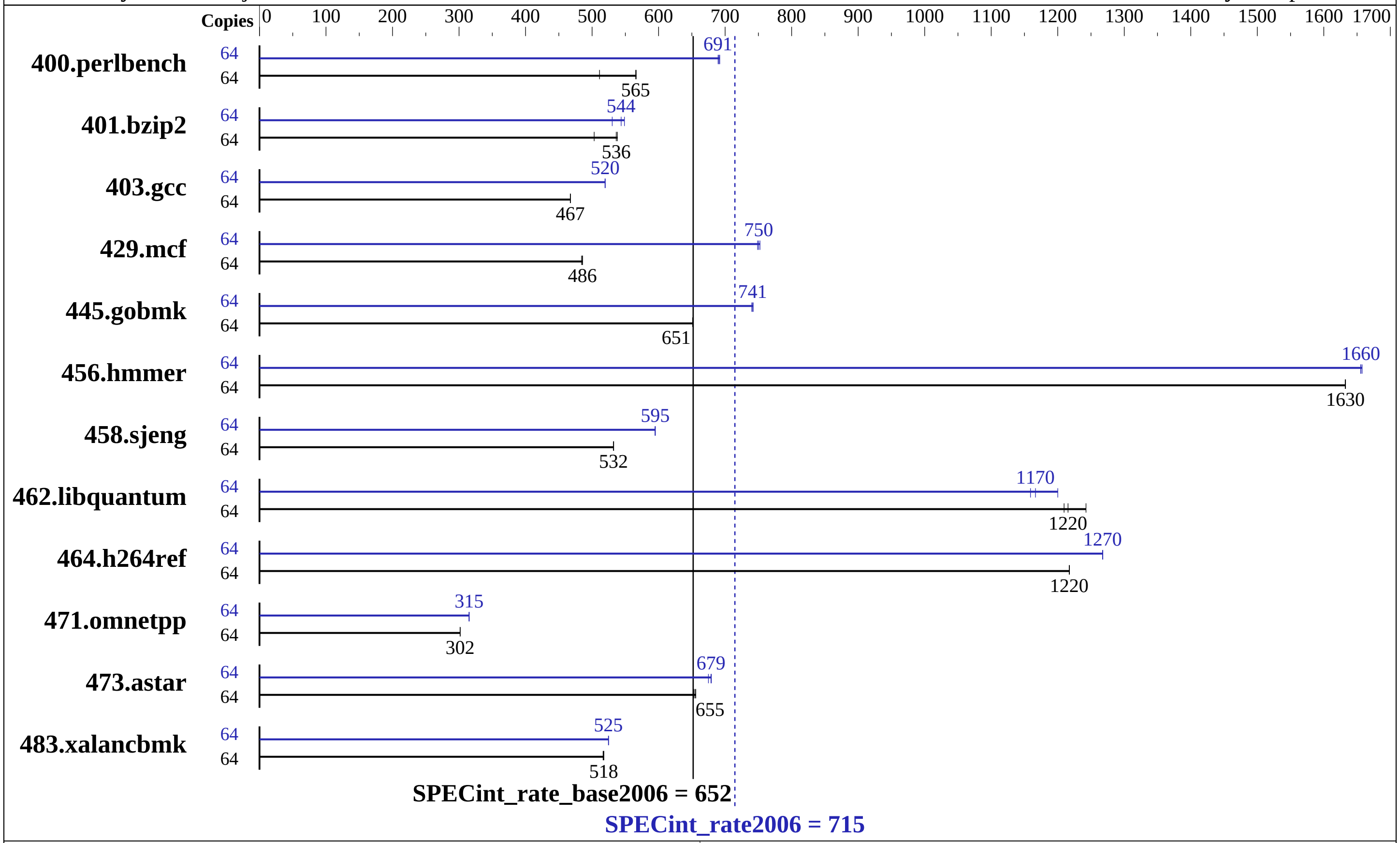
SPEC® CINT2006 Result

Fujitsu Limited
PRIMEQUEST 580

SPECint®_rate2006 = 715

SPECint_rate_base2006 = 652

CPU2006 license:	19	**Test date:**	Apr-2007
Test sponsor:	Fujitsu Limited	**Hardware Availability:**	Aug-2006
Tested by:	Fujitsu Limited	**Software Availability:**	Apr-2007



