

Performance and battery life ratings of 10 notebook PCs with Intel and AMD processors

Intel Corporation commissioned Principled Technologies, Inc. to run BAPCo's MobileMark 2007 Productivity test on five pairs of notebook PCs that ranged from mainstream notebooks to high-end systems.

MobileMark 2007 is an industry-standard benchmark that evaluates notebook PC user experience by measuring both performance and battery life at the same time on the same workload, one that uses a variety of business applications.

System	MobileMark 2007 Productivity – Performance Qualification		MobileMark 2007 Productivity – Battery Life	
	Score (median)	Comparative rating	Score (minutes)	Comparative rating
OEM 1 systems				
OEM System 1A AMD Athlon 64 X2 Dual-Core Mobile TK-55 1.8 GHz (80 nits)	86	Baseline	168	Baseline
OEM System 1B Intel Core 2 Duo T5250 1.5 GHz (90 nits)	110	28% better	227	35% better
OEM System 1C AMD Turion 64 X2 Dual-Core Mobile TL-64 2.2 GHz (83 nits)	100	Baseline	163	Baseline
OEM System 1D Intel Core 2 Duo T7500 2.2 GHz (98 nits)	166	66% better	225	38% better
OEM 2 systems				
OEM System 2A AMD Athlon 64 X2 Dual-Core Mobile TK-55 1.8 GHz (76 nits)	93	Baseline	187	Baseline
OEM System 2B Intel Core 2 Duo T5250 1.5GHz (78nits)	112	20% better	216	16% better
OEM System 2C AMD Turion 64 X2 Dual-Core Mobile TL-60 2.0 GHz (72 nits)	108	Baseline	195	Baseline
OEM System 2D Intel Core 2 Duo T7500 2.2 GHz (78 nits)	172	59% better	210	8% better
OEM 3 systems				
OEM System 3A AMD Turion 64 X2 Dual-Core Mobile TL-60 2.0 GHz (76nits)	121	Baseline	177	Baseline
OEM System 3B Intel Core 2 Duo T7500 2.2 GHz (78 nits)	192	59% better	277	56% better

KEY FINDINGS

- Across the five pairs of systems we tested, the Intel Centrino Duo based notebooks showed a performance advantage ranging from 20 percent to 66 percent over the comparably priced AMD-based systems.
- Across the five pairs of systems we tested, the Intel Centrino Duo based systems demonstrated battery life ranging from 8 percent to 56 percent longer than that of the comparably priced AMD-based systems.
- The price points of the Intel processor-based notebook PCs ranged from \$50 more than the AMD processor-based systems to \$110 less.

We measured the performance and battery life buyers would experience with these systems in their out-of-the-box configurations. Intel selected the systems, ensuring that the pairs were as comparable as reasonably possible in terms of both hardware and price. Each pair of comparable systems had identical hard drives, RAM amount, LCD size, and battery rating. PT purchased the systems in September 2007, set them up, and executed the tests over a four-week period. To keep the focus on the relative performance of the processors, Intel requested we not disclose the names of the manufacturers of the systems.

We ran the test three times on each system. In the event of a tie, we chose the run with the highest Performance Qualification score as the median run.

For more information on these tests and to see the full test report, visit www.principledtechnologies.com/clients/reports/Intel/NoteMM0907.pdf

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