



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

CPU2017 License: 001176

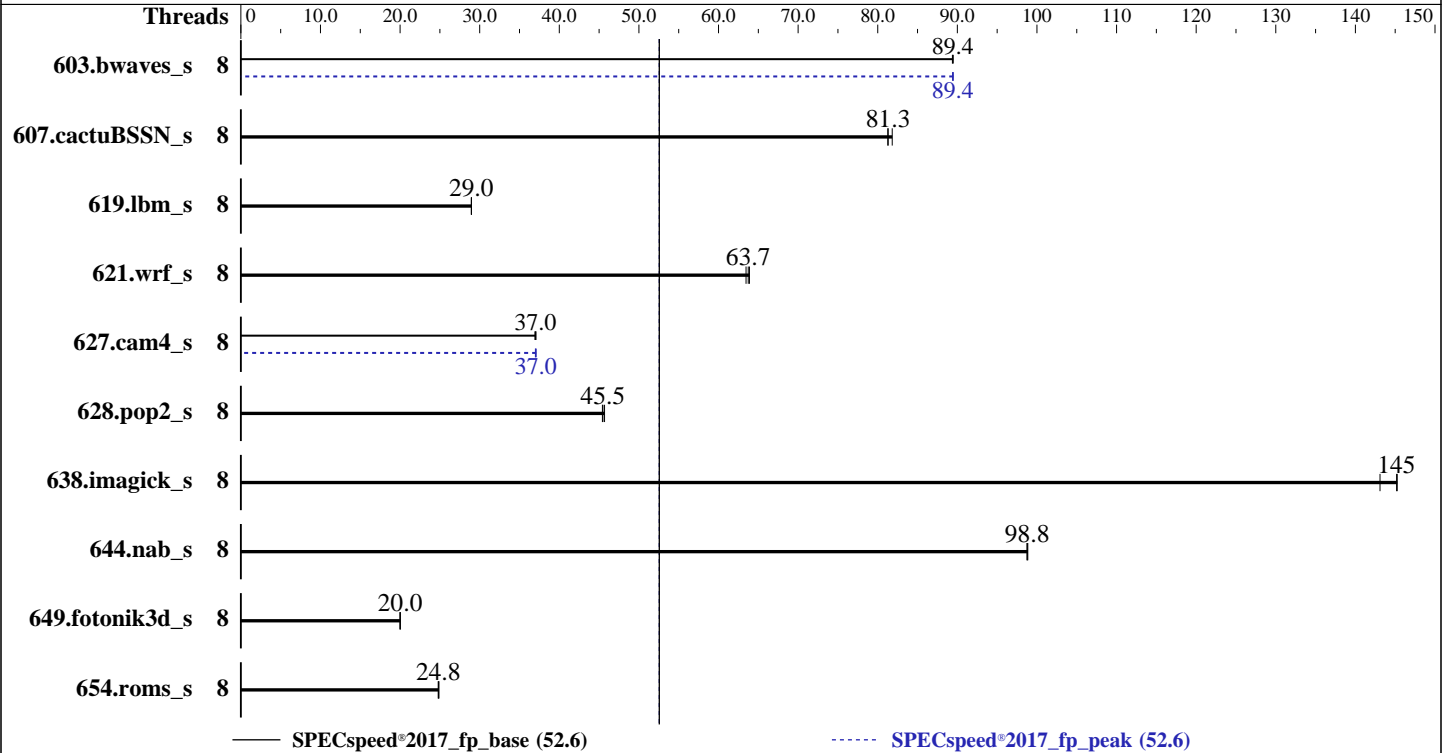
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Aug-2023

Hardware Availability: Sep-2021

Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon E-2388G
 Max MHz: 5100
 Nominal: 3200
 Enabled: 8 cores, 1 chip
 Orderable: 1 chip
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 512 KB I+D on chip per core
 L3: 16 MB I+D on chip per chip
 Other: None
 Memory: 128 GB (4 x 32 GB 2Rx8 PC4-3200AA-E)
 Storage: 1 x 128 GB M.2 NVMe SSD
 Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP4
 Kernel 5.14.21-150400.22-default
 Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2023.0 of Intel Fortran Compiler for Linux;
 Parallel: Yes
 Firmware: Version 1.4 released Feb-2023
 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 set to prefer performance at the cost of additional power usage.



