



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

**Fujitsu**

PRIMERGY TX1330 M6,  
Intel Xeon E-2486, 3.5 GHz

**SPECrate®2017\_fp\_base = 98.6**

**SPECrate®2017\_fp\_peak = Not Run**

CPU2017 License: 19

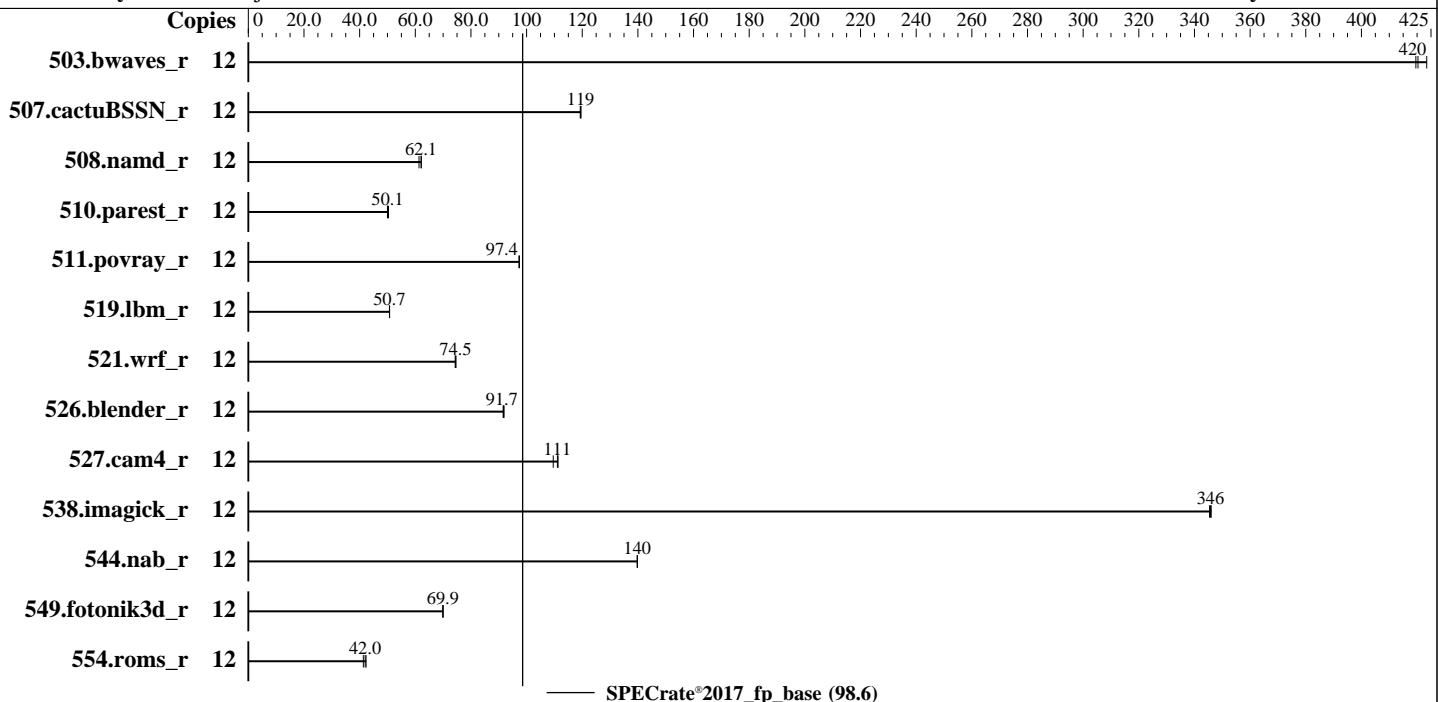
Test Sponsor: Fujitsu

Tested by: Fujitsu

**Test Date:** Apr-2024

**Hardware Availability:** Apr-2024

**Software Availability:** Dec-2023



## Hardware

CPU Name: Intel Xeon E-2486  
 Max MHz: 5600  
 Nominal: 3500  
 Enabled: 6 cores, 1 chip, 2 threads/core  
 Orderable: 1 chip  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 18 MB I+D on chip per chip  
 Other: None  
 Memory: 64 GB (2 x 32 GB 2Rx8 PC5-4800B-E,  
 running at 4400)  
 Storage: 1 x SATA M.2 SSD, 960 GB  
 Other: CPU Cooling: Air

## Software

OS: SUSE Linux Enterprise Server 15 SP5  
 5.14.21-150500.53-default  
 Compiler: C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++  
 Compiler for Linux;  
 Fortran: Version 2024.0.2 of Intel Fortran  
 Compiler for Linux;  
 Parallel: No  
 Firmware: Fujitsu BIOS Version V5.0.0.27 R1.5.0 for  
 D4132-A1x. Released Jul-2024  
 tested as V5.0.0.27 R1.0.0 for D4132-A1x Mar-2024  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: Not Applicable  
 Other: jemalloc memory allocator V5.0.1  
 Power Management: BIOS set to prefer performance  
 at the cost of additional power usage



