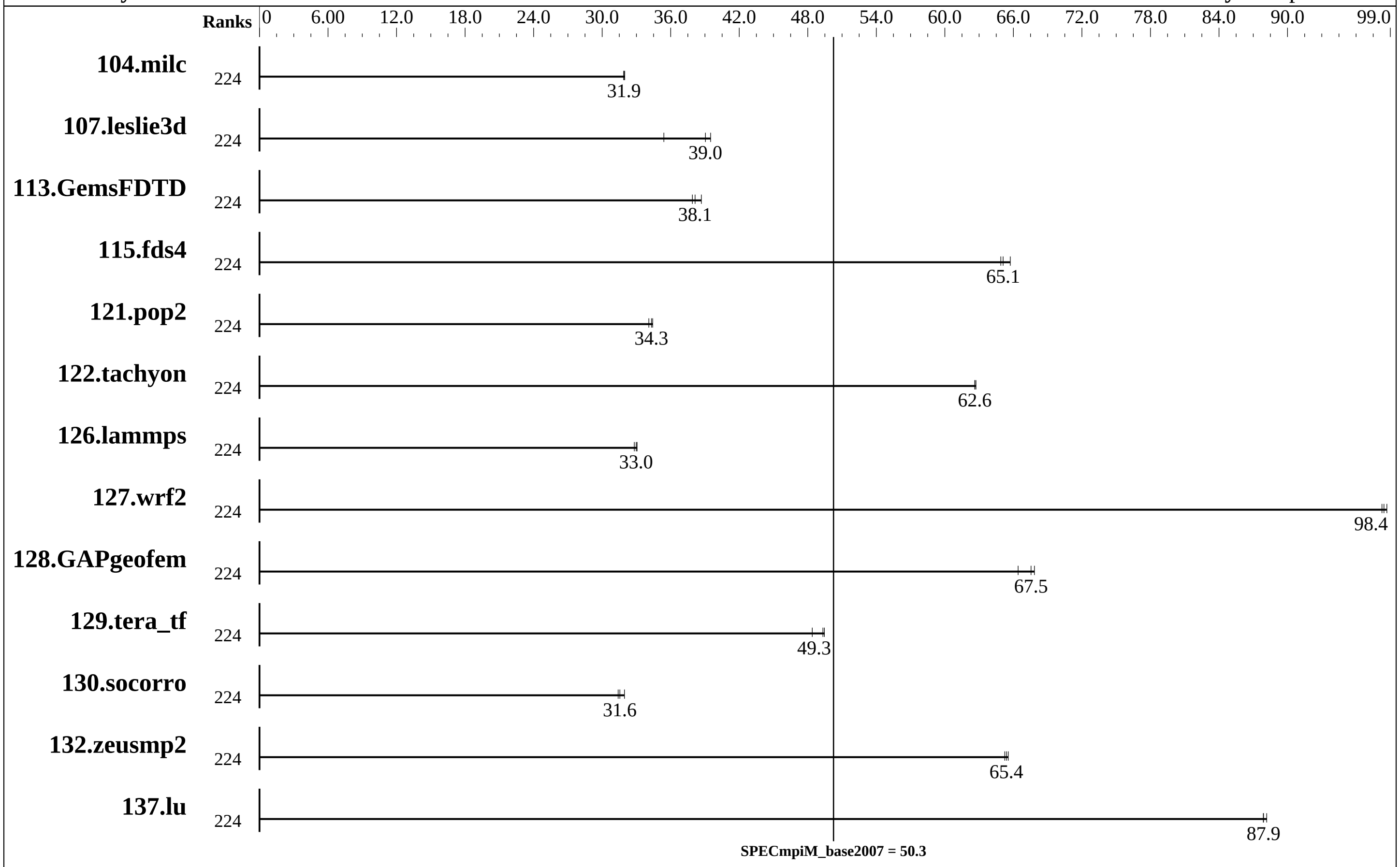
SPEC® MPIM2007 Result

Huawei
Huawei 8100 V5

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 50.3

MPI2007 license: 27
Test sponsor: Huawei
Tested by: Huawei
Test date: Jun-2017
Hardware Availability: Jul-2017
Software Availability: Apr-2017



Results Table

	Base							Peak						
Benchmark	**Ranks**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Ranks**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
104.milc	224	49.1	31.9	**49.0**	**31.9**	48.9	32.0							
107.leslie3d	224	132	39.5	147	35.4	**134**	**39.0**							
113.GemsFDTD	224	**165**	**38.1**	166	37.9	163	38.7							
115.fds4	224	**30.0**	**65.1**	30.1	64.9	29.7	65.7							
121.pop2	224	121	34.1	**120**	**34.3**	120	34.4							
122.tachyon	224	44.6	62.7	44.7	62.6	**44.7**	**62.6**							
126.lammps	224	88.2	33.1	**88.4**	**33.0**	88.8	32.8							
127.wrf2	224	**79.2**	**98.4**	79.0	98.7	79.3	98.3							
128.GAPgeofem	224	30.4	67.8	31.1	66.4	**30.6**	**67.5**							
129.tera_tf	224	57.2	48.4	56.0	49.5	**56.1**	**49.3**							

