Hewlett-Packard Company

HP Integrity rx2660 (1.66GHz/18MB Dual-Core Intel Itanium)

SPECint®2006 = 17.0
SPECint_base2006 = 15.7

CPU2006 license: 03
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Sep-2007
Hardware Availability: Nov-2007
Software Availability: Sep-2007

Hardware
CPU Name: Dual-Core Intel Itanium 9140M
CPU Characteristics: 1.66GHz/18MB, 667MHz FSB
CPU MHz: 1666
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
CPU(s) orderable: 1-2 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: 9 MB I+D on chip per core
Other Cache: None
Memory: 16 GB (8x2GB DIMMs)
Disk Subsystem: 73GB 10K RPM SAS
Other Hardware: None

Software
Operating System: HPUX11i-MCOE B.11.31 (LR)
Compiler: HP C/aC++ Developer's Bundle C.11.31.03
HP Fortran90 Compiler B.11.31.03
Auto Parallel: No
File System: vxfs
System State: Multi-user
Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: MicroQuill Smartheap 8.1
SPEC CINT2006 Result

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Operating System Notes

The system had the September 2007 HP-UX 11i v3 Mission Critical Operating Environment (MCOE) and compilers installed, along with the following patches:

PHSS_36349  linker + fdp cumulative patch
PHSS_36351  Math Library Cumulative Patch
PHSS_36352  Integrity Unwind Library
PHSS_36350  aC++ Runtime (A.06.15)
PHSS_36354  assembler patch

The following kernel tunables were set, in addition to the defaults set by the Mission Critical OE:

maxdsiz=3221225472
maxssiz=401604608
maxrsessiz=41943040

Platform Notes

The "cpuconfig" EFI command was used prior to booting to deconfigure processors.

Although two cores were enabled during testing, the SPEC CPU2006 benchmarks used only one core.

The setboot command was used to disable hyperthreading.
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**Base Compiler Invocation**

C benchmarks:

/opt/ansic/bin/cc -Ae

C++ benchmarks:

/opt/aCC/bin/aCC -Aa

---

**Base Portability Flags**

400.perlbench: -DSPEC_CPU_HPUX_IA64  
-403.gcc: -DSPEC_CPU_HPUX

462.libquantum: -DSPEC_CPU_HPUX

483.xalancbmk: -DSPEC_CPU_HPUX_IA64

---

**Base Optimization Flags**

C benchmarks:

+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M
-Wl,+pi,64M -Wl,-N

C++ benchmarks:

+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M
-Wl,+pi,64M -Wl,-N

/opt/smartheap/SmartHeap_8.1/lib/libsmartheapC.a /opt/smartheap/SmartHeap_8.1/lib/libsmartheap.a

---

**Peak Compiler Invocation**

C benchmarks:

/opt/ansic/bin/cc -Ae

C++ benchmarks:

/opt/aCC/bin/aCC -Aa

---

**Peak Portability Flags**

400.perlbench: -DSPEC_CPU_HPUX_IA64  
-403.gcc: -DSPEC_CPU_HPUX

462.libquantum: -DSPEC_CPU_HPUX

483.xalancbmk: -DSPEC_CPU_HPUX_IA64
**SPEC CINT2006 Result**

Hewlett-Packard Company

**HP Integrity rx2660 (1.66GHz/18MB Dual-Core Intel Itanium)**

| SPECint2006 = | 17.0 |
| SPECint_base2006 = | 15.7 |

**CPU2006 license:** 03  
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**Hardware Availability:** Nov-2007  
**Software Availability:** Sep-2007

### Peak Optimization Flags

**C benchmarks:**

400.perlbench: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2)  
+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared  
-Wl,+pd,64M -Wl,+a,archive_shared -N  

401.bzip2: Same as 400.perlbench

403.gcc: Same as 400.perlbench

429.mcf: Same as 400.perlbench

445.gobmk: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2)  
+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared  
-Wl,+pd,64M -Wl,+a,archive_shared -Otype_safety=ansi -Wl,-a,archive_shared -N  

456.hmmer: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2)  
+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared  
-Wl,+pd,64M -Wl,+a,archive_shared -Otype_safety=ansi -Wl,-a,archive_shared -N  

458.sjeng: Same as 445.gobmk

462.libquantum: Same as 456.hmmer

464.h264ref: basepeak = yes

**C++ benchmarks:**

471.omnetpp: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2)  
+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared  
-Wl,+pd,64M -Wl,+a,archive_shared -Wl,+pd,64M -Wl,+a,archive_shared -N  
/opt/smartheap/SmartHeap_8.1/lib/libsmartheapC.a /opt/smartheap/SmartHeap_8.1/lib/libsmartheap.a

473.astar: +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared  
-Wl,+pd,64M -Wl,+a,archive_shared +Onoparmsoverlap  
[opt/smartheap/SmartHeap_8.1/lib/libsmartheapC.a /opt/smartheap/SmartHeap_8.1/lib/libsmartheap.a]

483.xalancbmk: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2)  
+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared  
-Wl,+pd,64M -Wl,+a,archive_shared +Onoparmsoverlap  
[opt/smartheap/SmartHeap_8.1/lib/libsmartheapC.a /opt/smartheap/SmartHeap_8.1/lib/libsmartheap.a]

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

You can also download the XML flags source by saving the following link:  
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.07.xml
## SPEC CINT2006 Result

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

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