



SPEC® OMPG2012 Result

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Uniwise Technologies

(Test Sponsor: Telecommunications Technology Association)

SPECompG_peak2012 = Not Run

RB128 (Intel Xeon E5-2699 v4, 2.20 GHz)

SPECompG_base2012 = 11.8

OMP2012 license:068A

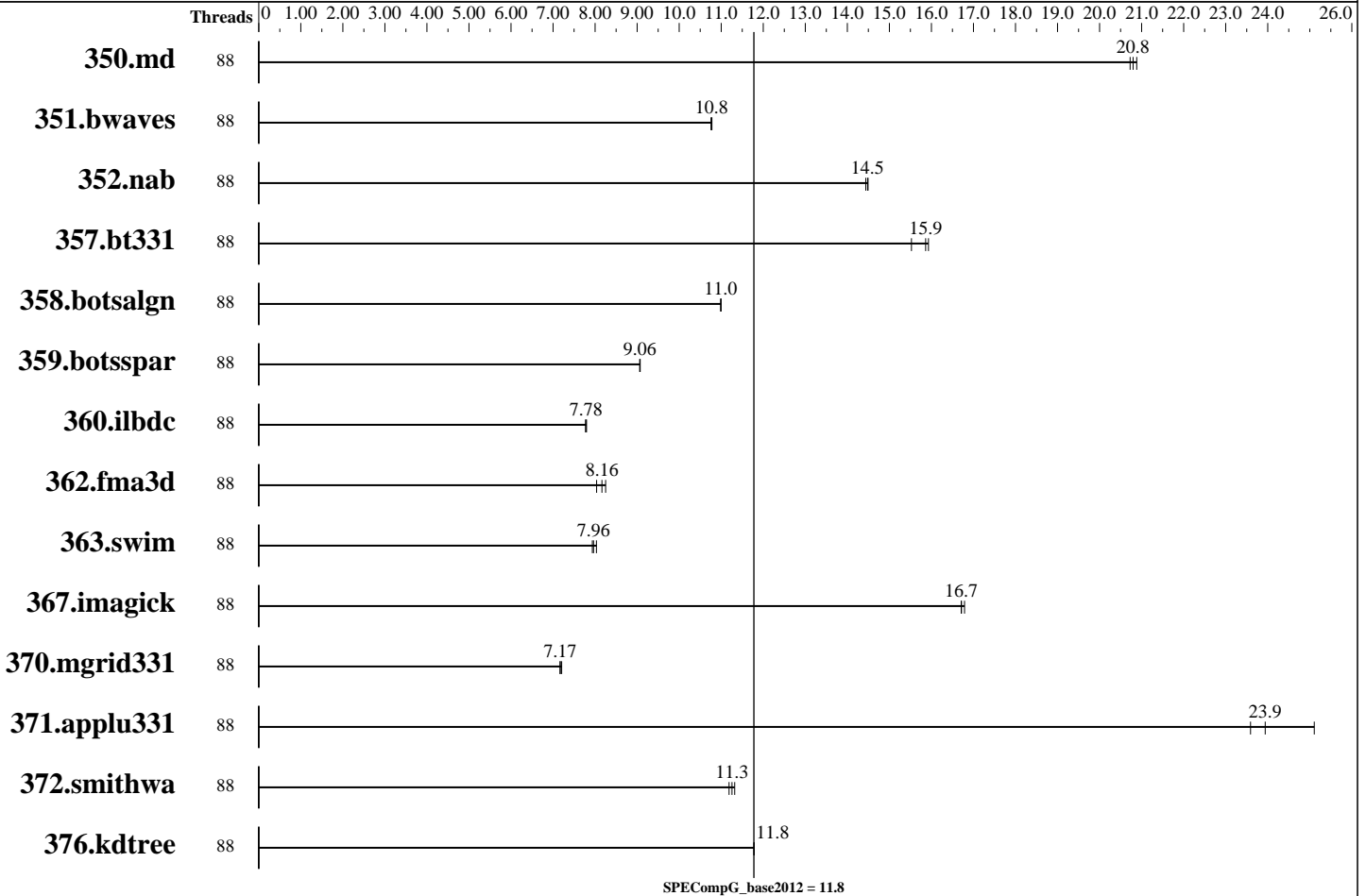
Test sponsor: Telecommunications Technology Association

Tested by: Telecommunications Technology Association

Test date: Dec-2019

Hardware Availability: May-2017

Software Availability: Dec-2018



Hardware

CPU Name: Intel Xeon E5-2699 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz Hyper-threading On.
 CPU MHz: 2200
 CPU MHz Maximum: 3600
 FPU: Integrated
 CPU(s) enabled: 44 cores, 2 chips, 22 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 Chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 55 MB I+D on chip per chip
 Other Cache: None
 Memory: 512 GB (16 x 32 GB 2Rx4 PC4-2400T-R)
 Disk Subsystem: 2 x 300GB SEAGATE ST300MM0048 SAS RAID0
 Other Hardware: None
 Base Threads Run: 88

