## SPEC CPU®2017 Floating Point Rate Result

**Supermicro**

SuperStorage 6029P-E1CR24H  
(X11DSC+, Intel Xeon Gold 6226R)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base</th>
<th>206</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak</td>
<td>216</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro  
**Test Date:** Aug-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** Apr-2020

### Hardware

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECrate®2017_fp_base</th>
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<tbody>
<tr>
<td>503.bwaves_r</td>
<td>64</td>
<td>32</td>
<td></td>
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<tr>
<td>507.cactuBSSN_r</td>
<td>64</td>
<td>32</td>
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<td>508.namd_r</td>
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<td>510.parest_r</td>
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<td>511.povray_r</td>
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<td>521.wrf_r</td>
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<tr>
<td>526.blender_r</td>
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<td>527.cam4_r</td>
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<tr>
<td>538.imagick_r</td>
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<tr>
<td>544.nab_r</td>
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<tr>
<td>549.fotonik3d_r</td>
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</tr>
<tr>
<td>554.roms_r</td>
<td>32</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

**CPU Name:** Intel Xeon Gold 6226R  
**Max MHz:** 3900  
**Nominal:** 2900  
**Enabled:** 32 cores, 2 chips, 2 threads/core  
**Orderable:** 1,2 chips  
**Cache L1:** 32 KB I + 32 KB D on chip per core  
**L2:** 1 MB I+D on chip per core  
**L3:** 22 MB I+D on chip per core  
**Memory:** 384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R)  
**Storage:** 1 x 200 GB SATA III SSD

### Software

**OS:** Red Hat Enterprise Linux release 8.1  
**Kernel:** 4.18.0-147.el8.x86_64  
**Compiler:** C/C++: Version 19.1.1.217 of Intel C/C++ Compiler for Linux; Fortran: Version 19.1.1.217 of Intel Fortran Compiler for Linux  
**Parallel:** No  
**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 Rate Result

Supermicro
SuperStorage 6029P-E1CR24H (X11DSC+, Intel Xeon Gold 6226R)

SPECrate®2017_fp_base = 206
SPECrate®2017_fp_peak = 216

Results Table

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</tbody>
</table>

SPECrate®2017_fp_base = 206
SPECrate®2017_fp_peak = 216

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

Compiler Notes
The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler.
The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux
The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

Submit Notes
The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.

Operating System Notes
Stack size set to unlimited using "ulimit -s unlimited"

Environment Variables Notes
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"
MALLOC_CONF = "retain:true"
**Supermicro**
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Gold 6226R)

**SPEC®2017 fp base = 206**
**SPEC®2017 fp peak = 216**

<table>
<thead>
<tr>
<th>CPU2017 License: 001176</th>
<th>Test Date: Aug-2020</th>
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<tbody>
<tr>
<td>Test Sponsor: Supermicro</td>
<td>Hardware Availability: Feb-2020</td>
</tr>
<tr>
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<td>Software Availability: Apr-2020</td>
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</tbody>
</table>

**General Notes**

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB 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`
runccpu command invoked through numactl i.e.:
    `numactl --interleave=all runcpu <etc>`

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

**Platform Notes**

BIOS Settings:
Power Technology = Custom
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Maximum Performance
SNC = Enable
Stale AtoS = Disable
IMC Interleaving = 1-way Interleave
Patrol Scrub = Disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7edbe6e46a485a0011
running on RHEL81-01 Fri Aug 7 08:40:13 2020

SUT (System Under Test) info as seen by some common utilities.
For more information on this section, see
https://www.spec.org/cpu2017/Docs/config.html#sysinfo

From /proc/cpuinfo
    model name : Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
    2 "physical id"s (chips)
    64 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 16
siblings : 32

(Continued on next page)
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### Supermicro

SuperStorage 6029P-E1CR24H
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**CPU2017 License:** 001176  
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**Test Sponsor:** Supermicro  
**Hardware Availability:** Feb-2020  
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**Software Availability:** Apr-2020

### Platform Notes (Continued)

From `lscpu`:

- **Architecture:** x86_64
- **CPU op-mode(s):** 32-bit, 64-bit
- **Byte Order:** Little Endian
- **CPU(s):** 64
- **On-line CPU(s) list:** 0-63
- **Thread(s) per core:** 2
- **Core(s) per socket:** 16
- **Socket(s):** 2
- **NUMA node(s):** 4
- **Vendor ID:** GenuineIntel
- **CPU family:** 6
- **Model:** 85
- **Model name:** Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
- **Stepping:** 7
- **CPU MHz:** 3600.039
- **CPU max MHz:** 3900.000
- **CPU min MHz:** 1200.000
- **BogoMIPS:** 5800.00
- **Virtualization:** VT-x
- **L1d cache:** 32K
- **L1i cache:** 32K
- **L2 cache:** 1024K
- **L3 cache:** 22528K
- **NUMA node0 CPU(s):** 0-3, 8-11, 32-35, 40-43
- **NUMA node1 CPU(s):** 4-7, 12-15, 36-39, 44-47
- **NUMA node2 CPU(s):** 16-19, 24-27, 48-51, 56-59
- **NUMA node3 CPU(s):** 20-23, 28-31, 52-55, 60-63
- **Flags:** fpu vme de pse tsc msr pae mce 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 pni pclmulqdq dtes64 ksm vmx smx est tm2 ssse3 sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrnd lahf_lm abm 3dnowprefetch cpuid_fault ebda cat l3 cdp l3 invpcid_single intel_pinn ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsaving xgetbv1 xsaves cqm_llc cqm_occld 1lc cqm_mbb_total cqm_mbb_local dtherm ida arat pni pts kpu ospke avx512_vnni md_clear flush_lid arch_capabilities