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	8	660	89.4	660	89.4	659	89.5	8	660	89.4	660	89.4	659	89.5
607.cactuBSSN_s	8	204	81.8	205	81.3	205	81.3	8	204	81.8	205	81.3	205	81.3
619.lbm_s	8	181	29.0	181	29.0	181	29.0	8	181	29.0	181	29.0	181	29.0
621.wrf_s	8	207	63.9	208	63.7	208	63.5	8	207	63.9	208	63.7	208	63.5
627.cam4_s	8	239	37.1	240	36.9	240	37.0	8	239	37.0	240	37.0	239	37.1
628.pop2_s	8	260	45.7	261	45.5	261	45.4	8	260	45.7	261	45.5	261	45.4
638.imagick_s	8	101	143	99.4	145	99.3	145	8	101	143	99.4	145	99.3	145
644.nab_s	8	177	98.8	177	98.8	177	98.8	8	177	98.8	177	98.8	177	98.8
649.fotonik3d_s	8	455	20.0	456	20.0	455	20.0	8	455	20.0	456	20.0	455	20.0
654.roms_s	8	634	24.8	633	24.9	635	24.8	8	634	24.8	633	24.9	635	24.8

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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"
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 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Platform Notes

BIOS Settings:
Hyper-Threading = Disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on 135-179-102 Fri Aug 4 14:01:29 2023

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 249 (249.11+suse.124.g2bc0b2c447)
- 12. Services, from systemctl list-unit-files
- 13. Linux kernel boot-time arguments, from /proc/cmdline
- 14. cpupower frequency-info
- 15. sysctl
- 16. /sys/kernel/mm/transparent_hugepage
- 17. /sys/kernel/mm/transparent_hugepage/khugepaged
- 18. OS release
- 19. Disk information
- 20. /sys/devices/virtual/dmi/id
- 21. dmidecode
- 22. BIOS

```
1. uname -a
Linux 135-179-102 5.14.21-150400.22-default #1 SMP PREEMPT_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222)
x86_64 x86_64 x86_64 GNU/Linux
```

```
2. w
14:01:29 up 11:54, 2 users, load average: 3.93, 4.67, 3.20
USER      TTY      FROM          LOGIN@      IDLE        JCPU      PCPU      WHAT
root     tty1      -              02:09       11:50m     0.85s     0.01s    -bash
root     tty2      -              06:23       7:36m     0.09s     0.09s    -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
file size                (blocks, -f) unlimited
pending signals          (-i) 514725
max locked memory       (kbytes, -l) 64
```

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Platform Notes (Continued)

```

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) 514725
virtual memory       (kbytes, -v) unlimited
file locks           (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags -c
  ic2023.0-lin-core-avx2-speed-20221201.cfg --define cores=8 --tune base,peak -o all --define drop_caches
  fpspeed
runcpu --nobuild --action validate --define default-platform-flags --configfile
  ic2023.0-lin-core-avx2-speed-20221201.cfg --define cores=8 --tune base,peak --output_format all --define
  drop_caches --nopower --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv --note-preenv
  --logfile $SPEC/tmp/CPU2017.008/temlogs/preenv.fpspeed.008.0.log --lognum 008.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) E-2388G CPU @ 3.20GHz
vendor_id      : GenuineIntel
cpu family     : 6
model          : 167
stepping       : 1
microcode      : 0x57
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores      : 8
siblings       : 8
1 physical ids (chips)
8 processors (hardware threads)
physical id 0: core ids 0-7
physical id 0: apicids 0,2,4,6,8,10,12,14
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 2.37.2:
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          39 bits physical, 48 bits virtual
Byte Order:             Little Endian
CPU(s):                 8
On-line CPU(s) list:   0-7
Vendor ID:              GenuineIntel
Model name:             Intel(R) Xeon(R) E-2388G CPU @ 3.20GHz
CPU family:             6
Model:                  167
Thread(s) per core:    1

