node  0  1
 0:  10  21
 1:  21  10
```

9. /proc/meminfo

MemTotal: 1056278968 kB

10. who -r

run-level 3 Apr 14 22:58

11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)

Default Target	Status
multi-user	running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nsd postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore tuned wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-remount-fs
disabled	autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info firewallld fsidd gpm grub2-once haveged hwloc-dump-hwdata ipmi ipmievdt issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysexit systemd-time-wait-sync systemd-timesyncd udisks2 vncserver@
indirect	systemd-userdbd wickedd

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

BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=80e782d0-aedd-4e72-9732-1f74ade0ad3b

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Platform Notes (Continued)

```
splash=silent
mitigations=auto
quiet
security=apparmor
nomodeset
```

```
-----
14. cpupower frequency-info
    analyzing CPU 231:
        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                 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                  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+madvice [madvice] never
    enabled         [always] madvice never
    hpage_pmd_size  2097152
    shmem_enabled   always within_size advise [never] deny force
    -----
```

```
-----
18. /sys/kernel/mm/transparent_hugepage/khugepaged
    alloc_sleep_millisecs  60000
    defrag                 1
    max_ptes_none          511
    max_ptes_shared        256
    max_ptes_swap          64
    pages_to_scan          4096
    scan_sleep_millisecs   10000
    -----
```

```
-----
19. OS release
    From /etc/*-release /etc/*-version
    -----
```

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Platform Notes (Continued)

os-release SUSE Linux Enterprise Server 15 SP6

20. Disk information

SPEC is set to: /home/cpu2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	xfs	277G	128G	149G	47%	/

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

Vendor: Supermicro
Product: Super Server
Product Family: Family
Serial: 0123456789

22. dmidecode

Additional information from dmidecode 3.4 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:

9x Micron Technology MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400
7x Micron Technology MTC40F2046S1RC64BDY MWCC 64 GB 2 rank 6400

23. BIOS

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

BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.2
BIOS Date: 02/20/2025
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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

Compiler Version Notes (Continued)

=====

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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.

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
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 -xsierraforest -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Apr-2025

Hardware Availability: Sep-2024

Software Availability: Jun-2024

Base Optimization Flags (Continued)

C benchmarks (continued):

-DSPEC_OPENMP -Wno-implicit-int -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

Fortran benchmarks:

-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsierraforest -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 -xsierraforest -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 -xsierraforest -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

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



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

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

Test Date: Apr-2025
Hardware Availability: Sep-2024
Software Availability: Jun-2024

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 -xsierraforest
-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 -xsierraforest -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

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-ic2024-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-GNR-revB.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

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



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Supermicro

CloudDC SuperServer SYS-222C-TN
(X14DBHM , Intel Xeon 6766E)

SPECspeed®2017_fp_base = 309

SPECspeed®2017_fp_peak = 309

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Apr-2025

Hardware Availability: Sep-2024

Software Availability: Jun-2024

SPEC CPU and SPECspeed 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®2017 v1.1.9 on 2025-04-14 22:58:55-0400.
Report generated on 2025-05-08 10:04:21 by CPU2017 PDF formatter v6716.
Originally published on 2025-05-06.