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Computer Organization II

6 February 2020

**Benchmark Report**

* CPU brand: Intel
* CPU model: MacBook Air
* Number of cores: 2
* Clock rate (GHz): 1.8 GHz
* Amount of memory: 8 GB
* Memory speed: 1600 MHz DDR3
* Hard drive capacity: 121 GB
* Hard drive type: SSD
  + Max sequential read speed: 1390 MB/s
  + Max sequential write speed: 730.8 MB/s
  + Max 512K random read speed: 898.8 MB/s
  + Max 512K random write speed: 715.3 MB/s

A close up of a screen

Description automatically generated

**Figure 1: 32-bit Integer operation benchmark**

A close up of a screen

Description automatically generated

**Figure 2: 32-bit Floating point operation benchmark**

A screenshot of a cell phone

Description automatically generated

**Figure 3: Memory benchmark**

A screenshot of a cell phone

Description automatically generated

**Figure 4: Hard drive benchmark**

A close up of a logo

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**Figure 5: Results of benchmarks (in microseconds)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Instruction Count** | **Execution Time (seconds)** | **Reference Time (seconds)** | **SPECratio** |
| 32-bit Integer operation benchmark | 17\*10^10 | 6422.454027 | 100 | 0.015570372 |
| 32-bit Floating point operation benchmark | 17\*10^10 | 6418.995676 | 500 | 0.077893805 |
| Memory benchmark | 10^10 | 27.874191 | 100 | 3.587548066 |
| Hard drive benchmark | 2\*10^9 | 145.627375 | 1000 | 6.866840798 |
| **Geometric mean** | - | - | - | **0.415756604** |