SPEC® CINT2006 Result
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M Computers s.r.o.

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

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 686
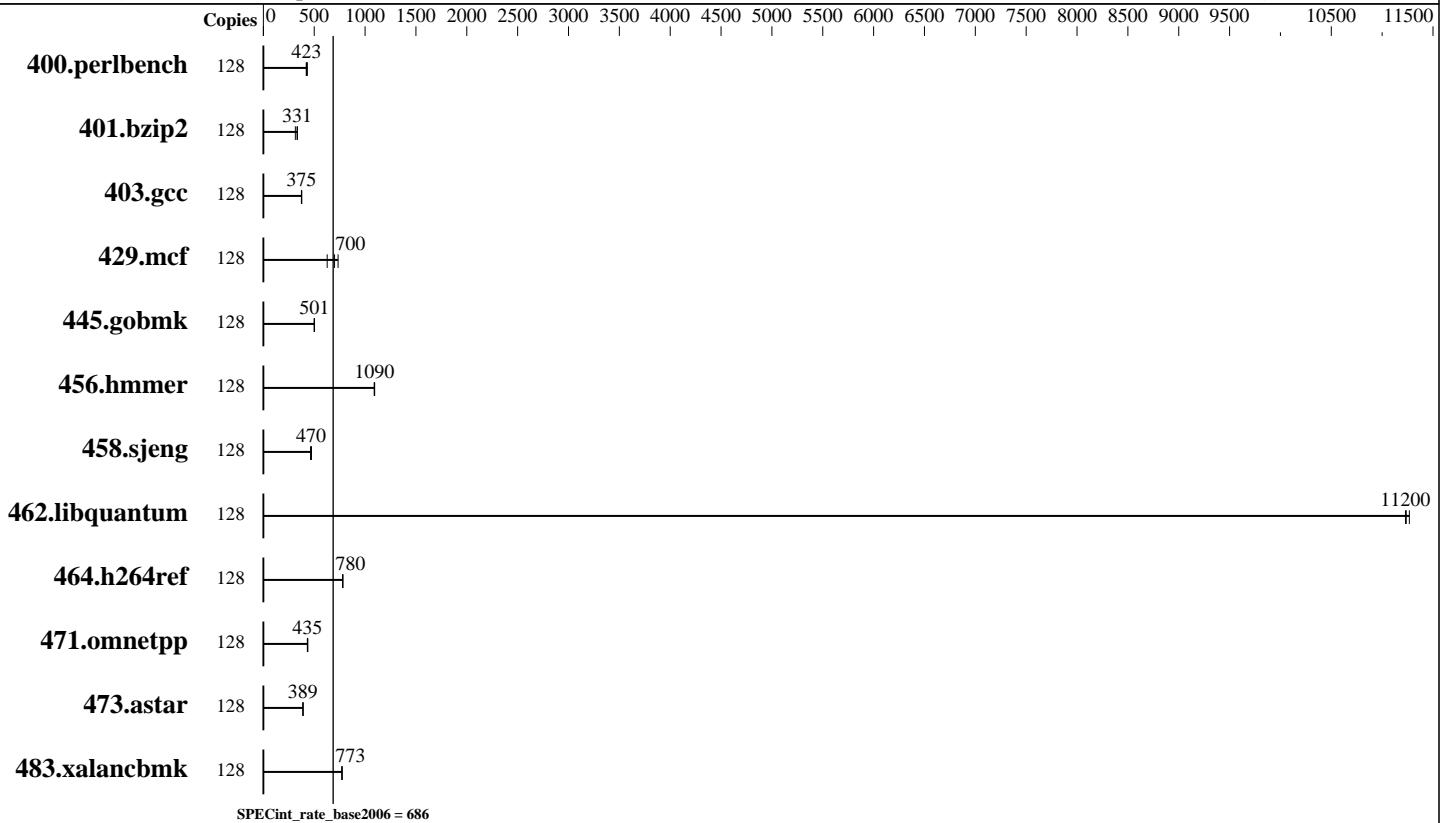
CPU2006 license: 4204
Test sponsor: M Computers s.r.o.
Tested by: M Computers s.r.o.

Test date: Dec-2016
Hardware Availability: Sep-2016
Software Availability: Feb-2016

Benchmark	Copies	Result
400.perlbench	128	423
401.bzip2	128	331
403.gcc	128	375
429.mcf	128	700
445.gobmk	128	501
456.hmmer	128	1090
458.sjeng	128	470
462.libquantum	128	11200
464.h264ref	128	780
471.omnetpp	128	435
473.astar	128	389
483.xalancbmk	128	773

SPECint_rate_base2006 = 686

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

Benchmark	Base						Peak						
	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

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CPU2006 license: 4204		**Test date:**	Dec-2016
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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

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SPECint_rate2006 =   Not Run

SPECint_rate_base2006 =   686

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

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