Fujitsu
PRIMERGY RX1330 M4, Intel Xeon E-2186G, 3.80GHz

CPU2017 License: 19  
Test Sponsor: Fujitsu  
Tested by: Fujitsu  
Test Date: Nov-2018  
Hardware Availability: Nov-2018  
Software Availability: Sep-2018

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**Hardware**

CPU Name: Intel Xeon E-2186G  
Max MHz.: 4700  
Nominal: 3800  
Enabled: 6 cores, 1 chip, 2 threads/core  
Orderable: 1 chip  
Cache L1: 32 KB I + 32 KB D on chip per core  
L2: 256 KB I+D on chip per core  
L3: 12 MB I+D on chip per chip  
Other: None  
Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2666V-E)  
Storage: 1 x SATA M.2 SSD, 240 GB  
Other: None

**Software**

OS: Red Hat Enterprise Linux Server release 7.5  
(Maipo)  
Compiler: C/C++: Version 19.0.0.117 of Intel C/C++  
Compiler for Linux: Fortran: Version 19.0.0.117 of Intel Fortran  
Compiler for Linux  
Parallel: Yes  
Firmware: Fujitsu BIOS Version V5.0.0.13 R1.4.0 for D3675-A1x. Released Nov-2018 tested as V5.0.0.13 R1.0.0 for D3675-A1x Sep-2018  
File System: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: Not Applicable  
Other: None

SPECspeed2017_fp_base = 32.1  
SPECspeed2017_fp_peak = Not Run

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Page 1  
Standard Performance Evaluation Corporation (info@spec.org)  
https://www.spec.org/
### Fujitsu

PRIMERGY RX1330 M4, Intel Xeon E-2186G, 3.80GHz

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### 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"

### General Notes

Environment variables set by runcpu before the start of the run:

- KMP_AFFINITY = "granularity=fine,compact,1,0"
- OMP_STACKSIZE = "192M"
- LD_LIBRARY_PATH = "/home/Benchmark/speccpu2017-ic19_SOKUTEI/ic19.0-lib/intel64"

Binaries compiled on a system with 1x Intel Xeon E-2186G CPU + 64GB RAM memory using Red Hat Enterprise Linux Server release 7.5