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Software

Operating System: CentOS Linux release 7.7.1908 (Core)
 Compiler: C/C++/Fortran: Version 18.0.1.163 of Intel Composer XE for Linux Build 20171018
 Auto Parallel: No
 File System: xfs
 System State: Multi-user, run level 3
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other Software: None



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Minimum Peak Threads: --

Maximum Peak Threads: --

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	88	<u>223</u>	<u>20.8</u>	222	20.9	223	20.7							
351.bwaves	88	421	10.8	420	10.8	<u>421</u>	<u>10.8</u>							
352.nab	88	269	14.4	268	14.5	<u>269</u>	<u>14.5</u>							
357.bt331	88	<u>299</u>	<u>15.9</u>	298	15.9	305	15.5							
358.botsalgn	88	<u>396</u>	<u>11.0</u>	396	11.0	396	11.0							
359.botsspar	88	<u>579</u>	<u>9.06</u>	579	9.06	579	9.07							
360.ilbdc	88	457	7.80	458	7.77	<u>458</u>	<u>7.78</u>							
362.fma3d	88	<u>466</u>	<u>8.16</u>	473	8.04	461	8.25							
363.swim	88	564	8.03	571	7.93	<u>569</u>	<u>7.96</u>							
367.imagick	88	<u>421</u>	<u>16.7</u>	421	16.7	419	16.8							
370.mgrid331	88	<u>616</u>	<u>7.17</u>	613	7.20	617	7.17							
371.applu331	88	241	25.1	<u>253</u>	<u>23.9</u>	257	23.6							
372.smithwa	88	473	11.3	479	11.2	<u>476</u>	<u>11.3</u>							
376.kdtree	88	382	11.8	<u>382</u>	<u>11.8</u>	382	11.8							

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

Platform Notes

```

Sysinfo program /usr/omp2012/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 $# 8f8c0fe9e19c658963ale67685e50647
running on uniwide-rb128 Mon Dec 2 22:41:59 2019

```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/omp2012/Docs/config.html#sysinfo>

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2699 v4 @ 2.20GHz
 2 "physical id"s (chips)
 88 "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 : 22
siblings  : 44
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27
28
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27
28
cache size : 56320 KB

```

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Platform Notes (Continued)

From /proc/meminfo

MemTotal: 528087944 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

centos-release: CentOS Linux release 7.7.1908 (Core)
centos-release-upstream: Derived from Red Hat Enterprise Linux 7.7 (Source)
os-release:
NAME="CentOS Linux"
VERSION="7 (Core)"
ID="centos"
ID_LIKE="rhel fedora"
VERSION_ID="7"
PRETTY_NAME="CentOS Linux 7 (Core)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:centos:centos:7"
redhat-release: CentOS Linux release 7.7.1908 (Core)
system-release: CentOS Linux release 7.7.1908 (Core)
system-release-cpe: cpe:/o:centos:centos:7

uname -a:

Linux uniwide-rb128 3.10.0-1062.4.1.el7.x86_64 #1 SMP Fri Oct 18 17:15:30 UTC
2019 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 2 13:46

SPEC is set to: /usr/omp2012

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/centos-root	xfs	50G	7.2G	43G	15%	/

Additional information from dmidecode:

BIOS American Megatrends Inc. 3407 01/11/2017
Memory:
16x 32 GB
12x Hynix Semiconductor HMA84GR7AFR4N-UH 32 GB 2133 MT/s 2 rank
4x Hynix Semiconductor HMA84GR7MFR4N-UH 32 GB 2133 MT/s 2 rank
8x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

System settings notes:

Intel Turbo Boost Technology (Turbo) : Enabled
Hyper-threading : Disabled

General OMP Library Settings

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General Notes (Continued)

```
KMP_AFFINITY=compact,0
KMP_LIBRARY=turnaround
KMP_STACKSIZE=512M
KMP_BLOCKTIME=infinite
OMP_DYNAMIC=FALSE
OMP_NESTED=FALSE
OMP_SCHEDULE=static
```

```
=====
Environment Variables Settings
ulimit -s unlimited
```

Spectre and Meltdown

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.

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.

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Base Portability Flags

```
350.md: -FR
357.bt331: -mmodel=medium
363.swim: -mmodel=medium
367.imagick: -std=c99
```

Base Optimization Flags

C benchmarks:

```
-ansi-alias -qopenmp -ipo -O3 -no-prec-div -no-prec-sqrt
-fp-model fast=2 -xHost
```

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Base Optimization Flags (Continued)

C++ benchmarks:

```
-ansi-alias -qopenmp -ipo -O3 -no-prec-div -no-prec-sqrt
-fp-model fast=2 -xHost
```

Fortran benchmarks:

```
-qopenmp -ipo -O3 -no-prec-div -no-prec-sqrt -fp-model fast=2
-xHost
```

The flags file that was used to format this result can be browsed at

http://www.spec.org/omp2012/flags/icc_linux_flags.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/omp2012/flags/icc_linux_flags.xml

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

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