Table continues on next page. Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Results Table (Continued)

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
130.socorro	224	122	31.4	**121**	**31.6**	119	32.0							
132.zeusmp2	224	47.3	65.6	**47.4**	**65.4**	47.6	65.2							
137.lu	224	41.8	87.9	41.7	88.2	**41.8**	**87.9**							

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

Hardware Summary

Type of System:	Homogeneous
Compute Node:	RH8100 V5 Node
File Server Node:	RH8100 V5 Node
Head Node:	RH8100 V5 Node
Total Compute Nodes:	1
Total Chips:	8
Total Cores:	224
Total Threads:	224
Total Memory:	1536 GB
Base Ranks Run:	224
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--

Software Summary

C Compiler:	Intel C++ Composer XE 2017 for Linux, Version 17.0.4.196 Build 20170411
C++ Compiler:	Intel C++ Composer XE 2017 for Linux, Version 17.0.4.196 Build 20170411
Fortran Compiler:	Intel Fortran Composer XE 2017 for Linux, Version 17.0.4.196 Build 20170411
Base Pointers:	64-bit
Peak Pointers:	64-bit
MPI Library:	Intel MPI Library for Linux, Version 2017 Update 3 Build 20170405
Other MPI Info:	None
Pre-processors:	No
Other Software:	None

Node Description: RH8100 V5 Node

Hardware

Number of nodes:	1
Uses of the node:	head, compute, fileserver
Vendor:	Huawei
Model:	Huawei 8100 V5
CPU Name:	Intel Xeon Platinum 8180 CPU
CPU(s) orderable:	2, 4, 8 chip
Chips enabled:	8
Cores enabled:	224
Cores per chip:	28
Threads per core:	1
CPU Characteristics:	Intel Turbo Boost Technology on, Hyper-Threading Technology (SMT) disable
CPU MHz:	2500
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	38.5 MB I+D on chip per chip
Other Cache:	None
Memory:	1536 GB (48 x 32 GB 2Rx4 PC4-2666V, running at 2666 MHz)
Disk Subsystem:	2 x 600 GB 10K RPM SAS
Other Hardware:	None
Adapter:	0
Number of Adapters:	0
Slot Type:	0

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Software

Adapter:	0
Adapter Driver:	0
Adapter Firmware:	--
Operating System:	SUSE Linux Enterprise Server 12 SP 2 4.4.21-69-default
Local File System:	xfs
Shared File System:	None
System State:	Multi-User
Other Software:	None

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MPI2007 license: 27 | **Test date:** Jun-2017
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Node Description: RH8100 V5 Node

Data Rate:	0
Ports Used:	0
Interconnect Type:	0

Submit Notes

```
The config file option 'submit' was used.
```

General Notes

```
MPI startup command:
  mpiexec.hydra command was used to start MPI jobs.

BIOS settings:
  Intel Hyper-Threading Technology (SMT):Disable
  Intel Turbo Boost Technology (Turbo):Enabled (default is Enabled)
```

Base Compiler Invocation

C benchmarks:
`mpiicc`

C++ benchmarks:

126.lammps: `mpiicpc`

Fortran benchmarks:
`mpiifort`

Benchmarks using both Fortran and C:
`mpiicc mpiifort`

Base Portability Flags

121.pop2: `-DSPEC_MPI_CASE_FLAG`
126.lammps: `-DMPICH_IGNORE_CXX_SEEK`
127.wrf2: `-DSPEC_MPI_CASE_FLAG -DSPEC_MPI_LINUX`
130.socorro: `-assume nostd_intent_in`

Base Optimization Flags

C benchmarks:
`-O3 -xCORE-AVX2 -no-prec-div`

C++ benchmarks:

126.lammps: `-O3 -xCORE-AVX2 -no-prec-div`

Fortran benchmarks:
`-O3 -xCORE-AVX2 -no-prec-div`

Benchmarks using both Fortran and C:
`-O3 -xCORE-AVX2 -no-prec-div`

The flags file that was used to format this result can be browsed at
http://www.spec.org/mpi2007/flags/Huawei_x86_64_Intel_linux.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/mpi2007/flags/Huawei_x86_64_Intel_linux.xml

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

Tested with SPEC MPI2007 v2.0.1.
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