



# SPEC® CINT2006 Result

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## Supermicro Motherboard H8DMU+

SPECint®\_rate2006 = 50.9

SPECint\_rate\_base2006 = 45.6

CPU2006 license: 001176

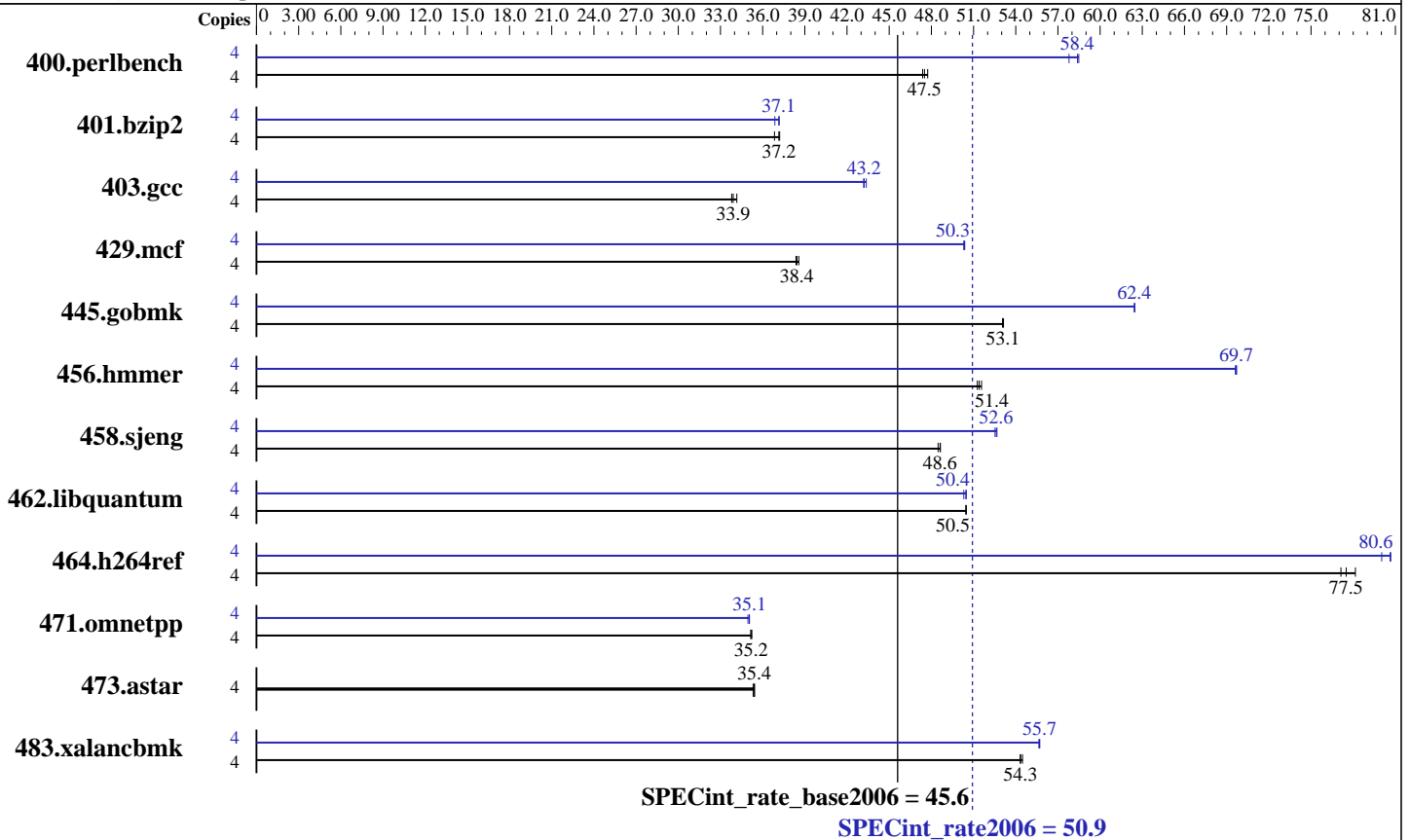
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Oct-2007

