SPEC® CINT2006 Result

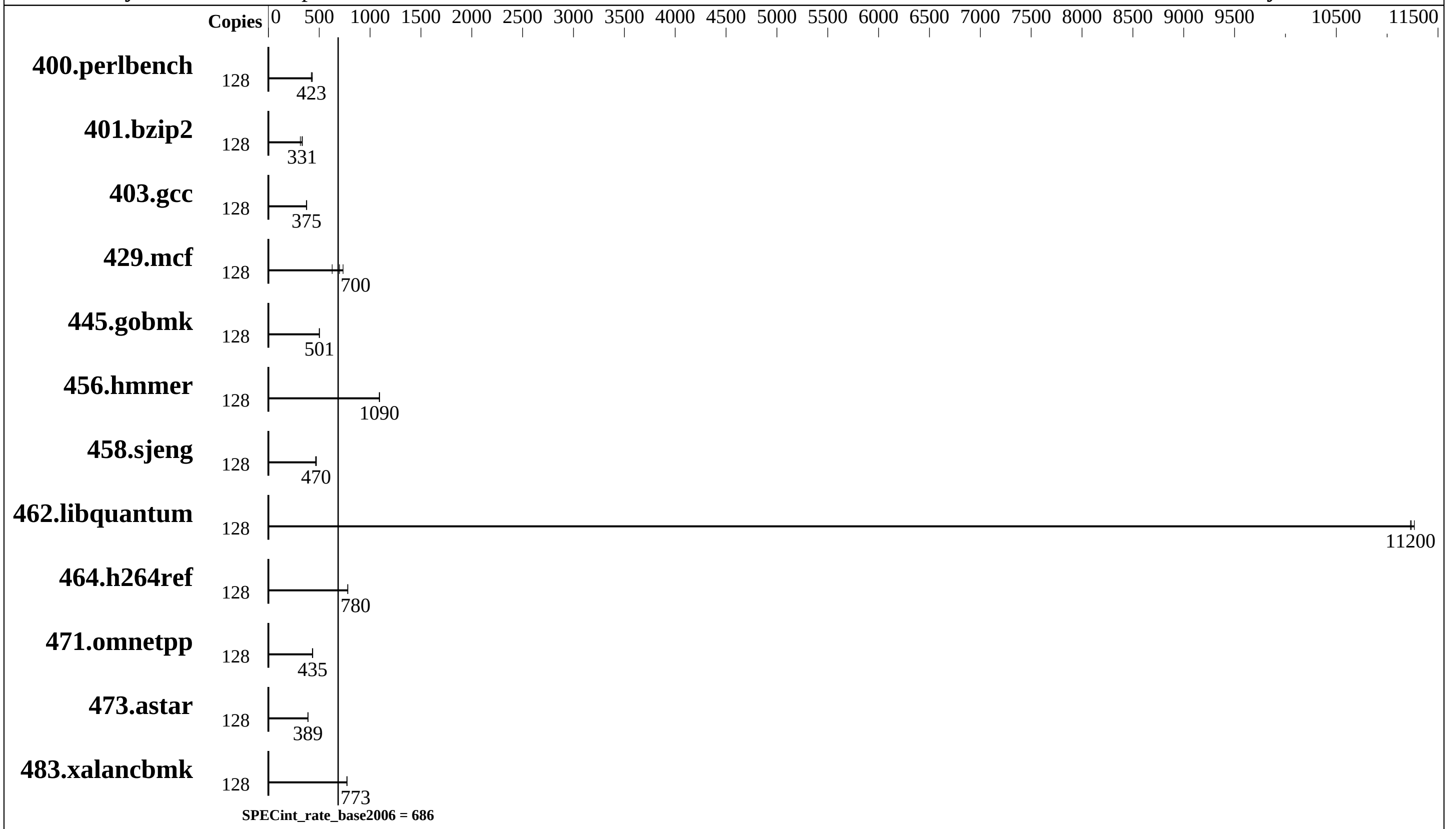
M Computers s.r.o.

MIC HD S7200AP (Intel Xeon Phi 7210, 1.30GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 686

CPU2006 license:	4204	**Test date:**	Dec-2016
Test sponsor:	M Computers s.r.o.	**Hardware Availability:**	Sep-2016
Tested by:	M Computers s.r.o.	**Software Availability:**	Feb-2016



Hardware

CPU Name:	Intel Xeon Phi 7210
CPU Characteristics:	Intel Turbo Boost Technology up to 1.50 GHz
CPU MHz:	1300
FPU:	Integrated
CPU(s) enabled:	64 cores, 1 chip, 64 cores/chip, 4 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per two cores
L3 Cache:	None
Other Cache:	None
Memory:	192 GB (6 x 32 GB 2Rx4 PC4-2400T-R, running at 1200MHz)
Disk Subsystem:	800 GB SSD
Other Hardware:	16 GB MCDRAM

Software

Operating System:	CentOS 7.2 3.10.0-327.18.2.el7.x86_64
Compiler:	C/C++: Version 16.0.2.181 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.2

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Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	128	2963	422	2891	433	**2956**	**423**							
401.bzip2	128	3931	314	**3730**	**331**	3693	334							
403.gcc	128	2756	374	**2746**	**375**	2731	377							
429.mcf	128	1861	627	**1668**	**700**	1589	735							
445.gobmk	128	2670	503	2687	500	**2680**	**501**							
456.hmmer	128	1096	1090	1091	1090	**1094**	**1090**							
458.sjeng	128	**3299**	**470**	3338	464	3279	472							
462.libquantum	128	235	11300	236	11200	**236**	**11200**							
464.h264ref	128	3633	780	**3630**	**780**	3626	781							
471.omnetpp	128	**1840**	**435**	1833	437	1851	432							
473.astar	128	2310	389	**2307**	**389**	2306	390							
483.xalancbmk	128	1145	772	1141	774	**1142**	**773**							

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

Submit Notes

```
The taskset 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"
```

Platform Notes

```
BIOS Configuration:
CPU and Power Performance Policy = Performance
Patrol Scrub = Disabled
Set Fan Profile = Performance
Fan PWM Offset = 100
Cluster mode = Quadrant
Memory mode = Cache
Processor C6 = Disabled
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh/:$/opt/intel/compilers_and_libraries_2016.2.181/linux/compiler/lib/intel64_lin"

Binaries compiled on a system with
1x Intel 2nd Generation Xeon Phi CPU
```

Continued on next page

General Notes (Continued)

```
+ 192GB memory using CentOS 7.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
```

Base Compiler Invocation

C benchmarks:
`icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

C++ benchmarks:
`icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-xMIC-AVX512 -ipo -O3 -no-prec-div -opt-prefetch`

C++ benchmarks:
`-xMIC-AVX512 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs`
`-L/spec/sh -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/MComputers-Platform-Settings-V1.2-KNL-revA.html
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/MComputers-Platform-Settings-V1.2-KNL-revA.xml
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64-revB.xml

Tested with SPEC CPU2006 v1.2.
Report generated on Wed Jan 25 10:53:54 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 January 2017.