/proc/cpuinfo cache data

**cache size:** 22528 KB

(Continued on next page)
**SPEC CPU®2017 Floating Point Rate Result**

**Supermicro**
SuperStorage 6029P-E1CR24H (X11DSC+, Intel Xeon Gold 6226R)

<table>
<thead>
<tr>
<th>Speed (MIPS)</th>
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<td>SPECrate®2017_fp_peak = 216</td>
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**Test Sponsor:** Supermicro  
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**Platform Notes (Continued)**

- physical chip.  
- available: 4 nodes (0-3)  
  - node 0 cpus: 0 1 2 3 8 9 10 11 32 33 34 35 40 41 42 43  
  - node 0 size: 95350 MB  
  - node 0 free: 84325 MB  
  - node 1 cpus: 4 5 6 7 12 13 14 15 36 37 38 39 44 45 46 47  
  - node 1 size: 96739 MB  
  - node 1 free: 90026 MB  
  - node 2 cpus: 16 17 18 19 24 25 26 27 48 49 50 51 56 57 58 59  
  - node 2 size: 96764 MB  
  - node 2 free: 90315 MB  
  - node 3 cpus: 20 21 22 23 28 29 30 31 52 53 54 55 60 61 62 63  
  - node 3 size: 96764 MB  
  - node 3 free: 90322 MB  
  - node distances:  
    - node 0 1 2 3  
    - 0: 10 11 21 21  
    - 1: 11 10 21 21  
    - 2: 21 21 10 11  
    - 3: 21 21 11 10

From /proc/meminfo  
MemTotal: 394872936 kB  
HugePages_Total: 0  
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*  
- os-release:  
  - NAME="Red Hat Enterprise Linux"  
  - VERSION="8.1 (Ootpa)"  
  - ID="rhel"  
  - ID_LIKE="fedora"  
  - VERSION_ID="8.1"  
  - PLATFORM_ID="platform:el8"  
  - PRETTY_NAME="Red Hat Enterprise Linux 8.1 (Ootpa)"  
  - ANSI_COLOR="0;31"  
  - redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)  
  - system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)  
  - system-release-cpe: cpe:/o:redhat:enterprise_linux:8.1:ga

uname -a:  
Linux RHEL81-01 4.18.0-147.el8.x86_64 #1 SMP Thu Sep 26 15:52:44 UTC 2019 x86_64  
x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

- CVE-2018-3620 (L1 Terminal Fault): Not affected

(Continued on next page)
SPEC CPU®2017 Floating Point Rate Result

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Platform Notes (Continued)

Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 Aug 7 00:58
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 185G 41G 145G 22% /

From /sys/devices/virtual/dmi/id
BIOS: American Megatrends Inc. 3.2 10/18/2019
Vendor: pm_2019-10-08_18:11:34
Product: ppm_2019-10-08_18:11:37
Serial: ps_2019-10-08_18:11:38

Additional information from dmidecode 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 NO DIMM NO DIMM
12x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C | 519.lbm_r(base, peak) 538.imagick_r(base, peak)
   | 544.nab_r(base, peak)
------------------------------------------------------------------------------
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
   NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
==============================================================================

==============================================================================
C++ | 508.namd_r(base, peak) 510.parest_r(base, peak)
--------------------------------------------------------------------------------
Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1

(Continued on next page)
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Compiler Version Notes (Continued)

NextGen Build 20200304
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+++
C++, C | 511.povray_r(base) 526.blender_r(base, peak)
+++
Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

+++
C++, C | 511.povray_r(peak)
+++
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

+++
C++, C | 511.povray_r(base) 526.blender_r(base, peak)
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Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
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+++
C++, C | 511.povray_r(peak)
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Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
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Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
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(Continued on next page)
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CPU2017 License: 001176
Test Sponsor: Supermicro
Test Date: Aug-2020

Tested by: Supermicro
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Compiler Version Notes (Continued)

C++, C, Fortran | 507.cactuBSSN_r(base, peak)

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Fortran | 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak)

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.1.217 Build 20200306
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Fortran, C | 521.wrf_r(base) 527.cam4_r(base, peak)

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64, Version 19.1.1.217 Build 20200306
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Fortran, C | 521.wrf_r(peak)

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.1.217 Build 20200306
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Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
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(Continued on next page)
Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Gold 6226R)