Hardware Availability: Jul-2007

Software Availability: Feb-2007



### Hardware

CPU Name: AMD Opteron 2218  
 CPU Characteristics:  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2GB, DDR2-667 CL5 ECC Reg Dual Rank)  
 Disk Subsystem: SATA, 250 GB  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64) SP1, kernel 2.6.16.46-0.12-default  
 Compiler: QLogic PathScale Compiler Suite, Release 3.0  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Multi-user, run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap 8.0 32 bit Library for Linux



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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	4	825	47.4	819	47.7	<u>823</u>	<u>47.5</u>	4	668	58.5	676	57.8	<u>669</u>	<u>58.4</u>
401.bzip2	4	<u>1039</u>	<u>37.2</u>	1048	36.8	1037	37.2	4	1047	36.9	1038	37.2	<u>1039</u>	<u>37.1</u>
403.gcc	4	943	34.2	953	33.8	<u>950</u>	<u>33.9</u>	4	<u>745</u>	<u>43.2</u>	742	43.4	746	43.2
429.mcf	4	946	38.6	951	38.4	<u>949</u>	<u>38.4</u>	4	<u>725</u>	<u>50.3</u>	725	50.3	724	50.4
445.gobmk	4	790	53.1	<u>791</u>	<u>53.1</u>	791	53.1	4	672	62.4	672	62.5	<u>672</u>	<u>62.4</u>
456.hammer	4	728	51.3	724	51.6	<u>726</u>	<u>51.4</u>	4	536	69.6	<u>536</u>	<u>69.7</u>	535	69.7
458.sjeng	4	<u>996</u>	<u>48.6</u>	998	48.5	995	48.6	4	<u>920</u>	<u>52.6</u>	919	52.7	921	52.5
462.libquantum	4	<u>1642</u>	<u>50.5</u>	1642	50.5	1642	50.5	4	1647	50.3	1642	50.5	<u>1643</u>	<u>50.4</u>
464.h264ref	4	<u>1142</u>	<u>77.5</u>	1133	78.2	1148	77.1	4	<u>1098</u>	<u>80.6</u>	1106	80.0	1097	80.7
471.omnetpp	4	710	35.2	<u>711</u>	<u>35.2</u>	711	35.2	4	<u>713</u>	<u>35.1</u>	713	35.1	715	35.0
473.astar	4	795	35.3	793	35.4	<u>793</u>	<u>35.4</u>	4	795	35.3	793	35.4	<u>793</u>	<u>35.4</u>
483.xalancbmk	4	<u>508</u>	<u>54.3</u>	508	54.3	507	54.5	4	496	55.6	<u>496</u>	<u>55.7</u>	495	55.7

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

## General Notes

taskset utility used to bind CPU(s) to processes  
All memory slots filled on all chips  
Tested systems can be used with CSE-825TQ-R700LPV case,  
To ensure system stability, a 550W (minimum) ATX power supply  
[4-pin (+12V), 8-pin (+12V) and 24-pin are required]  
Product description located as of  
<http://www.supermicro.com/Aplus/motherboard/Opteron2000/MCP55/H8DMU+.cfm>

## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64

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## Base Portability Flags (Continued)

456.hmmr: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-Ofast -OPT:malloc\_alg=1  
C++ benchmarks:  
-Ofast -m32 -L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmartheap

## Peak Compiler Invocation

C benchmarks:  
pathcc  
C++ benchmarks:  
pathCC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmr: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:  
400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-LNO:opt=0  
401.bzip2: -O3 -LNO:ou\_prod\_max=10 -OPT:Ofast -OPT:alias=disjoint

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## Peak Optimization Flags (Continued)

403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-OPT:Ofast

429.mcf: -m32 -O3 -ipa  
-L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmartheap

445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off  
-WOPT:retype\_expr=on

456.hmmr: -O2 -OPT:alias=disjoint -OPT:malloc\_alg=1 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=50000 -IPA:pu\_reorder=2

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -CG:gcm=off -m32  
-L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8  
-L/cpu2006/mpaton/1.0/amd514K8.lib/32 -lsmartheap

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.06.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.06.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.06.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.06.xml)

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.1.  
Report generated on Tue Jul 22 13:36:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 28 November 2007.