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	12	284	423	<b>286</b>	<b>420</b>	287	420							
507.cactuBSSN_r	12	127	119	<b>127</b>	<b>119</b>	127	120							
508.namd_r	12	183	62.2	186	61.3	<b>184</b>	<b>62.1</b>							
510.parest_r	12	623	50.4	<b>627</b>	<b>50.1</b>	628	50.0							
511.povray_r	12	288	97.4	<b>288</b>	<b>97.4</b>	288	97.3							
519.lbm_r	12	249	50.7	<b>249</b>	<b>50.7</b>	249	50.8							
521.wrf_r	12	362	74.3	<b>361</b>	<b>74.5</b>	360	74.6							
526.blender_r	12	<b>199</b>	<b>91.7</b>	199	91.9	200	91.6							
527.cam4_r	12	<b>189</b>	<b>111</b>	192	110	189	111							
538.imagick_r	12	<b>86.3</b>	<b>346</b>	86.3	346	86.4	345							
544.nab_r	12	<b>144</b>	<b>140</b>	145	140	144	140							
549.fotonik3d_r	12	669	70.0	<b>669</b>	<b>69.9</b>	669	69.9							
554.roms_r	12	<b>454</b>	<b>42.0</b>	451	42.3	461	41.3							

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

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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/Benchmark/speccpu.ic2024.0.2/lib/intel64:/home/Benchmark/speccpu.ic2024.0.2/je5.0.1-64"
MALLOC_CONF = "retain:true"
```

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4

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)

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## General Notes (Continued)

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 configuration:

C-State Auto Demotion = Disabled

CState Pre-Wake = Disabled

DMI Max Link Speed = Gen1

Fan Control = Full

Intel(R) Turbo Boost Max Technology 3.0 = Disabled

Total Memory Encryption = Disabled

```
Sysinfo program /home/Benchmark/speccpu.ic2024.0.2/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Mon Apr 22 19:57:24 2024
```

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 (249.16+suse.171.gdad0071f15)
  12. Failed units, from systemctl list-units --state=failed
  13. Services, from systemctl list-unit-files
  14. Linux kernel boot-time arguments, from /proc/cmdline
  15. cpupower frequency-info
  16. sysctl
  17. /sys/kernel/mm/transparent\_hugepage
  18. /sys/kernel/mm/transparent\_hugepage/khugepaged
  19. OS release
  20. Disk information
  21. /sys/devices/virtual/dmi/id
  22. dmidecode
  23. BIOS
- 

1. uname -a
Linux localhost 5.14.21-150500.53-default #1 SMP PREEMPT\_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
x86\_64 x86\_64 x86\_64 GNU/Linux

2. w

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## Platform Notes (Continued)

```
19:57:24 up 3:20, 2 users, load average: 3.26, 9.23, 10.98
USER      TTY      FROM          LOGIN@     IDLE     JCPU     PCPU WHAT
root      ttys1     -           16:37      3:18m   0.83s   0.08s -bash
root      pts/0    10.8.84.69  16:38      3:18m   0.02s   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
file size               (blocks, -f) unlimited
pending signals         (-i) 254852
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) 254852
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 --define numcopies=12 -c
  ic2024.0.2-lin-core-avx2-rate-20231213.cfg --define smt-on --define cores=12 --define physicallogical
  --define no-numa --tune base -o all --define drop_caches fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=12 --configfile
  ic2024.0.2-lin-core-avx2-rate-20231213.cfg --define smt-on --define cores=12 --define physicallogical
  --define no-numa --tune base --output_format all --define drop_caches --nopower --runmode rate --tune base
  --size refrate fprate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.001/templogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/Benchmark/speccpu.ic2024.0.2
```

-----  
6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) E E-2486
vendor_id       : GenuineIntel
cpu family     : 6
model          : 183
stepping        : 1
microcode       : 0x121
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrss_pbrss
cpu cores       : 6
siblings        : 12
1 physical ids (chips)
12 processors (hardware threads)
physical id 0: core ids 0-5
physical id 0: apicids 0-11
```

(Continued on next page)



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## Platform Notes (Continued)

**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:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Address sizes: 46 bits physical, 48 bits virtual
Byte Order: Little Endian
CPU(s): 12
On-line CPU(s) list: 0-11
Vendor ID: GenuineIntel
Model name: Intel(R) Xeon(R) E E-2486
CPU family: 6
Model: 183
Thread(s) per core: 2
Core(s) per socket: 6
Socket(s): 1
Stepping: 1
CPU max MHz: 7200.0000
CPU min MHz: 800.0000
BogoMIPS: 6988.80
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 xtTopology
       nonstop_tsc cpuid aperf mperf 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 fsfsbase
       tsc_adjust bmil avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt
       clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves split_lock_detect
       avx_vnmi dtherm ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp
       hwp_pkg_req hfi umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid
       movdir64b fsrm md_clear serialize pconfig arch_lbr flush_lld
       arch_capabilities
Virtualization: VT-x
L1d cache: 288 KiB (6 instances)
L1i cache: 192 KiB (6 instances)
L2 cache: 12 MiB (6 instances)
L3 cache: 18 MiB (1 instance)
NUMA node(s): 1
NUMA node 0 CPU(s): 0-11
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: 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, PBRSB-eIBRS SW
sequence
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
```

(Continued on next page)



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## Platform Notes (Continued)

L1d	48K	288K	12	Data	1	64	1	64
L1i	32K	192K	8	Instruction	1	64	1	64
L2	2M	12M	16	Unified	2	2048	1	64
L3	18M	18M	9	Unified	3	32768	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: 0-11
node 0 size: 63746 MB
node 0 free: 63287 MB
node distances:
node 0
 0: 10
```