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9050
CPU Characteristics:	1.6GHz/24MB, 533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	64 cores, 32 chips, 2 cores/chip
CPU(s) orderable:	1-32 chips
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	1 MB I + 256 KB D on chip per core
L3 Cache:	12 MB I+D on chip per core
Other Cache:	None
Memory:	256 GB (256 x 1GB DDR2-533 DIMMs)
Disk Subsystem:	Fujitsu MAW3147NC (SCSI Ultra 320) x 2 147GB 10,025rpm, No RAID configuration
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux 5 (for Intel Itanium)
Compiler:	Intel C++ Compiler for Itanium/Linux 9.1 (Build 20061105)
Auto Parallel:	No
File System:	ext2
System State:	Single-user
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill Smartheap 8.0

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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	64	**1106**	**565**	1223	511	1104	566	64	907	689	904	692	**905**	**691**
401.bzip2	64	**1152**	**536**	1227	503	1148	538	64	1165	530	**1136**	**544**	1126	549
403.gcc	64	**1102**	**467**	1102	467	1103	467	64	**991**	**520**	992	519	991	520
429.mcf	64	1202	486	**1202**	**486**	1206	484	64	776	752	**778**	**750**	779	749
445.gobmk	64	**1031**	**651**	1031	651	1031	651	64	907	740	905	742	**906**	**741**
456.hmmer	64	366	1630	366	1630	**366**	**1630**	64	**361**	**1660**	360	1660	361	1660
458.sjeng	64	1456	532	**1455**	**532**	1454	533	64	1301	595	**1301**	**595**	1302	595
462.libquantum	64	1096	1210	1067	1240	**1091**	**1220**	64	**1137**	**1170**	1144	1160	1105	1200
464.h264ref	64	1163	1220	**1163**	**1220**	1163	1220	64	**1117**	**1270**	1117	1270	1117	1270
471.omnetpp	64	**1326**	**302**	1326	302	1327	302	64	1268	315	1270	315	**1269**	**315**
473.astar	64	**685**	**655**	687	654	685	656	64	666	675	661	679	**662**	**679**
483.xalancbmk	64	855	517	**853**	**518**	853	518	64	**842**	**525**	842	525	841	525

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

General Notes

```
Processes are bound to CPUs using numactl and taskset.
limit stacksize unlimited
Memory system is in "Non Mirror Mode".
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_IA64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

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Base Portability Flags (Continued)

464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast -IPF_fp_relaxed -ansi-alias

C++ benchmarks:
-fast -IPF_fp_relaxed -ansi-alias -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed -mtune=itanium2-p9000 -inline-max-size=550 -inline-min-size=40

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed -auto-ilp32 -ansi-alias

403.gcc: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed -auto-ilp32 -ansi-alias -opt-mem-bandwidth2

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Peak Optimization Flags (Continued)

429.mcf: -fast -IPF_fp_relaxed -auto-ilp32 -ansi -inline-max-total-size=5000

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -O2 -IPF_fp_relaxed -static -ipo -auto-ilp32

456.hmmer: -fast -IPF_fp_relaxed -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed

462.libquantum: -fast -IPF_fp_relaxed -ansi-alias -auto-ilp32 -mtune=itanium2-p9000

464.h264ref: -fast -IPF_fp_relaxed -inline-max-size=100

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -O2 -IPF_fp_relaxed -static -ipo -inline-max-per-routine=50 -Wl,-z,muldefs /opt/SmartHeap_8/lib/libsmartheapC64.a /opt/SmartHeap_8/lib/libsmartheap64.a

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -O2 -static -ipo -inline-max-size=5000 -Wl,-z,muldefs /opt/SmartHeap_8/lib/libsmartheapC64.a /opt/SmartHeap_8/lib/libsmartheap64.a

483.xalancbmk: -prof-gen(pass 1) -prof-use(pass 2) -O2 -static -ipo -ansi-alias -Wl,-z,muldefs /opt/SmartHeap_8/lib/libsmartheapC64.a /opt/SmartHeap_8/lib/libsmartheap64.a

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Fujitsu.PQ580.ipf.linux.flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Fujitsu.PQ580.ipf.linux.flags.xml

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

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