

InHand™ Reference Platform Power Consumption Benchmarks
The Effects of Low-Power Design and BatterySmart™



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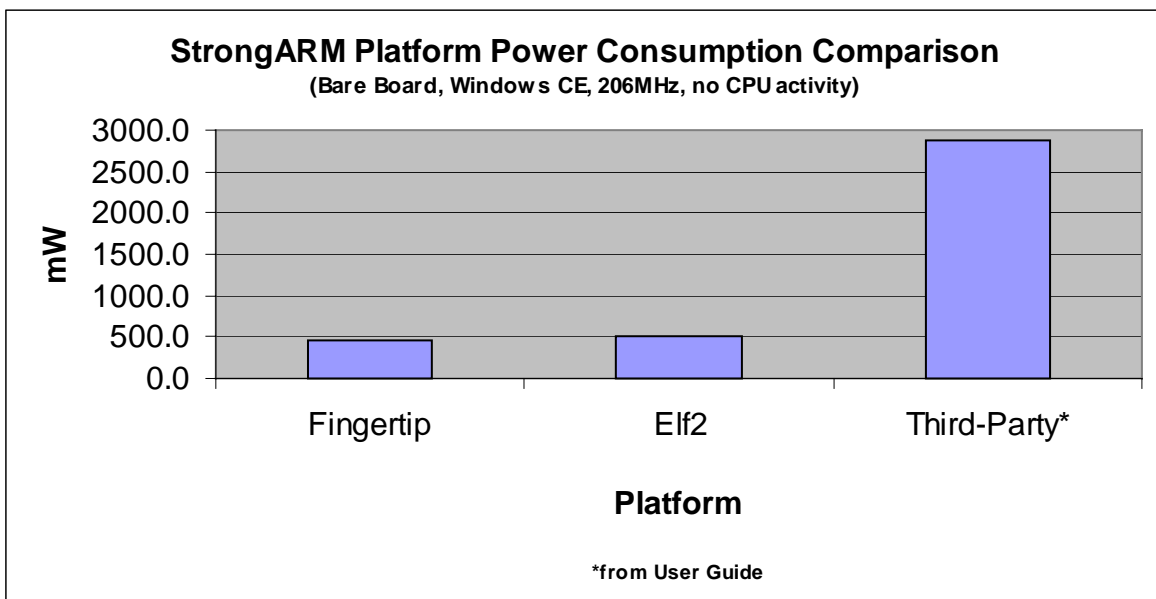
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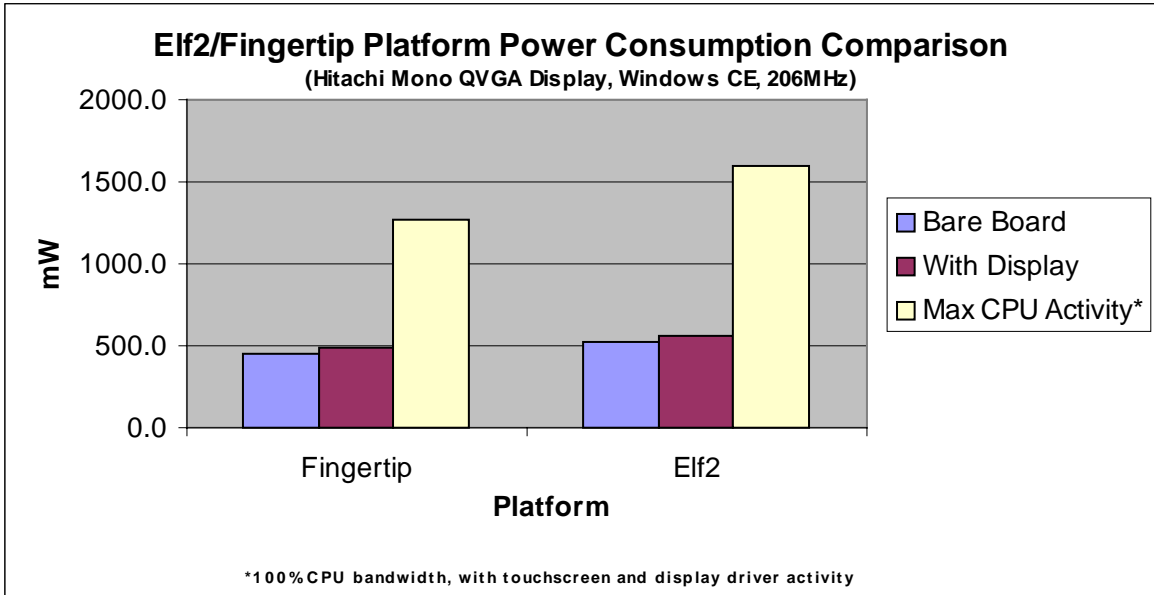
While Intel® StrongARM® CPUs generally offer high-performance with low power consumption, system hardware and software design plays a key role in determining actual energy consumption and battery life in a handheld or wireless device. Designers of handheld devices must pay close attention to power supply designs, board layout, and software driver design, so as to minimize power consumption.

InHand's Elf2™ and Fingertip™ reference platforms are production-ready and – coupled with BatterySmart software – are unparalleled in their ability to extend battery life. The chart below demonstrates the capabilities of InHand platforms relative to a third-party StrongARM-based single-board computer. The results are quite dramatic, as Elf2 and Fingertip are both almost six times lower in power consumption than the third-party platform.



This chart demonstrates the significant power savings that InHand's designs afford you. Ultimately, your combination of peripherals will impact your overall power budget, but Elf2 and Fingertip provide an ideal starting point for your low-power handheld device designs. The charts on the following page provide more detailed information on InHand's low-power platforms.

This chart compares the Elf2 and Fingertip platforms. Power consumption for either platform without a display is only 500mW. Add a low-power Hitachi monochrome LCD (with backlight off) and power is not increased markedly. Loading down the platform by exercising 100% of CPU bandwidth with lots of peripheral activity (touchscreen and display updates), and power consumption is still well under two watts.



The final chart compares the effect of display type on power consumption. Whereas the Fingertip with Hitachi monochrome display (with backlight off) draws between 500 and 1300mW, depending on CPU activity level, the Fingertip with Alps color display (with backlight on) draws between 1100 and 1900mW.