-----  
9. /proc/meminfo

```
MemTotal:       65276752 kB
```

-----  
10. who -r  
run-level 3 Apr 22 16:37

-----  
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)

```
Default Target      Status
multi-user          degraded
```

-----  
12. Failed units, from systemctl list-units --state=failed

```
UNIT           LOAD   ACTIVE SUB   DESCRIPTION
* sep5.service loaded failed failed systemd script to load sep5 driver at boot time
```

-----  
13. Services, from systemctl list-unit-files

```
STATE          UNIT    FILES
enabled        YaST2-Firstboot YaST2-Second-Stage apparmor auditd chrony cron display-manager getty@
                haveged irqbalance issue-generator kbdsettings kdump kdump-early klog lvm2-monitor nsqd
                postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore wicked
                wickedd-autod4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemdr-mount-fs
disabled       autofs autostart-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
                console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info firewalld gpm
                grub2-once haveged-switch-root ipmi ipmievrd 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-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
                vncserver@
indirect       pcscd wickedd
```

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

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=7d6282e3-8e21-4b62-ab94-5941e54159d1
splash=silent
mitigations=auto
quiet
security=apparmor
crashkernel=235M,high
```

(Continued on next page)



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## Platform Notes (Continued)

crashkernel=72M,low

```
-----  
15. cpupower frequency-info  
analyzing CPU 0:  
    current policy: frequency should be within 800 MHz and 7.20 GHz.  
        The governor "powersave" may decide which speed to use  
        within this range.  
    boost state support:  
        Supported: yes  
        Active: yes
```

```
-----  
16. 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  
vm.nr_overcommit_hugepages    0  
vm.swappiness                  60  
vm.watermark_boost_factor     15000  
vm.watermark_scale_factor     10  
vm.zone_reclaim_mode          0
```

```
-----  
17. /sys/kernel/mm/transparent_hugepage  
defrag           always defer defer+madvise [madvise] never  
enabled          [always] madvise never  
hpage_pmd_size  2097152  
shmem_enabled   always within_size advise [never] deny force
```

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

```
-----  
19. OS release  
From /etc/*-release /etc/*-version  
os-release SUSE Linux Enterprise Server 15 SP5
```

```
-----  
20. Disk information  
SPEC is set to: /home/Benchmark/speccpu.ic2024.0.2  
Filesystem      Type  Size  Used Avail Use% Mounted on
```

(Continued on next page)



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## Platform Notes (Continued)

/dev/sda2 xfs 223G 98G 126G 44% /

-----  
21. /sys/devices/virtual/dmi/id  
Vendor: FUJITSU  
Product: PRIMERGY TX1330 M6  
Product Family: SERVER  
Serial: xxxxxxxxxxxx

-----  
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:  
2x Samsung M324R4GA3BB0-CQKOD 32 GB 2 rank 4800, configured at 4400

-----  
23. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: FUJITSU // American Megatrends International, LLC.  
BIOS Version: V5.0.0.27 R1.0.0 for D4132-A1x  
BIOS Date: 03/13/2024  
BIOS Revision: 1.0

## Compiler Version Notes

=====  
C | 519.lbm\_r(base) 538.imagick\_r(base) 544.nab\_r(base)  
=====  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
=====

=====  
C++ | 508.namd\_r(base) 510.parest\_r(base)  
=====  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
=====

=====  
C++, C | 511.povray\_r(base) 526.blender\_r(base)  
=====  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
=====

=====  
C++, C, Fortran | 507.cactuBSSN\_r(base)  
=====  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
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## Compiler Version Notes (Continued)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====  
Fortran | 503.bwaves\_r(base) 549.fotonik3d\_r(base) 554.roms\_r(base)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

=====  
Fortran, C | 521.wrf\_r(base) 527.cam4\_r(base)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213  
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

503.bwaves\_r: -DSPEC\_LP64  
507.cactuBSSN\_r: -DSPEC\_LP64  
508.namd\_r: -DSPEC\_LP64  
510.parest\_r: -DSPEC\_LP64  
511.povray\_r: -DSPEC\_LP64

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

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Fujitsu

PRIMERGY TX1330 M6,  
Intel Xeon E-2486, 3.5 GHz

SPECrate®2017\_fp\_base = 98.6

SPECrate®2017\_fp\_peak = Not Run

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fujitsu

Test Date: Apr-2024

Hardware Availability: Apr-2024

Software Availability: Dec-2023

## Base Portability Flags (Continued)

```
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -nostandard-realloc-lhs -align array32byte -auto
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```



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

<http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-RPL-RevA.html>

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

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

<http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0-RPL-RevA.xml>

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