PMIC Devices Target Li-Ion Battery Based Mobile Products

austriamicrosystems announced two new members of its Power Management IC (PMIC) family. According to the company, these devices feature essential power management building blocks and flexibility to provide a complete power solution for the next generation of tablets, media players and portable gaming consoles. The versatile start-up configuration programming capability allows the AS3710/11 to be adapted to various processors. These features can also be used to adapt for last minute changes or fine tuning without a design re-spin. Both the AS3710 and AS3711 include three DC-DC 4 MHz step-down converters, two DC-DC step-up converters, eight LDOs, four GPIOs, a 1.5A charger, an I2C interface, three current sinks, an ADC, a watchdog timer, and a real-time clock (RTC). The AS3710 PMIC adds a third booster whereas the AS3711 adds a 3A step-down converter. Configuration options include selecting linear or switching charging based on maximizing power efficiency or minimizing space and cost.

The outputs of the converters are all programmable. Two of the eight LDOs are low noise, well suited for noise critical RF modules. The step-up converters can be used to power peripherals that require voltages higher than the Li-Ion battery, such as class D amplifiers, USB OTG/Host, OLED displays and LED backlight displays. Three high-voltage current sinks are included for LCD backlighting. The programmable current level is adjustable in 150 ?A increments from 0 to 40 mA. In addition, PWM input options offer a simple way of implementing dynamic luminance scaling (DLS).

Each device is housed in a space saving 7x7 mm QFN56 package, operate from a single 2.7 V to 5.5 V supply and are specified over a -40 to +85°C temperature range.

Austriamicrosystems
919-676-5292, www.austriamicrosystems.com [1]

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