

NEWS RELEASE

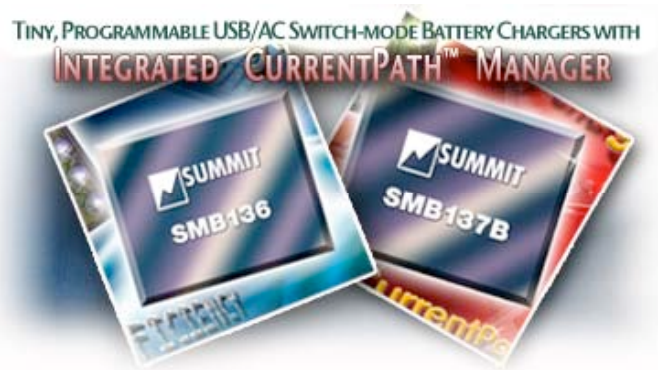
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Summit Introduces Tiny, Programmable USB/AC Switch-mode Battery Chargers with Integrated CurrentPath™ Manager

Instant-on output and Low Battery Recovery solve “dead” battery problems. Fastest USB charging while supporting safety standards and reducing system cost.

Sunnyvale, Calif. – July 15, 2009 – Summit Microelectronics has introduced two more members of its third-generation programmable battery charger integrated circuit (IC) family. The SMB136 and SMB137B employ CurrentPath technology, providing dual input source (USB or AC/DC) with arbitration, dual output for system and battery and system operation with a dead or missing battery. Both products support all battery charging standards: USB 2.0 Specification, USB On-The-Go Supplement, USB Battery Charging Specification 1.0, IEEE1725 Standard, Chinese USB Charging Specification, and others. Furthermore, the SMB136 and SMB137B are the only battery charger ICs with CurrentPath to detect the input source type (USB host/hub, AC/DC, etc.) and automatically optimize operation for the fastest and safest battery charging. Both products meet the European Union Memorandum of Understanding, issued on June 29th, 2009, for standardized mobile phone charger.

Features

The SMB136 and SMB137B are based on a 3MHz, switch-mode architecture, with minimal external components, which allows for very efficient power delivery and extremely compact solution size. High-efficiency operation enables fast charging due to higher output/charge currents, while reduced thermal dissipation improves user comfort, system reliability and Green operation (www.summitmicro.com/MobileGreen). Furthermore, Summit's proprietary TurboCharge™ patent-pending technology enables high charge current, even from relatively low-power sources (example: up to 750mA output from 500mA USB source). As consumer devices continue to employ larger batteries, the SMB136 and SMB137B reduce charge time for consumer convenience.

The SMB136 and SMB137B incorporate CurrentPath functionality to allow both input and output current path control. The SMB136 features one power input (USBIN) that allows USB500/100 or AC/DC (700-1400mA) operation. The SMB137B features two power inputs, one for supporting AC/DC power sources and the second one for supporting USB power sources. Both solutions provide independent output current paths for the system and the battery, allowing the system to turn on with a missing or deeply-discharged battery. This charging configuration reduces the charge and discharge cycles on the battery, thereby extending its operating life. CurrentPath also allows accurate charge termination, since both devices can detect the current flowing into the battery vs. traditional solutions that can only detect the combined current for battery and system.

Both the SMB136 and the SMB137B offer Summit's proprietary, patent-pending, Low-Battery Recovery (LBR) mode, which provides two benefits: a) enables booting up from a USB1 source and a "dead" battery (common scenario for smart phones and media players) and b) extends battery run time for emergency operation. This is accomplished by running the battery charger in reverse (boost) and providing the system with 4.17V at up to 500mA. Furthermore, this technology eliminates the need for expensive buck/boost regulators in systems with extended voltage range Li+ batteries (less than 3.0V).

"Consumers expect their feature-rich portable electronics to charge quickly, conveniently and to power up instantly, under all conditions. Addressing this need while supporting USB and safety compliancy can be accomplished cost-effectively by Summit's new CurrentPath battery charging solutions," stated George Paparrizos, Summit marketing director.

"Proprietary technologies, CurrentPath, TurboCharge™ and LBR significantly reduce charge time, extend run time and improve consumer convenience."

