Programmable, 500 mA Battery Charger Slims Designs

Summit Microelectronics has added to its family of programmable battery charger integrated circuits (IC) for single-cell Li-Ion and Li-Polymer powered systems. The SMB239 enables industrial designs for portable consumer electronics, and its battery charging parameters are fully programmable via the Summit Microelectronics I²C interface and non-volatile memory, allowing easy system design, without any hardware changes. The SMB239 comprises a highly integrated, 500 mA linear charging solution that uses a fully programmable algorithm for single-cell Li-Ion and Li-Polymer cells. All charging parameters - pre-charge/fast-charge/charge termination current, cell float/pre-charge voltage, battery temperature/timer safety limits - are configurable via the I²C/SMBus interface, enabling a wide variety of algorithms without hardware changes. Default (custom) configuration in non-volatile memory allows the same product to be used in different system designs and/or with different battery types and technologies, resulting in significantly lower qualification/inventory costs and sourcing risks. Host/software control capability allows in-system adjustment of the charging profile, minimizing charging time and enhancing safety. The SMB239 is offered in a 2.1 mm x 1.3 mm CSP package and requires just two small external chip capacitors for a complete battery charging system design. Unlike other linear chargers offered in packages with a limited number of pins -- most of which need to be used for hardware-based "programming" -- the SMB239's chip-scale package allows the integration of a higher number of features, including critical charging protection functionality. The device allows the system to initiate battery charging only when battery voltage is below a certain threshold, thereby eliminating frequent charge cycles that may affect battery life. The SMB239 is priced at $0.81 each in quantities of 10,000 units.

Summit Microelectronics
408 436 9890, www.summitmicro.com [1]

Source URL (retrieved on *05/21/2013 - 4:31am*):
http://www.ecnmag.com/product-releases/2009/04/programmable-500-ma-battery-

charger-slims-designs

Links:
[1] http://www.summitmicro.com/