SPEC® CINT2006 Result
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ASUSTeK Computer Inc.

ASUS RS700D (Z8NH-D12) server system (Intel Xeon X5570)

SPECint®2006 =   36.1

SPECint_base2006 =   32.0

	Results
400.perlbench	30.3 / 24.1
401.bzip2	19.9 / 17.5
403.gcc	29.8 / 26.8
429.mcf	48.6 / 47.0
445.gobmk	26.3 / 22.7
456.hmmer	31.9 / 23.1
458.sjeng	27.0 / 24.8
462.libquantum	307
464.h264ref	40.5 / 36.2
471.omnetpp	26.6 / 23.6
473.astar	20.7 / 17.9
483.xalancbmk	36.1

SPECint_base2006 = 32.0

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Hardware

CPU Name: Intel Xeon X5570

CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz

CPU MHz: 2933

FPU: Integrated

CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core

CPU(s) orderable: 1,2 chips

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: 24 GB (6 X 4 GB PC3-10600R, CL=9)

Disk Subsystem: HITACHI HDT725050VLA360 500GB SATAII, 7200RPM

Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2 with patch Kernel linux 20090119, Kernel 2.6.16.60-0.34-smp

Compiler: Intel C++ Compiler Professional 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080

Auto Parallel: Yes

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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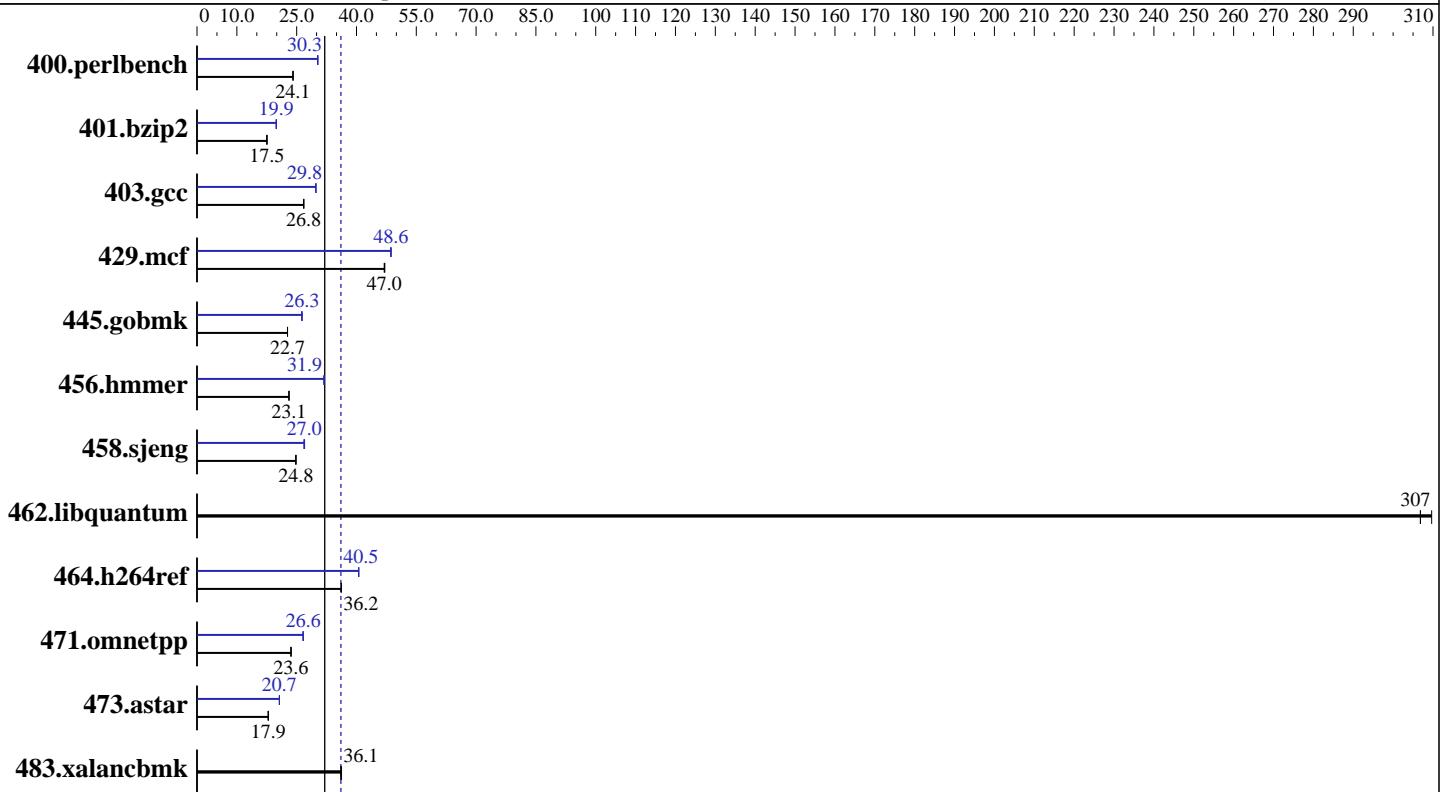SPECint2006 = 36.1