Like all products in the SMB339 family, the SMB136 and SMB137B also allow true universal USB and AC/DC battery charging. Both solutions incorporate Automatic Power Source Detection to differentiate between a USB 2.0 port and a “USB” AC/DC adapter. Furthermore, the SMB136 and SMB137B offer Summit’s proprietary Automatic Input Current Limit (patent pending), which detects the maximum current capability of the AC/DC adapter and automatically programs the devices’ input current limit accordingly. These two features enable true, universal USB charging and reliable and safe phone operation without the need for additional hardware and software support.

Like its predecessors, both products support USB On-the-Go (OTG) with integrated VBUS power and a current capability up to 500mA, without additional components or cost. A full set of programmable safety features are also integrated to support the strictest safety standards, including IEEE1725™ and JISC8714™. These include dual redundant protection for input/output current and voltage, chip and battery thermal protection, hardware and software safety timers, battery missing detection and a variety of status and fault registers. In addition, the chips’ parametric programmability allows the implementation of sophisticated embedded charging algorithms, further increasing system performance and reliability.

Applications

The SMB136 and SMB137B are ideal for any portable device, such as mobile phones, smart phones, portable media/MP3 players (PMP), portable GPS navigation devices, portable game consoles, and digital cameras/camcorders (DSC/DCC). The features and integration of the SMB136 and SMB137B make them especially suited for portable devices that require operation even with a missing battery, utilize higher-capacity batteries and feature very compact industrial designs.

Both products operate with an input range from +3.5V to +6.2V input and safely withstand continuous input over-voltage up to +18V (non-operating), while protecting downstream circuitry. Both the SMB136 and the SMB137B are offered in a tiny 3.0mm x 2.5mm, 30-ball, lead-free chip-scale (CSP) with an operating temperature range of –30C to +85C.

Pricing and Availability

Available now in production quantities, the SMB136 is priced at \$1.27 and the SMB137B is priced at \$1.36 each in quantities of 10,000 units.

Design Software and Programmer for Prototype Development

To speed user product development, Summit offers customers the SMB137BEV companion evaluation board and a graphical user interface (GUI) software so designers can quickly see the features and benefits and design a prototype battery charging solution with the SMB136 and SMB137B. This is a complete development tool that lets designers easily manipulate the characteristics of their systems. The SMB137BEV design kit includes menu-driven Microsoft Windows (R) GUI software to automate programming tasks and also includes all necessary hardware to interface to the USB port of a laptop or PC.

Once a user completes design and prototyping, the SMB137BEV automatically generates a HEX data file that can be transmitted to Summit for review and approval. Summit then assigns a unique customer identification code to the HEX file and programs the customer's production devices prior to final electrical test operations. This ensures that the device will operate properly in the end application.

About Summit Microelectronics

Summit Microelectronics is the leader in flexible, highly integrated power management solutions combining precision power regulation with sophisticated digital control in a single chip. The Company's devices are found in a variety of consumer, communications and computing applications.

Summit's unique programmable, non-volatile mixed-signal IC technology combined with a convenient GUI development environment allows for unparalleled functional and parametric flexibility in power supply design. This flexibility applied to common problems such as dynamic voltage/current control and intelligent battery charging, allows for significant system performance improvement while realizing drastic reductions in design effort.

Digital programmability enables high integration and system flexibility in a single chip - impossible with conventional "hard-wired" analog power ICs. Additionally, this integration reduces the bill-of-materials yielding the lowest total system cost and size. Summit solutions address the biggest challenges facing OEM developers today: increasing system

functionality, performance and complexity accompanied by shrinking development time cycles.

Summit Microelectronics actively supports industry efforts towards creating a greener planet. The Company's MobileGreen™ technologies significantly reduce the energy consumption and waste material footprint in our customers' products. Visit www.summitmicro.com/MobileGreen for more information.

The URL for the SMB136 product is

http://www.summitmicro.com/prod_select/summary/SMB136/SMB136.htm

The URL for the SMB137B product is

http://www.summitmicro.com/prod_select/summary/SMB137B/SMB137B.htm

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The URL for the SMB136 product application block diagram is

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The URL for the SMB137B product application block diagram is

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The URL for the product fact sheet is

http://www.summitmicro.com/prod_select/summary/SMB137B/SMB137BFactSheet.pdf

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