## SPEC CPU®2017 Floating Point Rate Result

### Summary

**Altos Computing Inc.**

**BrainSphere R580 F4 (Intel Xeon Gold 6252)**

<table>
<thead>
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<th>Test Date:</th>
<th>Dec-2020</th>
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<td>CPU2017 License:</td>
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<td>Test Sponsor:</td>
<td>Altos Computing Inc.</td>
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<td>Tested by:</td>
<td>Altos Computing Inc.</td>
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<td>Hardware Availability:</td>
<td>Jul-2019</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Apr-2020</td>
</tr>
</tbody>
</table>

**SPEC CPU®2017**

- **SPECrate®2017_fp_base = 474**
- **SPECrate®2017_fp_peak = 502**

### Hardware

**CPU Name:** Intel Xeon Gold 6252  
**Max MHz:** 3700  
**Nominal:** 2100  
**Enabled:** 96 cores, 4 chips, 2 threads/core  
**Orderable:** 2,4 chips  
**Cache L1:** 32 KB I + 32 KB D on chip per core  
**L2:** 1 MB I+D on chip per core  
**L3:** 35.75 MB I+D on chip per chip  
**Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933V-R)  
**Storage:** 1 x 1.6 TB SATA SSD  
**Other:** None

### Software

**OS:** Red Hat Enterprise Linux release 8.1 (Ootpa)  
**Compiler:** C/C++; Version 19.1.1.217 of Intel C/C++ Compiler Build 20200306 for Linux;  
**Fortran:** Version 19.1.1.217 of Intel Fortran Compiler Build 20200306 for Linux  
**Parallel:** No  
**Firmware:** Version 3.1 released Oct-2019  
**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

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### SPECrate®2017_fp_base (474) vs SPECrate®2017_fp_peak (502)
# SPEC CPU®2017 Floating Point Rate Result

## Altos Computing Inc.

### SPEC CPU®2017 Floating Point Rate Result

**Altos Computing Inc.**

**BrainSphere R580 F4 (Intel Xeon Gold 6252)**

**SPECrate®2017_fp_base = 474**

**SPECrate®2017_fp_peak = 502**

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</table>

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"
MALLOCONF = "retain:true"
### General Notes

- Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM
- 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
  ```
- runcpu 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.

### Platform Notes

- BIOS Configuration:
  - Power Policy Quick Settings set to Max Performance
  - IMC set to 1-way interleaving
  - Sub_NUMA Cluster set to enabled

- Sysinfo program /home/cpu2017/bin/sysinfo
- Rev: r6365 of 2019-08-21 295195f888a3d7edbe6e46a485a0011 running on rhel Tue Dec 29 15:48:45 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 6252 CPU @ 2.10GHz`
  - `4 "physical id" s (chips)`
  - `192 "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 : 24`
  - `siblings : 48`
  - `physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29`
  - `physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29`
  - `physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29`
  - `physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29`

(Continued on next page)
Altos Computing Inc.

BrainSphere R580 F4 (Intel Xeon Gold 6252)

SPECraten®2017_fp_base = 474
SPECraten®2017_fp_peak = 502

CPU2017 License: 97
Test Sponsor: Altos Computing Inc.
Tested by: Altos Computing Inc.

Platform Notes (Continued)

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 192
On-line CPU(s) list: 0-191
Thread(s) per core: 2
Core(s) per socket: 24
Socket(s): 4
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 6252 CPU @ 2.10GHz
Stepping: 5
CPU MHz: 3110.071
CPU max MHz: 3700.0000
CPU min MHz: 1000.0000
BogoMIPS: 4200.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 33792K
NUMA node0 CPU(s): 0-23, 96-119
NUMA node1 CPU(s): 24-47, 120-143
NUMA node2 CPU(s): 48-71, 144-167
NUMA node3 CPU(s): 72-95, 168-191
Flags: fpu vme de pse tsc msr pae mce cmov pat apic mtrr pge mca cmov
pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtsscp
lm constant_tsc arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid
aperfmpref pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtrm pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avx f16c rdrand lahf_lm abm 3nowprefetch cpuid_fault epb cat_l3 cdp_l3
invpcid_single intel_pme tm ces ibm ibpb stibp tpr_shadow vnmi fxlpmx ept
vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 3dnowprec cpuid rtm rdt_a
avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl
xsaveopt xsavec xsavec xgetbv1 xsaves cqm_llc cqm_occupa llc cqm_mbms local
dtherm ia atat pinn pts pku ospke flush_lld arch_capabilities

/proc/cpuinfo cache data
cache size: 33792 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 4 nodes (0-3)
node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 96 97 98 99

(Continued on next page)
Altos Computing Inc.

BrainSphere R580 F4 (Intel Xeon Gold 6252)

SPECrater®2017_fp_peak = 502
SPECrater®2017_fp_base = 474

CPU2017 License: 97
Test Sponsor: Altos Computing Inc.
Tested by: Altos Computing Inc.

Test Date: Dec-2020
Hardware Availability: Jul-2019
Software Availability: Apr-2020

Platform Notes (Continued)

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119
node 0 size: 191846 MB
node 0 free: 170912 MB
node 1 cpus: 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141
142 143
node 1 size: 193526 MB
node 1 free: 174419 MB
node 2 cpus: 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165
166 167
node 2 size: 193501 MB
node 2 free: 174896 MB
node 3 cpus: 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95
168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189
190 191
node 3 size: 193524 MB
node 3 free: 174943 MB
node distances:
node 0 1 2 3
0: 10 21 21 21
1: 21 10 21 21
2: 21 21 10 21
3: 21 21 21 10

From /proc/meminfo
MemTotal: 790936172 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 rhel 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

(Continued on next page)
Altos Computing Inc.

BrainSphere R580 F4 (Intel Xeon Gold 6252)

SPEC CPU®2017 Floating Point Rate Result

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CPU2017 License: 97
Test Sponsor: Altos Computing Inc.
Tested by: Altos Computing Inc.

Test Date: Dec-2020
Hardware Availability: Jul-2019
Software Availability: Apr-2020

Platform Notes (Continued)

Kernel self-reported vulnerability status:

CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Vulnerable: Clear CPU buffers attempted, no microcode; SMT vulnerable
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: Full generic retpoline, IBPB: conditional, IBRS_FW, STIBP: conditional, RSB filling

run-level 3 Dec 29 02:46

SPEC is set to: /home/cpu2017
Filesystem            Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs   1.5T  246G  1.2T  18% /home

From /sys/devices/virtual/dmi/id
    BIOS:    American Megatrends Inc. 3.1 10/09/2019
    Vendor:  Altos
    Product: BrainSphere R580 F4
    Product Family: BrainSphere
    Serial:  aa123456789bb

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 SMI S" standard.

Memory:
24x NO DIMM NO DIMM
24x 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

(Continued on next page)
Altos Computing Inc.

BrainSphere R580 F4 (Intel Xeon Gold 6252)

SPEC CPU®2017 Floating Point Rate Result

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Compiling Environment Details

CPU2017 License: 97
Test Sponsor: Altos Computing Inc.
Tested by: Altos Computing Inc.

Test Date: Dec-2020
Hardware Availability: Jul-2019
Software Availability: Apr-2020

Compiler Version Notes (Continued)

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---------------------------------------------------------------------
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
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
---------------------------------------------------------------------
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.
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C++, C          | 511.povray_r(base) 526.blender_r(base, peak)
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C++, C          | 511.povray_r(peak)
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**Test Sponsor:** Altos Computing Inc.
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**Compiler Version Notes (Continued)**

Intel(R) C++ 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 19.1.1.217 Build 20200306

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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**

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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**

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<th>521.wrf_r(base)</th>
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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**

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Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306

(Continued on next page)
Altos Computing Inc.

**SPEC CPU®2017 Floating Point Rate Result**

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**CPU2017 License:** 97

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**Tested by:** Altos Computing Inc.

**Compiler Version Notes (Continued)**

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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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==============================================================================

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) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
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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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-----------------------------------------------------------------------------

**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

(Continued on next page)
Base Compiler Invocation (Continued)

Benchmarks using Fortran, C, and C++:
icpc icc ifort

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
-W1, -plugin-opt=-x86-branches-within-32B-boundaries -W1, -z, muldefs
-fuse-ld gold -xCORE-AVX512 -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 -W1, -plugin-opt=-x86-branches-within-32B-boundaries
-W1, -z, muldefs -fuse-ld gold -xCORE-AVX512 -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 -W1, -plugin-opt=-x86-branches-within-32B-boundaries -W1, -z, muldefs
-fuse-ld gold -xCORE-AVX512 -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

(Continued on next page)
Base Optimization Flags (Continued)

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-AVX512 -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`

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-AVX512 -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-AVX512 -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`
**SPEC CPU®2017 Floating Point Rate Result**

**Altos Computing Inc.**

**BrainSphere R580 F4 (Intel Xeon Gold 6252)**

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base = 474</th>
<th>SPECrate®2017_fp_peak = 502</th>
</tr>
</thead>
</table>

- **CPU2017 License:** 97
- **Test Sponsor:** Altos Computing Inc.
- **Tested by:** Altos Computing Inc.
- **Test Date:** Dec-2020
- **Hardware Availability:** Jul-2019
- **Software Availability:** Apr-2020

**Peak Compiler Invocation (Continued)**

Benchmarks using Fortran, C, and C++:

```
icpc icc ifort
```

**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

**Fortran benchmarks:**

- `503.bwaves_r`: basepeak = yes
- `549.fotonik3d_r`: basepeak = yes
- `554.roms_r`: Same as `503.bwaves_r`

(Continued on next page)
Altos Computing Inc.
BrainSphere R580 F4 (Intel Xeon Gold 6252)

SPECrate®2017_fp_base = 474  
SPECrate®2017_fp_peak = 502

CPU2017 License: 97
Test Sponsor: Altos Computing Inc.
Tested by: Altos Computing Inc.
Test Date: Dec-2020
Hardware Availability: Jul-2019
Software Availability: Apr-2020

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

521.wrf_r: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512 -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
-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-AVX512 -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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Altos-Platform-Settings-V1.0-revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic19.1u1-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Altos-Platform-Settings-V1.0-revA.xml

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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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