SPECratenumber = 206
SPECratenumber = 216

CPU2017 License: 001176
Test Date: Aug-2020
Test Sponsor: Supermicro
Hardware Availability: Feb-2020
Tested by: Supermicro
Software Availability: Apr-2020

Compiler Version Notes (Continued)
Fortran, C | 521.wrf_r(base) 527.cam4_r(base, peak)
-----------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
  64, Version 19.1.1.217 Build 20200306
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Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
  NextGen Build 20200304
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==============================================================================
Fortran, C | 521.wrf_r(peak)
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Intel(R) C Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
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Base Compiler Invocation
C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icc

Benchmarks using both C and C++:
icpc icc

Benchmarks using Fortran, C, and C++:
icpc icc ifort
SPEC CPU®2017 Floating Point Rate Result

Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Gold 6226R)

SPECrate®2017_fp_base = 206
SPECrate®2017_fp_peak = 216

CPU2017 License: 001176
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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
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:
-m64 -qnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-fuse-ld=gold -xCORE-AVX2 -Ofast -ffast-math -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:
-m64 -qnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -Wl,-z,muldefs -fno-prec-div -fprefetch
-fuse-ld=gold -xCORE-AVX2 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Fortran benchmarks:
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-fuse-ld=gold -xCORE-AVX2 -O3 -ipo -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-multiple-gather-scatter-by-shuffles
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-auto -mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using both Fortran and C:
-m64 -qnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-fuse-ld=gold -xCORE-AVX2 -Ofast -ffast-math -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo -no-prec-div
-qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles -nostandard-realloc-lhs

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### Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):
- `-align array32byte -auto -mbranches-within-32B-boundaries`
- `-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

Benchmarks using both C and C++:
- `-m64 -qnextgen -std=c11`
- `-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs`
- `-fuse-ld=gold -xCORE-AVX2 -Ofast -ffast-math -flto -mfpmath=sse`
- `-funroll-loops -qopt-mem-layout-trans=4`
- `-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

Benchmarks using Fortran, C, and C++:
- `-m64 -qnextgen -std=c11`
- `-Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs`
- `-fuse-ld=gold -xCORE-AVX2 -Ofast -ffast-math -flto -mfpmath=sse`
- `-funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo -no-prec-div`
- `-qopt-prefetch -ffinite-math-only`
- `-qopt-multiple-gather-scatter-by-shuffles -nostandard-realloc-lhs`
- `-align array32byte -auto -mbranches-within-32B-boundaries`
- `-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

### Peak Compiler Invocation

**C benchmarks:**
- `icc`

**C++ benchmarks:**
- `icpc`

**Fortran benchmarks:**
- `ifort`

Benchmarks using both Fortran and C:
- `ifort icc`

Benchmarks using both C and C++:
- `icpc icc`

Benchmarks using Fortran, C, and C++:
- `icpc icc ifort`
Supermicro
SuperStorage 6029P-E1CR24H
(X11DSC+, Intel Xeon Gold 6226R)

SPECrate®2017_fp_base = 206
SPECrate®2017_fp_peak = 216

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

<table>
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<tr>
<th>Test Date: Aug-2020</th>
<th>Hardware Availability: Feb-2020</th>
</tr>
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<tbody>
<tr>
<td>Software Availability: Apr-2020</td>
<td></td>
</tr>
</tbody>
</table>

Peak Portability Flags
Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
519.lbm_r: basepeak = yes
538.imagick_r: basepeak = yes
544.nab_r: basepeak = yes

C++ benchmarks:
508.namd_r: basepeak = yes
510.parest_r: -m64 -qnextgen
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fFuse-ld=gold -xCORE-AVX2 -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

Fortran benchmarks:
503.bwaves_r: -m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fFuse-ld=gold -xCORE-AVX2 -O3 -ipo
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
549.fotonik3d_r: basepeak = yes
554.roms_r: Same as 503.bwaves_r

Benchmarks using both Fortran and C:
521.wrf_r: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2 -O3 -ipo
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-nostandard-realloc-lhs -align array32byte -auto

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## SPEC CPU®2017 Floating Point Rate Result

### Supermicro
SuperStorage 6029P-E1CR24H (X11DSC+, Intel Xeon Gold 6226R)

<table>
<thead>
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<th>SPECrate®2017_fp_peak</th>
<th>SPECrate®2017_fp_base</th>
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<tr>
<td>216</td>
<td>206</td>
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**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro  
**Test Date:** Aug-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** Apr-2020

### Peak Optimization Flags (Continued)

521.wrf_r (continued):
- `-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

527.cam4_r: `basepeak = yes`

Benchmarks using both C and C++:

511.povray_r: `-prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2 -O3 -ipo`  
- `-no-prec-div`  
- `-qopt-prefetch`  
- `-ffinite-math-only`  
- `-qopt-multiple-gather-scatter-by-shuffles`  
- `-qopt-mem-layout-trans=4`  
- `-mbranches-within-32B-boundaries`  
- `-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

526.blender_r: `basepeak = yes`

Benchmarks using Fortran, C, and C++:

507.cactuBSSN_r: `basepeak = yes`

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


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


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

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