



SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

SPECint®_rate2006 = 124

ASUS RS300-E6 (P7F-E) server system
(Intel Xeon X3470)

SPECint_rate_base2006 = 114

CPU2006 license: 9016

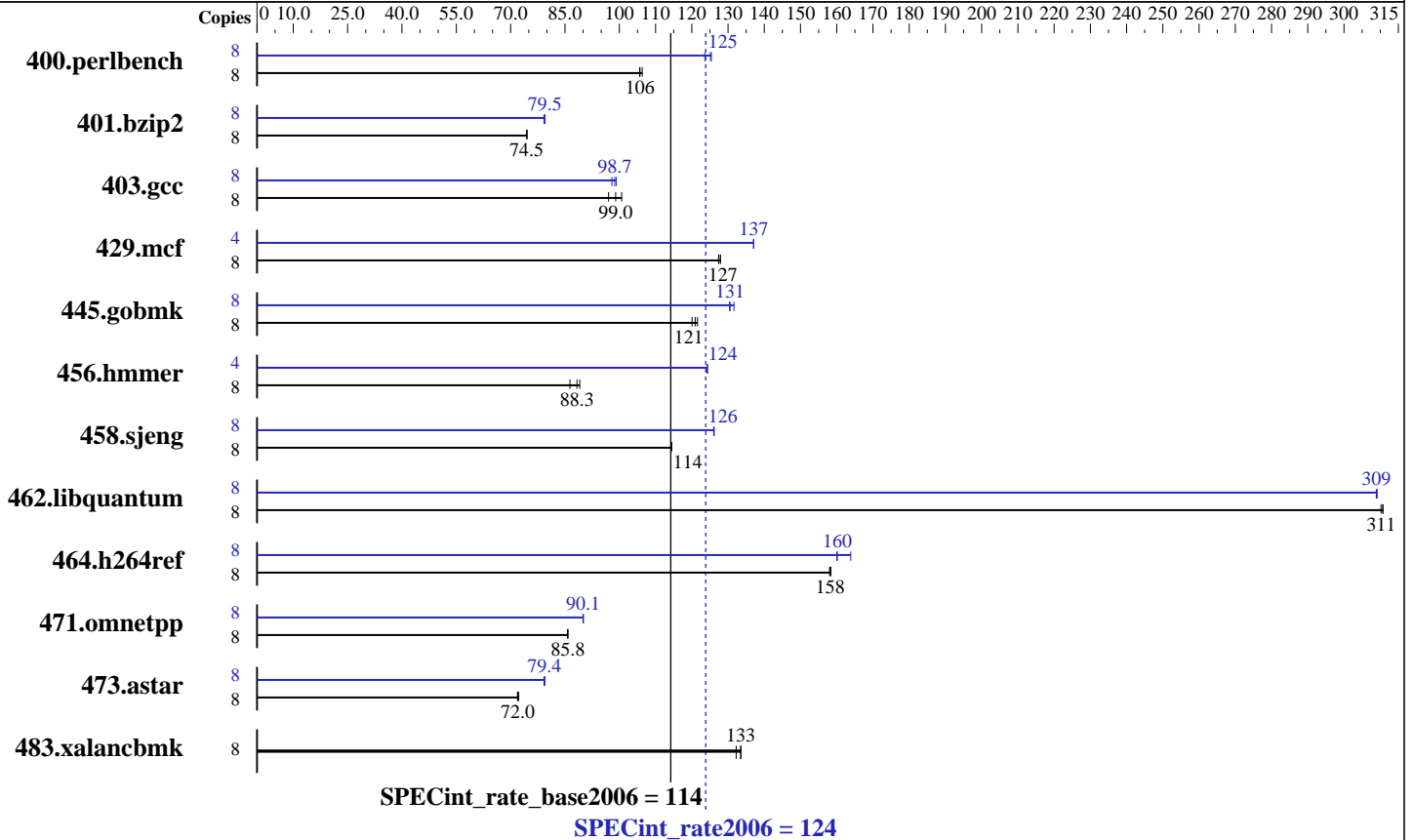
Test date: Oct-2009

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2009

Tested by: ASUSTeK Computer Inc.

Software Availability: Jul-2009



Hardware

CPU Name: Intel Xeon X3470
 CPU Characteristics: Intel Turbo Boost Technology up to 3.6 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (4 x 4 GB PC3-10600R, CL=9)
 Disk Subsystem: HITACHI HDT722525DLA380 250 GB SATAII, 7200RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1
 Build 20090511 Package ID: l_cproc_p_11.1.040
 Auto Parallel: No
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1
 Binutils 2.18.50.0.7.20080502



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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	8	<u>739</u>	<u>106</u>	740	106	735	106	8	<u>625</u>	<u>125</u>	633	124	623	125
401.bzip2	8	1036	74.5	<u>1037</u>	<u>74.5</u>	1037	74.4	8	<u>971</u>	<u>79.5</u>	971	79.5	975	79.2
403.gcc	8	640	101	<u>651</u>	<u>99.0</u>	664	97.0	8	<u>652</u>	<u>98.7</u>	658	97.9	650	99.2
429.mcf	8	573	127	<u>572</u>	<u>127</u>	570	128	4	266	137	266	137	<u>266</u>	<u>137</u>
445.gobmk	8	699	120	690	122	<u>694</u>	<u>121</u>	8	<u>643</u>	<u>131</u>	643	130	637	132
456.hammer	8	838	89.1	864	86.4	<u>845</u>	<u>88.3</u>	4	300	124	300	124	<u>300</u>	<u>124</u>
458.sjeng	8	<u>847</u>	<u>114</u>	847	114	846	114	8	768	126	767	126	<u>767</u>	<u>126</u>
462.libquantum	8	<u>533</u>	<u>311</u>	533	311	534	310	8	<u>537</u>	<u>309</u>	537	309	536	309
464.h264ref	8	1118	158	<u>1119</u>	<u>158</u>	1120	158	8	1106	160	<u>1105</u>	<u>160</u>	1080	164
471.omnetpp	8	<u>583</u>	<u>85.8</u>	583	85.8	584	85.7	8	<u>555</u>	<u>90.1</u>	555	90.1	556	90.0
473.astar	8	777	72.2	<u>780</u>	<u>72.0</u>	781	71.9	8	707	79.4	<u>707</u>	<u>79.4</u>	709	79.2
483.xalancbmk	8	<u>414</u>	<u>133</u>	413	134	417	132	8	<u>414</u>	<u>133</u>	413	134	417	132

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

Submit Notes

The config file option 'submit' was used.
numactl was used to bind copies to the cores

Component Notes

Tested system case compliance with Intel ATX or SSI spec
390W or higher ATX Power Supply, 350W or higher SSI Server Power Supply
System was configured with ASPEED AST2050 VGA (on board VGA)

General Notes

The ASUS TS300-E6 (Intel Xeon X3470, 2.93 GHz) and the ASUS RS300-E6 (Intel Xeon X3470, 2.93 GHz) models are electronically equivalent. The results have been measured on a ASUS RS300-E6 (Intel Xeon X3470, 2.93 GHz) model.

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32



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Base Portability Flags

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

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64

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Peak Portability Flags (Continued)

458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias -opt-prefetch

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
-ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static
-opt-malloc-options=3 -opt-prefetch

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/spec/cpu2006.1.1/lib -lsmartheap

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Peak Optimization Flags (Continued)

```
473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -ansi-alias -opt-ra-region-strategy=routine -auto-ilp32
           -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64
```

```
483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revD.20091208.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revD.20091208.xml>

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For other inquiries, please contact webmaster@spec.org.

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