SPECint_base2006 = 32.0

CPU2006 license: 9016
Test sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test date: May-2009
Hardware Availability: Mar-2009
Software Availability: Feb-2009

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	406	24.0	405	24.1	**406**	**24.1**	**323**	**30.3**	322	30.4	323	30.2
401.bzip2	552	17.5	549	17.6	**550**	**17.5**	486	19.8	**485**	**19.9**	485	19.9
403.gcc	**301**	**26.8**	300	26.8	301	26.7	270	29.8	**270**	**29.8**	270	29.8
429.mcf	**194**	**47.0**	194	47.1	194	47.0	187	48.7	**188**	**48.6**	188	48.6
445.gobmk	462	22.7	**462**	**22.7**	462	22.7	397	26.4	399	26.3	**399**	**26.3**
456.hmmer	405	23.1	**404**	**23.1**	404	23.1	293	31.8	293	31.9	**293**	**31.9**
458.sjeng	489	24.8	487	24.8	**488**	**24.8**	448	27.0	452	26.8	**449**	**27.0**
462.libquantum	66.9	310	67.5	307	**67.5**	**307**	66.9	310	67.5	307	**67.5**	**307**
464.h264ref	613	36.1	**612**	**36.2**	611	36.2	**546**	**40.5**	546	40.5	545	40.6
471.omnetpp	265	23.6	266	23.5	**265**	**23.6**	235	26.6	**235**	**26.6**	234	26.7
473.astar	394	17.8	392	17.9	**392**	**17.9**	339	20.7	**340**	**20.7**	340	20.6
483.xalancbmk	191	36.1	190	36.3	**191**	**36.1**	191	36.1	190	36.3	**191**	**36.1**

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
```

Component Notes

```
Tested system case compliance with Intel EEB 3.61 spec
SSI Server Power Supply 650W or higher
System was configured with ASPEED AST2050 VGA (on board VGA)
```

Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

Base Portability Flags

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

Continued on next page

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Base Portability Flags (Continued)

    483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel
    -par-runtime-control -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

    401.bzip2: /opt/intel/Compiler/11.0/080/bin/intel64/icc

    456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc

    458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

C++ benchmarks (except as noted below):
    icpc

    473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc

Peak Portability Flags

    400.perlbench: -DSPEC_CPU_LINUX_IA32
       401.bzip2: -DSPEC_CPU_LP64
       456.hmmer: -DSPEC_CPU_LP64
        458.sjeng: -DSPEC_CPU_LP64
    462.libquantum: -DSPEC_CPU_LINUX

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$SPECint2006 = $ 36.1

$SPECint_base2006 = $ 32.0

Peak Portability Flags (Continued)

```
      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) -auto-ilp32 -opt-prefetch -ansi-alias

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

        429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -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: basepeak = yes

     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

      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
```

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Peak Optimization Flags (Continued)

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-ic11.0-int-linux64-revA.20090710.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.xml

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

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