Acer Incorporated

Gateway GW2000h-GW175h F1 (AMD Opteron 6168)

| SPECint®_rate2006 | 351 |
| SPECint_rate_base2006 | 307 |

CPU2006 license: 97  Test date: Apr-2011  Hardware Availability: Aug-2010
Test sponsor: Acer Incorporated  Software Availability: Jul-2010  Tested by: Acer Incorporated

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</thead>
</table>

**Hardware**

| CPU Name: | AMD Opteron 6168 |
| CPU Characteristics: | 24 cores, 2 chips, 12 cores/chip |
| CPU MHz: | 1900 |
| FPU: | Integrated |
| CPU(s) enabled: | 24 cores, 2 chips |
| Primary Cache: | 64 KB I + 64 KB D on chip per core |
| Secondary Cache: | 512 KB I+D on chip per core |
| L3 Cache: | 12 MB I+D on chip per chip, 6 MB shared / 6 cores |
| Memory: | 64 GB (16 x 4 GB 2Rx8 PC3-10600R-9, ECC) |
| Disk Subsystem: | 1 x 500 GB SATA, 7200 RPM |

**Software**

| Operating System: | SUSE Linux Enterprise Server 11 (x86_64) SP1 |
| Compiler: | x86 Open64 4.2.4 Compiler Suite (from AMD) |
| Auto Parallel: | No |
| File System: | ext3 |
| System State: | Run level 3 (multiuser) |
| Base Pointers: | 32/64-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | SmartHeap 8.1 32-bit Library for Linux |
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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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<td>458</td>
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<td>455</td>
<td>364</td>
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</tr>
</tbody>
</table>

Submit Notes

The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.

Operating System Notes

'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152' was used to set environment locked pages in memory limit

Set vm/nr_hugepages=10800 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages

General Notes

Environment variables set by runspec before the start of the run:
HUGETLB_LIMIT = "450"
LD_LIBRARY_PATH = "/usr/cpu2006/amd1002-rate-libs-revC/64:/usr/cpu2006/amd1002-rate-libs-revC/32"

The x86 Open64 Compiler Suite is only available from (and supported by) AMD at
http://developer.amd.com/cpu/open64
Binaries were compiled on SLES10 SP2 with binutils 2.18
This result was measured on the Gateway GW2000h-GW175h F1.
The Acer AW2000h-AW175h F1 and Gateway GW2000h-GW175h F1 are electronically equivalent.
## SPEC CINT2006 Result

**Acer Incorporated**

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### Base Compiler Invocation

- **C benchmarks:** opencc
- **C++ benchmarks:** openCC

### Base Portability Flags

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<td>483.xalancbmk</td>
<td>-DSPEC_CPU_LINUX</td>
</tr>
</tbody>
</table>

### Base Optimization Flags

- **C benchmarks:**
  -march=barcelona -mso -Ofast -CG:local_sched_alg=1
  -INLINE:aggressive=on -CG:local_sched_alg=1
  -HP:bdt=2m:heap=2m

- **C++ benchmarks:**
  -march=barcelona -mso -Ofast -m32 -INLINE:aggressive=on
  -CG:cmp_peep=on -L/root/work/libraries/SmartHeap-8.1/lib -lsmartheap

### Peak Compiler Invocation

- **C benchmarks:** opencc
- **C++ benchmarks:** openCC

### Peak Portability Flags

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Peak Portability Flags (Continued)

- 401.bzip2: -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
- 464.h264ref: -DSPEC_CPU_LP64
- 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

- 400.perlbench: -march=barcelona -ms -fb_create fbdata(pass 1)
- Ofast -IPA:plimit=20000 -LNO:opt=0
- OPT:unroll_times_max=8 -OPT:unroll_size=256
- -OPT:unroll_level=2 -OPT:keep_ext=on -WOPT:if_conv=0
- -CG:local_sched_alg=1 -CG:unroll_fb_req=on
- -HP:bdt=2m:heap=2m