```

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Platform Notes (Continued)

```

Core(s) per socket:      8
Socket(s):              1
Stepping:               1
Frequency boost:        enabled
CPU max MHz:            3201.0000
CPU min MHz:            800.0000
BogoMIPS:               6384.00
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 sse4_1 sse4_2
                        x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm
                        abm 3dnowprefetch cpuid_fault epb invpcid_single ssbd ibrs ibpb stibp
                        ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase
                        tsc_adjust bmi1 avx2 smep bmi2 erms invpcid mpx avx512f avx512dq rdseed
                        adx smap avx512ifma clflushopt intel_pt avx512cd sha_ni avx512bw avx512vl
                        xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts avx512vbmi umip pku
                        ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnmi avx512_bitalg
                        avx512_vpopcntdq rdpid fsrm md_clear flush_l1d arch_capabilities
Virtualization:         VT-x
L1d cache:              384 KiB (8 instances)
L1i cache:              256 KiB (8 instances)
L2 cache:               4 MiB (8 instances)
L3 cache:               16 MiB (1 instance)
NUMA node(s):          1
NUMA node0 CPU(s):     0-7
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:    Not affected
Vulnerability Mds:     Not affected
Vulnerability Meltdown: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbds:   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	48K	384K	12	Data	1	64	1	64
L1i	32K	256K	8	Instruction	1	64	1	64
L2	512K	4M	8	Unified	2	1024	1	64
L3	16M	16M	16	Unified	3	16384	1	64

8. numactl --hardware

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

```

available: 1 nodes (0)
node 0 cpus: 0-7
node 0 size: 128705 MB
node 0 free: 106391 MB
node distances:
node 0
0: 10

```

9. /proc/meminfo

MemTotal: 131794284 kB

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Platform Notes (Continued)

10. who -r
run-level 3 Aug 4 02:07

11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
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@ haveged irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections postfix purge-kernels rollback rsyslog smartd sshd wickd wickd-auto4 wickd-dhcp4 wickd-dhcp6 wickd-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 gpm grub2-once haveged-switch-root ipmi ipmievdev issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nvme-autoconnect rdisc rpcbind rpmconfigcheck rsyncd serial-getty@ smartd-generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd tcsd udisks2
indirect	wickd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=4f2b8917-d4b6-4b8d-ac40-54e299d9c7ea
splash=silent
mitigations=auto
quiet
security=apparmor

14. cpupower frequency-info
analyzing CPU 0:
current policy: frequency should be within 800 MHz and 3.20 GHz.
The governor "ondemand" may decide which speed to use within this range.

boost state support:
Supported: yes
Active: yes

15. sysctl

kernel.numa_balancing	0
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

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Platform Notes (Continued)

```

vm.nr_overcommit_hugepages      0
vm.swappiness                    60
vm.watermark_boost_factor       15000
vm.watermark_scale_factor       10
vm.zone_reclaim_mode            0

```

```

-----
16. /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

```

```

-----
17. /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

```

```

-----
18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP4

```

```

-----
19. Disk information
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p2 xfs 117G 42G 75G 36% /

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:      Supermicro
Product:     Super Server
Serial:      0123456789

```

```

-----
21. dmidecode
Additional information from dmidecode 3.2 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:
  4x Micron Technology 18ADF4G72AZ-3G2B3 32 GB 2 rank 3200

```

```

-----
22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      American Megatrends International, LLC.
BIOS Version:     1.4
BIOS Date:        02/13/2023
BIOS Revision:    5.22

```



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
=====

=====
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 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 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



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F, Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

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:

```
-m64 -g -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -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:

```
-m64 -g -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX2 -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:

```
-m64 -g -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -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++:

```
-m64 -g -std=c++14 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -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
```



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F , Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

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

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: -m64 -g -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-gopt-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

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

Microcloud SuperServer SYS-530MT-H8TNR
(X12STD-F , Intel Xeon E-2388G)

SPECspeed®2017_fp_base = 52.6

SPECspeed®2017_fp_peak = 52.6

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

Test Date: Aug-2023
Hardware Availability: Sep-2021
Software Availability: Dec-2022

Peak Optimization Flags (Continued)

```
627.cam4_s: -m64 -g -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -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-ic2023-official-linux64_revB.html
<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-RKL-revB.html>

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

http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64_revB.xml
<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-RKL-revB.xml>

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 2023-08-04 02:01:29-0400.
Report generated on 2023-08-30 09:45:36 by CPU2017 PDF formatter v6716.
Originally published on 2023-08-29.