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
```

Yes: 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.
Fujitsu
PRIMERGY RX1330 M4, Intel Xeon E-2186G, 3.80GHz

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CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

General Notes (Continued)
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:
Energy Efficient Turbo = Disabled
Sysinfo program /home/Benchmark/speccpu2017-ic19_SOKUTEI/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on localhost.localdomain Wed Nov 7 13:54:42 2018

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) E-2186G CPU @ 3.80GHz
  1 "physical id"s (chips)
  12 "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 : 6
    siblings : 12
    physical 0: cores 0 1 2 3 4 5

From lscpu:
  Architecture: x86_64
  CPU op-mode(s): 32-bit, 64-bit
  Byte Order: Little Endian
  CPU(s): 12
  On-line CPU(s) list: 0-11
  Thread(s) per core: 2
  Core(s) per socket: 6
  Socket(s): 1
  NUMA node(s): 1
  Vendor ID: GenuineIntel
  CPU family: 6
  Model: 158
  Model name: Intel(R) Xeon(R) E-2186G CPU @ 3.80GHz
  Stepping: 10
  CPU MHZ: 4629.858
  CPU max MHZ: 4700.0000
  CPU min MHZ: 800.0000
  BogoMIPS: 7584.00
  Virtualization: VT-x
  L1d cache: 32K

(Continued on next page)
SPEC CPU2017 Floating Point Speed Result

Fujitsu
PRIMERGY RX1330 M4, Intel Xeon E-2186G, 3.80GHz

SPECspeed2017_fp_base = 32.1
SPECspeed2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Nov-2018
Hardware Availability: Nov-2018
Software Availability: Sep-2018

Platform Notes (Continued)

L1i cache: 32K
L2 cache: 256K
L3 cache: 12288K
NUMA node0 CPU(s): 0-11

Flags:

fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
pat pse36 cflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtsscp
lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc
aperfmpref eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx est tm2 ssse3 sdbg
fma cx16 xtrict pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes
xsave avx f16c rdrand lahf_lm abm 3dnowprefetch epb intel_pt tpr_shadow vnmi
flexisxor preempt vpid vmpath msr pax novmmx fmsx cmov pmx rdseed adx smap clflushopt
xsaves opt xsave xsavec xgetbv1 ibpb ibrs stibp dtherm ida
ar at pln pts hwp hw_xnotify hw_act_window hw_epp spec_ctrl intel_stibp

/platforminfo cache data

/cache size : 12288 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

From /proc/meminfo

MemTotal: 65543968 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*

os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.5 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.5"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.5 (Maipo)"
redhat-release: Red Hat Enterprise Linux 7.5 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.5 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.5:ga:server

uname -a:
Linux localhost.localdomain 3.10.0-862.el7.x86_64 #1 SMP Wed Mar 21 18:14:51 EDT 2018
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 7 13:52 last=5

SPEC is set to: /home/Benchmark/speccpu2017-ic19_SOKUTEI

Filesystem Type Size Used Avail Use% Mounted on

(Continued on next page)
Fujitsu
PRIMERGY RX1330 M4, Intel Xeon E-2186G, 3.80GHz

| SPECspeed2017_fp_base = 32.1 |
| SPECspeed2017_fp_peak = Not Run |

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Nov-2018
Hardware Availability: Nov-2018
Software Availability: Sep-2018

Platform Notes (Continued)
/dev/mapper/rhel-home xfs 365G 27G 338G 8% /home

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.
BIOS FUJITSU // American Megatrends Inc. V5.0.0.13 R1.0.0 for D3675-A1x
09/14/2018
Memory:
4x SK Hynix HMA82GU7CJR8N-VK 16 GB 2 rank 2667

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
CC 619.lbm_s(base) 638.imagick_s(base) 644.nab_s(base)
------------------------------------------------------------------------------
icc (ICC) 19.0.0.117 20180804
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
==============================================================================
FC 607.cactuBSSN_s(base)
------------------------------------------------------------------------------
icpc (ICC) 19.0.0.117 20180804
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icc (ICC) 19.0.0.117 20180804
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
ifort (IFORT) 19.0.0.117 20180804
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
==============================================================================
FC 603.bwaves_s(base) 649.fotonik3d_s(base) 654.roms_s(base)
------------------------------------------------------------------------------
ifort (IFORT) 19.0.0.117 20180804
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
==============================================================================
CC 621.wrf_s(base) 627.cam4_s(base) 628.pop2_s(base)
------------------------------------------------------------------------------
ifort (IFORT) 19.0.0.117 20180804
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
icc (ICC) 19.0.0.117 20180804

(Continued on next page)
**Fujitsu**
PRIMERGY RX1330 M4, Intel Xeon E-2186G, 3.80GHz

| SPECspeed2017_fp_base | 32.1 |
| SPECspeed2017_fp_peak | Not Run |

**Compiler Version Notes (Continued)**
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

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### Base Compiler Invocation

C benchmarks:
```plaintext
icc -m64 -std=c11
```

Fortran benchmarks:
```plaintext
ifort -m64
```

Benchmarks using both Fortran and C:
```plaintext
ifort -m64 icc -m64 -std=c11
```

Benchmarks using Fortran, C, and C++:
```plaintext
icpc -m64 icc -m64 -std=c11 ifort -m64
```

### 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:
```plaintext
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -qopenmp -DSPEC_OPENMP
```

Fortran benchmarks:
```plaintext
-DSPEC_OPENMP -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=3 -qopenmp
-nostandard-realloc-lhs -align array32byte
```

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

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -gopenmp -DSPEC_OPENMP
-nostandard-realloc-lhs -align array32byte

Benchmarks using Fortran, C, and C++:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -gopenmp -DSPEC_OPENMP
-nostandard-realloc-lhs -align array32byte

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0.2-CFL-RevB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.xml
http://www.spec.org/cpu2017/flags/Fujitsu-Platform-Settings-V1.0.2-CFL-RevB.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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