- 401.bzip2: -march=barcelona -ms -fb_create fbdata(pass 1)
- Ofast -IPA:disjoint
- OPT:goto=off -CG:local_sched_alg=1 -HP:bdt=2m:heap=2m

- 403.gcc: -march=barcelona -ms -fb_create fbdata(pass 1)
- Ofast -LNO:trip_count=256
- -LNO:prefetch_ahead=10 -CG:cmp_p2align=on -m32
- -HP:bdt=2m:heap=2m -GRA:unspill=on -IPA:small_pu=200

- 429.mcf: -march=barcelona -ms -ipa -INLINE:aggressive=on
- -CG:cmp=off -GRA:prioritize_by_density=on -m32
- -HP:bdt=2m:heap=2m

- 445.gobmk: -march=barcelona -ms -fb_create fbdata(pass 1)
- Ofast -IPA:restrict
- OPT:unroll_times_max=8 -OPT:unroll_size=256
- -IPA:min_hotness=300 -IPA:pu_reorder=1 -LNO:prefetch=1
- -LNO:ignore_feedback=off -CG:p2align=on
- -CG:unroll_fb_req=on -HP:bdt=2m:heap=2m

- 456.hmmer: -march=barcelona -ms -fb_create fbdata(pass 1)
- Ofast -LNO:prefetch=0
- -IPA:disjoint -OPT:unroll_times_max=8
- -OPT:unroll_size=256 -OPT:unroll_level=2 -OPT:keep_ext=on
- -CG:local_sched_alg=1 -CG:cf=flow=0
- -CG:push_pop_int_saved_regs=off -CG:cmp_p2align=on
- -HP:bdt=2m:heap=2m
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### Peak Optimization Flags (Continued)

**458.sjeng**:
- -march=barcelona -msos -fb_create fbdata(pass 1)  
- -fb_opt fbdata(pass 2) -O3 -ipa -LNO:ignore_feedback=off  
- LNO:full_unroll=10 -LNO:fission=0 -LNO:fusion=2  
- -IPA:pu_reorder=2 -CG:ptr_load_use=0  
- -OPT:unroll_times_max=8 -INLINE:aggressive=on

**462.libquantum**:
- -march=barcelona -msos -Ofast -LNO:pf2=0 -CG:gcm=off  
- CG:use_prefetchcnta=on -CG:cmp_peep=on -WOPT:aggstr=0  
- HP:bdt=2m:heap=2m -OPT:alias=disjoint  
- INLINE:aggressive=on -IPA:space=1000 -IPA:plimit=20000

**464.h264ref**:
- -march=barcelona -msos -fb_create fbdata(pass 1)  
- -fb_opt fbdata(pass 2) -O3 -IPA:plimit=20000  
- -OPT:alias=disjoint -LNO:prefetch=0 -CG:ptr_load_use=0  
- -CG:push_pop_int_saved_regs=off

**C++ benchmarks**:

**471.omnetpp**:
- basepeak = yes

**473.astar**:
- -march=barcelona -msos -fb_create fbdata(pass 1)  
- -fb_opt fbdata(pass 2) -Ofast -TENV:frame_pointer=off  
- WOPT:if_conv=0 -GRA:optimize_boundary=on  
- OPT:alias=disjoint -INLINE:aggressive=on  
- IPA:small_pu=3000 -IPA:plimit=3000 -m32  
- HP:bdt=2m:heap=2m

**483.xalancbmk**:
- -march=barcelona -msos -INLINE:aggressive=on -m32  
- -CG:cmp_peep=on -GRA:unspill=on -TENV:frame_pointer=off  
- fno-emit-exceptions  
- -L/root/work/libraries/SmartHeap-8.1/lib -lsmartheap

---

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:


http://www.spec.org/cpu2006/flags/amd-platform-rate-revC.xml
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For other inquiries, please contact webmaster@spec.org.

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